2007 - 2008 Catalog

Cancer Chemopreventive Agents
Signal Transduction Chemicals
Antiangiogenic Compounds
Biologically Active Peptides
Drug Discovery Kits
Chemotherapeutics
Apoptosis Inducers
Natural Products
Antimicrobials

GENERAL INFORMATION

LKT Labs is a research and development company focused on the discovery of specialty chemicals for cancer chemoprevention. We produce and distribute unique chemicals and biochemicals for all types of life science research and supply raw materials for manufacturing and repackaging.

PRICING, TERMS AND SPECIFICATIONS

Prices and specifications shown are current at the time of printing. We make every effort to retain these prices and specifications until the printing of our next catalog; however, prices and specifications are subject to change without notice. All prices are in US dollars. LKT ships orders F.O.B. St. Paul, MN, USA. Payment terms are Net 30 Days from the date of invoice. LKT accepts Visa and MasterCard. Sales, use, excise and other applicable taxes will be charged.

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Please include the name, telephone number or fax number of the person who will be knowledgeable in handling special shipments to avoid delay in Customs clearance or proper storage of the materials.

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USE OF PRODUCTS

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LKT warrants that its products shall conform to the description of such products as provided by LKT through LKT's catalog, analytical data or other literature.
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Contact our Customer Service Department for a Return Authorization within 30 days for replacement of any product sold by LKT Labs that does not meet the standards indicated by the product specification.

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St. Paul, Minnesota 55114-1629
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Web Site: www.lktlabs.com

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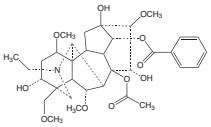
Aconitine

Preparation of Aconitum roots are employed in Chinese and Japanese medicine for analgesic, antirheumatic and neurological indications [1]. Its pharmacological effects are attributed to several diterpenoid alkaloids.

Aconitine, the main diterpene alkaloid isolated from Aconitum roots, is known to suppress the inactivation of voltage-dependent Na^+ channels by binding to neurotoxin binding site 2 of the alpha-subunit of the channel protein [1]. Telang *et. al.* found that 10 μg aconitine administered intraventricularly in cats produced cardiac arrhythmias. They suggested that brain stem noradrenaline probably played a role in the centrally induced cardiac arrhythmias by aconitine [2].



Aconitine
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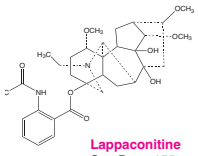
Bulleyaconitine A is an active principle from Aconitum bulleyanum Diel. Tang, et al found that the relative analgesic effect of bulleyaconitine A was 1.8-3.25, 15.3-65.5 and 1208-7195 times as potent as 3-acetylaconitine, morphine and aspirin, respectively. They concluded that the analgesic effect of bulleyaconitine A was related to the 5-HT level in brain [3].

1. Ameri A. Progress in neurobiology. 56:211-35 (1998).
2. Telang, BV., Ng'ang'a, JN. Indian Journal of Physiology & Pharmacology. 19:1-10 (1975).
3. Tang, XC., Liu, XJ., Lu, WH. Acta Pharm Sinica. 21:886-891 (1986).



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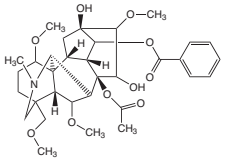

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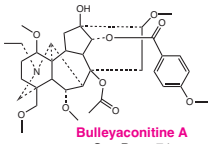
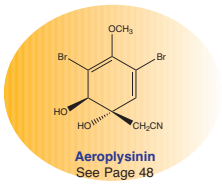


Bulleyaconitine A
See Page 74

Aeroplysinin

Aeroplysinin is a brominated antibacterial compound isolated from the marine sponge Verongia aerophoba. It has antiangiogenic activity . Aeroplysinin inhibits cell growth, induces apoptosis, and inhibits migration of endothelial cells [1].

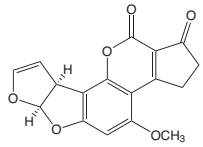
Aeroplysinin also shows cytotoxic activity in tumor cells. It blocks the epidermal growth factor (EGF) – dependent proliferation of both MCF-7 and ZR-75-1 human breast cancer cells and inhibits the ligand-induced endocytosis of the EGF receptor in vitro [2]. Aeroplysinin displayed IC50 of 3.0 microM in human cervix uteri tumor cell line [3].



Aeroplysinin
See Page 48

1. Rodriguez-Nieto S, Gonzalez-Iriarte M, et al. FASEB Journal. 16(2):261-3 (2002).
2. Kreuter MH, Leake RE, et al. Comparative Biochemistry. 97(1):151-8 (1990).
3. Teeyapant R, Woerdenbag HJ, et al. Z Naturforsch [C]. 48(11-12):939-45 (1993).

Aflatoxins



Aflatoxin B1
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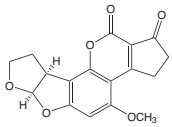

Aflatoxin B2
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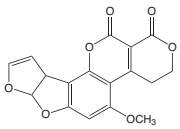
Aflatoxins are mycotoxins that are commonly produced by Aspergillus flavus and Aspergillus parasiticus. These molds often occur in poorly stored grains and nuts. The naturally occurring mycotoxins are commonly found as contaminants in many food products including corn, peanuts, peanut butter, cereal, cornmeal, cottonseed, tortillas, animal feeds and various dairy products.

Aflaxins have been studied extensively because they are demonstrated to have liver carcinogenic effects and other toxic effects in humans and animals. Chronic exposure to aflatoxins can lead to acute necrosis, cirrhosis and carcinoma of the liver in a number of animal species[1].

Aflatoxin B1 (AfB1) and Aflatoxin B2 (AfB2) are produced by Aspergillus flavus and Aspergillus parasiticus. Aflatoxin G1 and G2 are produced only by A. parasiticus. Under ultraviolet light, AfB1 and AfB2 produce a blue fluorescence while AfG1 and AfG2 produce green fluorescence.

Aflatoxin B1 is a potent hepatoxin and hepatocarcinogen. The P450 enzyme system in the liver activates Aflatoxin B1 to form the carcinogenic 2,3-exo-epoxide[2]. The 2,3-exo-epoxide forms a DNA adduct by reacting with the N7 of guanine[3]. The product of this reaction, AfB1-N7-guanine, is believed to be responsible for the mutation, leading to cancer. Aflatoxin M1 (AfM1) and Aflatoxin M2 (AfM2) are metabolites of AfB1 and AfB2, respectively. AfM1 and AfM2 are found in the milk of mammals as a result of ingestion of AfB1 contaminated food[4].

1. Phillips, T., Tox. Sci. (52 Suppl), 118-126 (1999).
2. Croy RG, Essigmann JM, Reinhold VN, Wogan GN. Proc Natl Acad Sci. 75:1745-91978 (1978).
3. Daniels JM, Liu L, Stewart RK, Massey TE. Carcinogenesis. 5: 823-827 (1990).
4. Unusan N. Food Chem Toxicol. 44:1897-1890 (2006).



Aflatoxin G1
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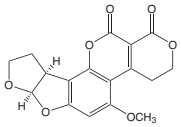

Aflatoxin G2
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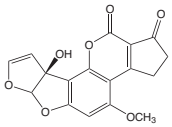

Aflatoxin M1
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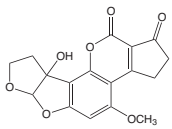

Aflatoxin B1
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Anastrozole

Aromatase inhibitor
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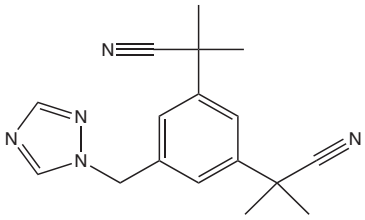
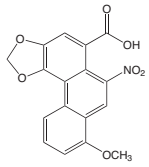


Anastrozole is a potent selective aromatase inhibitor used for treatment of advanced breast cancer in postmenopausal women[1]. Estrogens induce growth factors that cause cell proliferation and tumor formation in estrogen-dependent tumors[2]. Aromatase is an estrogen-synthesizing enzyme that converts androgens to estrogens. Therefore, suppression of estrogen production is of great value in the treatment of hormone-dependent breast cancer. Anastrozole reduces plasma estrogen levels by inhibiting the conversion of androstenedione to estrone without interfering with adrenal steroid hormones[3].

Anastrozole is also an efficacious treatment for severe endometriosis when combined with progesterone, rofecoxib, and calcitriol[4]. Oral administration of Anastrozole reduces endometriotic lesions and reduces the intensity of pain symptoms associated with endometriosis[5].

1. Hong Y., Chen S. Ann N Y Acad Sci. 1089: 237-51 (2006).
2. Lu Q., Yue W., Wang J., Liu Y., Long B., Brodie A. Breast Cancer Res Treat. 50: 63-71 (1998).
3. Plourde PV., Dyroff M., Dukes M. Breast Cancer Res Treat. 30: 103-11 (1994).
4. Shippen ER., West WJ Jr. Fertil Steril. 81: 1395-8 (2004).
5. Takayama K., Zeitoun K., Gunby RT., Sasano H., Carr BR., Bulun SE. Fertil Steril. 69: 709-13 (1998).

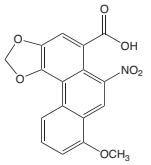
Aristolochic acids



Aristolochic acid A
See Page 61

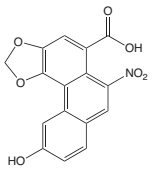
Aristolochic acids are the active ingredients responsible for the hepatoxicity and renal toxicity of the Oriental herb Aristolochic fangchi[1,2].

They form DNA adducts in renal tissue and are associated with urothelial carcinoma formation[3-5]. They are known to induce hepatic nodules and forestomach tumors in rats[6,7]. Aristolochic acid A activates ras genes in tumors[8].



Aristolochic acid B

1. Levi, M., et al. Pharm. World Sci. 20:43-44 (1998).
2. Mengs, U. Stolzem, C.D. Arch. Tox. 67:307-311 (1993).
3. Schmeiser, H.H., et al. Cancer Res. 56:2025-2028(1996).
4. Pfau, W., et al. Carcinogenesis 11:1627-1633 (1990).
5. Nortier, J.L., et al. New England J Med. 342:1686-1692 (2000).
6. Rossiello, M.R., et al. Cancer Lett. 71:83-87 (1993).
7. Hadjiolov, D., et al. Carcinogenesis. 14:407-410 (1993).
8. Schmeiser, H.H., et al. Cancer Res. 50:5464-5469 (1990).



Aristolochic acid C
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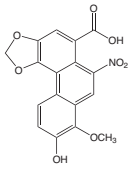

7-Hydroxyaristolochic acid A
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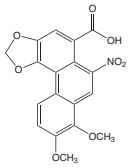
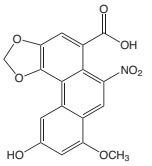


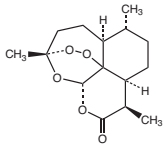
7-Methoxyaristolochic acid A



Aristolochic acid D

Artemisinin

and derivatives



Artemisinin
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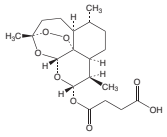

Artesunate
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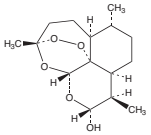

Dihydroartemisinin
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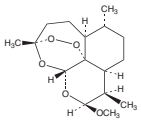

Artemether
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Qinghao (Artemisia annual, wormwood) has been used as a traditional remedy in China for over two thousand years. Its antimalarial principle was isolated in 1971 and named artemisinin or qinghaosu by Chinese scientists [1]. Artemisinin is a rapid-action, low toxicity and powerful antimalarial drug. It reacts with the high concentration of iron that is found in the malaria parasite to form free radicals that kill cells. Research shows the same principle holds true for cancer cells that need a lot more iron than normal cells to help them divide rapidly [2,3]. Most recently, artemisinin was discovered as an anticancer drug. It induces apoptosis in transformed oral epithelial cells [4]. Artemisinin dose-dependently inhibited angiogenesis in mouse embryonic stem cell-derived embryoid bodies and raised the level of intracellular reactive oxygen species [5]. Compared to artemisinin, holotransferrin-tagged artemisinin is very potent and selective in killing cancer cells. The 'tagged-compound' could potentially be developed into an effective chemotherapeutic agent for cancer treatment [3].

Literature shows that artemisinin and its derivatives inhibit angiogenesis by induction of cellular apoptosis induction and inhibition of VEGF receptors expression. Artemether is an oil-soluble methyl ether of artemisinin. Artesunate is a semi-synthetic derivative of artemisinin used for the second line therapy of malaria infections. It induces apoptosis of human umbilical vein endothelial cell and of KS-IMM cells [6,7]. Dihydroartemisinin, a more water-soluble metabolite of artemisinin derivatives, is the most effective antimalarial analog of artemisinin [8]. Dihydroartemisinin is more effective than artemisinin in inhibiting cancer cell lines and is a promising novel candidate for cancer chemotherapy[9] .

1. Li Y, Wu YL. Med Trop 58(3):9-12 (1998).
2. BBC News, Nov. 28, 2001.
3. Lai H, Sasaki T, et al. Life Sci. 76(11):1267-79 (2005).
4. Yamachika E, et al. Anticancer Res. 24(4):2153-60 (2004).
5. Wartenberg M, Wolf S, et al. Lab Invest. 83(11):1647-55 (2003).
6. Dell'Eva R, et al. Biochem Pharmacol. 68(12):2359-66 (2004).
7. Wu GD, Zhou HJ, Wu XH. Vascul Pharmacol. 41(6):205-12 (2004).
8. Chen HH, et al. Cancer Chemotherapy & Pharmacology. 53(5):423-32 (2004).
9. Chen HH. Zhou HJ. Fang X. Pharmacological Research 48(3):231-6 (2003).

Azelaic Acid

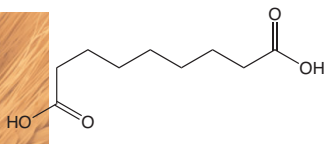
Azelaic acid is a saturated dicarboxylic acid and is widely used to treat skin disorders including acne vulgaris, inflammatory rosacea, erythematotelangiectatic rosacea, perioral dermatitis, melasma, and postinflammatory hyperpigmentation[1].

Azelaic acid shows cytotoxic activities in abnormally active melanocytes and human malignant melanocytes while normal melanocytes are unaffected at similar dosages and times of exposure. It causes significant damage to human malignant melanocytes by inducing massive swelling of the cristae[2]. Addition of azelaic acid causes a 50-70% decrease in the number of cultured human melanoma cells[3].

Azelaic acid inhibits mitochondrial oxidoreductases of the respiratory chain and enzymes involved with DNA synthesis. Clinical studies have shown that administration of azelaic acid significantly damages human melanoma cells.

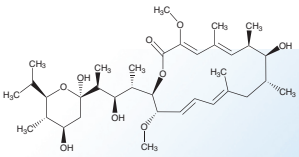
Azelaic acid is a potential general antitumor agent because of its non-toxic, non-teratogenic, and non-mutagenic properties. It can be administered topically, orally, intraveneously, and intralymphatically without any ill effects[3,4].

1. Del Rosso, JQ. Cutis. Feb; 77 (2 Suppl): 22-4 (2006).
2. Bennett D, Bhasin Y, and Breathnach AS. et. al. Br J Dermatol. (6): 687-97 (1985).
3. Konrad K and Korschan H et. al. J Invest Dermatol. 85 (5): 417-22 (1985).
4 Breathnach, AS. Med. Hypotheses. 52 (3): 221-6 (1999).

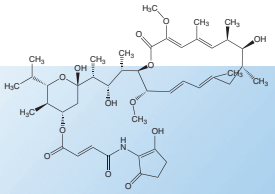


Azelaic Acid
See Page 65

Bafilomycins



Bafilomycin A1
See Page 66



Bafilomycin B1
See Page 66

Bafilomycins are 16-membered macrolides that are isolated from *Streptomyces* sp. The compounds possess antibiotic properties with good anti-tumor activity[1,2]. They are lysosome inhibitors that are active against gram-positive bacteria, yeast and fungi[3]. It has shown signs of inducing apoptosis in Capan-1 human pancreatic cancer cells with chromatin condensation and cell shrinkage[4]. All bafilomycins are activated ATPase inhibitors[5].

Extracellular pH in malignant tumors is known to be lower than that of normal tissues[6]. It has also been shown that this is one of the causes for multi-drug resistance seen in some cancer treatment regiments[7]. Many studies have shown that the use of bafilomycin A1 has caused significant decrease in pH and, therefore, also decreased the multi-drug resistance[7,8,9]. This suggests it may play an important role in effective chemotherapy for the future.

1. Werner, G. et al., Tetrahedron Lett. 24, 5193 (1983).
2. Heusers, et al. J. Am. Chem. Soc. 105, 3672 (1983).
3. Khissiin, A., et al., FEBS Letters. 448, 160 (1999).
4. Ohta, T. et al., Journal of Pathology. 185, 324 (1998).
5. Saurin, A. J., et al. Biochem. J. 313, 65 (1994).
6. Montcourrier, P., et al., Clinical & Experimental Metastasis. 15, 382. (1997).
7. Martinez-Zaguilan, R., et al. Biochemical Pharmacology. 57,1037 (1999).
8. Bidani, A., et al., Lung. 178, 91 (2000).
9. Altan, et al. Journal of Experimental Medicine. 187,1585 (1998).

Berbamine

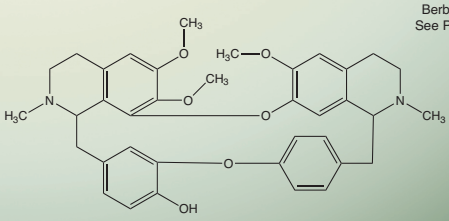
Berbamine is an alkaloid isolated from *Berberis aristata* the shrub found in Eastern Asia and is used in traditional medicine to help support healthy liver and a healthy immune system.

Barbamine has been shown to inhibit the growth of leukemia cells by activating Caspase-3 to induce cell apoptosis[1, 2]. In addition, berbamine has been shown to be an anti-myocardial, anti-arrhythmic, and anti-thrombosis agent, as well as being able to lower blood pressure and reduce heart rate[3].

The immunosuppressive effects of berbamine have been investigated. Berbamine showed suppressive effects on the delayed type hypersensitivity reaction response with sheep red blood cells and mixed lymphocyte reaction[4]. It also prolonged skin allograft survival compared to untreated mice[4].

1. He, Z.B.; Zhao, X.Y.; Xu, R.Z.; Wu, D. Zhejiang Da Xue Xue Bao Yi Xue Ban 35:209-214 (2006).
2. Dong, Q.H.; Zheng, S.; Xu, R.Z.; Lu, Q.; He, L. Zhongguo Zhong Xi Yi Jie He Za Zhi 24:820-822 (2004).
3. Guo, Z.B.; Fu, J.G. Zhongguo Zhong Xi Yi Jie He Za Zhi. 25: 765-8 (2005).
4. Luo, C.N.; Lin, X.; Li, W. K.; Pu, F.; Wang, L.W.; Xie, S.S.; Xiao, P.G. J. Ethnopharmacol. 59:211-215 (1998).

Berbamine
See Page 67



Bicalutamide

About 50% of men over 50 years old and 70% of men over 70 years old have some form of prostate cancer. 220,000 men were diagnosed with prostate cancer in 2003 in the U.S. alone.. According to the American Cancer Society, nearly 30,000 men die from prostate cancer each year [1]. Prostate cancer is the second most prevalent cancer among men.

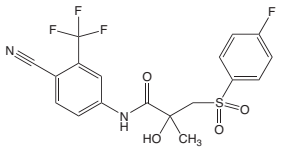
Bicalutamide, an analogue of flutamide, is a nonsteroidal antiandrogen. It is used as monotherapy or in combination with castration for prostate cancer [2]. Bicalutamide interferes with androgen receptor-mediated cell survival and initiates cell death in human prostate cancer cells by acting on components downstream of decline of DeltaPsim and upstream of cytochrome c release [3]. Growth factors such as insulin growth factor (IGF-1), keratinocyte growth factor (KGF) and epidermal growth factor (EGF) can directly activate the androgen receptor in the absence of androgen. Bicalutamide was shown to completely inhibit androgen receptor activation by EGF, IGF-1 and KGF in LnCaP cell line. Because aberrant activation of the androgen receptor is one of the mechanisms involved in the late stage of prostate cancer, this finding may be important in androgen-independent prostate cancer, its final stage [4,5].

Bicalutamide is a racemate and the (R)-enantiomer is exclusively responsible for its antiandrogenic activity. (R)-Bicalutamide's plasma elimination half-life is one week. The metabolism of (R)-Bicalutamide is essentially mediated by cytochrome P450 [6].

1. Prostate Cancer Institute. www.prostate-cancer-institute.com
2. Schellhammer PF, Davis JW. Clinical Prostate Cancer. 2(4):213-9 (2004).
3. Lee EQ, Zhan P, et al. Cell Death & Differentiation. 10(7):761-71 (2003).
4. Culig Z, Hobisch A, et al. Cancer Res. 54(20):5474-8 (1994).
5. Prostate Cancer Research Institute. www.prostate-cancer.org
6. Cockshott ID. Clin Pharmacokinet. 43(13):855-78 (2004).

Bicalutamide
See Page 69

R-Bicalutamide
See Page 69



BISPHOSPHONATES

Bisphosphonates are bone resorption inhibitors. They are modified pyrophosphates with a P-C-P instead of P-O-P structure, which contributes to their resistance to enzymatic degradation and high affinity for hydroxyapatite[1]. They are potent inhibitors of osteoclastic bone resorption and are used to treat osteoporosis, Paget's disease, malignant hypercalcaemia and bone metastasis[2]. The most potent bisphosphonate is the nitrogen-containing zoledronate[3].

The nitrogen-containing dronates appear to have a different mechanism of action from those of the non-nitrogen-containing group. Alendronate and other nitrogen-containing bisphosphonates were found to inhibit post-translational prenylation of proteins[4]. The disruption of the mevalonate-cholesterol synthesis pathway is mainly due to the loss of geranylgeranylated proteins rather than loss of farnesylated proteins in osteoclasts[5].

The antitumor activity of bisphosphonates appears to be the result of inhibition of osteoclast activity and release of tumor growth factors. Cell proliferation and induction of apoptosis in human myeloma cells have been observed[6]. The induction of apoptosis of ostelclast-like cells from a giant cell tumor was found to relate to the Fas gene expression[7].

1. Shinoda, H. Nippon Yakurigaku Zasshi 105:285-94 (1995).
2. Gatti, D., Adami, S. Drugs Aging. 15:285-96 (1999).
3. Body, J.J. Cancer 88:3054-8 (2000).
4. Berstrom, J.D. Bostedor, R.G., et al Arch Biochem Biophys. 373:231-41 (2000).
5. Coxon, F.P., Helfrich, M.H., Van't Hof R., et al J Bone Miner Res. 15:1467-76 (2000).
6. Shipman, /cm., Rogers, M.J., Apperley, J.F. et al Leuk Lymphoma 32:129-38 (1998).
7. Wang, X.M., Yu, S.F., Yang, Z.P Chin. J. Dent. Res. 3:26-32 (2000).

Alendronate	See Page 49	Pamidronate	See Page 185
Clodronate	See Page 92	Risedronate	See Page 205
Etidronate	See Page 118	Tiludronate	
Ibandronate	See Page 145	Zoledronate	

Bleomycins

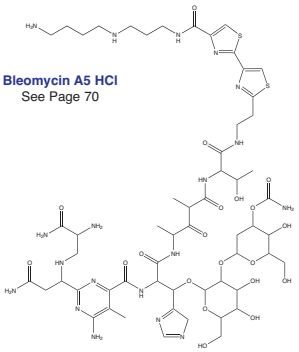
Bleomycins are glycopeptide-derived natural products that exhibit potent anti-neoplastic and antibiotic properties. Bleomycin sulfate is the predominent component of the commercial preparation Bleomycin. It is used to treat cervical, vulvar, testicular, penile, and head and neck carcinomas. It is also used in the treatment of hodgkins and non-hodgkins lymphomas. Although the exact mechanism of bleomycin is not known, its target is thought to be a nucleic acid[1].

Bleomycin has two major structural domains[1], the bithiazole DNA interaction site and a metal coordination site. A complex of O_2-Fe(III)bleomycin is formed at this site[2]. This generates an activated oxygen species that causes DNA degradation[2] .When acting on intact cells the drug induces double and single strand breaks and inhibits DNA synthesis[3].

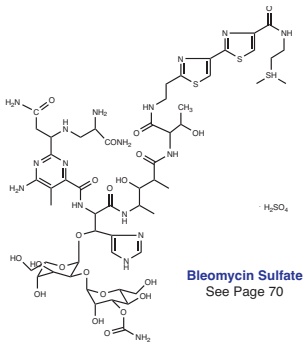
Bleomycin A5 (Pingyangmycin) can induce two modes of cell death, necrosis and apoptosis. It is a useful chemotherapeutic drug to treat various cancers. In addidition, pingyangmycin can effectively treat venous malformations, nasal polyposis, eyelid xanthelasma by inhibiting cell proliferation [4,5,6].

1. Benitz-Bribiesca, L., Sanchez-Suarez, P., Ann, N.Y., Acad Scie., 887:133-49 (1999).
2. Sugiura, Y., Suzuki, T., Otsuka, M., et al., J Biol Chem, 258(2):1328-36 (1983).
3. Gunther, R., Forrest, B., Newman, W., et al., Acta Biochim Pol, 45(1):13-8 (1998).
4. Yang LC, Yang SH, Tai KW, Chou MY, Yang JJ. J Oral Pathol Med. 33: 37-45 (2004).
5. Gao Z, Ding P, Zhang L, Shi J, Yuan S, Wei J, Chen D. Int J Pharm. 328: 57-64 (2007).
6. Meng RH, Meng Y, Yang L, Sun L, Sun WR, Liu HM. Zhonghua Yan Ke Za Zhi. (2005).

Antineoplastic Agents



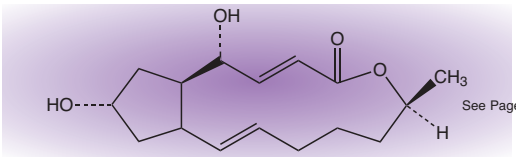
Bleomycin A5 HCl
See Page 70



Bleomycin Sulfate
See Page 70

Brefeldin A

Anti tumor agent from *Penicillium brefeldianum*



See Page 73

Brefeldin A, is a macrolide isolated from Penicillium brefeldianum. It affects the vesticular transport of the Golgi apparatus and induces DNA fragmentation which leads to apoptosis[3,4]. It is also a potent cell cycle modulator that regulates pRB phosphorylation[2]. It possesses antifungal, antiviral, antibiotic properties and has antitumor activity[1].

There is also some indication that it has anti-HIV activity[5] as well as protein and nucleic acid synthesis inhibition[6]. It reversibly blocks protein translocation from the endoplasmic reticulum to the Golgi apparatus[7]. It does this by affecting the vesicular transport, but not changing the structure of the Golgi apparatus.

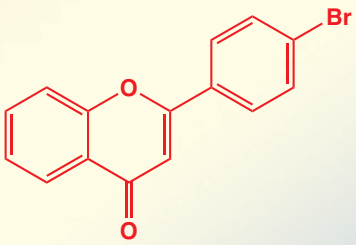
1. Misumi, Y., et al., J. biol. Chem. 261:11398 (1986).
2. Mordente, J.A., Konno, S., Chen, Y. et al J. Urol 159:275-9 (1998).
3. Erokhina, M.V. Stavrovskaya, A.A Onishchenko, G.E. Membr. Cell Biol. 12:871-82 (1999).
4. Chapman, J.R., Tazaki, H., Mallouh, C., Konno, S. Bju International 83:703-8 (1999).
6. Nojiri, H., et al FEBS Letters. 453,140 (1999).
7. Betina, V. et al. J. Antibiot. 20, 115 (1966).

4' Bromoflavone

4'-Bromoflavone is an aryl hydrocarbon hydroxylase inducer[1]. Recently, it was found to induce the phase II detoxifying enzymes, quninone reductase and glutathione S-transferase in cell culture and in different tissues of rats. Dietary administration of 4'-bromoflavone was found to inhibit DMBA-induced mammary tumor formation in Sprague Dawley rats[2].

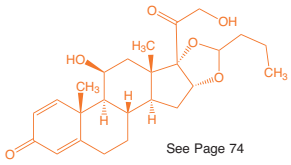
$C_{15}H_9BrO_2$
Mol.Wt.: 301.13

See Page 73



1. Burki, K., Liebelt, A.G., Bresnick, E. Biochem Genet. 13:417-33 (1975).
2. Song, L. L., et al Cancer Res. 59:578-585 (1999).

Budesonide



See Page 74

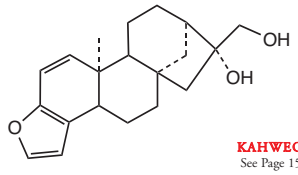
Anti-inflammatory
Chemopreventive
Anti-tumor

A steroidal anti-inflammatory agent used for the treatment of asthma, non-infectious rhinitis and nasal polyposis[1]. Budesonide is a synthetic glucocorticoid known to be a potent chemopreventive agent. In a benzo[a]pyrene-induced carcinogenesis study, female A/J mice were administered benzo[a]pyrene for one week. Oral administration of budesonide during the early stage and post-initiation stage significantly reduced pulmonary tumor formation by 84% [2].

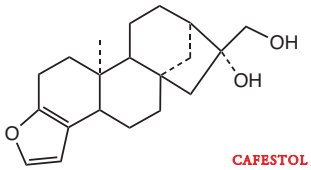
A link has been proposed between budesonide and the activities of tumor suppressor genes, p21 and p27. These genes are cyclin-dependent kinase inhibitors that hamper the progression of cell cycle and play a key role in carcinogenesis[3]. Budenoside increased the protein levels of both p21 and p27 genes and increased the expression of p21 mRNA4. In addition, chemoprotection with budesonide resulted in the delayed appearance of vinyl carbamate-induced lung tumors, decreased their growth and their progression to carcinoma[4].

1. Noonan M., Rosenwasser L., Martin P., O'Brien C., O'Dowd L. Drug News Perspect. 19: 485-9 (2006).
2. Wattenber LW., Estensen RD. Carcinogenesis 18: 2015-7 (1997).
3. Bourlaire J., Foteddar A., Foster R. Pathol. Biol. 48: 190-202 (2000).
4. Pereira MA et. al. Carcinogenesis 23: 1185-92 (2002).

Natural Products from Coffee Beans



KAHWEOL
See Page 151



CAFESTOL
See Page 76

Coffee consumption has been associated with a reduction in colon cancer[1-3]. Cafestol and kahweol are diterpenes isolated from coffee beans[4,5]. In animal studies, diets supplemented with cafestol and kahweol resulted in a reduction of DNA-carcinogen adduct formation[6], and the reduction of the frequency of adenocarcinoma[7] of the colon in rats.

Green coffee beans have been found to inhibit chemically induced mammary tumors in Sprague Dawley rats[8]. This observation led researchers to identify cafestol and kahweol palmitates as the active components in green coffee beans[9]. These two compounds were found to be responsible for the induction of the detoxifying enzyme system, glutathione S-transferase(GST)[10], particularly GST mμ isozyme-dependent activity in mice[11], and placental GST activity in rats[12]. An increase of GST activity is correlated with anti-carcinogenic activity of some chemopreventive agents.

Partial or total saturation of the furan ring of cafestol by catalytic hydrogenation resulted in total elimination of the GST inducing activity. These observations suggest that the furan moiety is the critical functional group that defines the activity of furan-containing diterpenes as inducers of GST[13].

LKT Labs offers various derivatives of cafestol and kahweol, including esters and oxo compounds.

1. IARC Working Group, in IARC Monogr. Eval. Carcinog. Risks Hum., Vol. 51, pp. 41-197 (1991).
2. Olsen, J., and Kronborg, O. Int. J. Epidemiol. , 22:398-402 (1993).
3. Baron, J.A., deVerdier, M.G., and Ekbom, A. Cancer Epidemiol. Biomarkers Prev. , 3:365-570 (1994).
4. Bengis, R.O. and Anderson, R.J. J. Biol. Chem., 47:99-113 (1932).
5. Slotta, K.H. and Neisser, K. Ber., 71:1991-1994 (1938).
6. Huber, W.W., McDaniel, L.P., Kaderlik, K.R., et al., Mut. Res. , 376:115-122 (1997).
7. Gershbein, L.L. Anticancer Res. , 14:1113-1116 (1994).
8. Sparnins, V.L., Lam, L.K.T., and Wattenberg, L.W Proc. Am. Assoc. Cancer Res., 22:114 (1981).
9. Wattenberg, L.W., and Lam, L.K.T. in Banbury Report 17:Coffee and Health, pp. 137-144 (1984).
10. Lam, L.K.T., Sparnins, V.L. and Wattenberg, L.W. Cancer Res., 42:1193-1198 (1982).
11. DiSimplicio, P., Jensson, H., and Mannervik, B. Biochem. J.., 263:679-685 (1989).
12. Schilter, B., Perrin, I., Cavin, C., and Huggett, A.C. Carcinogenesis. , 17:2377-2384 (1996).
13. Lam, L.K.T., Sparnins, V.L. and Wattenberg, L.W. J. Med. Chem.., 30:1399-1403 (1987).

Cafestol acetate See Page 76
Cafestol eicosanate See Page 76
Cafestol linoleate See Page 76
Cafestol oleate See Page 76
Cafestol palmitate See Page 76
Cafestol stearate See Page 77

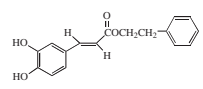
Caffeic Acid Esters

Derivatives of 3,4-dihydroxycinnamic acid (caffeic acid) constitute a class of naturally occurring plant phenolics with chemopreventive properties[1]. Caffeates occur naturally in the conjugated form; more frequently as esters than as glycosides[2]. Possible mechanisms of action of caffeates include antioxidant or electrophile trapping as modulators of arachidonic acid metabolism cascade pathways, cell protein kinase inhibition, and inhibition of carcinogenesis[3].Esters of caffeic acid, such as methyl caffeate, phenethyl caffeate, and phenethyl dimethyl caffeate all inhibit the mutagenicity of 3,2'-dimethyl-4-aminobiphenyl (DMAB) in the Ames test, and are cytotoxic toward colon adenocarcinoma cells[4]. Phenethyl caffeate also shows differential cytotoxicity in transformed rat/human melanoma and breast carcinoma cell lines[5].

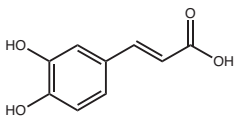
Dietary phenylethyl-3-methyl caffeate significantly inhibits both the incidence and multiplicity of invasive, noninvasive, and total adenocarcinomas of the colon[6]. Ferulic acid is the 3-methyl ether of caffeic acid. Both caffeic acid and ferulic acid inhibit 4-nitroquinoline-1-oxide-induced rat tongue carcinogenesis[7]. Curcumin is structurally related to caffeic acid, and is the coloring material from the root of Curcuma species[8]. Curcumin inhibits lipoxygenase and cyclooxygenase, and is an antipromoter with antioxidant and anti-inflammatory properties[9].

LKT Labs offers a full line of caffeic acid analogs.

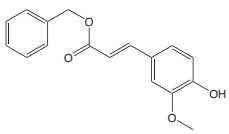
1. IARC Working Group, IARC Monogr. Eval. Carcinog. Risks Hum., Vol. 56, pp. 115-134 (1993).
2. Herrman, K.. CRC Crit. Rev. Food Sci. Nutri., 28:315-47 (1989).
3. Newmark, H.L. Dietary Phytochem. in Cancer Prevention and Treatment , AICR, N.Y., pp. 25-34 (1996).
4. Rao, C.V., Desai, D., Kaul, B., Amin, S. and Reddy, B.S. Chem.-Biol. Int., 84:277-903 (1992).
5. Gurnberger, D., Banerjee, R., Eisinger, K., et al. Experientia, 44:230-2 (1988).
6. Rao, C.V., Desai, D., Rivenson, A., Simi, B., Amin, S. and Reddy, B.S.. Cancer Res., 55:2310-5 (1995)
7. Tanaka, T., Kojima, T., Kawamori, T., et al. Carcinogenesis, 14:1321-5 (1993).
8. Commandeur, J.N.M. and Vermeulen, N.P.E. Xenobiotica ,26:667-80 (1996).
9. Huang, M.T., Lysz, T., Ferraro, T., Abidi, T.F., Laskin, J.D., Conney, A.H. Cancer Res., 51:813-9 (1991).



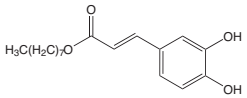
Caffeic acid phenethyl ester
See Page 189



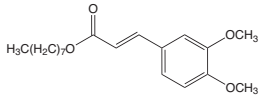
Caffeic acid
See Page 77



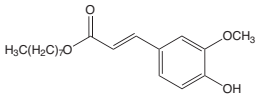
Phenylethyl-3-methylcaffeate
See Page 191



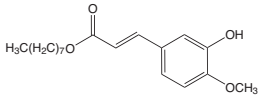
n-Octyl Caffeate
See Page 179



n-Octyl-3,4-Dimethylcaffeate
See Page 179

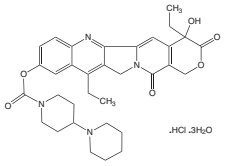


n-Octyl-3-methylcaffeate
See Page 179



n-Octyl-4-methylcaffeate
See Page 179

Camptothecins

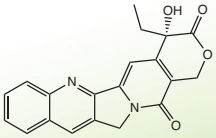


Irinotecan
See Page 148

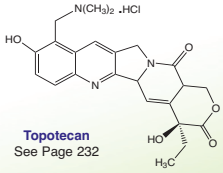
Camptothecin is an alkaloid isolated from the Chinese herb, xi shu (Camptotheca acuminata), that has anticancer activity[1]. Because of its severe side effects as an anticancer agent many attempts have been made to modify the structure to minimize its undesirable properties.

Two of the camptothecin derivatives have been successful in obtaining FDA approval as therapeutic agents for cancer treatment. Irinotecan and topotecan are approved for ovarian cancer and metastatic colorectal cancer, respectively. Other derivatives such as 9-amino camptothecin is still under investigation [2].

The mechanism of action of the camptothecins is known to be the inhibition of DNA topoisomerase I, which is an enzyme responsible for the winding and unwinding of DNA [3-7].

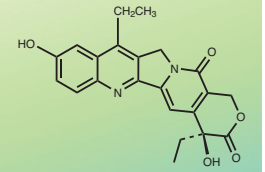


Camptothecin
See Page 79

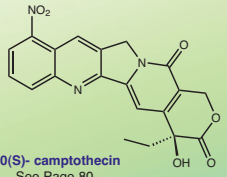


Topotecan
See Page 232

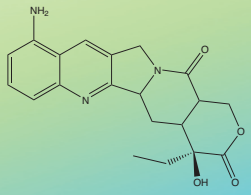
1. Wall, ME. et al J Am Chem Soc. 88:3888 (1966).
2. Takimoto, CH., Thomas, R. Ann N Y Acad Sci. 922:224-36 (2000).
3. Hertzberg, RP., Caranfa, MJ., Hecht, SM. Biochemistry 28:4629-38 (1989).
4. Cotter, TG., Glynn, JM., Echeverri, F., Green, DR. Anticancer Res. 12:773-9 (1992).
5. Johnson, N., Ng, TT., Parkin, JM. Leuk Res. 21:961-72 (1997).
6. Clements, MK., Jones, CB., Cumming, M., Daoud, SS. Cancer Chemther Pharmacol. 44:411-6 (1999).
7. O'Leary, JJ., Shapiro, RL., Ren, CJ. et al Clin Cancer Res. 5:181-7 (1999).



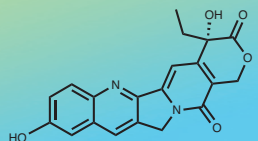
7-ethyl-10-hydroxy Camptothecin
See Page 79



9-Nitro-20(S)- camptothecin
See Page 80



9-Aminocamptothecin
See Page 79

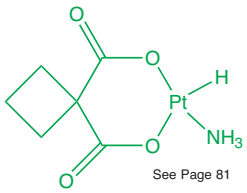


10-Hydroxy camptothecin
See Page 79

CARBOPLATIN

Carboplatin, also known by the brand names paraplatin or paraplatin-AQ, is an anti-tumor platinum complex. The drug forms the major adduct 1,3-d(GXG) intrastrand cross link[1]. It also forms interstrand cross links[2]. Although there is no clear evidence which one of the DNA cross links are responsible for the cytotoxicity of the compound, there are suggestions that interstrand cross links can cause more lethal lesions[3].

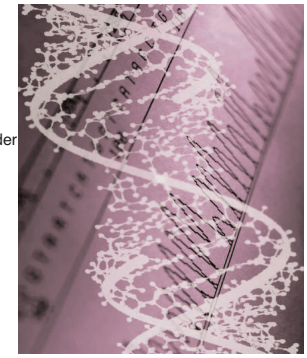
1.Teuben, J.M., Baur, C., Wang, A.H., Reedijik, J., Biochemistry, 38(38):12305-12, 1999.
2.Pratt, W.B., Ruddon, R.W., Ensminger, W.D., Maybaum, J., The Anticancer Drugs. Oxford University Press, INC. 1994.
3.Lawley, P.D., Philips, D.H., Mutat Res, 355(1-2):13-40, 1996.



See Page 81

Antineoplastic Agent

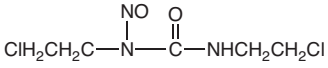
Appearance:	White Crystal Powder
Molecular Formula:	$C_6H_{12}N_2O_4Pt$
Molecular Weight:	317.25
Solubility:	Slightly souble in water



Carmustine

Antineoplastic Agent

Carmustine, also known as BCNU, is an alkylating and carbamoylating nitrosourea compound. It interferes with the growth of cancer cells to the point of destruction. Carmustine interacts with DNA, RNA and proteins[5] causing DNA interstrand cross linking which is cytotoxic and leads to apoptotic cell death[3,4]. Carmustine is used to treat certain types of brain cancer[1,2].

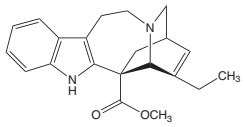


See Page 81

Appearance:	Light yellow powder.
Molecular Formula:	$C_5H_9Cl_2N_3O_2$
Molecular Weight:	214.04
Solubility:	Soluble in water and ethanol.
Storage:	-20 °C

1. Kokkinakis, D.M., Moschel, R.C., Pegg, A.E., Schold, S.C., Clin Cancer Res. 5(11):3676-81 (1999).
2. Wang, C.C., Li, J., Teo, C.S., Lee, T., J Controlled Release 61(1-2):21-41 (1999).
3. Hickman, M.J., Samson, L.D., Proc Natl Acad Sci USA. 96(19):10764-9 (1999).
4. Meikrantz, W., Bergom, M.A., Memisoglu, A., Samson, L. Carcinogenesis 19(2):369-72 (1998).
5. Pratt, W.B., Ruddon, R.W., et al., The Anticancer Drugs. Oxford Uninversity Press, INC (1994).

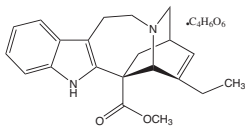
Catharanthine



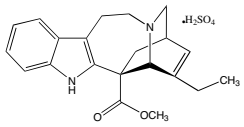
Catharanthine base
See Page 83

Catharanthine is a vinca alkaloid drug. Prakash and Timasheff found that catharanthine induced the self-association of tubulin into linear indefinite polymers with an efficacy that was 75% that of vinblastine or vincristine [1]. Their binding studies of catharanthine using the gel batch and fluorescence perturbation techniques showed a polymerization-linked binding of one catharanthine molecule per tubulin alpha-beta dimer with a binding constant of $(2.8 \pm 0.4) \times 10^3\ M^{-1}$.

1. Prakash, V., Timasheff, SN. Biochemistry. 30(3):873-80 (1991).



Catharanthine tartrate
See Page 83

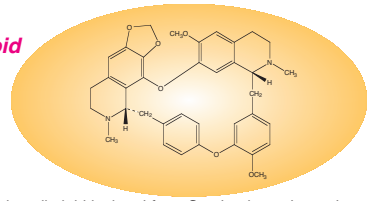


Catharanthine sulfate
See Page 83

Cepharanthine

A Biscoclaurine Alkaloid

See page 85



Cepharanthine is a biscoclaurine alkaloid isolated from Stephania cepharantha Hayata. It has antiinflammatory, antiallergic, immunomodulatory, and many other interesting biological activities. Cepharanthine suppresses NO production, which is one of the critical mediators in inflammation[1].

Cepharanthine, either alone or in combination with 8-difluoromethoxy-1-ethyl-6-fluoro-1,4-dihydro-7-[4-(2-methoxyphenyl0-1-piperazinyl]-4-oxoquinoline-3-carboxylic acid, was found to inhibit HIV-1 replication in TNF-α- and PMA-stimulated U 1 cells[2,3]. In a two-stage carcinogenesis model cepahranthine was found to inhibit tumor promotion by TPA. Both ODC and PKC, two enzymes invloved in the promotional phase of carcinogenesis, were inhibited[4,5]. In murine P388 doxorubicin-sensitive and -resistant cells, cepharanthine was found to induce apoptosis by increasing the production of reactive oxygen species and Fas-antigen expression[6]. When cepharanthine was given in combination with other cancer therapeutic drug such as doxorubicin, tamoxifen, vindesine, vincristine, nitrosourea and others, it was found to potentiate their therapeutic effects by modulating the multidrug resistance[7-11].

Similar to minoxidil, cepharathine is able to stimulate proliferation and delay initiation of differentiation and keratinization of cultured cells[12].

1. Kondo, Y., Takano, F., Hojo, H. Biochem. Pharmacol. 46:1887-1892 (1993).
2. Okamoto, M., Okamoto, T., Baba, M. Antimicrob Agents Chemother. 43:492-497 (1999).
3. Okamoto, M., Ono, M., Baba, M. AIDS Res Hum Retroviruses. 14:1239.45 (1998).
4. Yasukawa, K., Takido, M., Takeuchi, M. et al. J. Cancer Res Clin. Oncol. 117:421-424 (1991).
5. Edashige. K., Utsumi, T., Utsuumi, K. Biochem. Pharmacol. 441: 71-78 (1991).
6. Furusawa, S., Wu, J., Fudumura, T. et al. Methods Find Exp. Clin. Pharmacol. 20:87-97 (1998).
7. Hotta, T., Tanimura, H., Yamaue, H., et al. Oncology. 54:153-157(1997).
8. Hotta, T., Tanimura, H. Yamaue, H., et al. Cancer Lett. 107:117-123 (1996).
9. Saito, T., Hiikita, M., Kohno, K., et al. Cancer. 70:2402-2409 (1992).
10. Kubota, R. Kubota, K., Yamada, S. Gan To Kagaku Ryoho. 19:2169-2174 (1992).
11. Kato, T., Suzumura, Y. J. Natl. Cancer Inst. 79:527-5332 (1987).
12. Tanigaki-Obana, N., Ito, M. Arch. Dermatol. Res. 284:290-296 (1992).

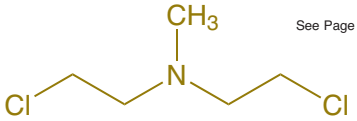
Chlormethine

Chlormethine is a chemotherapeutic agent that exhibits anti-tumor properties[1]. Chloromethine is also known as nitrogen mustard, mechlorethamine, mustine and HN2. The drug is a mustard gas analogue derived from chemical warfare research during the 1940s. It is a nitrogen mustard alkylating agent which modifies DNA replication and RNA transcription by forming N7 guanine adduct and interstrand cross-links with DNA[1].

Although chlormethine is cell cycle non-specific, it caused G1 cell arrest and induced S-phase cell apoptosis in human leukemic MOLT-4 cells (which express mutated p53)[2,3]. Chlormethine also induced G1 cell arrest in Burkitt's lymphoma and lymphoblastoid cell lines[4].

In addition, estradiol combined with chlormethine was shown to be an efficacious treatment of prostate cancer[5,6,7].

1. Wu XC, Marcinkowski K, Turner PM, Ferguson LR. Mutat Res. 448: 35-45 (2000).
2. Masta A, Gray PJ, Phillips DR. Nucleic Acids Res. 23: 3508-15 (1995).
3. Bhatia U, Danishefsky K, Traganos F, Darzynkiewicz Z. Clin Cancer Res. 1: 873-80 (1995).
4. Fan S, el-Deiry WS, Bae I, Freeman J, Jondle D, Bhatia K, Fornace AJ Jr, Magrath I, Kohn KW, O'Connor PM.Cancer Res. 54: 5824-30 (1994).
5. Mareel MM, Storme GA, Dragonetti CH, De Bruyne GK, Hartley-Asp B, Segers JL, Rabaey ML. Cancer Res. 1988 Apr 1;48(7):1842-9.
6. Yamanaka H, Shida K. Gan To Kagaku Ryoho. 1984 Mar;11(3):537-44.
7. Sander S. Tidsskr Nor Laegeforen. 1976 Jan 10;96(1):27-8.

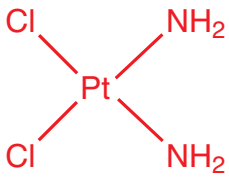


See Page 87

CISPLATIN

Cisplatin, also called Abiplatin, platinol or Platinol-AQ, is a heavy metal complex with platinum as a central atom surrounded by two chloride atoms and two ammonia molecules in the *cis* position.

Cisplatin produces intrastrand and interstrand DNA Cross links[1]. DNA distortions like Location of the platinum residue in the minor groove, the bending of the helix towards the minor groove and large DNA unwinding are caused by interstrand cross links[2]. Although there is no clear evidence which one of the DNA cross links are responsible for the cytotoxicity of the compound, there are suggestions that interstrand cross links can cause more lethal lesions[3]. Cisplatin is used in the treatment of various types of cancer.



Antineoplastic

Cat.No.: C3374
Cas No: 1663-27-1

See Page 90

Appearance:	deep yellowish solid
Molecular formula:	$Cl_2H_6N_2Pt$
Molecular Wt:	300.05
Solubility:	soluble in water (2.5 mg/ml)

1. Teuben, J.M., Bauer, C., Wang, A.H., Reedijik, J., Biochemistry 38(38):12305-12, 1999.
2. Malinge, J.M., Giraud-panis, M.J., Leng, M., J Inorg Bioche, 77(1˙-2):23-9, 1999.
3. Lawley, P.D., Philips, D.H., Mutat Res, 355(1-2):13-40,1996.

Clenbuterol HCl

Clenbuterol hydrochloride is a long-acting β2-adrenergic agonist used to treat breathing disorders as a decongestant and bronchodilator. In dogs, oral administration of clenbuterol inhibited the airway-resistance increase caused by histamine[1]. In addition, clenbuterol caused heart rate increase via left ventricle pressure and arterial blood pressure decrease[1].

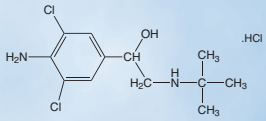
Beta2-adrenergic agonists are effective in muscle atrophy attenuation and muscle growth induction[2]. Administration of clenbuterol induced muscle growth in normal rats and attenuated muscle atrophy in rats suffering from hind-limb suspension via activation of Akt and mammalian target rapamycin (mTOR) signaling pathways[2,3].

Activation of the beta-adrenoceptors in the basolateral nucleus of the amygdala (BLA) affects memory storage[4]. Post-training microinfusion of clenbuterol into the basolateral nucleus of the amygdala (BLA) in Sprague-Drawley rats enhanced retention of the inhibitory avoidance task[5]. Clenbuterol has also been shown to enhance memory performance in aging rats and monkeys[6].

1. Kato H, Nakayama K, Takata Y, Kurihara J, Sakai T, Iwata K, Yamamoto I. Arzneimittelforschung. 35: 1037-41 (1985).
2. Kline WO, Panaro FJ, Yang H, Bodine SC. J Appl Physiol. 102: 740-7 (2007).
3. Burniston JG, McLean L, Beynon RJ, Goldspink DF. Muscle Nerve. 35: 217-23 (2007).
4. McIntyre CK, Miyashita T, and Setlow B, *et. al.* Proc Natl Acad Sci U S A. 102: 10718-23 (2005).
5. Ferry B, Roozendaal B, McGaugh JL. J Neurosci. 19: 5119-23 (1999).
6. Ramos BP, Colgan LA, Nou E, Arnsten AF. Neurobiol Aging. 2007 Mar 13.

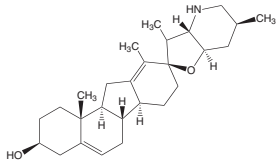
β2-adrenergic agonist

See Page 91



Cyclopamine

See page 97



Cyclopamine is a steroidal alkaloid isolated from corn lily. It is a Hedgehog (Hh) signaling inhibitor. Hh signal pathway regulates cell growth, differentiation, and is activated in various types of malignancies [1,2,3,4]. Cyclopamine was found to induce apoptosis in both adenoma- and carcinoma-derived colorectal tumor cell lines, inhibit the growth of the Hh pathway-activated breast carcinoma cells and small cell lung cancer [1,2,4].

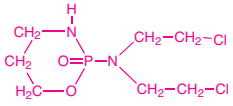
Using high potency Hh signal pathway antagonists such as cyclopamine to target Hh dependent tumors is a rational therapeutic approach to carcinoma.

1. Qualtrough D, Buda A, et al. International Journal of Cancer. 110(6):831-7 (2004).
2. Kubo M, Nakamura M, et al. Cancer Research 64(17):6071-4 (2004).
3. Chen JK, Taipale J, et al. Genes & Development. 16(21):2743-8 (2002).
4. Watkins DN, Peacock CD. Biochem Pharmacol. 68(6):1055-60 (2004).

Cyclophosphamide

Antineoplastic

See Page 97

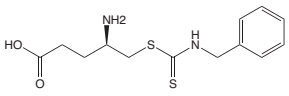


Cyclophosphamide is the most commonly used alkylating agent with broad application in cancer chemotherapy. The drug is activated by liver cytochrome P-450 (CYP) via 4-hydroxylation to produce the cytotoxic alkylating mustard phosphoramide[1]. Like other nitrogen mustards, cyclophosphamide exerts its antitumor activity by causing DNA strand cross link or link between bases within the same strand of DNA and inhibiting DNA replication in proliferating cancer cells[2]. It is also used for the treatment of rheumatoid arthritis[3].

1. Roy, P., Yu, L.J., Crespi, C.L., Waxman, D.J., Drug Metab Dispos, 27:655-66 (1999).
2. Pratt, W.B., Ruddon, R.W., et. al., The Anticancer Drugs. Oxford university press, INC (1994).
3. Cron, R.Q., Sharma, S., Sherry, D.D., J Rheumatol, 26:2036-8 (1999).

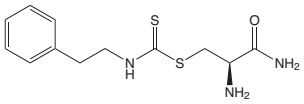
Appearance:	**White crystalline powder.**
Molecular formula:	**$C_7H_{15}Cl_2N_2O_2P$**
Molecular Weight:	**261.10**
Solubility:	**Soluble in water and slightly soluble in ethanol.**

Cysteine Conjugates of Isothiocyanate



S-(N-Benzylthiocarbamoyl)-L-cysteine

See Page 67



S-(N-Phenyl propylthiocarbamoyl)-L-cysteine

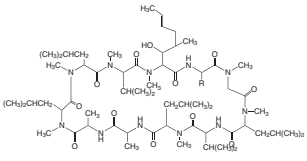
See Page 191

S-(N Benzylthiocarbamoyl)-L-cysteine and S-(N-phenylpropylthiocarbamoyl)-L-cysteine are water-soluble phenylalkylisothiocyanate cysteine conjugates[1,2]. Their parent compounds are benzyl isothiocyanate and 3-phenylpropyl isothiocyanate, respectively, which have been reported to inhibit chemically induced carcinogenesis in laboratory animals[1-6].

The induction of the detoxifying enzyme glutathione S-transferase (GST) by the two cysteine conjugates and their parent compounds has been determined and compared in several tissues of A/J mice. The cysteine conjugates appear to be less toxic and even more potent as enzyme inducers than the parent compounds in some of the mouse tissues[7]. Both conjugates were found to inhibit the growth of human leukemia 60 cells, and have antiproliferative activity in vitro[8]. It is believed that arylalkyl isothiocyanate cysteine conjugates dissociate to the isothiocyanate in order to be active[9-10].

1. Chung, F.-L., Jachatz, A, Vitarius, J, Hecht, S.S. Cancer Res. 44:2924-2928 (1984).
2. Chung, F.L., Wang, M, Hecht, S.S. Carcinogenesis 6:539-543 (1985).
3. Morse, M.A., Wang, C.X, Stoner, G.D., et al., Cancer Res. 49:549-553 (1989).
4. Morse, M.A., Amin, S.G. Hecht, S.S. Chung, F.L. Cancer Res. 49:2894-2897 (1989).
5. Morse, M.A. Eklung, K.I., Amin, S.G. et al Carcinogenesis 10:1757-1759 (1989).
6. Morse, M.A. Eklind, K.I. Hecht, S.S., et al Cancer Res. 51:1846-1850 (1991).
7. Zheng, G.-q., Kenney, P.M. and Lam, L.K.T. J. Med. Chem. 35:185-188 (1992).
8 Adesida, A., Edwards, L.G., and Thornalley, P.J. Food Chem. Toxicol. 34:385-392 (1996).
9. Jiao, D., Conaway, C.C., Wang, M.H., et al. Chem. Res. Toxicol. 9:932-938 (1996).
10. Conaway, C.C., Jiao, D., and Chung, F.L. Carcinogenesis, 17:2423-2427 (1996).

Cyclosporins



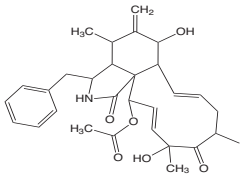
Cyclosporin A
See Page 98

Cyclosporin was discovered from the fugus Tolypocladium inflatum in 1971 and its immunosuppressive activity revealed in 1976 [1]. **28.5%** are cyclic undecapeptides of fungal origin.

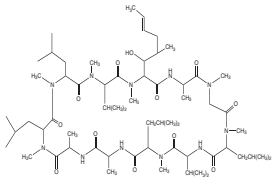
Cyclosporin A, a cyclopeptide composed of 11 amino acids, is a leading clinical immunosuppressant. It works by selectively affecting the production of T and B lymphocytes. At low concentration, cyclosporine A reverts the MDR phenotype, while at high concentration it induces apoptosis through mitochondrial depolarization [2]. Chronic cyclosporine A exposure causes an increase in c-fos and c-jun mRNA and increases the renal expression of transforming growth factor-beta mRNA. Nakai and colleagues found cyclosporine A treatment improved recovery of fetal brain energy metabolism and inhibited the mitochondrial swelling after transient in utero ischemia [3].

Substitution of the L-amino-butyric acid of cyclosporine A structure by L-alanine, L-threonine, and L-valine yields cyclosporine B, cyclosporine C, cyclosporine D, respectively [4]. Cyclosporin H is different from Cyclosporin A in the chiral inversion of MeVal-11 from L to D [5]. It inhibits FMPL-induced superoxide anion (O2-) formation in human neutrophils. Cyclosporin H is a potent and selective formyl peptide receptor antagonist compare to cyclosporins A, B, C, D, and E [6,7].

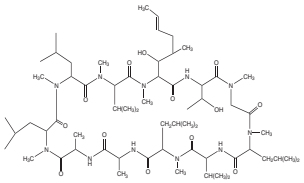
Cyclosporin C and Cyclosporin D are less potent immunosuppressive analogues of Cyclosporin A [8].



Cyclosporin D
See Page 98

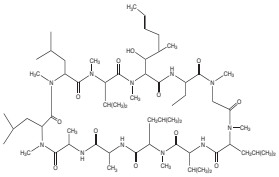


Cyclosporin B
See Page 98



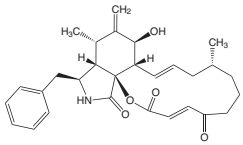
Cyclosporin C
See Page 98

1. Harriet Upton. www.world-of-fungi.org
2. Bustamante J, Caldas Lopes E, et al. Toxicol Appl Pharmacol. 199(1):44-51 (2004).
3. Nakai A, Shibazaki Y, et al. Pediatr Neurol. 30(4):247-53 (2004).
4. Billich A, Zocher R. J Biol Chem. 262(36):17258-9 (1987).
5. Potter B, Palmer RA, et al. Org Biomol Chem. 1(9):1466-74 (2003).
6. Wenzel-Seifert K, Seifert R. J Immunol. 150(10):4591-9 (1993).
7. de Paulis A, Ciccarelli A, et al. J Allergy Clin Immunol 98(1):152-64 (1996).
8. Uadia PO, Ezeamuzie IC, et al. Afr J Med Sci. 23(1):47-51 (1994).

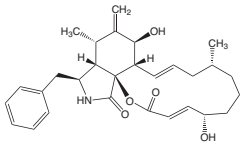


Cyclosporin H
See Page 98

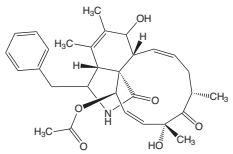
Cytochalasin



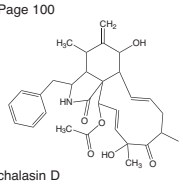
Cytochalasin A
See Page 100



Cytochalasin B
See Page 100



Cytochalasin C
See Page 100

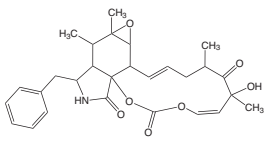


Cytochalasin D
See Page 100

Cytochalasins are fungal metabolites that are structurally similar and have similar biological properties. They are known to bind actin and modify its polymerization. Cytochalasins are often used to study the biological activities of actin and actin-binding proteins[1]. Cytochalasins are similar to capping proteins in that they hinder one end of actin filaments, and block filament elongation and polymeration[1]. Many cytochalasins cause cell arrest and exhibit apoptotic activities due to the inhibition of actin polymerization[2].

Cytochalasin A is an anti-cytoskeletal drug which inhibits actin polymerization and has caused low stationary motility and membrane ruffling in K1735-M2 mouse melanoma cells[3,4,5]. Cytochalasin B blocks activated hKv1.5 channels and endogenous I(K,ur) in a cytoskeleton-independent manner[6]. Cytochalasin C increases the rate of transcription of the TGF-beta 1 gene and of the collagenase gene[7]. Cytochalasin D activates p53-dependent transcription, causes G1- and S-phase cell arrest and induces apoptosis in wild-type p53 cells2. Cytochalasin E strongly induces interleukin-8 through epithelial cell line HeLa[8,9].

1. Cooper, J. A. J. Cell Biol. 105: 1473–1478 (1987).
2. Rubtsova, S. N., Kondratov, R. V., Kopnin, P. B., Chumakov, P. M., Kopnin, B. P. & Vasiliev, J. M. FEBS Lett. 430: 353–357(1998).
3. Suelmann R, Fischer R. Cell Motil Cytoskeleton. 45: 42-50 (2000).
4. Torralba S, Raudaskoski M, Pedregosa AM, Laborda F. Microbiology. 144(Pt 1):45-53 (1998).
5. Hofmann-Wellenhof R, Smolle J, Helige C et al. Exp Dermatol. 3:219-226 (1994).
6. Choi BH, Park JA, Kim KR et al. Am J Physiol Cell Physiol. 289: C425-436 (2005).
7. Varedi M, Ghahary A, Scott PG, Tredget EE. J Cell Physiol. 172:192-199 (1997).
8. Yun BW, Atkinson HA, Gaborit C et al. Plant J. 34:768-777 (2003).
9. Ikewaki N, Yamada A, Inoko H. Microbiol Immunol. 47:775-783 (2003).

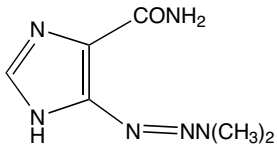


Cytochalasin E
See Page 100

Dacarbazine

Dacarbazine, also known as DTIC, is a methylating agent which is used for the treatment of malignant melanoma and cancer of the lymph system[1,3].

Dacarbazine is metabolized by P-450 in the liver to the active methylating agent, methyldiazonium ion. The Methylating agent forms DNA adducts N7-methylguanine (N7-meG) and O6-methylguanine (O6-meG). Recent evidence indicates the latter may be important in the cytotoxic activity of the compound[4].



See Page 100

Appearance:	**White to ivory micro crystals.**
Molecular Formula:	**$C_6H_{10}N_6O$**
Molecular Weight:	**182.18**
Solubility:	**Soluble in water, ethanol, acetone or DMSO.**
Storage:	**Protect from light while in solution.**

1. Negrier, S., Fervers, B., Bailly, C., et al., Bull Cancer, 87(2):173-182 (2000).
2. Sivkova, N., Steuhl, K.P., Rohrbach, J., Popova, L., Folia Med, 41(3):5-11 (1999).
3. Yamazaki, N., Yamahato, A., Wada, T., Ishikawa, M., J Dermatol, 28(8):489-93 (1999).
4. Kyrtopoulos, S.A., Anderson, L.M., Chhabara, S.K., et al., Cancer Detect Prev, 21(5):391-405 (1997).

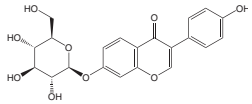
Daidzin

Kudzu (Pueraria lobata) is a medicinal plant that has been widely used in Japanese and Chinese medicine[1]. It has been found to have numerous medical properties such as anti-inflammatory, antimicrobial, chemopreventive, antiproliferative, antileukemic and antidipsotropic[1,2]. Daidzin, an isoflavonoid isolated from Kudzu, also exhibits many of these properties. In alcohol dependency studies, daidzin was shown to exhibit potent antidipsotropic activities[2,3,4]. It appeared that its antidipsotropic works by altering several neuronal systems that caused drinking behavior[4].

Low frequencies of prostate and breast cancers in Asian countries are linked to high intake of soybean phytoestrogens. Daidzin is a phytoestrogen that exhibits chemopreventive and anti-cancer properties. In a rat prostate carcinogenesis study, Daidzin was found to reduce the incidents of ventral prostate carcinoma by inhibiting prostate cancer development during early stages[5].

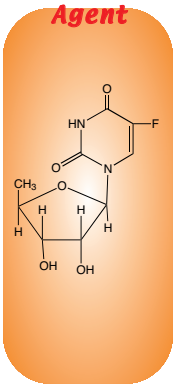
1. Keung WM, Vallee BL. Phytochemistry. 47: 499-506 (1998).
2. Boue SM, Wiese TE, Nehls S, andBurow ME. *et. al.* J Agric Food Chem. 51: 2193-9 (2003).
3. Overstreet DH, Keung WM, Rezvani AH, Massi M, Lee DY. Alcohol Clin Exp Res. 27: 177-85 (2003).
4. Rezvani AH, Overstreet DH, Perfumi M, Massi M. Pharmacol Biochem Behav. 75: 593-606 (2003).
5. Kato K, Takahashi S, Cui L, Toda T, Suzuki S, Futakuchi M, Sugiura S, Shirai T. Jpn J Cancer Res. 91: 786-91 (2000).

See Page 101



Doxifluridine

Antineoplastic Agent



Doxifluridine or 5'-deoxy-fluorouridine is a prodrug of 5-fluorouracil (5-FU), an anticancer agent used in the treatment of malignant tumors. 5'-Deoxy-5-fluorouridine (5'DFUR) is converted into the antimetabolite 5-FU by the action of the enzyme thymidine phosphorylase[1].

Cytokines such as tumor necrosis factor (TNF alpha), interleukin-1 alpha (IL-1 alpha) and interferon-gamma (IFN gamma) found in tumor cells induce thymidine phosphorylase expression[2]. Induction of thymidine phosphorylase makes tumor cells more suceptible to 5'-deoxy-5-fluorouridine than normal cells[3].

See Page 110

Appearance: White needle crystalline powder.
Molecular formula: $C_9H_{11}FN_2O_5$
Molecular Weight: 246.20
Solubility: Soluble in water.

1. Hara, Y., Gan To Kagaku Ryoho, 11:2133-43 (1984).
2. Kimura, T., Kobayashi, T., Nakaya, Y., et al., Gan To Kagaku Ryoho, 22:1051-6 (1995).
3. Eda, H., Fujimoto, K., Watanabe, S., et al., Cancer Chemother Pharmacol, 32:333-8 (1993).

Etretinate

Antineoplastic [Systemic]

Catalog No: E7668

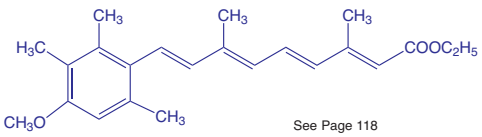
Retinoids are known to play a vital role in diverse cellular processes including growth, cell differentiation and vision[1]. Etretinate, also known as tegison, is a synthetic aromatic analog of retinoic acid.

Etretinate is used for topical and systemic treatment of severe recalcitrant psoriasis and other hyperkeratotic and parakeratotic skin disorders, chemoprevention of skin cancer and other neoplasia [2]. It is also used in combination with psoralens plus UV light in the treatment of psoriasis[3].

It is known to be extensively metabolized to inactive 13-cis form, shortened chain breakdown products, and conjugates that are ultimately excreted.

Despite its demonstrated clinical usefulness in psoriasis and other proliferative skin disorders, its mechanism of action has not been fully elucidated[4] .

1. Chaudhuri BN, Kleywegt GJ, Broutin-L'Hermite I, Bergfors T, Senn H, Le Motte P, Partouche O, Jones TA. Acta Crystallogr D Biol Crystallogr 55:1805-7, 1999.
2. Orfanos CE, Zouboulis CC, Almond-Roesler B, Geilen CC. Drugs. 53:358-88, 1997.
3. http://www.oncology.com/library/drug_database/DD_description_main/
4. Surat JH. J Am Acad Dermatol. 41:S2-6, 1999.



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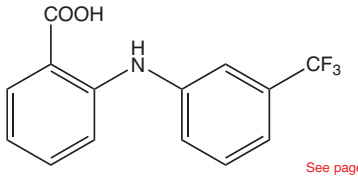
Flufenamic acid



See page 123

Gap junctional intercellular communication is of paramount importance in the regulation of a variety of biological processes including embryogenesis, cell proliferation, cardiac function, and propagation of calcium waves. Gap junctional channels allow intercellular diffusion of small (<1 kDa) hydrophilic molecules and ions, mediate electrical coupling between cells and allow clusters of cells to behave as electrical syncytium. Electrical coupling underlies synchronous electrical activity between excitable cells and has been shown to be essential in the propagation of the cardiac action potential, the contraction of smooth muscle and the coordination of hormone secretion.

Flufenamic acid inhibits electrical coupling in single electrode voltage-clamp step response measurements. The inhibition of gap junctional communication by flufenamic acid do not involve changes in intracellular calcium or pH, and is unrelated to protein kinase C activity or an inhibition of cyclooxygenase activity. Flufenamic acid represents a novel class of reversible gap junction blockers that can be used to study the role of Cx43-mediated gap junctional intercellular communication in biological processes [1].

Flufenamic acid belongs to the class of N-phenylanthranilic acids and is widely used as nonsteroidal anti-inflammatory drugs due to its ability to inhibit cyclooxygenases (Cox). It is a time independent and non-selective inhibitor towards both Cox-1 and Cox-2 [2].

1. Harks EG., et al. Journa of Pharma. & Experimental Therapeutics. 298(3):1033-41 (2001).
2. Ouellet M., Percival MD. Biochemical Journal. 306 (Pt1):247-51 (1995).

Flavonoids

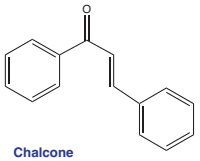
Flavonoids are phenolic compounds found in food[1]. They occur naturally as the glycosides, and consist of flavones, flavonols, isoflavones and flavonones[2]. It has been estimated that humans who consume high vegetable and fruit diets ingest up to 1 gram of flavonoids daily[1], making these the most important phenolics in food.

Flavonoids are potent chemopreventive agents, and may act by several possible mechanisms[1]. They are largely responsible for the antioxidant properties of wines, teas and fruit juices[2]. Flavanoids may also act upon the arachidonic acid metabolism cascade, or inhibit chemical mutagens[1].

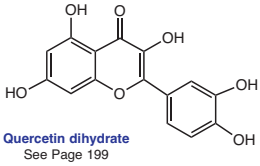
Chrysin is a flavone that inhibits metabolic activation of benzo[a]pyrene[3].

Chalcone is an open-chain flavone that inhibits lung and forestomach carcinogenesis[4]. The most active and available flavonol is quercetin, and its glycoside rutin[1]. Quercetin inhibits lipoxygenase and ornithine decarboxylase induction[5]. Genistein and Daidzein are isoflavones found in soy which are antioxidants and weak estrogens[6]. Another isoflavone, Biochanin A, inhibits cell proliferation and differentiation as well as possessing chemopreventive properties[7]. The flavonone, epigallocatechin gallate is an active component of tea for chemoprevention[8].

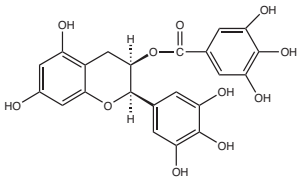
Silymarin is a mixture of flavonones from milk thistle that have shown chemopreventive activity[9].



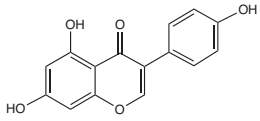
Chalcone
See Page 86



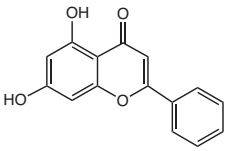
Quercetin dihydrate
See Page 199



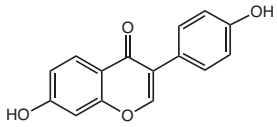
Epigallocatechin gallate
See Page 115



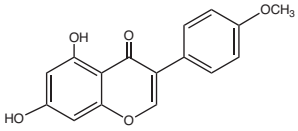
Genistein
See Page 130



Chrysin
See Page 89



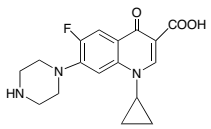
Daidzein
See Page 101



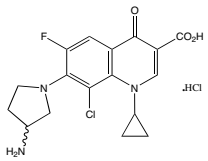
Biochanin A
See Page 69

1. Newmark, H.L. Dietary Phytochemicals in Cancer Prevention and Treatment, pp. 25-34 (1996).
2. Rice-Evans, C.A., and Miller, N.J. Biochem. Soc. Trans., 24:790-5 (1996).
3. Chae, Y.-H., Ho, D.K., Cassady, J.M., et. al. Chem. Biol. Int., 82:181-93 (1992).
4. Wattenberg, L.W., Coccia, J.B., and Galbraith, A.R. Cancer Lett., 83:165-9 (1994).
5. Nakadate, T., Aizu, E., Yamamoto, S. and Kato, R. Prostaglandins, 30:357-68 (1985).
6. Wiseman, H. Biochem. Soc. Trans., 24:795-800 (1996).
7. Chae, Y.-H., Ho, D.K., Cassady, J.M., et al. Chem. Biol. Int. 82:181-193 (1992).
8. Dong, Z., Ma, W., Huang, C., and Yang, C.S. Cancer Res. 57:4414-4419 (1997).
9. Zi, X., et al. Clin. Cancer Res., 4:1055-64, 1998. 239(1): 334-339 (1997).

Fluoroquinolones



Ciprofloxacin
See Page 90

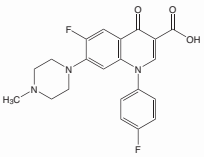


Clinafloxacin
See Page 91

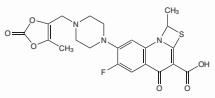
Floxacins

The **fluoroquinolones** are one of the few purely synthetic antibiotics that are widely used as antibacterials. The first generation fluoroquinolones, norfloxacin, ofloxacin, ciprofloxacin, are effective against Gram (-) bacteria. Subsequent second generation fluoroquinolones, sparfloxacin, temafloxacin and gatifloxacin, have shown increased Gram (+) activity. In addition to their effectiveness against Gram (-) and Gram (+) bacteria, the third generation fluoroquinolones such as moxifloxacin and clinafloxacin are also active against anaerobes.

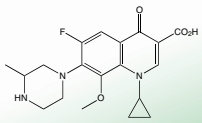
The mechanism of fluoroquinolone action is targeted at the DNA gyrase and topoisomerase IV of bacteria[1]. The former is the primary target in Gram (-) bacteria and the latter is the primary target in Gram (+) bacteria[2,3].



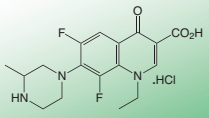
Difloxacin
See Page 106



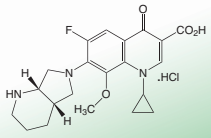
Prulifloxacin
See Page 197



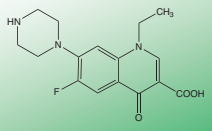
Gatifloxacin
See Page 129



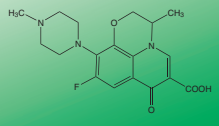
Lomefloxacin
See Page 159



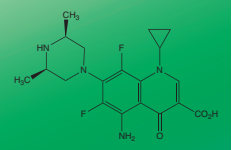
Moxifloxacin
See Page 170



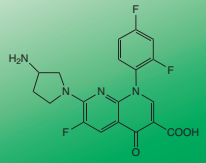
Norfloxacin
See Page 178



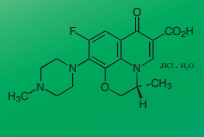
Ofloxacin
See Page 180



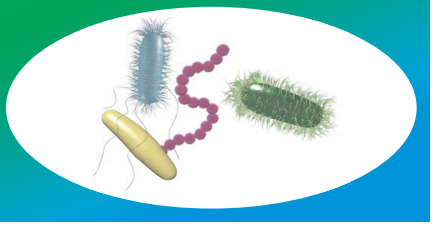
Sparfloxacin
See Page 214



Tosulfloxacin
See Page 232

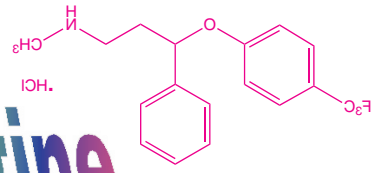


Levofloxacin
See Page 157



1. Levine, C., Hiasa, H.,et al. Biochim Biophys Acta 1400:29-43 (1998).
2. Kampranis, S., Maxwell, A. J Biol Chem. 173:22615-26 (1998).
3. Khodursky, A., Cozzarelli, N. J Biol Chem. 273:27668-77 (1998).

Fluoxetine



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A specific serotonin uptake inhibitor

Selective serotonin re-uptake inhibitors are relatively new antidepressants used in the last 10-15 years. They increase the level of serotonin in the brain. Serotonin is an important substance necessary for the brain to function.
Fluoxetine is an atypical selective serotonin uptake inhibitor. It has been shown to increase extracellular concentrations of norepinephrine and dopamine as well as serotonin in rat prefrontal cortex [1].

Antidepressant drugs are reported to be used as co-analgesics in clinical management of migraine and neuropathic pain. Fluoxetine-induced antinociception invloves both central opioid and the serotoninergic pathways[2].
Edgar VA et al analyzed the influence of fluoxetine on the kinases that are involved in intracellular signalling after stimulation with mitogens. They concluded fluoxetine has a dual effect on T-cell proliferation by modulating the PKC and protein kinase A pathways through Ca^{2+} mobilization[3].

Antidepressants are known to induce apoptosis in various cell types in vitro. But experiments show fluoxetine is capable to increase cAMP-response-element-binding-protein phosphorylation without induction of apoptosis depending on concentration and duration of treatment [4].

1. Bymaster FP., Zhang W., Carter PA., et al. Psychopharmacologia. 160(4):353-61, 2002.
2. Singh VP., Jain NK., Kulkarni SK. Brain Research. 915(2):218-26, 2001.
3. Edgar VA., Sterin-Borda L., Cremaschi GA., et al. European Journal of Pharmacology. 372(1):65-73, 1999.
4. Koch JM, Kell S, Aldenhoff JB. J Psychiatr Res. 37(1):53-9, 2003.

Formononetin

Isoflavones derived from many edible plants have been reported to possess significant antioxidant, estrogenic and tyrosine kinase inhibitory activity. Formononetin is a natural isoflavone found in red clover (trifolium pratense).

Formononetin was tested for its neuroprotective efficacy against two toxic insults, glutamate and beta-amyloid. Results show it exerts a neuroprotective effect at the plasma membrane [1]. Morito K. et al find formononetin binds well to human estrogen receptor beta and alpha proteins [2]. Formononetin inhibits lecithin peroxidation which is induced by hydroxy radical generation, by interaction of haemoglobin and hydrogen peroxide, by superoxide anion generation by xanthine-xanthine oxidase [3].It is reported that formononetin inhibits proliferation, collagen and total protein synthesis, migration and MAP kinase activity in human aortic smooth muscle cells [4].

Literatures demonstrate formononetin also possesses anti-H. pylori activity. It may be a useful chemopreventive agent for peptic ulcer or gastric cancer in H. pylori-infected individuals [5].

1. Zhao L. Chen Q. Diaz Brinton R. Experimental Biology & Medicine. 227:509-19 (2002).
2. Morito K. Aomori T. Hirose T. et al. Biological & Pharmaceutical Bulletin. 25:48-52 (2002).
3. Toda S. Shirataki Y. Phytotherapy Research. 13:163-5 (1999).
4. Dubey RK. Gillespie DG. Imthurn B. et al. Heypertension. 33:177-82 (1999).
5. Fukai T. Marumo A. Kaitou K. et al. Life Sciences. 71:1449-63 (2002).

Formononetin
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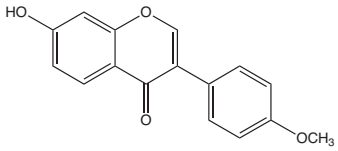

Geldanamycin

Geldanamycin is a benzoquinoid ansamycin antibiotic having antitumor activities. It selectively inhibits the expression of c-myc, proto-oncogene, along with suppression of DNA replication in L5178Y cells [1].

Geldanamycin can inhibit tyrosine kinases. It causes a dose-dependent G2 arrest and reversible inhibition of entry into the S phase in A2780 cells. It induces increased P53 protein involved in cell-cycle arrests of human ovarian tumor cells. Geldanamycin can induce increased P53 protein by a mechanism not involving DNA damage. Furthermore, the cell cycle arrests and cytotoxic effects of geldanamycin in A2780 human ovarian cells are not mediated by P53-dependent pathway [2].

The heat shock protein 90 (HSP90) is required for the assembly and activation of telomerase in human cells. Telomerase is a target of geldanamycin and its inhibition may contribute to the cytotoxic activity of the drug [3]. HSP90 serves as a chaperone protein and plays a critical role in tumor cell growth and/or survival. Geldanamycin, a specific inhibitor of HSP90, is known to disrupt signaling pathways by inducing destabilization of the enzyme complexes and degradation of signaling intermediates [4]. It inhibits cancer cell proliferation, down-regulates oncoproteins, and inhibits EGF-induced invasion in thyroid cancer cell lines [5]. It inhibits the 90 kDa heat shock protein that reglates cell signal transduction, and telomerase activity, and induces apoptosis [6].

1. Yamaki H. Iguchi-Ariga SM. Ariga H. J Antibiot (Tokyo). 42:604-10 (1989).
2. McIlwrath AJ. Brunton VG. Brown R. Cancer Chemother Pharmacol. 37:423-8 (1996).
3. Villa R. Folini M. Porta CD. et al Carcinogenesis. 24: 851-9 (2003).
4. Irina A. Vasilevskaya and Peter J. O'Dwyer CancerResearch 59, 3935-3940, (1999).
5. Park JW. Yeh MW. Wong MG. et al. J Clin Endocrinol Metab. 88(7): 3346-53, (2003).
6. Kim S. Kang J. Hu W. Int J Cancer. 103:352-9 (2003).

Geldanamycin
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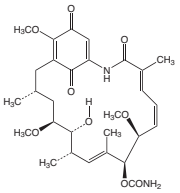

GEMCITABINE HCl

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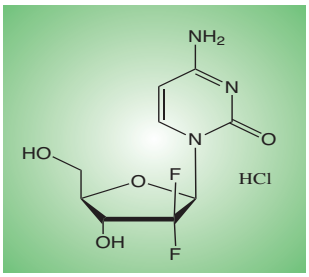


Gemcitabine Hydrochloride is a chemotherapeutic agent that has demonstrated activity against various solid tumors such as non-small cell lung cancer (NSCLC), pancreatic cancer, ovarian cancer, renal cancer, neck cancer and breast cancer[1-6].

Gemcitabine is a deoxycytidine-analogue of cytarabine (1-beta-D-arabinofuranosylcytosine, Ara-C) which is known to be the most effective chemotherapy drug used to treat adult acute leukemia[1]. In biological systems, the phosphorylated derivative of Gemcitabine retains its anti-tumor activities in addition to having a longer half-life than that of Ara-C[2,4]. Gemcitabine acts by inhibiting ribonucleoside diphosphate reductase activity and DNA synthesis[2].

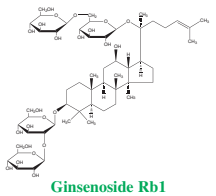
1. Matsui K, Fukuoka M. Gan To Kagaku Ryoho. 19: 2127-32 (1992).
2. Hui YF, Reitz J. Am J Health Syst Pharm. 54:162-170 (1997).
3. Lilenbaum RC, Green MR. J Clin Oncol. 11: 1391-402 (1993).
4. Ruiz van Haperen VW, Peters GJ. Pharm World Sci. 16: 104-12 (1994).
5. Bouffard DY, Momparler LF, Momparler RL. Anticancer Drugs. 1: 49-55 (1991).
6. Christgen M, Schniewind B, Jueschke A, Ungefroren H, Kalthoff H. Cancer Lett. 227(2):193-200 (2005).

Ginsenosides

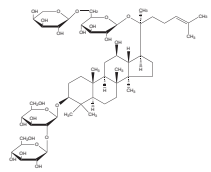
Ginseng has been used in the Orient as a tonic for over 2000 years. Modern research has determined that this herb has pharmacological properties in the area of cardiovascular, endocrine and immune systems[1]. The most widely used species of ginseng are the Panax ginseng, also known as Korean or Chinese ginseng, Panax quinquefolius, American ginseng, and Panax japonicus, Japanese ginseng. The active ingredients in ginseng are ginsenosides, which belong to the chemical class of compounds known as steroidal saponins. Many of these ginsenosides have been isolated and identified. They can be separated into two groups: the panaxadiols and panaxatriols. In addition to the steroidal saponins other active ingredients such as ginsenoside Ro, an oleanic acid have also been identified.

Various ginsenosides have been found to have anticancer properties against tumor cell lines and tumor growth. Ginsenoside Rg3 inhibits growth in human prostate carcinoma LNCaP cells by activating cyclin-kinase inhibitors arresting LNCaP cell at G1 phase and inducing apoptosis[2]. Ginsenoside Rh2 inhibits growth of MCF-7 human breast carcinoma cells by "inducing protein expression of p21 and reducing the protein levels of cyclin D which resulted in the down-regluation of cyclin/Cdk complex kinase activity, decreasing phosphorylation of pRb, and inhibiting E2F release"[3]. Ginsenoside Rh2 given by p.o. inhibits tumor growth in nude mice bearing human ovarian cancer cells[4]. Ginsenosides Rb2 and Rg3 were found to inhibit B16-BL6 melanoma and colon 26-M3.1 metastasis in syngeneic mice[5]. The inhibition appears to be associated with the antiangiogenic effects of these compounds[6]. Ginsenosides Rb1 and Rg1 are the main ingredients responsible for the CNS effects of ginseng. Rb1 and Rg1 were shown to protect neurons from ischemic damage[7,8]. Rb1, Rg1, as well as Re were found to prevent scopolamine-induced memory deficits [9-11].

1. For review: Attele, A.S., Wu, J.A., et al. Biochem. Pharm. 58:1685-93 (1999).
2. Liu, W.K., Xu, S.X., Che, C.T. Life Sci. 67:1297-306 (2000).
3. Oh, M., Choi, Y.H., Choi, S., et al Int. J. Oncol. 14:869-75 (1999).
4. Nakata, H., Kikuchi, Y., Tode, T. et al. Jpn J. Cancer Res. 89:733-40 (1998).
5. Mochizuki, M., Yoo, Y.C., et al. Biol Pharm Bull. 18:1197-202 (1995).
6. Sato, K., Mochizuki, M., Saiki, I., et al. Biol Pharm Bull 17:635-9 (1994).
7. Lim, J.H., Wen, T.C., Marsuda,, S., et al. Neurosci. Res. 28:191-200 (1997).
8. Wen, T.C., Yoshimura, H., Matsuda, S., et al. Acta Neuropathol. 91:15-22 (1996).
9. Benishin, C.G., Lee, R., Wnag, L.C.H., Liu, HJ., Pharmacology 42:223-9 (1991).
10. Yamaguchi, Y., Haruta, K., et al. Psychoneuroendocrinology 20:645-53 (1995).
11. Yamaguchi, Y., Higashi, M., Kobayashi, H. Biomed Res 17:487-90 (1996).



Ginsenoside Rb1
See Page 133



Ginsenoside Rb2
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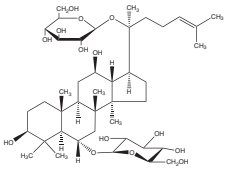
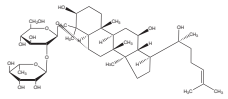


Ginsenoside Rg1
See Page 133



Ginsenoside Rg2
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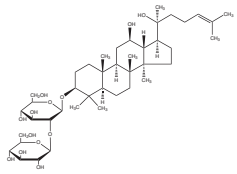

Ginsenoside Rg3
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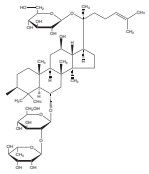


Ginsenoside Re
See Page 133

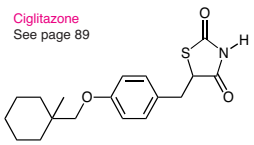
Glitazones

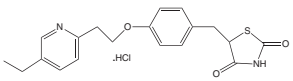
Thiazolidinediones are a new class of drugs used for the treatment of type 2 diabetes and act by improving insulin sensitivity in adipose tissue, liver and sketetal muscle [1]. Both rosiglitazone and pioglitazone are registered as monotherapy and in combination with sulfonylureas and metformin in type 2 adult diabetes patients.

Ciglitazone, a PPAR-gamma agonists, is an antidiabetic thiazolidinedione in In C57BL/6L-ob/ob mice, treatment with 100mg/kg ciglitazone for 2 days elicited a drastic fall in blood glucose [2]. Literature shows ciglitazone can induce apoptosis and inhibit COX-2 [3,4].

1. Trisha M O'Moore-Sullivan and Johannes B Prins The Medical J of Australia 176(8):381-386 (2002).
2. Chang AY, Wyse BM, Gilchrist BJ, et al. Diabetes. 32:830-8 (1983).
3. Han S, Roman. J. Biochem Biophys Res Commun. 314:1093-9 (2004).
4. Ignatenko NA, Babbar N, Mehta D, et al. Mol Carcinog. 39:91-102 (2004).

Ciglitazone
See page 89





Pioglitazone
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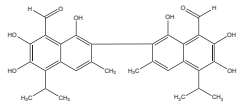
Gossypol

Antineoplastic Agent from Cotton Seeds



See Page 137

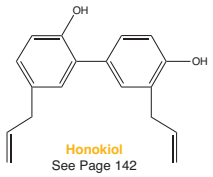
Gossypol is a potential male anti-fertility agent from cottonseed that exhibits a wide spectrum of toxicity [1,2]. It was found to have differential cytotoxic effects on certain tumor types such as melanoma and colon carcinoma [3]. Literatures suggest that the gossypol-induced cell death is via apoptotic pathway and may not be cell cycle specific [4].

Absence of telomerase activity causes replication senescence and cell death. Telomerase inhibitors are being considered as potential anticancer drugs. Gossypol is a potent telomerase inhibitor [5]. It has mild inhibiting influence on the replication of HIV via possible inhibition of reverse transcriptase HIV.

Because of its spermatotoxic and cytotoxic activity, gossypol is a potential new drug for testicular cancer therapy.

1. Nadakavukaren MJ. Sorensen RH. Tone JN. Cell Tissue Res. 204(2):293-6 (1979).
2. Sakesena SK. Salmonsen R. Lau IF. Chang MC. Contraception. 24(2):203-14 (1981).
3. Tuszynski GP. Cossu G. Cancer Res. 44(2):768-71 (1984).
4. Wang X. Wang J. Wong SC. Life Sciences. 67(22):2663-71 (2000).
5. Mego M. Bratisl Lek Listy. 103(10):378-81 (2002).

Honokiol



Honokiol
See Page 142

Honokiol is a phenolic compound isolated from the Chinese medicinal herb Magnolia officinalis. It was found to induce apoptosis in human squamous lung cancer CH 27 cells and lymphoid leukemia Molt 4B cells and inhibit migration of human fibrosarcoma HT-180 cells and leukotriene synthesis in rat basophilic leukemia cells 1,2,3,4.

Honokiol inhibits oxygen consumption and malondialdehyde formation 550 times and is 680 times more potent, respectively, than alpha-tocopherol [5]. Through inhibiting intracellular GSH depletion, it can protect GalN-induced hepatotoxicity.

Fukuyama, et al. claimed that honokiol had neurotrophic activity on the cultures of rat cortical neurons at concentration from 0.1 to 10 μM [6]. Tsai, et al reported that honokiol elicited a concentration-dependent enhancement of K+-evoked ACh release from rat hippocampal slices [7].

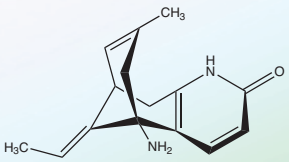
Other interesting biological activities include effects against arrhythmia during myocardial ischemia, selectively inducing an anxiolytic effect with less liability of eliciting motor dysfunction and sedation or disinhibition, and possessing antimicrobial and antifungal activity with a relatively low cytotoxic effect on human gingival cells.

1 Yang, SE., Hsieh, MT., Tsai, TH., Hsu, SL. Biochemical Pharmacology. 63:1641-51 (2002).
2. Hibasami, H., Achiwa, Y. et al. International Journal of Molecular Medicine. 2:671-3 (1998).
3. Nagase, H., Ikeda, K., Sakai, Y. Planta Medica. 67:705-8 (2001).
4. Hamasaki, Y., Muro, E., Miyanji, S. et al. International Archives of Allergy & Immunology. 110:278-81 (1996).
5. Chiu, JH., Ho, CT., Wei, YH., Liu, WY., Hong, CY. Life Sciences. 61:1961-71 (1997).
6. Fukuyama, Y., Nakade, K., Minoshima, Y., et al. Bioorganic & Medicinal Chemistry Letters. 12:1163-6 (2002).
7. Tsai, TH., Westly, J., Lee, TF., Chen, CF., Wang, LC. Planta Medica. 61:477-9 (1995).

Huperzine A

Acetylcholinesterase is a serine hydrolase enzyme catalyzing the hydrolysis of acetylcholine. Huperzine A, an alkaloid isolated from *Huperzia serrata*. It is a potent and reversible acetylcholinesterase inhibitor with a prolonged biological half-life. It was 8-fold more potent than donepezil in increasing cortical acetylcholine level [1].

Huperzine A exhibits memory-enhancing activities and can reduce neuronal cell death caused by glutamate [2,3]. Huperzine A has been approved as a drug for mild to moderate Alzheimer's disease in China [4].



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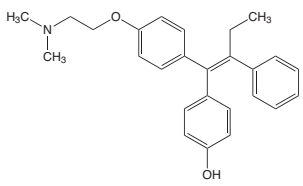
1. Liang YQ, Tang XC. Neuroscience Letters. 361(1-3): 56-9 (2004).
2. Bai DL, Tang XC, He XC. Curr Med Chem. 7(3):355-74 (2000).
3. Wang LS, Zhou J, et al. Zhonghua Er Ke Za Zhi. 41(1):42-5 (2003).
4. Jiang H, Luo X, Bai D. Current Medicinal Chemistry. 10(21):2231-52 (2003)

HYDROXYTAMOXIFEN

(Z)-4-Hydroxytamoxifen (4OHT) is an active metabolite of (Z)-tamoxifen (TAM), which is a first generation selective estrogen receptor (ER) modulator (SERM) and TAM is extensively used in estrogen-dependant breast cancer treatment.[1] 4OHT has higher binding affinity to ER than its precursor TAM and is 50-100 fold more potent for inhibiting normal human breast cell lines' multiplication[2]. (E)-4-hydroxytamoxifen also has antiestrogen activity, however, it only has 5% of 4OHT affinity for ER[3].

4OHT and TAM were found to be intramembranous inhibitors of lipid peroxidation and scavengers of peroxyl radicals[4]. 4OHT was reported to protect against oxidative stress in brain mitochondria[5]. TAM and 4OHT induce depolarization of the mitochondrial membrane potential and cause a decrease in mitochondrial ATP levels[6].

1. Jordan, V. C. J. Med. Chem. 46, 883 (2003).
2. Malet, C.; Gompel, A.; Spritzer, P.; Bricout, N.; Yaneva, H.; Mowszowicz, I.; Kuttenn, F.; Mauvais-Jarvis, P. Cancer Res. 48, 7193-7199 (1988).
3. Murphy, C. S.; Langan-Fahey, S.M.; McCague, R.; Jordan, V. C. Mol. Pharmacol. 38, 737-743 (1990).
4. Custódio, J. B. A.; Dinis, T. C. P.; Almeida L. M.; Madeira, V. M. C. Biochem. Pharmacol. 47, 1989-1998 (1994).
5. Moreira, P. I.; Custódio, J. B.; Oliveira C. R.; Santos, M. S. Biochem. Pharmacol. 68, 195-204 (2004).
6. Cardoso, C. M. P.; Moreno, A. J. M.; Almeida, L. M.; Custódio, J. B. A. Toxicol. In Vitro 17, 663-670 (2003).



(E)-4-Hydroxytamoxifen
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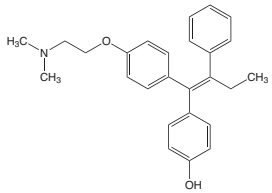


(Z)-4-Hydroxytamoxifen
See Page 144

Hypocrellins

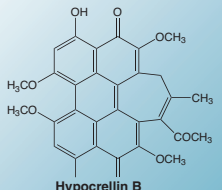
Photosensitizers in Photodynamic Therapy

Hypocrellin A (HA) and B (HB) are peryloquinones isolated from the fungi Hypocrella bambusae (B. et Br) Sacc. and Shiraia bambusicola P. Heen. These pigments have been used in combination with phototherapy to treat various skin diseases. Recently, they have been found to have antiviral activity and are potent photosensitizers in photodynamic therapy of cancer[1-3].

HA was found to have photoinduced antiviral activity against vesicular stomatitis virus and human immunodeficiency virus type I[4]. The antiviral activity is oxygen dependent. Singlet oxygen is most likely involved in the virus inactivation[5].

Singlet oxygen and other radical species are also responsible for the photodynamic therapy of tumors using HA and HB as photosensitizers[6,7]. Many water soluble derivatives of hypocrellins have been synthesized to enhance the photosensitizing efficacy in cancer PDT and a few have been used in preclinical trial[8,9].

1. Hirayama J. Ikebuchi K. Abe H. et al.,S. Photochem Photobiol. 66(5):697-700 (1997).
2. Fu NW. Chu YX. Chung Kuo Yao Li Hsueh Pao. 10(4):371-3 (1989).
3. Zhang J. Cao EH. et. al.,. J Photochem Photobiol B. 43(2):106-11 (1998).
4. Hudson JB. Zhou J. et. al.,. Photochem Photobiol. 60(3):253-5 (1994).
5. Park J. English DS. et.al.,. Photochem Photobiol. 68(4):593-7 (1998).
6. Zhang ZY. Zang LY. Xu GR. Tao NB. Wang DH. Sci China B. 32(9):1063-71 (1989) .
7. Nenghui W. Zhiyi Z. J Photochem Photobiol B. 14(3):207-17 (1992).
8. Yuying H. Jingyi A. Lijin J. Free Radic Biol Med. 26(9-10):1146-57 (1999).
9. Miller GG. Brown K. Ballangrud AM. et. al.,. Photochem Photobiol. 65(4):714-22 (1997).



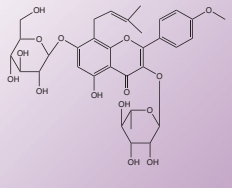
Hypocrellin B
See Page 145

Icariin

Icariin is a flavonol glycoside isolated from Epimedium. Lee, et al discovered that icariin significantly reduced the level of glutamic pyruvic transaminase and sorbitol dehydrogenase released resulting in a 76% protection from toxicity at concentrations of 1 μM to 20 μM [1]. Zhao, et al concluded that icariin had the effects of induction of differentiation on HL-60 cells and the mechanism might be related to elevating the cAMP/cGMP ratio [2].

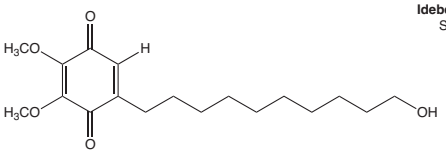
He, et al reported that icariin in certain concentrations could increase lymphokine-activated killer cell (LAK) activity in both tumor patients and healthy donors and natural killer cell activity in tumor patients. Icariin stimulates production of tumor necrosis factor-alpha in monocytes from healthy donors. They claimed that generation of LAK cells in the presence of an appropriate dose of icariin might be superior to interleukin-2 alone [3].

1. Lee, MK., Choi, YJ., Sung, SH., Shin, DI., Kim, JW., Kim, YC. Planta Medica. 61(6):523-6 (1995).
2. Zhao, Y., Cui, Z., Zhang, L. Chinese Journal of Oncology. 19(1):53-5 (1997).
3. He, W., Sun, H., Yang, B., Zhang, D., Kabelitz, D. Arzneimittel-Forschung. 45(8);910-3 (1995).



Icariin
See Page 145

IDEBENONE



Idebenone
See Page 146

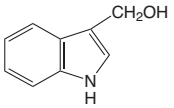
Protective Efficacy Against Neurotoxicity

Idebenone, a synthetic coenzyme Q analogue, is an antioxidant that is currently used in the treatment of vascular and degenerative diseases of the central nervous system [1]. Nagaoka *et. al.* show idebenone inhibits the development of stroke and renal vascular lesions in hypertensive rats [2]. Its protective effects involve the redox cycling between its hydroquinone and quinone forms [3].

In vitro data suggests that Idebenone (5mg/kg daily) protects he Friedreich's ataxia patients heart muscle from iron-induced injury [4].

1. Mordente A, Martorana GE, Minotti G, Giardina B. Chem Res Toxicol. 11:54-63 (1998).
2. Nagaoka A, Shino A, Kakihana M, Iwatsuka H. Jpn J Pharmacol. 36:291-9 (1984).
3. Civenni G. Bezzi P. et al. Eur J Pharmacol. 370:161-7 (1999).
4. Rustin P. von Kleist-Retzow JC. et al. Lancet. 354: 477-9 (1999).

Cancer Preventive Agents from Vegetables



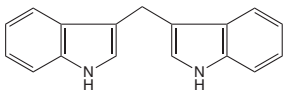
Indole-3-carbinol
See Page 146

Several indole-based compounds are found in cruciferous vegetables such as cabbage, broccoli, and brussel sprouts[1,2]. They are derived from a common parent compound, glucobrassicin. Consumption of these vegetables has been shown to prevent certain types of cancer. Researchers have demonstrated that indoles possess chemopreventive properties[3,4].

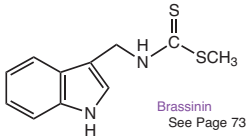
Indole-3-carbinol (I3C) inhibits carcinogenesis at the initiation stage[5]. It has been shown to inhibit chemically-induced carcinogenesis in several animal models[5,6]. However, enhanced liver carcinogenesis in trout and lung carcinogenesis in mice indicate that I3C may also act as a promoter[7,8]. The induction of phase I as well as phase II drug metabolizing enzymes may explain the simultaneous occurrence of both chemopreventive and co-carcinogenic properties in I3C [5].

3,3'-Diindolylmethane, a dimer of I3C, induces apoptosis in human cancer cells[9]. It inhibits several cytochrome P450 isozymes *in vitro* and may be the active metabolite of I3C responsible for its chemopreventive properties[10]. Brassinin, isolated from Chinese cabbage[11], has been found to inhibit dimethylbenz[a]anthracene-induced preneoplastic lesions in mouse mammary gland cultures[11,12].

1. Goetz, J.K., Schravdolf, H., R Phytochem., 22:905-908 (1983).
2. Takasugi, M., Katsui, M., et al. J. Chem. Soc. Chem. Commun., 1077-1078 (1986).
3. Wattenberg, L.W., and Loub, W.D. Cancer Res., 38:1410-1413 (1978).
4. Chung, F.L., Morse, M.A., and Eklind, K.I. Cancer Res., 52:2719s-2722s (1992).
5. Grubbs, C.J., Steele, V.E., Casebolt, T.,et al., Anticancer Res., 15:709-716 (1995).
6. Arnao, M.B., Sanchez-Bravo, J., et al. Biochem. Mol. Biol. Int., 39:1125-1134 (1996).
7. Dashwood, R.H., Fong, A.T., Hendricks, J.D. et al. Basic Life Sci., 52:361-365 (1990).
8. Bailey, G.S., Dashwood, R.H., et al. IARC Sci. Publ., 105:275-280 (1991).
9. Ge, X., Tannai, S., et al., Biochem. Biophys. Res. Commun., 228:153-158 (1996).
10. Stresser, D.M., Bjeldanes, L.F.,et al., J. Biochem. Toxicol., 10:191-201 (1995).
11. Mehta, R.G., Liu, J., Constantinou, A., et al.,Carcinogenesis, 16:399-404 (1995).
12. Mehta, R.G., Liu, J., et. al., Anticancer Res., 14:1209-1214 (1994).



3,3'-Diindolylmethane
See Page 107

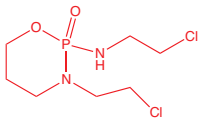


Brassinin
See Page 73

Ifosfamide

Antineoplastic

Ifosfamide (IF) is a cell cycle non-specific alkylating agent that belongs to a class of anticancer drugs called nitrogen mustards. It is a structural analog of cyclophosphamide. The drug is activated in human liver by a 4-hydroxylation reaction catalyzed by multiple cytochrome P-450 (CYP) enzymes[1]. The product is 4-hydroxy IF (4-OH-IF), which ultimately yields the alkylating mustard isophosphoramide[2].

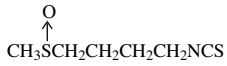


See Page 146

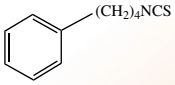
Appearance:	**White Crystal**
Molecular Formula:	**$C_7H_{15}Cl_2N_2O_2P$**
Molecular Weight:	**261.07**

1. May-Manke, A., Kroemer, H., Hempel, G., et al., Cancer Chemother Pharmacol, 44:327-34 (1999).
2. Brain, E.G., Yu, L.J., Gustafson, K., Drewes, P., Waxman, D.J., Br J Cancer, 77:1768-76 (1998).

Isothiocyanates



D,L-Sulforaphane
See Page 219



4-Phenylbutyl isothiocyanate
See Page 190

Isothiocyanates occur naturally as glucosinolates in edible plants[1,2]. The consumption of cruciferous vegetables is the main dietary source of isothiocyanates[3]. Benzyl and phenethyl isothiocyanates (BITC, PEITC) have been found to inhibit chemically-induced carcinogenesis in several animal models[4,5]. BITC is particularly effective against benzo[a]pyrene-induced lung tumorigenesis, while PEITC inhibits NNK-induced lung carcinogenesis[6].

3-Phenylpropyl and 4-phenylbutyl isothiocyanates (PPITC, PBITC) are synthetic compounds that show anticarcinogenic effects[7]. Studies on the effect of alkyl chain length of phenylalkyl isothiocyanates on tobacco specific nitrosamine-induced lung tumorigenesis revealed that PPITC and PBITC and more effective than the naturally occuring isothiocyanates[8].

Sulforaphane, isolated from broccoli[9], has been found to inhibit chemically-induced mammary tumors in rats[10]. Many sulforaphane analogues have been previously isolated from plants[11]. Their enzyme-inducing activity was less potent than that of sulforaphane[9].

Isothiocyanates have been found to induce activity of the detoxifying enzymes system, glutathione S-transferase[5,12] and to suppress carcinogen activation by cytochromes P450[4,5,13], particularly P450 2B1, the major enzyme involved in NNK activation[14].

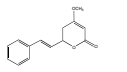
LKT Laboratories, Inc. offers the natural chiral R-sulforaphane, its synthetic enantiomer S-sulforaphane, and synthetic R,S-sulforaphane. Phenylalkyl isothiocyanates and phenethyl glucosinolate are also available in high purity.

1. Tookey, H. L.;et. al., Glucosinolates. In Toxic Constituents of Plant Food Stuffs, pp. 103-142 (1980).
2. Kjaer, A. Chemistry of Organic Sulfur Compounds, Vol. 1, pp. 409-420 (1961).
3. Fenwick, G. R.; Heaney, R. K.; Mullin, W. J. CRC Crit. Rev. Food Sci. Nutr. 18, 123-201 (1983).
4. Wattenberg, L. W. Carcinogenesis. 8, 1971-1973 (1987).
5. Chung, F.-L.; Jachatz, A.; Vitarius, J.; Hecht, S.S. Cancer Res. 44, 2924-2928 (1984).
6. Lin, J.M., Amin, S., Trushin, N., and Hecht, S.S. Cancer Lett. 74:151-159 (1993).
7. Zhang, Y., and Talalay, P. Cancer Res. 54(7 Suppl):1976S-1981S (1994).
8. Morse, M. A.; Eklind, K. I.; Amin, S. G.; Hecht, S. S.; Chung, F.-L. Carcinogenesis. 10, 1757-1759 (1989).
9. Zhang, Y., Talalay, P., Cho, C., and Posner, G.H., Proc. Natl. Acad. Aci. USA 89, 2399-2403 (1992).
10. Zhang, Y., Kensler, T.W., et al,. Proc. Natl. Acad. Aci. USA 91, 3147-3150 (1994).
11. Kjaer, A., Fortschr. Chem. Org. Naturst. 18, 122-176 (1960).
12. Benson, A. M.; Barretto, P. B. Cancer Res. 45, 4219-4223 (1985).
13. Morse, M. A.; Amin, S. G.; Hecht, S. S.; Chung, F.-L. Cancer Res. 49, 2894-2897 (1989).
14. Conaway, C.C., Jiao, D., and Chung, F.L. Carcinogenesis, 17:2423-2427 (1996).

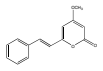
Kava Compounds

Kava extract is prepared from the South Pacific plant called *Piper methysticum*. The most often used extract has an enriched kavalactone contents of 30 %. The kava lactones (α-pyrones) appear to be the active ingredients responsible for the sedative and psychoactive properties of kava[1,2]. There is dose dependent effect of these pure components on the influence of dopamine level[3,4]. Low dose kavain treatment in rats elicits a decrease in dopamine level while high dose or chronical administration of the same compound produce no change in dopamine or serotonine level in the tissues of rats.

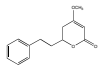
Several pure components of kava, desmethoxyyangonin (5,6-dehydrokawain), methysticin yangonin, etc., have been found to inhibit MAO-B in intact human platelets, which was thought to be an important mechanism for their psychotropic activity[5]. The specific binding behavior of the GABA-A receptor was found to be altered by these compounds as well[6].



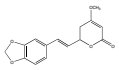
Kawain
See Page 152



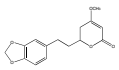
5,6-Dehydrokawain
See Page 102



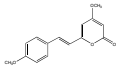
7,8-Dihydrokawain
See Page 107



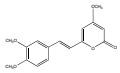
Methysticin
See Page 167



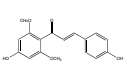
Dihydromethysticin
See Page 107



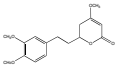
Yangonin
See Page 243



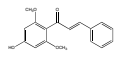
11-Methoxyyangonin
See Page 166



Flavokawain A
See Page 122

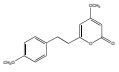


11,12-Dimethoxydihydrokawain
See Page 108

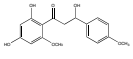


Flavokawain B
See Page 122

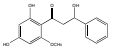
6-Phenyl-hexa-3,5-dien-2-one
See Page 191



Dihydroyangonin



1-(2,4-Dihydroxy-6-methoxy-phenyl)-3-hydroxy-3-(4-methoxy-phenyl)-propan-1-one
See Page 107

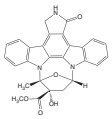


1-(2,4-Dihydroxy-6-methoxy-phenyl)-3-hydroxy-3-phenyl-propan-1-one
See Page 107

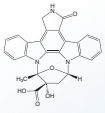
1. Jamieson, DD., Duffield, PH. Clin Exp Pharmacol Physiol 17:495-507 (1990).
2. Smith, KK., Dharmaratne, HR., Feltenstein, MW., et al Psychopharmacologia 15:86-90 (2001).
3. Baum, SS., Hill, R., et al. Prog Neuropsychopharmacol Biol Psychiatry 22:1105-20 (1998).
4. Boonen, G., Gerger, B., kuschinsky, K., Haberlein, H. Planta Med. 64:507-10 (1998).
5. Uebelhack, R., Franke, L., Schewe, HJ. Pharmacopsychiatry 31:187-92 (1998).
6. Boonen, G., Haberlein, H. Planta Med 64:504-6 (1998).

Protein Kinase Inhibitors

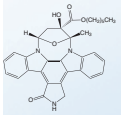
See Page 150–1



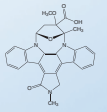
K252a



K252b



KT5720



KT5823

Nerve Growth Factor (NGF) autocrine systems are found to play an important role in the mechanisms associated with psoriasis and other hyper-proliferative skin disorders such as cancer[1]. NFG up-regulates NFG mRNA in keratinocytes, which leads to keratinocyte expression of high-affinity (TrkA) NFG-receptors in epidermic basal layer. In the absence of exogenous NFG, K252 is an effective inhibitor of tyrosine kinase phosphorylation, blocking high-affinity nerve growth receptor proliferation[1].

K252a is a potent protein kinase inhibitor that has shown promise fighting Met-driven proliferation of gastric carcinoma cells[2,3]. **K252b** is an ectoprotein kinase inhibitor that could have profound implications on the treatment of prostate cancer[4,5]. **KT5720** is a protein kinase inhibitor that has been shown to reduce enzyme activity in INF-alpha, thereby creating a potential pathway to treat tumors[6]. **KT5823** is a K252 derivative. These findings suggest that K252 derivatives (by inhibiting the phosphorylation of tyrosine kinase) can potentially regulate synaptic plasticity and inhibit hyper-proliferative conditions and tumors.

1. Pincelli C, Marconi A. j Dermatol Sci. 22: 71-9 (2000).
2. Alessandro M, Silvia M, Paolo A, Emma T, Carola P, Oncogene, 21(32): 4885-4893 (2002).
3. Tapley P, Lamballe F, Barbacid M. Oncogene. 7(2):371-81 (1992).
4. Ellen M-C, Kita T, Shih W, Dipaola R, Chin K Clinical Cancer Research. 6: 2309-2317 (2000).
5. Teshima et. al. Journal of immunology, 159(2): 964-969 (1997).
6. Naviglio et. al. J Interferon Cytokine Res. 27(2):1 (2007).

Laminin

Cys-Asp-Pro-Gly-Tyr-Ile-Gly-Ser-Arg

Laminin peptide CDPGYIGSR
See Page 155

Ser-Ile-Lys-Val-Ala-Val

Laminin peptide SIKVAV
See Page 154

Laminin, a large multidomain glycoprotein specific to basement membranes, is an important promoter of extracellular matrix interactions [1]. The YIGSR sequence on the B1 chain in laminin can decrease tumor growth and metastasis, whereas the SIKVAV on the A site can increase tumor growth and metastasis [2]. CDPGYIGSR was found to promote tumor cell migration in a larger degree than the constituent pentapeptide YIGSR [3].

LKT Labs offers laminin peptide YIGSR, YIGSR-NH2, SIKVAV and CDP-GYIGSR.

1. Nomizu M. Otaka A. et al. Journal of Biological Chemistry. 269(48):30386-92 (1994).
2. K Yamamura, MC Kibbey and HK Kleinman. Cancer Research 53(2):423-428 (1993).
3. Iwamoto Y. Graf J. Sasaki M. et al. Journal of Cellular Physiology. 134(2):287-91 (1988).

Tyr-Ile-Gly-Ser-Arg

Laminin peptide YIGSR
See Page 154

Tyr-Ile-Gly-Ser-Arg-NH_2

Laminin peptide YIGSR-NH2
See Page 154

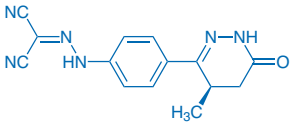
Levosimendan

Levosimendan is a new cardiotonic drug for acute and decompensated heart failure treatment. The mechanism of action is increasing myofilaments calcium sensitization, activating ATP-dependent potassium channels, and reducing circulating proinflammatory cytokine interleukin-6 and soluble apoptosis mediators [1,2]. In the absence of cardiac troponin I, lecosimendan was shown to bind on the C-terminal domain of cardiac troponin C in an animal model [3].

Cardiac troponin C belongs to the EF-hand superfamily of calcium-binding proteins and plays an essential role in the regulation of muscle contraction and relaxation [4,5]. In patients with acute coronary syndromes cardiac troponins are sensitive markers of myocardial damage [6]. Unlike the older generation of positive ionotropic drugs, levosimendan does not induce calcium-related deleterious effects such as arrhythmias or apoptosis [7].

The pharmacokinetics of levosimendan are similar in healthy subjects and patients with heart failure and remain relatively unaltered by age, sex, and organ dysfunction [8].

1. Cleland JG, Nikitin N, McGowan J. Expert Rev Cardiovasc Ther. 2(1):9-19 (2004).
2. Parissis JT, Adamopoulos S, et al. Am J Cardiol. 93(10):1309-12 (2004).
3. Sorsa T, Pollesello P, et al. Eur J Pharmacol. 486(1):1-8 (2004).
4. Tikunova SB, Davis JP. J Biol Chem. 279(34):35341-52 (2004).
5. Gomes AV, Potter JD, Szczesna-Cordary D. IUBMB Life. 54(6):323-33 (2002).
6. Amit G, Gilutz H, Zahger D. Harefuah 142(2):109-14 (2003).
7. Sorsa T, Pollesello P, Solaro RJ. Mol Cell Biochem. 266(1-2):87-107 (2004).
8. NG TM. Pharmacotherapy. 24(10):1366-84 (2004).



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Citrus Limonoids

From Grapefruit

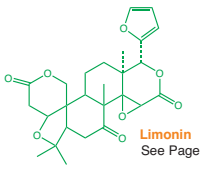
Limonin and **nomilin** are two of the most common limonoids present in Rutaceous plants which include the common edible fruits: orange, lemon, lime, and grapefruit[1,2]. They have been detected in the tissues, seed, peel, and juice of these fruits[3]. The ratio of free limonin and nomilin in citrus juices depends on a number of factors which include the variety of the fruit, the season of harvest, the time after the juice is made, and whether the juice has been subjected to heat treatment. In general, the concentration of limonin is 5 to 10 times higher than that of nomilin. The bitterness of limonin can be tasted when its concentration in the juice is greater than 6 ppm[4-6].

Limonin and nomilin have been found to inhibit chemically -induced tumor formation. When given by p.o. intubation, limonin and nomilin were found to inhibit benzo(a)pyrene-induced tumor formation in the forestomach of mice.

The anticarcinogenicity of nomilin and limonin was correlated with their ability to induce increased activities of the detoxifying enzyme, glutathione S-transferase, in mice[7]. Nomilin was found to be a more potent inducer than limonin. The inhibition of dimethylbenz(a)anthracene-induced tumors in the hamster cheek pouch[8] indicated that these limonoids may be effective inhibitors at both the initiation and promotion stages of carcinogenesis.

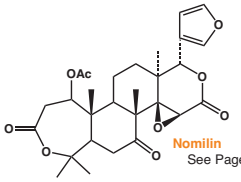
Limonin and nomilin were also shown to inhibit proliferation of MDA-MB-435 estrogen receptor-negative human breast cancer cells[9].

1. Maier, V. P., Bennett, R. D., et al. Citrus Science and Technology, Vol I, pp. 355-396 (1977).
2. Rouseff, R.L., J. Agric. Food Chem., 30:504-507 (1982).
3. Maier, V. P., Hasegawa, S. Bennett, R. D., et al. Citrus Nutrition and Quality, pp 63-81 (1980).
4. Guadahni, D.G., Maier, V.P., and Turnbaugh, J. C. J. Food Sci., 24:1277-1288(1973).
5. Hashinaga, F., Eijima, H., Nagahama, H., and Ito, S. Bull. Fac. Agric. Kagoshima Univ., 27:171(1977).
6. Rouseff, R.L. and Mathews, R.F., J. Food Sci. 49:777-779 (1984).
7. Lam, L.K.T. and Hasegawa, S. Nutr. Cancer, 12:43-47 (1989).
8. Miller, E. G., Fanous, R., Rivera-Hidalgo, F., Binnie, W.H., Hasegawa, S., and Lam, L.K.T. Carcinogenesis, 10:1535-1537 (1989).
9. Guthrie, N., Chambers, A.F., and Carroll, K.K. Proc. Am. Assoc. Cancer Res., 38:#759 (1997).



Limonin

See Page 158



Nomilin

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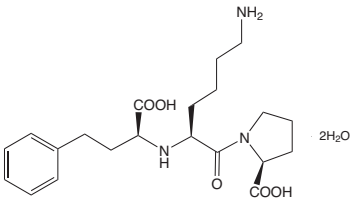
Lisinopril



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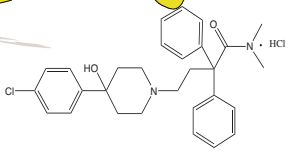
Angiotensin-converting enzyme (ACE) inhibitors inhibit angiogenesis. Lisinopril is an ACE inhibitor. It reduces immunoreactive AT1-receptor expression on the neovascularized vascular endothelial cells [1].

Yamaguchi *et. al.* found lisinopril attenuated the induction by thrombin of PDGF-A chain mRNA levels significantly in human saphenous vein endothelial cells at doses of 10^{-6} mol/L and 10^{-5} mol/L ($p<0.05$). They suggested lisinopril suppressed intimal thickening by inhibition of PDGF-A chain gene expression in endothelial cells regrowing over vessel injury areas [2].

Following establishment of its efficacy in hypertension and congestive heart failure, lisinopril has been shown to reduce mortality and cardiovascular morbidity in patients with myocardial infarction when administered as early treatment [3].

1. Fujita M. Hayashi I., et al. Biochemical & Biophysical Research Communication. 294:441-7 (2002).
2. Yamaguchi M. Gallati H. Baur W., et al. Surgery. 115:495-502 (1994).
3. Goa KL. Balfour JA. Zuanetti G. Drugs. 52:564-88 (1996).

Loperamide



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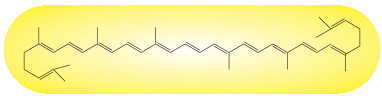
Loperamide, an opioid agonist, is a calcium channel blocker [1]. It is reported that loperamide (0.1-50 μM) produced a concentration-dependent reduction of the peak IBa with an IC50 value of 2.5 ± 0.4 microM. At the highest concentration tested, loperamide could fully block IBa in the absence of any other pharmacological agent. The fully reversible loperamide-induced block was rapid in onset and offset, and did not appear to be related to the known calmodulin antagonist actions of loperamide [2]. Animal studies indicate that P-glycoprotein limits morphine entry into the brain. P-glycoprotein is a major determinant of the pharmacokinetics and pharmacodynamics of the opioid loperamide. As a well-recognized antidiarrheal agent, loperamide has a wide spectrum of P-glycoprotein activity, acting as substrate and inhibitor. It is a substrate showing high dependence on P-glucoprotein in that basal-apical transport is nearly 10-fold greater than in the apical-basal direction in L-MDRI cells. Loperamide inhibits P-glucoprotein-mediated digoxin transport in Caco-2 cells with IC50 value of 2.5 μm [3].

In a variety of inflammatory pain models in rodents, the potency of loperamide after local administration was comparable to or better than that of morphine. Loperamide has potential therapeutic use as a peripherally selective opiate antihyperalgesic agent that lacks many of the side effects generally associated with administration of centrally acting opiates [4].

1. Hagiwara K. Nakagawasai O. Murata A. et al. Neurosci Res. 46:493-7, 2003.
2. Church J. Fletcher EJ. Abdel-Hamid K. MacDonald JF. Mol Pharmacol. 45:747-57. 1994.
3. Wandel C. Kim R. Wood M. Wood A. Anesthesiology. 96:913-20, 2002.
4. Dehaven-Hudkins DL. Burgos LC. Cassel JA. Daubert JD. J Pharmacol Exp. Ther. 289:494-502, 1999.

Lycopene



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Lycopene is one of the carotenoids that is present in fruits and vegetables. Tomatoes are the primary dietary source of lycopene[1]. Like β-carotene, lycopene acts as an antioxidant and protects cells against photooxidative damage[2].

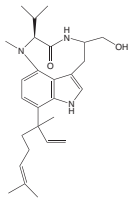
Tomato juice has been found to inhibit chemically-induced rat urinary bladder tumor formation[3]. In humans, the consumption of tomato-based foods has been associated with a reduced risk of prostate cancer, and evidence suggests that this is due to the presence of lycopene in these foods[4].

Lycopene is under investigation as a chemopreventive agent. Dietary lycopene decreases chemically-induced liver preneoplastic foci in the rat[5]. A diet supplemented with lycopene was found to significantly suppress spontaneous mammary tumor development in SHN virgin mice[6]. Recently, serum lycopene concentrations have been associated with a decreased risk of breast cancer in women[7]. The chemopreventive properties of lycopene may be attributed to its anti-oxidant nature[8]. Alternatively, a correlation has been found between the ability of carotenoids such as lycopene to enhance gap junction communication and their abilities to inhibit chemically-induced neoplastic transformations in C3H/10T1/2 cells[9].

1. Gartner, C., Stahl, W., and Sies, H. Am. J. Clin. Nutr., 66:116-122 (1997).
2. Rousseau, E.J., Davison, A.J., and Dunn, B. Free Radic. Biol. Med., 13:407-433 (1992).
3. Okajima, E., Tsutsumi, M., Ozono, S., Jpn. J. Cancer Res., 89:22-26 (1998).
4. Clinton, S.K., Emenhiser, C., et al. Jr. Cancer Epidemiol. Biomarkers Prev., 5:823-833 (1996).
5. Astorg, P., Gradelet, S., Berges, R., and Suschetet, M. Nutr. Cancer, 29:60-68 (1997).
6. Nagasawa, H., Mitamura, T., et al. Anticancer Res., 15:1173-1178 (1995).
7. Dorgan, J.F., Sowell, A., Swanson, C.A. et al., Jr. Cancer Causes Control, 9:89-97 (1998).
8. Builti, E., Munoz, N., Kato, I., et al. Int. J. Cancer, 65:317-322 (1996).
9. Zhang, L.X., Cooney, R.V., and Bertram, J.S. Carcinogenesis, 12:2109-2114 (1991).

Lyngbyatoxin A

Micromonospora sp



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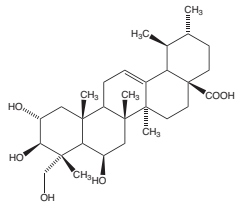
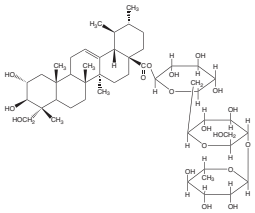
Lyngbyatoxin A is an indole alkaloid that is produced by marine blue green algae as well as several actinomycete species[1,3]. It is structurally related to teleocidin and is a strong skin irritant[2,7]. It has been shown to be a tumor promotor as well as a stimulator of protein kinase C4. This stimulation occurs because of the presence of a lactam ring[4,5]. The PKC activating effect enhances the cellular sensitivity to cis-diamminedichloroplatinum(II) (cisplatin)[6]. Cisplatin is used in chemotherapy because of its ability to work against solid tumors. Lyngbyatoxin A is also an inducer of ornithine decarboxylase in mouse skin and it has been found to bind to the same skin receptors as TPA and debromoaplysiatoxin[8].

1. Takashima, M. et al., Agric. Biol. Chem. 26, 660 (1962).
2. Moore, R.E. Pure Appl. Chem. 54, 1919 (1982).
3. Stafford, RG., et al., Food and Chemical Toxicology. 30, 795 (1992).
4. Basu, A., et al., Biochemistry. 31, 3824 (1992).
5. Robinson, CP., et al., Toxicon. 29, 1009 (1991).
6. Basu, A., et al., Cncer Research. 51, 2511 (1991).
7. Fujiki, H. Journal of Cancer Research and Clinical Oncology. 108, 174 (1984).
8. Lau, AF., Experimental Cell Research. 166, 23 (1986).

Madecassic Acid Asiaticoside





Madecassic acid

See Page 161

Asiaticoside

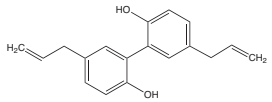
See Page 63

Much literatures has documented that *Centella asiatica* had the property to aid wound healing through stimulating production of type I collagen and decreasing production of myofibroblast and inflammatory reaction.

Madecassic acid and asiaticoside are the principal terpenoids extracted from the Centella asiatica plant [1]. Both of them are able to stimulate collagen and glycosaminoglycan sysnthesis [1, 2, 3].

1. Widgerow, AD., Chait, LA., et al. Aesthetic Plastic Surgery. 24:227-34 (2000).
2. Bonte, F., Dumas, M., et al. Planta Medica. 60:133-5 (1994).
3. Maquart, FX., Chastang, F.,et al. European J. of dermatology. 9:289-96 (1999).

Magnolol



Magnolol

See Page 162

The natural product, Magnolol, is isolated from the root and stem bark of cortex of Magnolia officinalis (Chinese name: Houpo). It possesses multiple pharmacological properties, such as anti-allergic, anti-inflammatory, anti-microbial, anti-fungal, anti-asthmatic activities, anxiolytic and central depressant effects [1].

Magnolol has been reported to exhibit antitumor effects in vitro and in vivo. At very low concentrations of 3 - 10 μM, it suppresses proliferation of cultured human colon and liver cancer cells (COLO-205 and Hep-G2) by inhibiting DNA synthesis and arresting the cells at the G0/G1 phase of the cell cycle. When Magnolol concentration was increased to 100 μM, apoptosis was observed in COLO-205 and Hep-G2 cells [2] . It inhibits CH 27 cell proliferation at low concentrations(10-40μm) and induces apoptosis at high concentrations(80-100μm). Magnolol-induced apoptosis is well correlated with the activation of JNK and inactivation of ERK signaling pathway [1].

Wu, et al found that Magnolol was potent in stimulating BK(Ca) channel activity in tracheal smooth muscle cells [3]. Shen, et al claimed that Magnolol prevented ischemia/reperfusion injury by inhibiting neutrophil adhesion [4].

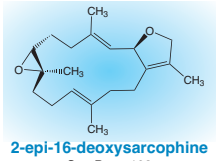
As an antioxidant, Magnolol may also offer some protection against postangioplasty restenosis [5].

1. Yang, Shu-Er., Hsieh, MT., Tsai, TH., Hsu, SL. British Journal of pharmacology. 138: 193-201(2003).
2. Lin, SY., Liu, JD., Chang, HC., Yeh, SD., Lin, CH., Lee, WS. J Cell Biochem. 84:532-44 (2002).
3. Wu, SN., Chen, CC., Li, HF., Lo, YK., Chen, SA., Chiang, HT. Thorax. 57:67-74 (2002).
4. Shen, YC., Sung YJ., Chen CF. European Journal of Pharmacology. 343:79-86 (1998).
5. Chen, YL., Lin, KF., Shiao, MS., Chen, YT., Hong, CY., Lin, SJ. Basic Res Cardiol. 96:353-63 (2001).

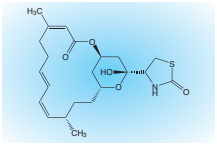
Marine Natural Products

Sarcophine and **2-epi-16-deoxysarcophine** are isolated from the Red Sea soft coral Sarcophyton glaucum[1]. Cembranoid marine natural products are reported to possess cancer chemopreventive properties[2]. Sarcophine was found to be an effective inhibitor of JB6 cell transformation[3]. Sarcophine and 2-epi-16-deoxysarcophine are useful templates for synthesis of more active cancer chemopreventive agents. Several studies were carried out in order to optimize their anticancer potential[4].

Sarcophine
See Page 209



2-epi-16-deoxysarcophine
See Page 103

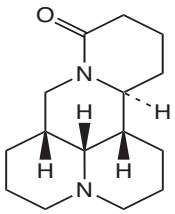


Latrunculin A
See Page 155

Latrunculin A is an actin-binding marine toxin isolated from Red Sea sponge Latrunculia magnifica, which distrupts microfilament-mediated processes[5]. It is a 16-membered macrolide attached to 2-thiazolidinone moiety[6]. It inhibits actin polymerisation in vitro and in vivo. Latrunculin A binds G-actin with moderate affinity (0.2 um), and inhibits the rate of nucleotide exchange[7]. The structure of G-actin is altered by latruculin A binding which prevents its participation in the polymerization process[8].

1. Sawant, S. S.; Youssef, D. T. A.; Reiland, J.; Ferniz, M.; Marchetti, D.; El Sayed, M. D. J. Nat. Prod. 69:1010-1013 (2006).
2. El Sayed, K. A.; Hamann, M. T.; Waddling, C. A.; Jensen, C.; Lee, S. K.; Dunstan, C. A.; Pezzuto, J. M. J. Org. Chem.63:7449-7455 (1998).
3. Katsuyama, I.; Fahmy, H.; Zjawiony, J. K.; Khalifa, S. I.; Kilada, R. W.; Konoshima, T.; Takasaki, M.; Tokuda, H. J. Nat. Prod. 65:1809-1814 (2002).
4. Sawant, S. S.; Sylvester, P. W.; Avery, M. A.; Desai, P.; Youssef, D. T. A.; El Sayed, K. A. J. Nat. Prod. 67:2017-2023 (2004).
5. Coue, M. Brenner, S.L. Spector, I. Korn E.D. FEBS letters. 213: 316-318 (1987).
6. Morton, W. M. Ayscough, K.R. McLaughlin, P.J. Nature Cell Biol. 2: 376-378 (2000).
7. Spector, I. Shochet, N.R. Kashman, Y. Groweiss, A. Science 214: 493-495 (1983).
8. Yarmola, E.G. Somasundaram, T. Boring, T.A. Spector, I. Bubb, M.R. J.Biol.Chem. 275: 28120-28127 (2000).

Matrine



Matrine
See Page 163

Matrine is an alkaloid isolated from the root of *Sophra subprostrata* (Leguminosae) that has been used as a Chinese medicine for the treatment of inflammation. It has anti-tumor, anti-arrhythmic, analgesic effects and protective effect on lipopolysacchride-induced liver injury as well [1,2,3].

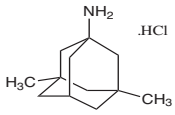
Matrine(0.2mg/ml) dramatically decreases the c-myc, c-jun and HNF-1 alpha mRNA of K562 cells at the early stage (3h), while increases the H-ras and P21 mRNA at the same time. The changes may be related to inhibiting proliferation and inducing differentiation [4]. Matrine inhibits the activity of protein tyrosine kinase in K562 cells. The inhibitory effect depends on matrine at concentration within 0.1mg/ml [5]. It is reported that matrine enhances the fibroblast apoptosis in rabbit ear hypertrophic scar, and up-regulates the expression of apoptosis related modulation protein bax and down-regulate the expression of P53 and Bcl-2 [6].

1. Zhang BH. Wang NS. et al. Zhongguo Yao Li Xue Bao/Acta Pharmacologica Sinica. 11:253-7 (1990).
2. Chuang CY. Xiao JG. Chiou GC. Journal of Ocular Pharmacology. 3:129-34 (1987).
3. Lin W. Zhang JP. Hu ZL. Qian DH. Yao Hsueh Hsueh Pao. 32:93-6 (1997).
4. He YJ. Jiang JK. Ou YH. et al. Aizheng. 21:369-72 (2002).
5. Liu BZ. Jiang JK. He YJ. et al. Aizheng. 21:1292-5 (2002).
6. Tang S. Cai B. Xu H. et al. Zhonghua Shao Shang Za Zhi. 18:299-301 (2002).

Memantine

Neuroprotective agent

See Page 165



Alzheimer disease (AD) is the most common neurodegenerative disorder and the most prevalent cause of dementia associated with aging. A cascade of pathophysiological events is triggered in AD that ultimately involves common cellular signaling pathways and leads to cellular and network dysfunction, failure of neurotransmission, cell death, and a common clinical outcome. Clinical trials in AD and the extensive clinical use of memantine for neurodegenerative conditions in Europe since 1982 support the safety, tolerability, and efficacy of this agent [1].

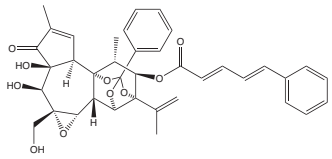
Memantine is not a cholinesterase inhibitor. It is an N-methyl-D-aspartate (NMDA) receptors antagonist that has recently been approved in the United States for the treatment of moderate to severe AD [2,3].

Memantine can interact with a variety of ligand-gated ion channels. However, NMDA receptors appear to be a key target of memantine at therapeutic concentrations. At high concentrations it can inhibit the mechanism of synaptic plasticity that is believed to underline learning and memory. At lower, clinically-relevant concentrations, memantine can under some circumstances promote synaptic plasticity and preserve or enhance memory in animal models of AD. In addition, memantine can protect against the excitotoxic destruction of cholinergic neurons. Moreover, recent in vitro studies suggest that memantine abrogates beta-amyloid (Abeta) toxicity and possibly inhibits Abeta production. Considerable attention has focused on the investigation of theories to explain the better tolerability of memantine over other NMDA receptor antagonists [4].

1. Doraiswamy PM. Psychopharmacol Bull. 37:41-9 (2003).
2. FDAnews Daily Bulletin. Wednesday, Oct.22 (2003).
3. Tariot PN. Federoff HJ. Alzheimer Dis Assoc Disord. 17105-13 (2003).
4. Rogawski MA. Wenk GL. CNS Drug Rev. 9:275-308 (2003).

Mezerein

See Page 167



Mezerein is a protein kinase C activitor. It has no diacylglycerol-like structure in its molecule, but it can activate protein kinase C both in vitro and in vivo. Mezerein causes analogous changes in the membrane to activate protein kinase C and utilize this protein kinase as a common receptive protein for tumor promotion [1].

Skin carcinogenesis can be divided into three stages: tumor initiation, stage I and stage II of promotion. The second stage of promotion is initially reversible but later becomes irreversible. Polyamine proliferation appears to be important event in stage II skin carcinogenesis promotion. Literature shows that mezerein could induce polyamine levels in stage II [2].

Mezerein is found to be a weak complete and Stage I tumor promotor. It is as potent as the most active phorbol esters as a second stage promoter and inflammatory agent. Jaken S, et al reported that mezerein is 25-fold more potent in causing a decrease in binding of epidermal growth factor to its specific cellular receptor than in inducing prostaglandin E2 production in G-292 osteosarcoma cells in culture. Their findings indicated that mezerein interacted with the major phorbol dibutyrate receptor to increase prostaglandin E2 production and also caused a decrease in the binding of epidermal growth factor [3].

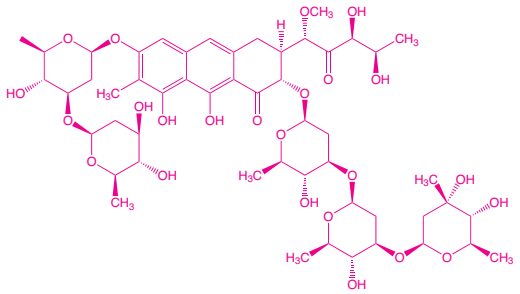
1. Miyake R, Tanaka Y, Tsuda T, et al. Biochem Biophys Res Commun. 121(2):649-56, 1984.
2. Slaga TJ. Acta Pharmacol Toxicol (Copenh). 55 Suppl 2:107-24, 1984.
3. Jaken S, Shupnik MA, Blumberg PM, Tashjian AH Jr. Cancer Res. 43(1):11-4, 1983.

Mithramycin

Mithramycin is an antibiotic produced from the actinomyces *Streptomyces plicatus*[1]. It is a potent antineoplastic agent shown to be an effective treatment for several types of cancers, hypercalcemia, and Paget's disease [2,3]. Mithramycin is a potent inhibitor of Sp1, human transcription factor that is involved in gene expression in the early development of an organism[4].

Mithamycin may be used as an effective treatment for systemic sclerosis. This drug effectively inhibits collagen production and gene expression in systemic sclerosis dermal fibroblasts. Mithamycin inhibits collagen transcription activity by reducing type I collagen (COL1A1) promoter and it inhibits post-transcription activities by destabilizing collagen transcripts[5].

1. Godfrey T, Linda L, Calif Med. 115: 1-4 (1971).
2. Brown J, Kennedy B, N Engl J Med. 272: 111-8 (1965).
3. Smithers DW. Br J Urol. 44: 217-28 (1972).
4. Chen F, Kim E, Wang CC, Harrison LE. Cell Signal. 17: 1572-7 (2005).
5. Sandorfi N, Louneva N, Hitraya E, Hajnoczky G, Saitta B, Jimenez SA. Ann Rheum Dis. 64: 1685-91 (2005).



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Mitotane

Mitotane is an antineoplastic agent that was originally discovered as a DDT contaminant. This drug induces atrophy of the adrenal cortex and inhibits adrenal steroidogenesis in humans and animals[1,2]. Mitotane is a well-known treatment for adrenal carcinoma and Cushing disease[3]. It is often used as a chemotherapeutic treatment when carcinomas are inoperative[4].Mitotane potently induces apoptosis in normal and malignant adrenocortical cells1. Previous studies suggest that the mechanism for adrenal inhibition is mediated by binding to a steroid membrane receptor and disrupting endocrine function[5].

1. Fang VS. Cancer Res. 39: 139-45 (1979).
2. Komissarenko VP, Mestechkina AY, Mikosha AS. Bull Exp Biol Med. 77: 761-3 (1975).
3. Besser GM, Jeffcoate WJ. Brit Med J. 1: 448-451 (1976).
4. Touitou Y, Bogdan A, Legrand JC, Desgrez P. Ann Endocrinol (Paris). 38: 13-25 (1977).
5. Das S, Thomas P. Endocrinology. 140: 1953-6 (1999).
6. Leblond VS, Hontela A. Toxicol Appl Pharmacol. 157: 16-22 (1999).

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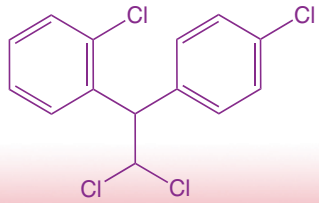

Mycophenolic acid

Mycophenolic acid (MPA) is a natural antibiotic derived from *Penicillium stoloniferum*. It is an active metabolite of mycophenolate mofetil and it is used as an immunosuppressive drug to prevent organ rejection[1]. It is a potent inhibitor of DNA synthesis in the L strain of fibroblasts in vitro and has been found to produce strong activity against a variety of tumors in mice[2]. Mycophenolic acid suppresses purine biosynthesis through the inhibition of the enzyme inosine monophosphate dehydrogenase[3].

Abnormal proliferation of arterial smooth muscle cells leads to pulmonary arterial hypertension (PAH). This disorder causes the blockage of blood flow to the arterioles, right ventricular hypertrophy, and death. In vitro studies have shown that MPA causes dose-dependent inhibition of proliferation in human pulmonary arterial smooth muscle cells. These findings may present a new treatment for patients with PAH[4].

1. Ginzler EM, Dooley MA, Aranow C, Kim MY, et al. N Engl J Med. 353: 2219-2229 (2005).
2. Franklin TJ, Cook JM. Biochem J. 13: 515-24 (1969).
3. Franklin, T. J. Biochem. J. 87: 449 (1963).
4. Suzuki C, Takahashi M, Morimoto H, and Izawa A et. a. Biochem Biophys Res Commun. 349: 781-8 (2006).

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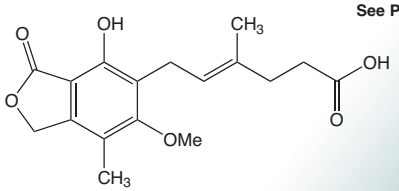
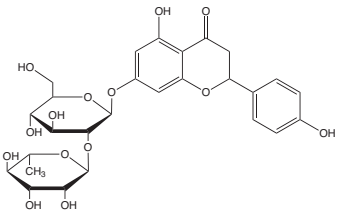


Naringin

Apoptosis Inhibitor



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Hydrogen peroxide (H2O2) causes cytotoxicity through oxidative stress and apoptosis. Free radicals are responsible for the induction of damage to the cellular DNA that leads to the formation of chromosome aberrations. Antioxidants are known to scavenge free radicals.

Flavonoids are widely recognized as naturally occurring antioxidants. Naringin is a bioflavonoid compound predominant in grapefruit and other citrus fruits. Together with limonoids, it gives grapefruit its characteristic bitter flavor.

Naringin, an apoptosis inhibitor from citrus fruit, is a useful drug having antioxidant properties. It can protect mouse bone marrow cells against radiation-induced chromosomal damage 1. Naringin suppresses chromatin condensation and DNA damage induced by H_2O_2 in mouse leukemia P388 cells [2]. Blankson *et. al.* showed Naringin can prevent the protein phosphatase-inhibitory algal toxins elicited DNA fragmentation and apoptotic cell death within 24h in freshly isolated rat hepatocytes [3].

Ueng YF et al tested the in vitro and in vivo effects of naringin on cytochrome P450-dependent monooxygenase in mouse liver. They found administration of a liquid diet containing 10mg/ml naringin for 7 days caused 38% and 49% decrease of AHH and 7-methoxyresorufin O-demethylase activities, respectively. These results demonstrate that naringin reduces the P450 1A2 protein level in vivo and may indicate a chemopreventive role of naringin against protoxicants activated by P450 1A2 [4].

1. Jagetia GC, Venkatesha VA, Reddy TK. Mutagenesis. 18:337-43 (2003).
2. Kanno S, Shouji A, Asou K, Ishikawa M. J Pharmacol Sci. 92:166-70 (2003).
3. Blankson H., Grotterod EM, Seglen PO. Cell Death & Differentiation. 7:739-46 (2000).
4. Ueng YF, Chang YL, et al. Life sciences. 65:2591-602 (1999).

NIGRIN B

Ribosome-inactivating protein
Sambucus nigra L. (common elder)

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Nigrin b is a two chain type 2 ribosome-inactivating protein isolated from elder bark (*Sambucus nigra* L.)[1]. It inhibits protein synthesis by inactivation of mammalian ribosomes but not plant nor E.coli ribosomes. The protein promotes the depurination of the 28S rRNA which upon treatment with acid aniline releases the Endo's RNA fragment. It agglutinates human red blood cells and shows D-galactose binding ability. Nigrin b has an apparent Mr of 58,000 with two subunits of Mr 26,000 (A chain) and 32,000 (B chain). The A chain shares amino acid sequence homology with single chain type 1 ribosome-inactivating proteins with antiviral activities like the anti-HIV proteins, trichosanthin and MAP 30. Nigrin b shows 10^3-10^5 times less toxicity towards cultured animal cells, mice and rats than ricin[1], the highly toxic two chain type 2 ribosome-inactivating protein isolated from Ricinus communis[2,3].

Nigrin b is presented as a freeze-dried powder essentially free of salts, practically 100 % pure, homogeneous by electrophoresis. The powder can be solubilized in water or 140 mM NaCl, 5 mM phosphate buffer (pH 7.5).

1. Girbes, T. et al., Plant Mol. Biol..,22, 1181(1993).
2. Batelli, M.G. et al., Arch. Toxicol., 71, 360 (1997).
3. Olsnes, S. et al., J. Biol..Chem., 249, 803(1993).

Neuropeptide Y

Neuropeptide Y (NPY) is a 36-amino acid peptide which belongs to the pancreatic polypeptide family. The members of this peptide family act via G protein-coupled receptors, the largest family of cell-surface receptors involved in signal transduction [1,2].

NPY is known for its widespread distribution especially in the central and peripheral nervous systems. Prominently expressed in brain regions involved in seizure generation and propagation, NPY can exert powerful effects on synaptic transmission [3]. Low levels of NPY is related to Alzheimer disease [4]. NPY is also available in the gastro-intestinal and respiratory tracts and in fibers innervating smooth muscle around blood vessels [5]. Due to its strong mitogenic effects on vascular smooth muscle cells, NPY induces occlusive lesions in a rat model of atherosclerosis induced by balloon angioplasty. Recent studies have shown that NPY constitutes an important central regulator of bone mass and that it may be involved in inflammation and immune regulation [6].

NPY, a sympathetic co-transmitter, acts through multiple G protein-coupled receptors (Y1 to Y6) to elicit its vast range of effects in the cardiovascular, immune, central and peripheral nervous systems. Agonists and antagonists aimed at the NPY system represent a new avenue for drug development [7].

1. Spinazzi R, Andreis PG, Nussdorfer GG. Int J Mol Med. 15(1):3-13 (2005).
2. Bader R, Zerbe O. Chembiochem. 6(9):1520-34 (2005).
3. Baraban SC. Neuropeptides. 38(4):261-5 (2004).
4. Panchal M, Rholam M, Brakch N. Curr Neurovasc Res. 1(4):317-23 (2004).
5. Chronwall BM, Zukowska Z. Peptides. 25(3):359-63 (2004).
6. Zoccali C. Curr Opin Nephrol Hypertens. 14(1):25-32 (2005).
7. Pons J, Lee EW, Li L, Kitlinska J. Curr Opin Investig Drugs. 5(9):957-62 (2004).

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NSAID

Non-Steroidal Anti-Inflammatory Agents

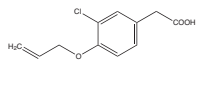
Non-steroidal anti-inflammatory drugs (**NSAIDs**) are effective in the chemoprevention of gastrointestinal cancer, specifically colon cancer[1]. One putative biochemical target of the chemopreventive activity of NSAIDs is cyclooxygenase inhibition, particularly that of COX-2 [2]. The increase in arachidonic acid associated with NSAIDs is known to result in apoptosis[3].

NSAIDs may be effective against breast cancer[4], prostate cancer[5], and esophageal cancer[6]. Many NSAIDs are already undergoing clinical trials as chemopreventive agents[7].

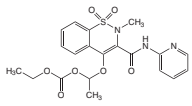
LKT Laboratories carries a full line of NSAIDs to meet your research needs. Acetyl salicylic acid (aspirin), ketoprofen and sulindac each have been found to inhibit chemically-induced mouse urinary bladder carcinogenesis[8]. Flurbiprofen has been suggested for both the chemoprevention and treatment of colon cancer[9]. Indomethacin modulates rat mammary carcinogenesis[10]. Piroxicam induces a rapid intestinal tumor regression in ApcMin mice[11].

Other NSAIDs offered by LKT Labs include diclofenac, meloxicam, ibuprofen and naproxen.

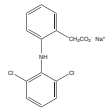
1. Vainio, H. and Morgan, G. Scand. J. Gastroenterol.., 33:785-92 (1998).
2. Ahnen, D.J. Eur. J. Surg. Suppl., 582:111-4 (1998).
3. Chan, T.A., Morin, P.J., Vogelstein, B. et al. Proc. Natl. Acad. Sci. USA., 95:681-6 (1998).
4. Harris, R.E., Kasbari, S. and Farrar, W.B. Oncol. Rep.., 6:71-3 (1999).
5. Norrish, A.E., Jackson, R.T. and McRae, C.U. Int. J. Cancer 77:511-5 (1998).
6. Morgan, G. and Vainio, H. Eur. J. Cancer Prev., 7:195-9 (1998).
7. Kelloff, G.J., Boone, C.W., Crowell, J.A., et. al., J. Cell Biochem Suppl., 26:1-28 (1996).
8. Rao, K.V., Detrisac, C.J., Steele, V.E., et al. Carcinogenesis, 17:1435-8 (1996).
9. Wechter, W.J., Kantoci, D., Murray, E.D., et. al., Cancer Res., 57:4316-24 (1997).
10. McCormick, D.L., Madigan, M.J. and Moon, R.C.. Cancer Res, 45:1803-8 (1985).
11. Ritland, S.R. and Gendler, S.J.. Carcinogenesis, 20:51-8 (1999).



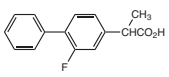
Alclofenac
See Page 49



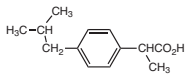
Ampiroxicam
See Page 54



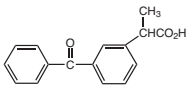
Diclofenac
See Page 105



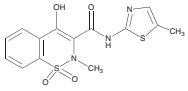
Flurbiprofen
See Page 124



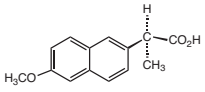
Ibuprofen
See Page 145



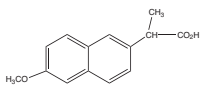
Ketoprofen
See Page 153



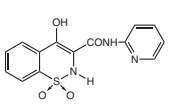
Meloxicam
See Page 164



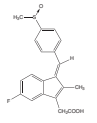
D-Naproxen
See Page 171



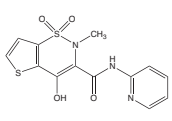
D,L-Naproxen
See Page 171



Piroxicam
See Page 194

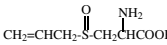


Sulindac
See Page 219



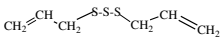
Tenoxicam
See Page 226

Organosulfur Compounds

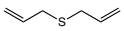


Alliin
See Page 50

Allyl Disulfide
See Page 50



Diallyl Trisulfide
See Page 105

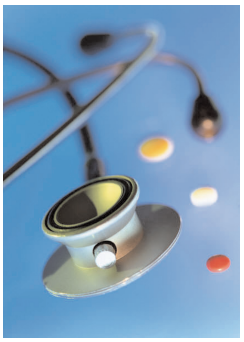


Diallyl Sulfide
See Page 105

The topical application of onion and garlic oils to carcinogen-treated mice inhibits skin-tumor formation[1]. The active chemopreventive ingredients in onion and garlic are organosulfur compounds, which are released when their bulbs are cut and exposed to oxygen. The relationship of organosufur compounds to cancer prevention has been the subject of several reviews[2-4]. Organosulfur compounds are effective in preventing colon, esophagus, forestomach, lung and mammary tumors[2]. Diallyl sulfide is a particularly strong inhibitor of dimethylhydrazine induced tumors in the colon and N-nitrosodimethylbenzylamine induced tumors in the esophagus of rats[2]. Allyl disulfide is a potent inhibitor of forestomach tumors induced by N-nitrosodiethylamine and azoxymethane-induced colon tumors in the rat [5,6]. Diallyl trisulfide prevents benzo[a]pyrene-induced lung tumors [2]. Dipropyl sulfide was found to inhibit NNK activation during lung carcinogenesis [7]. The potency of organosulfur compounds as inhibitors of tumorigenesis depends on their ability to induce glutathione-S-transferase (GST)[8], particularly GST p isozyme-dependent activity [9]. Diallyl sulfide and allyl disulfide also suppress cytochrome P450 2E1, but elevate P450s 2B1/2 and 1A2 in the rat [10].

1. Belman, E. Carcinogenesis, 4:1063-1065 (1983).
2. Wargovich, M.J., Uda, N., Woods, C.,et al. Biochem. Soc. Trans., 24:811-814 (1996).
3. Lea, M.A. Adv. Exp. Med. Biol., 401:147-154 (1996).
4. Wargovich, M.J., and Uda, N. Adv. Exp. Med. Biol., 401:171-177 (1996).
5. Wattenberg, L.W., Sparnins, V.L., and Barany, G. Cancer Res., 49:2689-2692 (1989).
6. Reddy, B.S., Rao, C.V., et al. Cancer Res., 53:3493-3498 (1993).
7. Wattenberg, L.W. Proc. Nutr. Soc., 49:173-183 (1990).
8. Srivastava, S.K., Hu, X., Xia, H., et al. Cancer Lett., 118:61-67 (1997).
9. Hu, X., Benson, P.J., et al. Arch. Biochem. Biophys., 336:199-214 (1996).
10. Haber, D., Siess, M.H., et al. J. Toxicol. Environ. Health, 44:423-434 (1995).

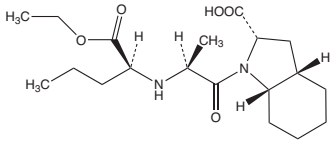
PERINDOPRIL



Perindopril is a potent angiotensin-converting enzyme (ACE) inhibitor used for the treatment of hypertension, stable coronary artery disease and heart failure. Chronic treatment with this drug prevents the development of hypertension in spontaneously hypertensive rats[2]. Subcutaneous injection of perindopril dramatically reduces protein expression of AT1R and TGF-beta[1]. It also inhibits the NF-kappaB DNA binding activity[3].

Recent studies suggest that ACE inhibitors exhibit chemopreventive effects[4]. Overexpression of vascular endothelial growth factor (VEGF) a potent angiogenic factor enhances tumor growth while suppression of VEGF reduces tumor growth[5]. In a recent study by Gilbert *et. al.* perindopril was found to significantly decrease the overexpression of VEGF mRNA. In vitro peridopril treatment of BNL-HCC cells exhibits a marked inhibition of VEGF transcription, resulting in suppression of tumor development and angiogenesis[6]. Because perindopril has been widely used as an antihypertensive drug, it would be an effective new approach for chemotherapy.

1. Ajayi AA, Lees KR, Reid JL. Eur J Clin Pharmacol. 30: 177-82 (1986).
2. Harrap SB, Nicolaci JA, Doyle AE. Clin Exp Pharmacol Physiol. 13: 753-65 (1986).
3. Li X, Meng Y, Yang XS, Mi LF, Cai SX. World J Gastroenterol. 11: 4807-11 (2005).
4. Lever AF, Hole DJ, Gillis CR, and McCallum IR et. al. Lancet. 352: 179-184 (1998).
5. Gilbert R. E., Kelly D. J., Cox A. J., and Wilkinson-Berka J. L., Diabetologia. 43: 1360-1367 (2000).
6. Yoshiji H, Kuriyama S, Kawata M, Yoshii J, and Ikenaka Y et. al. Clin. Can Res. 7: 1073-78 (2001).



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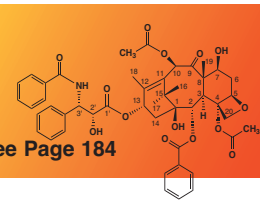
Paclitaxel



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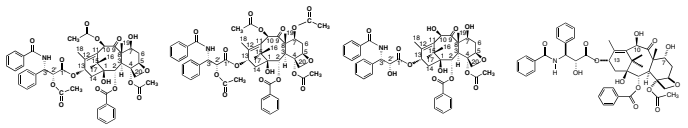
The natural anticancer diterpenoid, **paclitaxel** (taxol), was discovered in 1971 by Monroe Wall and his collaborators[1]. It was isolated from the stem bark of the Pacific Yew tree (*Taxus brevifolia Nutt.*). Paclitaxel was found to have significant antitumor activity against various leukemias, the Walker 256 carcinosarcoma, Sarcoma 180, and Lewis lung tumor.

Paclitaxel is of considerable interest because of its unique mechanism of action[2]. In contrast to other antimitotic natural products such as colchicine, podophyllotoxin and vinblastine that inhibit cell microtubule assembly[3-5], paclitaxel is the only antimitotic agent known so far to promote the assembly of stable microtubules and inhibit the disassembly process of microtubules to tubulin by calcium ions and low temperature[6-8]. The clinical use of taxanes has recently been the subject of several reviews[9-11]. Paclitaxel is active clinically against advanced ovarian and breast cancer[9], and is important in the treatment of several solid tumors[10]. Paclitaxel shows promise in certain previously unresponsive tumors, such as lung, head and neck, esophageal, and bladder cancers[11]. Furthermore, paclitaxel is currently under investigation in combination therapy, such as paclitaxel and doxorubicin for metastatic breast cancer[12-13]. Paclitaxel combined with a platinum analog is now considered first line therapy for advanced ovarian cancer[10].

1. Wani, M. C.; Taylor, H. L.; Wall, M. E.; Coggon, P.; McPhail, A. T. J. Am. Chem. Soc. 93, 2325 (1971).
2. Suffness, M.; et al. In: Chemistry and Pharmacology. Vol. XXV, pp. 3-355 (1985).
3. Olmsted, J. B.; Borisy, G. G. Biochem. 12, 4282 (1973).
4. Gensler, W. J.; Murthy, C. D.; Trammell, M. H. J. Med. Chem. 20, 635. (1977)
5. Snyder, J. A.; McIntosh, R. J. Ann. Rev. Biochem. 45, 699 (1976).
6. Manfredi, J. J.; Horwitz, S. B. Pharmacol. Ther. 25, 83 (1984).
7. Parness, J.; Horwitz, S. B. J. Cell Biol. 91, 479 (1981).
8. Schiff, P. B.; Fant, J.; Horwitz, S. B. Nature. 277, 665 (1979).
9. Terwogt, J.M., Nuijen, B., Huinink, W.W., and Beijnen, J.H. Cancer Treat. Rev., 23:87-95 (1997).
10. Goldspiel, B.R. Pharmacotherapy, 17:110S-125S (1997).
11. Aisner, J., and Cortes-Funes, H. Semin. Oncol., 24:S2-S113S2115 (1997).
12. Gehl, J., Boesgaard, M., Paaske, T.,et al. Oncol., 23:35-38 (1996).
13. Holmes, F.A. Semin. Oncol. 23:29-39 (1996).

Taxanes and taxol side chains

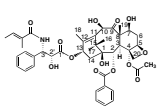


2'Acetyltaxol
See Page 221

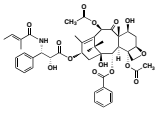
2',7-bis(acetyl)taxol
See Page 222

10-Deacetyltaxol
See Page 223

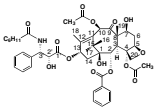
7-epi-10-Deacetyltaxol
See Page 223



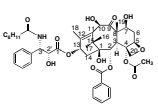
10-Deacetyltaxol B
See Page 223



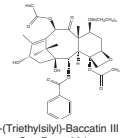
Cephalomannine
See Page 222



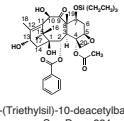
Taxol C
See Page 224



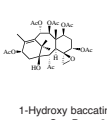
10-Deacetyltaxol C
See Page 223



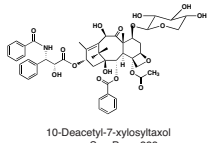
7-(Triethylsilyl)-Baccatin III
See Page 224



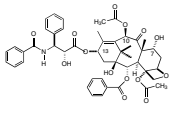
7-(Triethylsil)-10-deacetylbaccatin III
See Page 224



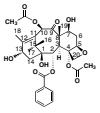
1-Hydroxy baccatin I
See Page 222



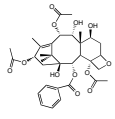
10-Deacetyl-7-xylosyltaxol
See Page 223



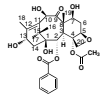
7-epi-Taxol
See Page 223



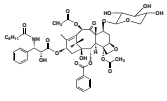
Baccatin III
See Page 222



13-Acetyl-9-dihydrobaccatin III
See Page 222

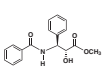


10-Deacetylbaccatin III
See Page 222

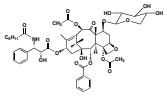


Xylosyltaxol C
See Page 224

Taxol side chain diol
See Page 223



Taxol side chain methyl ester
See Page 224



--Xylosyltaxol
See Page 224

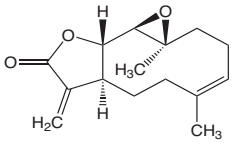
Parthenolide

Parthenolide is a germacranolide-type sesquiterpene lactone and an active ingredient of feverfew (Tanacetum parthenium). It is an anti-inflammatory agent that induces apoptosis and cell necrosis[1,2].

Nuclear factor-kappaB and cyclooxygenase (COX) are novel targets of interest for pancreatic cancer treatment. Parthenolide is an inhibitor of NF-kappaB that is shown to have potent apoptotic activities[3]. Additional treatment after COX inhibition by sulindac enhanced the growth suppression of pancreatic cancer cells.

Zunino *et. al.* found that addition of parthenolide to pre-B acute lyphoblastic leukemia lines caused rapid apoptosis by the loss of nuclear DNA[4]. These findings suggest that parthenolide may have great potential as an efficacious therapeutic agent for pancreatic and leukemia cancer.

1. Pozarowski P et al Cytometry 54:118-124 (2003).
2. Wen J et al J. Biol. Chem. 277: 38954-38964 (2002).
3. Yip-Schneider MT, Wu H, Ralstin M, Yiannoutsos C, Crooks PA, Neelakantan S, Noble S, Nakshatri H, Sweeney CJ, Schmidt CM. Mol Cancer Ther. May 31 (2007).
4. Zunino SJ, Ducore JM, Storms DH. Cancer Lett. Apr 28 (2007).



Parthenolide
See Page 186

Proton Pump Inhibitors

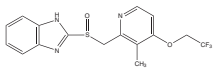
The five proton pump inhibitors approved by the FDA for acid-related disorders treatment are omeprazole (Prilosec), lansoprazole (Prevacid), rabeprazole (Aciphex), pantoprazole (Protonix), and esomeprazole (Nexium). Esomeprazole is the S-enantiomer of omeprazole. The human clearance of proton pump inhibitors is conducted primarily by the hepatic cytochrome P450 system [1,2].

Lansoprazole suppresses gastric acid secretion by specific inhibition of the gastric H+, K+ ATPase enzyme system of the gastric parietal cell [3]. It is more effective than the H2-receptor antagonists and omeprazole [4,5].

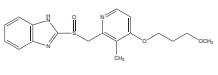
Rabeprazole is a newer proton pump inhibitor with both antisecretory and gastroprotective properties [6]. Because rabeprazole does not undergo hepatic biotransformation by CYP2C19, a cytochrome P450 isoenzyme, it offers more rapid onset of action and more efficient acid-suppressing effect over the first-generation proton pump inhibitors such as lansoprazole and omeprazole [7].

It is well known that blocking the clearance of acidic metabolites can induce cell death. Yeo M and colleagues evaluated the antitumor effect of pantoprazole in a xenograft model of nude mice. They discovered pantoprazole significantly inhibited tumorigenesis and selectively induced large-scale apoptotic cell death in gastric cancer. Their experiment demonstarted proton pump inhibitors could be used for selective anticancer effects [8].

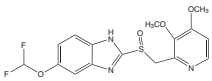
1. Li XQ, Anderson TB, et al. Drug Metabolism & Disposition. 32(8):821-7 (2004).
2. Der G. Gastroenterol Nurs. 26(5):182-90 (2003).
3. El-Gindy, et al. J of Pharmaceutical and Biomedical Analysis 31: 229-242 (2003).
4. Garnett WR. Ann Pharmacother. 30(12):1425-36 (1996).
5. Freston JW. Am J Med. 117(5A):14S-22S (2004).
6. Keane, WF. Swan, SK. Et al. J Clin Pharmacol 39:927-933 (1999).
7. Kinoshita Y. Aliment Pharmacol Ther. 20(8):19-23 (2004).
8. Yeo M, Kim DK, Kim YB, et al. Clin Cancer Res. 10(24):8687-96 (2004).



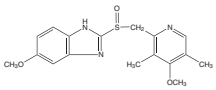
Lansoprazole
See page 155



Rabeprazole
See page 199



Pantoprazole
See page 186



Omeprazole
See page 181

Resveratrol

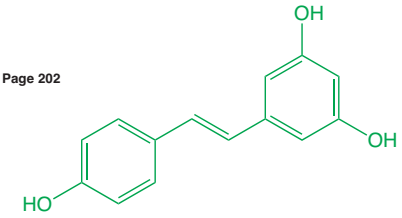
Resveratrol is a stilbene-type phytoalexin found in the skin and seeds of grapes, peanuts, mulberries and several medicinal plants[2]. Phytoalexins are organic metabolites produced by plants in response to fungal infections, heavy metals, or UV-radiation[1]. Resveratrol has been shown to have cancer chemopreventive effects and anticancer effects on various human cancers[11].

A major dietary source of resveratrol is red wine[2]. The health benefits of red wine consumption have been attributed to the polyphenol fraction, which contains resveratrol. Resveratrol is a strong anti-oxidant [3,4]. It has been shown to inhibit low-density lipoprotein oxidation [5,6] and to ameliorate oxidative stress induced in cultured PC12 cells [7]. Other biological effects of resveratrol include lowering fat content in the rat liver[8], reducing cholesterol levels [9], and inhibiting platelet aggregation 8.

In early 1997, it was reported that resveratrol displays a wide range of chemopreventive properties[10]. It blocks the initiation of carcinogenesis by acting as an anti-mutagen and a phase II drug-metabolizing enzyme inducer. It mediates anti-inflammatory effects and inhibits cyclooxygenase and hydroperoxidase functions, which have been implicated in cancer promotion.

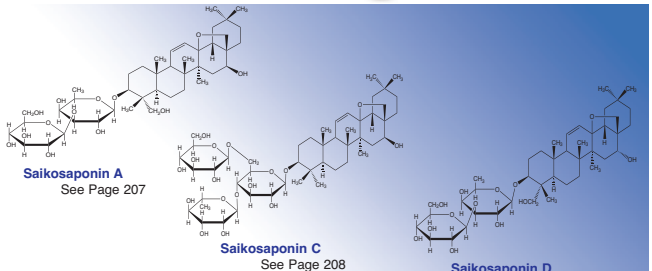
Furthermore, resveratrol induces cancer cell differentiation, inhibits preneoplastic lesions in cultured carcinogen-treated mouse mammary glands and tumorigenesis in mouse skin. In addition, reveratrol inhibits the growth of estrogen receptor negative MDA-MB-231 breast cancer cells by inducing apoptosis[11]. The breast cancer cell inhibition is induced by transient activation of mitogen activated protein kinase. Alkhalaf *et. al.* found that resveratrol apoptosis is associated with the inhibition of proteins involved in mitogen activated protein kinase signaling translation proteins[11].

See Page 202



1. Langcake, P., Pryce, R.J. Experientia, 33:151-152 (1977).
2. Soleas, G.J., diamandis, E.P., Goldberg, D.M. J. Clin. Lab. Anal., 11:287-313 (1997).
3. Miller, N.J. and Rice-Evans, C.A. Clin Chem., 41:1789 (1995).
4. Goldberg, D.M. Clin. Chem., 42:113-114 (1996).
5. Frankel, E.N., Waterhouse, A.L., and Kinsella, J.E. Lancet, 341:1103-1104 (1993).
6. Belguendouz, L., Fremont, L., and Linard, A. Biochem. Pharmacol., 53:1347-1355 (1997).
7. Chanvitayapongs, S., Draczynska-Lusiak, B., and Sun, A.Y. Neuroport. 8:1499-1502 (1997).
8. Soleas, G.J., Diamandis, E.P., and Goldberg, D.M. Clin. Biochem. 30:91-113 (1997).
9. Goldberg, D.M., Hahn, S.E., and Parkes, J.G. Clin. Chim. Acta. 237:155-187 (1995).
10. Jang, M., Cai, L., Udeani, G.O., et al. Science. 275:218-220 (1997).
11. Alkhalaf M. Eur J Cancer Prev. 16: 334-41 (2007).

Saikosaponins



Saikosaponin A
See Page 207

Saikosaponin C
See Page 208

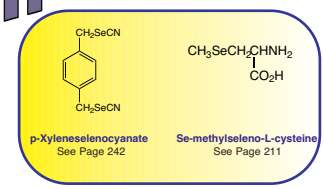
Saikosaponin D
See Page 208

Saikosaponins are biologically active compounds from the Chinese herbal drug, Bupleurum falcatum[1]. The saikosaponins have potent anti-inflammatory activity on mouse ear edema induced by the tumor promoter, phorbol myristate acetate[2]. In cell culture studies, they have been found to induce differentiation without growth inhibition and apoptosis in B16 melanoma cells[1,4]. Induction of apoptosis is most likely through down regulation of protein kinase C activity. They have potent anti-cell adhesive activity and strong hemolytic action[3]. Many saikosaponins have been isolated as pure compounds. Individual saikosaoponins appear to have different biological activity. Saikosaponin A was found to have antimutagenic activity and induce cell death in human hepatoma cell line. The cell death phenomena induced by saikosaponin A is different from apoptosis[5,7].

Saikosaponin D was found to stimulate corticotropin-releasing factor (CRF) gene expression and CRF release. It also increases adrenocorticotropin release[6].

1. Zong, Z., Fujikawa-Yamamoto, K., Ota, T., et al. Cell Struct. Funct. 23:265-272 (1998).
2. Bermejo, B.P., Abad Martinez, M.J., Silvan, Sen, A.M., et al. Life Sci. 63:1147-1156 (1998).
3. Ahn, B.Z., Yoon, Y.D., Lee, Y.H., Kim, B.H., Sok, D.E. Planta Med. 64:220-224 (1998).
4. Zong, Z., Fujikawa-Yamamoto, K., Tanino, M. et al. Biochem Biophys Res Commun. 219:480-485 (1996).
5. Ohtsuka, M., Fukuda, K., Yano, H., Kohiro, M. Jpn. J. Cancer Res. 86:1131-1135 (1995).
6. Dobashi, I., Tozawa, F., Horiba, N., et al. Neurosci Lett. 197:235-238 (1995).
7. Qian,, L., Murakami, T., Kimura, Y., et al. Pathol. Int. 45:207-214 (1995).

Selenium Compounds



p-Xyleneselenocyanate
See Page 242

Se-methylseleno-L-cysteine
See Page 211

Selenium is an essential micronutrient. Severe selenium deficiency causes muscle dysfunction[1,2]. Since selenium is required to maintain proper immune system functions and to prevent cellular oxidative damage, it may play an important role in cancer prevention[3]. Organoselenium compounds, such as selenomethionine have been the subject of much research. Selenomethionine is recognized as a safe and effective form of selenium supplementation[4,5]. Selenoamino acids can be incorporated into proteins, which diminishes their effectiveness in cancer prevention[4].

Se-methylselenocysteine is incorporated non-specifically into proteins[4,6]. This makes it about 500-750 times more effective than S-methylcysteine at preventing chemically induced mammary tumors in rats[7]. The synthetic compound, benzeneselenocyanate (BSC), is an effective inhibitor of chemically-induced mouse forestomach carcinogenesis[8], and is less toxic than inorganic selenium[9]. Another synthetic organoselenium compound, p-xyleneselenocyanate (p-XSC), was introduced in 1992[10]. p-XSC is even less toxic than BSC[11]. p-XSC is reported to have the most potent inhibitory effect of any selenium compound on chemically induced mammary, lung, and colon carcinogenesis in animal models[12]. p-XSC has undergone clinical trials as a chemopreventive[13] and is a good candidate for further investigation of chemoprevention of other types of cancer.

1. Young, V.R. New Eng. J. Med., 304:1228-1230 (1981).
2. Sathe, S.K., Mason, A.C., Rodibaugh, R.,et al. J. Agric. Food. Chem., 40:2084-2088 (1992).
3. Axley, M.J., Bock, A., and Stadtman, T.C. Proc. Natl. Acad. Sci. U.S.A., 88:8450-8454 (1991).
4. Ip, C. and Ganther, H.E. in Cancer Chemoprevention, Wattenberg, L., Lipkin, M., Boone, C.W., and Kelloff, G.J., eds, CRC Press, pp. 479-488 (1992).
5. Badmaev, V., Majeed, M., and Passwater, R.A. Altern. Ther. Health Med., 28:59-63 (1996).
6. Foster, S., Kraus, R.J., and Ganther, H.E. Arch. Biochem. Biophys., 251:77-86 (1986).
7. Ip, C., and Ganther, H.E. Carcinogenesis, 13:1167-1170 (1992).
8. El-Bayoumy, K. Cancer Res., 45:3631-3635 (1985).
9. Blackwell, L., Mathis, J., Asaad, W.W., et al. Drug Metab. Disp., 19:865-870 (1991).
10. Conaway, C.C., Upadhyaya, P., Date, V., et al. Fundam. Appl. Toxicol., 19:563-574 (1992).
11. Sohni, O.S., Li, H., Surace, A., et al. Anticancer Res., 15:1849-1856 (1995).
12. El-Bayoumy, K., Upadhyaya, P., Chae, Y.-H., et al. J. Cell. Biochem., 22:92-100 (1995).
13. Kelloff, G.J., Crowell, J.A., Hawk, E.T., et. al. J. Cell Biochem. Suppl., 26:54-71 (1996).

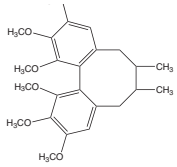
Schisandrins

The schisandrins are a group of lignans isolated from the fruit of Schisandra chinensis that have been used as tonic and sedative in traditional Chinese medicine [1]. Literatures indicate that they can lower the elevated serum glutamic-pyruvic transaminase levels in patients with chronic viral hepatitis.

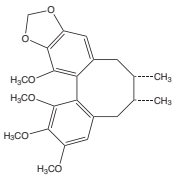
Schisandrin B was shown to have hepatoprotection against carbon tetrachloride toxicity by enhancing the mitochondrial glutathione redox status in mouse liver [2,3].

LKT Labs offers R(+)Schisandrin A, S(-)Schisandrin B and Schisantherin A.

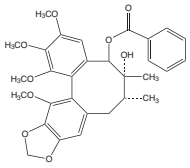
1. Li XY. Mem Inst Oswaldo Cruz. 86 Suppl 2:31-7 (1991).
2. Ip SP. Poon MK. et al. Free Radic Biol Med. 21(5):709-12 (1996).
3. Ip SP. Ko KM. Biochem Pharmacol. 52(11):1687-93 (1996).



R(+)Schisandrin A
See page 209



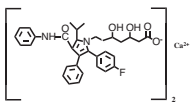
S(-)Schisandrin B
See page 209



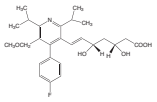
Schisantherin A
See page 210

Statins

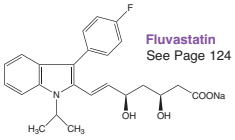
Antihypercholesterolemic Antineoplastic Agents



Atorvastatin



Cerivastatin



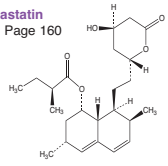
Fluvastatin
See Page 124

The **statins** are a group of compounds primarily used as antihypercholesterolemics[1]. They are used clinically to lower plasma levels of low-density lipoprotein cholesterol. The statins are inhibitors of the enzyme 3-hydroxy-3-methylglutary-coenzyme A (HMG-CoA) reductase[2]. This enzyme is responsible for the conversion of HMG-CoA to mevalonate, which is the rate-limiting step in the biosynthetic pathway of cholesterol. There are two main groups of statins, one of which are the fungal metabolites and their synthetic analogs such as lovastatin, simvastatin and pravastatin, the other are the pure synthetic ones such as atorvastatin, cerivastatin, and fluvastatin. The most potent statin of the former group is simvastatin and that of the latter is atorvastatin[3,4].

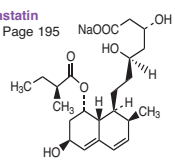
In addition to their anti-hypercholesterolemic property, some of the statins have been found to inhibit cell proliferation[5], induce apoptosis[6], and inhibit angiogenesis[7]. Lovastatin inhibits tumor development and metastasis of fibrosarcoma and lymphoma in the rat[8,9]. Simvastatin has been shown to enhance the antitumor activity of BCNU[10] and have anticarcinogenic activity during the promotion phase of radiation-induced mammary tumors[11].

1. Blumenthal, R.S. Am. Heart J. 139:577-83 (2000).
2. Krause, B.R., Newton, R.S. Atherosclerosis 117:237-244 (1995).
3. Kostner, G.M, Wien Med. Wochenschr. 149:120-124 (1999).
4. Bergstrom, J.D., Bostedor, R.G., Rew, D.J., et al. Biochim. Biophys. Acta 1389:213-221 (1998).
5. Park WH, Lee YY, Kim ES, et al. Anticancer Res 19(4B):3133-40 (1999).
6. Macaulay, R.J, Wang, W., Dimitroulakos, J., et al. J. Neurooncol. 42:1-11 (1999).
7. Feleszko, W., Balkowiec, E.Z., Sieberth, E., et al. Int. J. Cancer 81:560-567 (1999).
8. Matar, P. Rozados, V.R. et al. Cancer Biother. Radiopharm. 13:387-193 (1998).
9. Matar, P., Rozados, V.R., Binda, M.M., et al. Clin. Exp. Metastasis 17:19-25 (1999).
10. Soma, M.R., Baetta, R., De Renzis, M.R., et al. Cancer Res. 55:597-602 (1995).
11. Inano H. Suzuki K. Onoda M. Wakabayashi K. Carcinogenesis. 18:1723-1727 (1997).

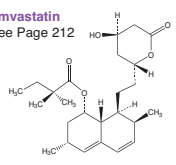
Lovastatin
See Page 160



Pravastatin
See Page 195



Simvastatin
See Page 212



Sulforaphane

Cancer Chemopreventive Agent From *Broccoli*

Traditional cytotoxic chemotherapeutic approaches have many adverse effects on patients with malignancies. Cancer chemoprevention using non-cytotoxic drugs or natural products to prevent the occurrence or proliferation of cancer [1].

Sulforaphane is a cancer chemopreventive agent discovered by Dr. Paul Talalay and his team at the Johns Hopkins University School of Medicine in 1992. They revealed three-day-old broccoli sprouts contained 20 to 50 times more sulforaphane than mature broccoli heads in 1997. Sulforaphane belongs to a general class of natural products that contain an isothiocyanate moiety. Isothiocyanaates can be found in other cruciferous vegetables such as cauliflower, cabbage, kale and turnips [2,3,4,5].

Sulforaphane, also known as 4-methylsulfinylbutyl isothiocyanates and (-)-1-isothiocyanato-4-(R)-(methylsulfinyl) butane, has many interesting properties such as antimicrobial, antioxidant and antitumor activities. It is reported that sulforaphane inhibits extracellular, intracellular, and antibiotic-resistant strains of Helicobacter pylori [6].

Synthetic sulforaphane (a racemic mixture) has been shown to be an effective agent in chemoprevention of chemically induced mammary tumors in rats [7]. Sulforaphane exerts its cancer chemopreventive property via the activation of detoxifying enzymes and induction of apoptosis.

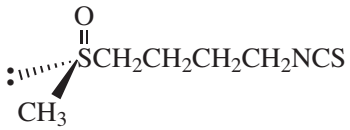
Phase I enzymes activate many carcinogens to highly reactive electrophilic metabolites capable of damaging DNA. Phase II enzymes convert these reactive electrophiles to less toxic and more easily excretable products [8]. Sulforaphane is a very potent inducer of Phase 2 detoxication enzymes such as glutathione S-transferase (GST) and quinone reductase (QR) [9-14]. The induction of Phase II enzymes is mediated by a mitogen-activated protein kinase pathway [13,14]. Sulforaphane increased quinone reductase activity at low concentration of 0.5 –1 μM and raised glutathione level in a dose-dependent manner in human lymphoblastoid cells [1]. In human prostate cell lines sulforaphane was found to induce QR, GST and g-glutamylcysteine synthetase accompanied by an increase of GSH synthesis [15]. In human epithelial cell line MCF-10F sulforaphane was found to inhibit benzo[a]pyrene-DNA and 1,6-dinitropyrene-DNA adducts formation. The inhibition of adducts formation was correlated with increase in QR and GST protein expression [12].

Sulforaphane is a strong Phase I enzymes inhibitor [16]. It inhibits the phase I cytochrome P450 isoenzymes 2E1 and 1A2 which have been associated with the activation of carcinogens [17,18].

Myzak MC and colleagues discovered sulforaphane also acts as an inhibitor of histone deacetylase (HDAC) in HCT116 human colorectal cancer cells. They suggest sulforaphane may be effective as a tumor-suppressing agent and as a chemotherapeutic agent [19]. The anticarcinogenic effect of sulforaphane has been attributed also to its ability to induce multidrug resistance-associated protein 2 in primary rat and human heptocytes [20].

In addition to the activation of detoxifying enzymes, induction of apoptosis is also involved in the sulforaphane-associated cancer chemoprevention. Sulforaphane induces apoptosis in various types of cancer cell lines. At 2.5 – 10 μM concentration sulforaphane is a cell growth modulator. The IC50 for sulforaphane in lymphoblastoid cells and human breast cancer MCF-7 cells was 3.9 μM and 13.7 μM, respectively [1,21]. Sulforaphane (10-30 μM)-induced HT29 human colon cancer cell cycle arrest, followed by cell death, was correlated with an increased expression of cyclins A and B1, increased expression of the proapoptotic protein bax, the release of cytochrome c from the mitochondria to the cytosol, and the proteolytic cleavage of poly (ADP-ribose) polymerase [7,22,23]. Incubations human pancreatic cancer cells at higher sulforaphane doses (>10 micromol/L) resulted in cleavage of caspase-3 in the G1 subpopulation [24].

Many sulforaphane analogs have been previously isolated from plants, but their enzyme inducing activity is less potent than that of sulforaphane [13]. The naturally occurring sulforaphane is optically active with an R(-)configuration.



R-Sulforaphane

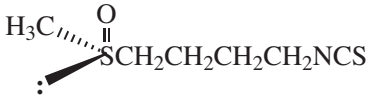
See Page 219

R,S-Sulforaphane

See Page 219

1. Irena Misiewicz, et al. Acta Biochimica Polonica. 51(3):711-721 (2004).
2. www.hopkinsmedicine.org
3. Verhoeven DT, Goldbohm RA, et al. Chem Biol Interact 103:79-129 (1997).
4. Verhoeven DT, Goldbohm RA, et al. Cancer Epidemiol Biomarkers Prev. 5:733-48 (1996).
5. Talalay P, Zhang Y. Biochem Soc Trans. 24:806-10 (1996).
6. Fahey JW, Haristoy X, et al. Proc Natl Acad Sci USA 99L11):7610-5 (2002).
7. Zhang Y, Kensler TW, et al. Proc. Natl Acad Aci. 91:3147-3150 (1994).
8. Laurence Gamet-Payrastre, Pengfei Li, et al. Cancer Research 60:1426-1433 (2000).
9. Wattenberg, L.W., Shafer, H.W., et al. Proc Am. Assoc. Cancer Res. 30:181 (1989).
10. Lori, R., Bernadi, R., et al. Bioorg Med Chem Lett. 9:1047-8 (1999).
11. Zhang, Y., Talalay, P. Cho, C., and Posner, G.H. Proc. Natl. Acad. Aci. USA 89:2399-2403 (1992).
12. Yu, R., Lei, W., et al. J. Biol. Chem. 274:27545-52 (1999).
13. Brooks, J.D., Paton, V.G., and Vidanes, G. Cancer Epidemiol Biomark. Prev. 10:949-54 (2001).
14. Maheo, K., Morel, F., et al. Cancer Res. 57:3649-3652 (1997).
15. Brooks, J.D., Paton, V.G., and Vidanes, G. Cancer Epidemiol Biomark. Prev. 10:949-54 (2001).
16. Singletary, K. and MacDonald, C. Cancer Lett. 155:47-54 (2000).
17. Barcelo , K., Mace, K., Pfeifer, A.M., and Chipman, J.K. Muta. Res. 402:111-120 (1998).
18. Fimognari C, Nusse M, et al. Biochem Pharmacol. 68(6):1133-8 (2004).
19. Myzak MC, Karplus PA, et al. Cancer Res. 64(16):5767-74 (2004).
20. Payen, L., Coutoies, A., Loewert, M., et al. Biochem Biophys Res Commun. 282:257-63 (2001).
21. Tseng E, Scott-Ramsay EA, Morris ME. Exp Biol Med. 229(8):835-42 (2004).
22. Gamet-Payrastre, L., Lumeau, S., et al. Anticancer Drugs. 9:141-8 (1998).
23. Gamet-Payrastre, L., Li, P., et al. Cancer Res. 60:1426-33 (2000).
24. Pham NA, Jacobberger JW, et al. Mol Cancer Ther. 3(10):1239-48 (2004).

Appearance:	**Slight yellowish liquid**
Molecular Formula:	**$C_6H_{11}NOS_2$**
Molecular Weight:	**177.29**
Density:	**1.18**
Assay(GC):	**Greater than 99%**

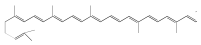


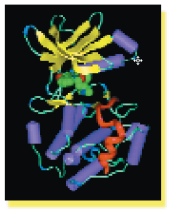
S-Sulforaphane

See Page 219

Staurosporine

Streptomyces sp.





See Page 216

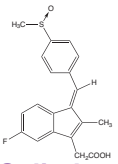
Staurosporine (green and red balls) binding to PCK to inhibit its activity[1].

Staurosporine, also known as Antibiotic AM 2282 and M 193, is isolated from several *Streptomyces* sp. It has been found to possess inhibitory properties of hypotensive and platelet aggregation as well as protein kinase C and other kinases[1]. Because staurosporine has a strong affinity for the kinases, it prevents ATP from binding, thus inhibiting normal PKC activity.

In addition to its inhibitory properties, this indolocarbazol alkaloid has been shown to have anti-fungal activity, apoptosis inducing abilitiy and cytotoxicity against human tumor cells[2,3].

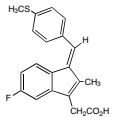
1. Clive Walker. Novartis Horsham Res. Ctr. http://freespace.virgin.net/clive.walker1/staurosporine/staurosporine.html
2. Oka, S. et al., Agric. Biol. Chem. 50, 2723 (1986).
3. Omura, S. et al., J. Antibiotics. 30, 275 (discovery) (1977).

Sulindac and Metabolites



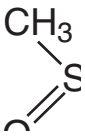
Sulindac

See Page 219



Sulindac sulfide

See Page 219



Sulindac sulfone

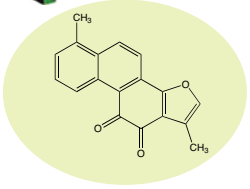
See Page 219

Sulindac is a non-steroidal anti-inflammatory drug (NSAID) commonly used to treat rheumatoid arthritis, osteoarthritis and ankylosing spondylitis[1]. Sulindac, in recent years, has been found to inhibit carcinogenesis in the colon and other tissues[2-4]. The metabolic conversion of sulindac gives two products, the sulfide as a result of reversible reduction and the sulfone as a consequence of irreversible oxidation. Both the sulfide and sulfone have been found to have anticancer activity[5-7].

Sulindac and its metabolites exhibit antiproliferative effects and induce apoptosis in cell culture[8,9].

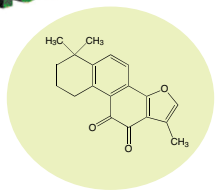
1. Reynolds PM. Rhymer AR. MacLeod MM. Buchanan WW. Curr Med Res Opin. 4:485-9 (1977).
2. Rao CV. Rivenson A. Simi B. Zang E. et al. Cancer Res. 55(7):1464-72 (1995).
3. Rao KV. Detrisac CJ. Steele VE. et al. Carcinogenesis. 17(7):1435-8 (1996).
4. Suganuma M. Ohkura Y. Okabe S. Fujiki H. J Cancer Res Clin Oncol. 127(1):69-72 (2001).
5. Hixson LJ. Alberts DS. et al. Cancer Epidemiology, Biomarkers & Prevention.3(5):433-8 (1994).
6. Thompson HJ. Jiang C. Lu J. Mehta RG. et al. Cancer Res. 57(2):267-71 (1997).
7. Soriano AF. Helfrich B. Chan DC. et al. Cancer Res. 59(24):6178-84 (1999).
8. Rahman MA. Dhar DK. Masunaga R. et al. Cancer Res. 60(8):2085-9 (2000).
9. Piazza, GA. Kahm, ALK, Krutzxch, M. et al. Cancer Res. 55:3110-6 (1995).

Tanshinones



Tanshiones I

See Page 221



Tanshiones II A

See Page 221

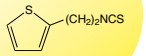
Salvia miltiorrhiza BUNGE is a traditional oriental herbal medicine that is known to induce antiinflammatory, antioxidative and cytotoxic activity [1]. Tanshinones are pigments from Salvia miltiorrhiza BUNGE. Results from Kang's experiments demonstrated that tanshinones significantly inhibited the expression of IL-12 P40 gene at the mRNA level. Furthermore, tanshinones potently inhibited the promoter activation of IL-12 P40 gene and nuclear factor (NF)-KappaB binding to the Kappa B site. These results may explain anti-inflammatory activity of tanshinones and suggest a possible use of tanshinones in the treatment of immunological diseases [2]. Tanshinones have been shown cytotoxicity against multiple cultured human tumor cell lines such as A549(non-small cell lung), SK-OV-3(ovary), SK-MEL-2(melanoma), XF498(central nerve system) and HCT-15(colon) [3].

Apoptosis is a new therapeutic target of cancer research [5]. Tanshinone IIA is a derivative of phenanthrene-quinone isolated from the roots of Salvia miltiorrhiza BUNGE 1. Tanshinones IIA induces apoptosis in HL60 human premyelocytic leukemia cell line, K562 human erythroleukemic cell and NB4 cell. Tanshinones IIA induces apoptosis might be associated with the selective members of caspase family [1, 4, 5].

1. Sung, HJ., Choi, SM., et al. Experimental & Molecular Medicine. 31(4):174-8 (1999).
2. Kang, BY., Chung, SW., Kim, SH., et al. Immunopharmacology. 49(3):355-61 (2000).
3. Ryu, SY., Lee, CO., Choi, SU. Planta Medica. 63(4):339-42 (1997).
4. Meng, W., Yang, Y., et al. Chinese Journal of Hematology. 23(6);297-300 (2002).
5. Yoon, Y., Kim, YO., Jeon, WK., et al. J of Ethnopharmacology. 68(1-3);121-7 (1999)

Thienyl alkyl Isothiocyanates

Thienylethyl Isothiocyanate



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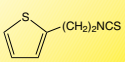
Thienylheptyl Isothiocyanate



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US Patent No. 6166003

Phenylbutyl isothiocyanate (PBITC) is an inhibitor of chemically-induced lung carcinogenesis[1]. n-Butyl thiophene (BT) inhibits colon carcinogenesis[2]. LKT Laboratories has designed thienylbutyl isothiocyanate (TBITC) to incorporate the active functional groups of isothiocyanate in PBITC and thiophene in BT to achieve the inhibitory activities of both compounds[3]. We refer to such compounds as "bifunctional inhibitors", where the term "bifunctional" refers to the the two biologically active functional groups present in the compound.

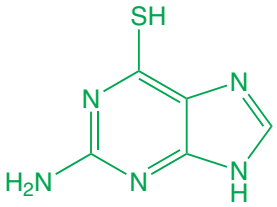
The activity of TBITC has been confirmed by three prescreening assays: the induction of glutathione-S-transferase, the inhibition of lung methylation, and reduction of colon aberrant crypts formation[3]. Bioassays with lung and colon tumor models indicate that TBITC is an effective cancer chemopreventive agent in both target tissues. Structure activity relationship studies of phenylalkyl isothiocyanates have shown that there is a preference for longer alkyl chain lengths in the prevention of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)-induced lung tumors, with a six carbon chain being the most effective[4]. Against esophageal tumors induced by N-nitrosomethylamylamine (NMAA), an ethyl group is the most effective[5]. Benzyl isothiocyanate, but not phenylethyl isothiocyanate, inhibits benzo[a]pyrene-induced lung tumors[6]. To promote similar SAR studies with thienyl alky isothiocyanates, LKT Laboratories offers the full series from thienylmethyl isothiocyanate (n = 1) to thienyl decyl isothiocyanate (n = 10), plus thienyl dodecyl isothiocyanate (n = 12). This series of bifunctional inhibitors of chemical carcinogenesis represents a new and novel class of chemopreventive agents.

1. Morse, M.A., Eklind, K.I., Amin, S.G., Hecht, S.S. and Chung, F.-L. Carcinogenesis, 10:1757-9 (1989).
2. Lam, L.K., and Zhang, J. Carcinogenesis, 12:2311-5 (1995).
3. Lam, L.K.T., Kenney, P., Bergstrom, C.P. and Lam, S.H. Proc. Amer. Assoc. Cancer Res., 40:57 (1999).
4. Jiao, D., Smith, T.J., Yang, C.S., et al. Carcinogenesis, 18:2143-7 (1997).
5. Huang, Q., Lawson, T.A., Chung, F.L., Morris, C.R. and Mervish, S.S. Carcinogenesis, 14:749-54 (1993).
6. Lin, J.M., Amin, S., Trushin, N. and Hecht, S.S. Cancer Lett. 74:151-9 (1993).

6-Thioguanine

6-Thioguanine is a chemotherapy drug that demonstrates anti-neoplastic, immunosuppressive and anti-cancer activities[1,2,3,4]. 6-Thioguanine is often used to treat inflammatory diseases and leukemia. Thioguanine is a guanine analogue that interferes with nucleic acid purine biosynthesis[3]. Its inhibition mechanism is the pseudo-feedback that blocks the synthesis of guanine. 6-Thioguanine also induces cell cycle arrest and apoptosis by the incorporation into both DNA and RNA[5,6].

1. Karran P. Br Med Bull 79-80: 153-70 (2006).
2. Sartorelli AC, Booth BA. Cancer Res. 25: 1393-40 (1965).
3. Sartorelli A, LePage G. Cancer Res. 18: 1329 (1958).
4. LePage G. Cancer Res. 23: 1329 (1963).
5. Inamochi H, Higashigawa M, Shimono Y, Nagata T, and Cao DC. J Exp Clin Cancer Res. 18: 417-24 (1999).
6. Tendian SW, Parker WB. Mol Pharmacol. 57: 695-9 (2000).



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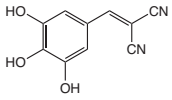
Tyrphostin

Signaling through protein tyrosine kinase (PTKs) is a major contributor to the transmission of mitogenic stimuli to the interior of the cell and nucleus. Platelet-derived growth factors(PDGF) and their receptors (PDGFR) are involved in the induction and proliferation of numerous solid tumors and are the potential candidates for novel targeted antitumor therapy. Receptor tyrosine kinase (RTK) activation is critical for growth factor-mediated cell proliferation.

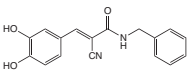
Tyrphostin AG1295 is an inhibitor of PDGF receptor kinase. It blocks the stitulatory effect of PDGF on the mRNA and protein expression of transcription factors [1]. AG1295 blocks beta-PDGF activation, downstream signaling, growth in cell culture and chemotaxis of TC-32 cells. It also delays tumor formation and prolonged survival in an Ewing's sarcoma family of tumor animal model [2]. Two concentrations of AG1295 (10 and 100 uM) significantly inhibited rabbit conjunctival fibroblast cell growth stimulated by PDGF-AA or PDGF-BB in vitro. No significant histologic or retinal functional damage was found in the AG1295-treated group [3]. Signal transduction through the PDGF/PDGFR system has been linked to vascular smooth muscle cell migration and proliferation leading to allograft vasculopathy. Experiments show tyrophostin AG1295 reduces neointimal formation in aortic allograft vasculopathy by inhibition of PDGFR-beta-triggered tyrosine phosphorylation which makes tyrophostin AG1295 a potential agent for local therapy of restenosis [4,5].

Tyrphostin AG490 is a Jak 2 inhibitor. It exhibits an IC50 on JAK activation at 10 uM. Treatment with 10 uM AG490 reduced myxoma virus-induced Jak2 phosphorylation by 36%. Thus, inhibition of JAK kinase activity blocks myxoma virus replicatio, indicative of a critical role for this kinase in virus infection [6].

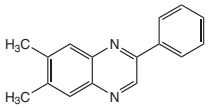
1. Chui CM, Li K, et al. Cytokine. 21:51-64 (2003).
2. Uren A, Merchant MS, et al. Oncogene. 22:2334-42 (2003).
3. Zheng Y, Ikuno Y, et al. Jpn J Ophthalmol. 47:158-65 (2003).
4. Karck M, Meliss R, Hestermann M, et al. Transplantation. 74:1335-41 (2002).
5. Chorny M, Fishbein I, et al. J Control Release. 83:401-14 (2002).
6. Masters J, Hinek AA, Uddin S, et al. J Biol Chem. 276:48371-5 (2001).



Tyrphostin A25
See Page 236



Tyrphostin AG490
See Page 236



Tyrphostin AG1295
See Page 237

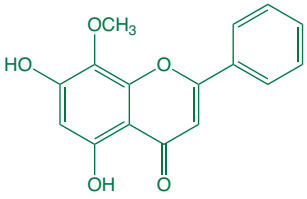
Wogonin

Wogonin is a natural flavanoid derived from the root of Scutellaria baicalensis Georgi. This medicinal plant is traditionally used in Chinese medicine1. Wogonin is reported to have a wide spectrum of biological activities including anti-inflammatory, neuroprotective, anti-oxidant and anti-cancer effects[1,2,3]. In recent studies, wogonin demonstrates potent apoptotic effects on human promyeloleukemic cells HL-60.

Wogonin also induces dose-dependent apoptosis on hepatocellular carcinoma cells in addition to DNA fragmentation. The apoptosis mechanism for hepatocellular carcinoma cells was through caspase-3 activation and induction of p53 protein[2].

Although the anticancer agent etoposide induces apoptosis in normal and cancer cells, it also causes adverse effects such as myelosuppression. Wogonin was found to prevent thymocyte apoptosis caused by etoposide. Addition of wogonin to etopotoside-treated Junkart, HL-60 and lung cancer cells caused acceleration in cell death. These results suggest that concomitant treatment of wogonin and etoposised may be very useful in chemotherapy with reduced adverse side effects[4].

1. Heasuk L, Young O, Hocheol K, Hocheol K, and Sun K, et. al. FASEB Journal. 17: 1943-1944 (2003).
2. Chen YC, Shen SC, Lee WR, Lin HY, Ko CH, Shih CM, Yang LL. Arch Toxicol. 76: 351-9 (2002).
3. Chang Y, Shen J, WungB, Cheng J, and Wang D. Mol. Pharm. 60: 507-513 (2001).
4. Lee E, Enomoto R, Suzuki C, Ohno M, Ohashi T, and Miyauchi A. et.al. Ann N Y Acad Sci. 1095: 521-6 (2007).



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Zonisamide

Zonisamide is an FDA approved antiepileptic drug. Zonisamide inhibits voltage-dependent sodium channels and calcium channels of T-type [1,2,3]. Zonisamide is metabolized by cytochrome P450 and has a clinical favorable long half-life (63-69 hours in healthy subjects) which allows even once-daily dosing [2].

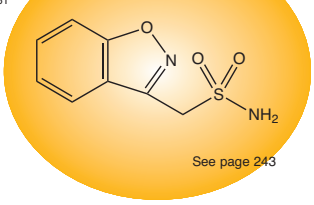
The clinical and experimental studies show zonisamide may be useful in the treatment of a wide variety of neuropathic pain syndromes or migraine prophylaxis [3,4]. Sakaue A and colleagues found zonisamide has a preferential antinociceptive action against thermal stimulation that is related to its local anesthetic action [5].

Although psychotropic agents are not approved for the treatment of obesity, they have been used by clinicians as a therapeutic tool in daily clinical practice. Zonisamide is one of the central nervous system antiobesity agents under investigation [6,7,8].

Murata M reported that zonisamide has novel therapeutic effects on Parkinson's disease. Zonisamide increases dopamine contents in the striatum by activating dopamine synthesis and the level of mRNA of tyrosine hydroxylase. A nation-wide double-blind controlled study in Japan confirmed that zonisamide improved all the cardinal symptoms of Parkinson's disease at 50mg per day dose [9].

New evidence suggest that Zonisamide exerts neuroprotective properties [3,10].

1. Faught E. Seizure. 1:S59-65 (2004).
2. Leppik IE. Seizure. 1:S5-9 (2004).
3. Sobieszek G, Borowicz KK, et al. Pol J Pharmacol. 55(5):683-9 (2003).
4. Guay DR. American Journal Geriatric Pharmacotherapy. 1(1):18-37 (2003).
5. Sakaue A, Honda M, Tanabe M, Ono H. Journal of Pharmacological Sciences 95(2):181-8 (2004).
6. Bays HE. Obes Res. 12(8):1197-211 (2004).
7. Appolinario JC, Bueno JR, Coutinho W. CNS Drugs. 18(10):629-51 (2004).
8. Wilding J. Curr Drug Targets. 5(3):325-32 (2004).
9. Murata M. Curr Pharm Des. 10(6):687-93 (2004).
10. Seino M. Seizure. 1:S2-4 (2004).



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Apoptosis Detection Assay Kits

See page 204 for a complete list of kits

Apoptosis is a cell suicide mechanism that enables organisms to control cell number and eliminate cells that threaten survival [1]. Apoptosis is also an important phenomenon in cytotoxicity induced by anticancer drugs [2]. Knowing the ability of a compound to induce or inhibit apoptosis is critical to making decisions about its drug-ability in the drug discovery process. Caspases, a group of cysteine proteases, play a central role as executioners in the apoptotic cell death process [3,4]. For instance, caspase-2 is an upstream initiator of mitochondrial permeabilization [5]. Cathepsins are apoptosis markers associated with tumors and Alzheimer's disease [6].

Caspases are involved not only in apoptosis but also in cytokine maturation and cell growth and differentiation. Among them, caspase-1 is primarily involved in the process of pro-inflammatory cytokines. Caspase-3 and caspase-9 are essential for apoptosis during brain development. Caspase-8 is required for the development of heart muscle, cell proliferation in the hematopoietic lineage and death-receptor-mediated apoptosis [3,7].

Apoptosis and cytotoxicity can be quantitated by measuring active caspases, cathepsins, serine proteases, cholinesterase, and mitochondrial functionality in live cells with our new FLICA™, Magic Red™, MitoPT™, FLISP™, Cholinesterase, and Cytotoxicity kits.

Easy to use:

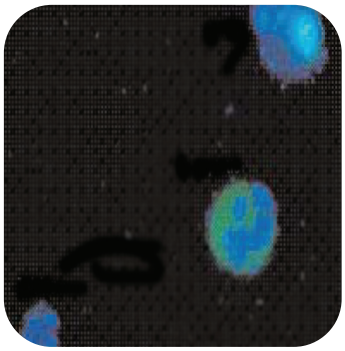
Potent caspase inhibitors are cell-permeable and non-cytotoxic.
No lysis, no permeabilization or antibodies, no radioisotopes are required.

Early detection:

Quantitate apoptosis earlier than Annexin V and Tunnel assays.

Sensitive & accurate results:

Only cells with active enzymes fluoresce
No interference from pro-caspases



1. Hajra KM, Liu JR. Apoptosis. 9(6):691-704 (2004).
2. Kim R, Tanabe K, et al. Cancer Chemother Pharmacol. 50(5):343-52 (2002).
3. Salvesen, G.S., and Dixit, V.M. Cell. 91:443-446 (1997).
4. Jin Wang and Michael J. Lenardo. Journal of Cell Science. 113:753-757 (2000).
5. Troy CM, Shelanski ML. Cell Death Differ. 10(1):101-7 (2003).
6. Motyckova, G., et al. Proc Natl Acad Sci. 98:5798-5803 (2001).
7. Kim Newton, and Andreas Strasser. Genes & Development. 17(7):819-825 (2003).

Recombinant Antigens

The recombinant antigens are for use in immunoassays and histochemistry application. For example, they can be used to detect antibodies against HIV envelop protein gp41 and gp120, HIV core protein p24 and HIV enzyme protein p31.

Recombinant HIV-1 gp-41 and HIV-1gp-120 bind CD4 & 7-transmembrane corepressor. HCV viral non-structural proteins are cleaved by NS3 serine protease.

LKT Labs offers the following recombinant antigens that in either lyophilized form for rapid test kits or in solution for ELISA. All these products are purified from *E. coli* by ion exchange chromatography and then through gel filtration to over 98% purity. They are stable at -20 °C for more than one year.

Recombinant HCV Antigens:

Recombinant Multi-epitope Chimeric HCV antigen (Core, NS3, NS4, NS5)
Recombinant HCV-Core antigens
Recombinant HCV-NS3 antigens
Recombinant HCV-NS4 antigens
Recombinant HCV-NS5 antigens

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Recombinant HIV Antigens:

Recombinant Multi-epitope Chimeric HIV antigen 1 (gp41, "O", gp36)
Recombinant HIV-1 gp-41
Recombinant HIV-1gp-120
Recombinant HIV-1p24
Recombinant HIV-1p31
Recombinant HIV-1"O) group consensus
Recombinant HIV-2 gp36

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Recombinant Treponema pallidum Antigens for Syphilie:

Recombinant Tp-chimeric protein (TpN15, TpN17, TpN44.5, TpN47)
Recombinant TpN 15 protein
Recombinant TpN 17 protein
Recombinant TpN 44.5 protein
Recombinant TpN 47 protein

See Page 201-2

Peptides

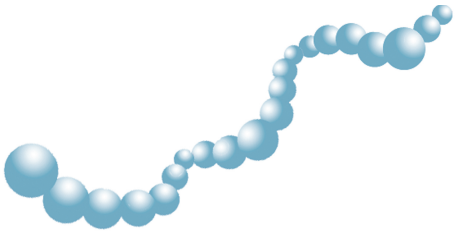
See page 212 for a complete list of biologically active peptides

Peptides are molecules formed from the linking of less than 50 various amino acids. The molecular weight of one peptide is less than 10,000. Like proteins, peptides occur in nature and are responsible for many functions. For instance, antimicrobial peptides disrupt the membrane of a target cell thus lysis of the cell. Opioid peptides such as casomorphiine and gluten exorphine mimick the effects of morphine [1]. Calcineurin is an important signaling molecule in mesangial cells in vitro and is involved in some manifestations of diabetic nephropathy in vivo [2].

Amyloid beta-protein accumulation in the brain is linked to the neuropathology of Alzheimer's disease [3]. The altered kinetics and enzymatic cleavage of peptides during water-electrolyte imbalance can contribute to cardiac and renal damage associated with elevated blood pressure [4]. Angiotensin II, a cell proliferation and angiogenesis regulator, is the main effector peptide in the renin-angiotensin system [5]. Angiotensin II binds two major receptors, AT1 and AT2. An AT2 receptor microvascular dilator action is mediated by nitric oxide (NO) generation in a bradykinin-dependent or independent manner. Carey RM reported that AT2 receptor had protective effect against ischemic renal injury. The AT2 receptor will be a crucial investigation area with therapeutic applications in the future [6].

Ultra-pure water is the first choice solvent for most peptides. Dilute acetic acid or ammonium hydroxide may be necessary to dissolve basic or acidic peptides, respectively. A peptide with greater than 70% purity is usually sufficient for generating or testing antibodies. A mixture of closely related peptides is able to induce an immune response that will provide the required antibody. Higher than 85% or 95% pure peptides are required in enzymology or biological activity studies [7].

1. Wikipedia. http://en.wikipedia.org/wiki/Peptide
2. Gooch JL, Pergola PE, et al. J Am Soc Nephrol. 15(6):1421-9 (2004).
3. Jayakumar R, Kusiak JW, et al. Biochim Biophys Acta. 1622(1):20-8 (2003).
4. Silveira PF, Gil J, et al. Curr Med Chem Cardiovasc Hematol Agents. 2(3):219-38 (2004).
5. Escobar E, Rodriguez-Reyna TS, et al. Curr Vasc Pharmacol. 2(4):385-99 (2004).
6. Carey RM. Curr Opin Nephrol Hypertens. 14(1):67-71 (2005).
7. Eurogentec. http://uk.eurogentec.com/code/en/page_08_307.htm



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Outsourcing has become an increasingly important part of successful business today. It eliminates the need to have expensive in-house laboratory facilities and personnel. Our friendly and creative staff, backed by years of experience and knowledge in organic synthesis and natural product chemistry, will work closely with you to ensure the success of your project.

Areas of Expertise:

- Multistep synthesis.
- Synthesis of heterocyclic compounds.
- Synthesis of specially designed compounds containing selenium and silicon.
- Synthesis of amino acid derivatives.
- Isolation, purification, characterization and bioassay of natural compounds.

LKT Laboratories, Inc. is a unique source for your confidential custom synthesis needs. The custom synthesis division is well equipped and dedicated to assisting you.

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The purity and characterization of compounds are performed with the use of modern analytical and spectroscopic instrumentation.

We develop simple alternative pathways for complex multistep synthesis.

We design novel and efficient synthetic procedures for biologically active natural compounds.

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Using High-Throughput Screening To Ease Your Job In The Laboratory

LKT Laboratories is making your job in the lab much easier with the **Drug Discovery Kit**.

We want you to spend time finding results, not doing monotonous tasks. This is why we put our specialty chemicals together in a way that utilizes the products of the high throughput screening industry. This product will provide a low cost method of determining the effect a large number of compounds has on your research system.

This is done by making available groups of compounds that can be customized to fit your needs. To order, choose which groups of compounds you would like to screen and order only these groups. All of the chemicals and their prices can be found on the following pages.

When placing an order, you pay a base charge of $35.00 for plate set-up plus the cost of the groups you choose. All plates will be shipped overnight on dry ice and free shipping is given to plates with 10 or more rows ordered.

Our library of chemicals is constantly expanding. In addition to including the new chemicals added in our 2007-2008 catalog, we will also be adding many rows of unknowns and at least 20 rows of apoptosis inducers.

Purpose: To provide equimolar samples of many specialty chemicals in a manner suitable for high throughput screening at a price that is affordable.

Delivery System: Either 10 or 100 microliters of a 1mM solution dissolved in DMSO, sealed and frozen in a 96 well plate. The organization of this product creates a minimal amount of waste.

Use: These materials can be used directly in your screening assay, diluted to suitable concentrations and/or added to pre-grown cells.

Customization: We do not want you to waste resources buying chemicals that have no effect; therefore, we are offering custom-built plates. We have established families of materials that have similar properties. These groups are put in the same row so when purchasing a plate, you choose the rows that will be the most relevant and pay accordingly. The groupings of materials are in the pages that follow.

Benefit: You will discover exciting information more quickly because you will be spending less time researching, pricing and purchasing large quantities of materials before knowing their potential.

For a list of chemicals, see pages 33-40.

The following 10 microliters volume kits have been discontinued and are now on sale!

AA100 - AA106, AP100 - AP107, AP109, CF100,CF101, CL100, CP100 - CP103, CP105 - CP116, CP120 - CP142, NA100, NP100 - NP106, ST100,TT100, TT101.

HURRY! LIMITED QUANTITY ONLY!

Orig. ~~$5,300~~
-$3,300
Only $2,000

Drug Discovery Kit

The following materials can be ordered as a part of the Drug Discovery Kit. Please select from the following groupings to be included in your plate.

Anti-Angiogenic Agents (**AA**) Antimicrobials (**AM**)

Antineoplastics (**AN**) Apoptosis Inducers and Inhibitors (**AP**)

Cancer Chemopreventive Agents (**CP**) Coffee Products(**CF**)

Cyclovirs (**CL**) Natural Products (**NP**)

NSAIDs (**NA**) Signal Transduction Reagents (**ST**)

Taxol Derivatives (**TT**) Non-Categorized Chemicals (**XX**)

The standard volume is 100 µl per well, and they are in stock.
Our library of chemicals is constantly expanding.
Please inquire if there are materials you do not find.
Please see page 32 for more information on this product.

AA100 $103.00
Paclitaxel
Cisplatin
Cyclophosphamide
Cyclosporin
Dacarbazine
Doxorubicin
Chalcone

AA101 $76.00
Fluorouracil
Ganciclovir
Glucosamine
Hydroxyurea
Indomethacin
Carboplatin
Clindamycin Palmitate
Cyclohexamide

AA102 $95.00
Tranilast
Amiloride
Dexamethasone
Forskolin
Curcumin
Oxaliplatin
Thalidomide
N-4-(Hydroxyphenyl) retinamide

AA103 $76.00
Medroxyprogesterone 17-acetate
Mifepristone
Busulfan
Colchicine
Simvastatin
Flurbiprofen
Ipriflavone

AA104 $76.00
Corticosterone
Doxycycline
Tamoxifen Citrate
Hydrocortisone
Quinacrine
Captopril
Suramin

AA105 $103.00
Nifidepine
Mitomycin C
Genestein
Penicillamine
Pentoxifylline
Daidzein
Wortmannin

AA106 $103.00
Somatostatin
Tetracycline
Omeprazole
Aprotinin
Tunicamycin
Ursodeoxycholic Acid
Prednisolone

AA107 $105.00
Acetylsalicylic Acid/ Aspirin
Atorvastatin
Lovastatin
Pravastatin sodium
Levamisole HCl
Genistein
Minocycline HCl
Chlormadinone acetate

AA108 $210.00
Carmustine
Difluoromethylornithine
Epigallocatechin gallate
N-(4-Hydroxyphenyl) retinamide
Lisinopril
Vincristine
Thalidomide
Lavendustin A

AA109 $253.00
Cyclosporin A
Cyclosporin C
Cyclosporin D
Cyclosporin H
Docetaxel
Paclitaxel
Tetrandrine
Tretinoin (trans-Retinoic acid)

AA124 $364.00
Camptothecin
Camptothecin, 7-ethyl-10-hydroxy
Camptothecin, 10-hydroxy
Camptothecin, 9-nitro-20(S)
Irinotecan
Topotecan
Radicicol
Staurosporine

AM100 $111.00
Carbadox
Cefaclor
Cefoperazone acid
Cefoperazone sodium
Cefotaxime acid
Cefotaxime sodium
Ceftazidime
Chloramphenicol

Drug Discovery Kit

AM101 $111.00
Acetylsalicylic acid/ Aspirin
4-Aminosalicylic acid
4-Aminosalicylic acid sodium dihydrate
Clobetasol Propionate
Diflunisal
6-Mercaptopurine monohydrate
Methotrexate
Paenol

AM102 $111.00
Levofloxacin HCl
Lincomycin HCl monohydrate
Lomefloxacin HCl
Nadifloxacin
Norfloxacin
Ofloxacin
Pazufloxacin
Rufloxacin

AM103 $111.00
Cinoxacin
Ciprofloxacin
Clindamycin HCl
Clinafloxacin HCl
Enoxacin
Enrofloxacin
Fleroxacin
Gatifloxacin

AM104 $111.00
Atropine sulfate
Bambuterol HCl
Loperamide HCl
Losartan Potassium
Sarafloxacin HCl
Sparfloxacin
Tosufloxacin
Sulfadoxine

AM105 $111.00
Bifonazole
Climbazole
Flubendazole
Fluconazole
Itraconazole
Mebendazol
Metronidazole

AM106 $111.00
Miconazole
Miconazole nitrate
Oxiconazole nitrate
Oxfendazole
Oxibendazole
Tioconazole
Secnidazole
Praziquantel

AM107 $111.00
Ampicillin trihydrate
Oxacillin sodium monohydrate
Penicillin G procraine
Penicillin V potassium
Piperacillin
Piperacillin sodium
Ethacridine lacate monohydrate
Erythromycin thiocyanate

AM108 $161.00
Bleomycin A5 HCl
Bleomycin sulfate
Cepharanthine
Mitomycin C
Spectinomycin HCl
Tobramycin free base
Nifursol

AM109 $111.00
Daunorubicin HCl
Demeclocycline
Doxorubicin HCl
Doxycycline HCl
Doxycycline monohydrate
Oxytetracycline HCl
Tetracycline
Tetracycline HCl

AM124 $166.50
Acemetacin
Indomethacin
Actinomycin D
Azithromycin
Andrographolide, dehydro-
Andrographolide, deoxy-
Puromycin
Nystatin

AM111 $136.00
Arbutin
Baicalin
Curcumin
Diosmin
Honokiol
Magnolol
Rosmarinic acid
Shikimic acid

AM112 $111.00
Florfenicol
Furosemide
Amitraz
Cromolyn sodium
Cyromazine
Meloxicam
Tenoxicam
Famciclovir

AM113 $111.00
Closantel
Diclofenac sodium salt
Pyrantel Pamoate
α-Santonin
Prothionamide
Pyrazinamide
Rimantadine HCl
Atenolol

AM114 $758.50
Caerulomycin A
Clarithromycin
Brefeldin A
Geldanamycin
Gentamycin
Ikarugamycin
Minocycline HCl
Roxithromycin

AM115 $142.00
Neomycin sulfate
Rapamycin
Ribavirin
Rifampin
Rifamycin SV-3 formyl
Rifamycin SV-Sodium
Rifaximin

AM116 $111.00
Betamethasone 21-phosphate sodium salt
Chlorpheniramine maleate
Fluocinolone acetonide
Hydrocortisone
Tolfenamic acid
Cycloheximide
Trimethoprim
Tylosin tartrate

AM117 $111.00
Nabumetone
Nimesulide
Colistin sulphate
Tolmetin sodium
Triamcinolone acetonide
Scopolamine hydrobromide
Thiamphenicol Glycinate HCl
Etoposide

AM118 $111.00
Fenbufen
Flurbiprofen
Ibuprofen
S(+) Ibuprofen
Ketoprofen
Amprolium HCl
Idoxuridine
Povidone iodine

AM119 $111.00
Allyl disulfide
Amantadine HCl
Pefloxacine mesylate
Suramin hexasodium salt
Terbinafine HCl
Primaquine Phosphate
Modafinil

AN100 $111.00
Actinomycin
Puromycin
Carmofur
Mitoxantrone
Canthaxanthin .5 mmol
Carnosic acid
Lisinopril

AN101 $777.00
Calcitriol
Cholecalciferol/ Vitamin D3
Vitamin E (tocopherol)
Vitamin A
Vitamin K3
Biochanin A
Genistein

AN102 $111.00
Calcium folinate, pentahydrate
Methotrexate
Ftorafur
Cyclocytidine HCl
Hydroxyurea
Lomustine
6-Mercaptopurine monohydrate
Tenoxicam

AN103 $173.00
Camptothecin
Camptothecin, 7-ethyl-10-hydroxy
Camptothecin, 10-hydroxy
Catharanthine base
Catharanthine sulfate
Catharanthine tartrate
Irinotecan
Topotecan

AN104 $185.00
Ifosfamide
Nocodazole
Suramin hexasodium salt
Vinblastine sulfate
Vincristine sulfate
Vindesine sulfate
Vindoline
Vinorelbine base

Drug Discovery Kit

AN105 $142.00
Daunorubicin HCl
Dihydrokainic acid
Doxorubicin HCl
Doxycycline Monohydrate
Doxycycline HCl
Epirubicin
Tetracycline
Etoposide

AN106 $111.00
Corticosterone
Hydrocortisone
Medroxyprogesterone 17-acetate
Megestrol acetate
Methylprednisolone
Mifepristone
Prednisolone
Prednisolone Na phosphate in 50% DMSO

AN107 $142.00
Carboplatin
Nedaplatin
Oxaliplatin
Satraplatin
Acemetacin
Kaempferol
Meloxicam
Catechin

AN108 $124.00
Levamisole HCl
Palmatine
Cyclophosphamide
Harringtonin
Hexamethonium bromide hydrate
Homoharringtonin
Sulfadiazine
Chlorambucil

AN109 $105.00
Podophyllotoxin
Teniposide
DL-Homocysteine thiolactone HCl
Hydroquinone
Uracil
Procarbazine HCl
Puerarin
Troglitazone

AN124 $136.00
Exemestane
Flutamide
Tamoxifen citrate
Toremifene
Docetaxel
Ibandronate .5 mmol 50% DMSO
Quinacrine
Paclitaxel, (Taxol)

AN111 $142.00
trans-Anethole
18 β-Glycyrrhetinic acid
Glycyrrhizic acid
Perillyl alcohol
D-Limonene
Triptolide
Tubeimoside I .1 mmol
Rubescensin A

AN112 $118.00
Adenine
Bestatine HCl
Busulfan
Colchicine
Mevastatin
Simvastatin
Vidarabine
Norepinephrine

AN113 $259.00
Alloxan monohydrate
Caerulomycin A
Gallic acid
Melphalan
Phenethyl caffeate
Allopurinol
Difluoromethylornithine
Ketoconazole

AN114 $198.00
Copper bis-3,5-diisopropylsalicylate
Lavendustin A
Phorbol-12-myristate-13-acetate
Tamsulosin HCl
Terazosin HCl
Thalidomide
Tranilast
Acivicin

AN115 $148.00
Altretamine
Danazol
Hydroquinone
Ionomycin
MESNA
Miconazole
Theophylline
5-Fluorouracil

AN116 $296.00
3-Aminobenzamide
Aphidicolin
Mitomycin C
Nimustine
Trichostatin A
Trifluoperazine
Bleomycin A5 HCl
Bleomycin sulfate

AN117 $111.00
Cytarabine
Doxifluridine
Floxuridine
Ribavirin
Zalcitabine
Hypocrellin A
Hypocrellin B
Captopril

AP100 $109.00
Adenine
3-Aminobenzamide
6-Aminonicotinamide
Ascorbic acid
Bafilomycin A1
Baicalin
Wortmanin

AP101 $130.00
Bestatine Hydrochloride
1,4-Benzoquinone
Bleomycin A5 hydrochloride
Brefeldin A
n-Butyric acid
Phenethyl caffeate
Acivicin
Baccatin III

AP102 $89.00
Biochanin A
Cerulenin
Chenodeoxycholic acid
Chlorambucil
Chlorpromazine
Chloroadenosine
Clofibrate

AP103 $82.00
3,3'-Diindolylmethane
Disulfiram
Etoposide
Farnesol
5-Fluorouracil
Flurbiprofen
Flavanone
Tunicamycin

AP104 $76.00
Colchicine
Concanavalin A (DMSO/ Tris Buffer)
Copper bis-3,5-diisopropylsalicylate
Corticosterone
Cyproterone Acetatte
Cycloheximide
Demecolcine
Diethylstilbestrol

AP105 $171.00
Fumonisin B1
Galactosamine
Genistein
Epigallocatechin gallate
Hexamethylene bisacetamide
Hydroxyphenyl)retinamide
Atorvastatin
Ibuprofen

AP106 $148.00
Ionomycin
Kaempferol
Ketoprofen
Valinomycin
Levonorgestrel
Curcumin
Lomustine
Levamisole HCl

AP107 $76.00
6-Mercaptopurine monohydrate
Methylprednisolone
Nifidepine
Nocodazole
Pentoxifylline
Perillyl Alcohol
Camptothecin

AP108 $163.00
Piroxicam
Prednisolone
Puromycin
Somatostatin
D-Sphingosine
Sphingosine-1-phosphate
Sphingosine N,N-dimethyl
Monesin

AP109 $163.00
Staurosporine
Sulindac, sulfide
Tamoxifen citrate
Tetracycline
Tetrandrine
Toremifene
Trichostatin A
Trifluoperazine

AP124 $111.00
Hydrocortisone
Mifepristone
Potassium Canrenoate
Prednisolone Na phosphate in 50% DMSO
Triamcinolone
Triamcinolone Acetonide
Triamcinolone Acetonide acetate
Finasteride

Drug Discovery Kit

AP111 $204.00
Aphidicolin
Chelerythrine chloride
Clomiphene citrate
Daunorubicin HCl
Doxorubicin HCl
DL, 1'-Acetoxychavicol acetate
Bestatine HCl
Vinblastine sulfate

AP112 $136.00
Gallic acid
Honokiol
Geniposide
Geranylgeraniol
Sulfasalazine
N-(4-Hydroxyphenyl) retinamide
Chloramphenicol
Naringin

AP113 $419.00
Saikosaponin A
Saikosaponin B1
Saikosaponin B2
Saikosaponin C
Saikosaponin D
Troglitazone
Tubeimoside I .1 mmol
Cyclophosphamide

AP114 $259.00
Hexamethonium bromide hydrate
Calcimycin
Mitomycin C
Valinomycin
Cyclosporin A
Cyclosporin C
Cyclosporin D
Cyclosporin H

AP115 $111.00
Benzalkonium bromide
Stanozolol
Anethole-trithione
Amlodipine
Amlodipine besylate
Formoterol Fumarate
Methimazole
S-Nitrosoglutathione

AP116 $105.00
Clodronate disodium in 50% DMSO
Phenethyl isothiocyanate
Phenylbutyl isothiocyanate
Phenylhexyl isothiocyanate
Phenylpropyl isothiocyanate
Auraptene
Imiquimod
Ticlopidine HCl

AP117 $148.00
Carmustine
Temozolomide
(-)Epicatechin gallate
Docetaxel
Vincristine sulfate
2-Hydroxyflutamide
5-Fluorouracil
Acetylsalicyclic acid/Aspirin

AP118 $118.00
Allyl disulfide
Irinotecan
Lovastatin
Simvastatin
Atorvastatin
Nimesulide
Securinine
Amiodarone HCl

CF100 $89.00
Kahweol stearate
Cafestol stearate
Kahweol acetate
Cafestol acetate
Cafestol
Kahweol
Cafestol palmitate
Caffeic acid

CF101 $89.00
Kahweol eicosanate
Butyric acid sodium salt
Sterioside
β-Naphthoflavone
Kahweol Linoleate
Caffeine
16-Oxocafestol
16-Oxokahweol

CL100 $83.00
Famciclovir
Gliclazide
Penciclovir
Valaciclovir
Acyclovir
Dideoxycytidine
Doxifluridine
Ribavirin

CP100 $89.00
R,S-Sulforaphane
R-Sulforaphane
S-Sulforaphene
3-Phenylpropylisothiocyanate
Phenethyl isothiocyanate
4-Phenylbutylisothiocyanate
Phenyl isothiocyanate
Benzyl isothiocyanate

CP101 $83.00
Thienylethyl isothiocyanate
Thienylheptyl isothiocyanate
Thienylhexyl isothiocyanate
Thienylmethyl isothiocyanate
Thienylnonanyl isothiocyanate
Thienyloctyl isothiocyanate
Thienylpentyl isothiocyanate
Thienylpropyl isothiocyanate

CP102 $83.00
Thienylbutyl isothiocyanate
Thienyldecyl isothiocyanate
Thienyldodecyl isothiocyanate
Benzyl thiocyanate
p-Xyleneselenocyanate
Benzyl selenocyanate
Taurine
Cysteamine hydrochloride

CP103 $83.00
L Alliin
Allyl disulfide
Diallyl sulfide
Diallyl trisulfide
L-Deoxyalliin
Dipropyldisulfide
Dipropylsulfide
1-Thioβ-D-glucose tetraacetate

CP105 $76.00
Carbenoxolone
Suramin
Theophylline
Chlorophyllin
Chrysin
Biochanin A
Allopurinol
Melatonin

CP106 $76.00
Dehydroepiandosterone
Diclofenac, sodium salt
Difluoromethylornithine
3,3'-Diindolylmethane
trans-Anethole
Chloramphenicol
D,L-alpha-Lipoic acid
2-n-Butylthiophene

CP107 $83.00
Alyssin
Alyssin sulfone
Erucin
Erysolin
Iberin
Iberverin
Cheirolin
Berteroin

CP108 $83.00
Acetylsalicylic acid
Etoposide
Indole-3-carbinol hydrate
2-5-Dimethylthiopene
2-n-Octylfuran
2-n-Dodecylfuran
2-n-Heptylfuran
2-n-Hexylfuran

CP109 $76.00
Silymarin
Piroxicam
Meloxicam
Miconazole
S-(N-3-Phenylpropylthiocarbamoyl)-L-cysteine
Se-methylselenocysteine
N-Acetyl-L-cysteine
S-(N-Benzylthiocarbamoyl)-L-cysteine

CP124 $83.00
Nordihydroguaiaretic Acid
Ursodeoxycholic Acid
Ferulic acid
Gallic acid
Brassinin
Phytic Acid
Protocatechuic acid
Purpurin

CP111 $83.00
Retinol acetate
9-cis Retinoic acid
13-cis Retinoic acid
trans Retinoic acid
Retinol
Retinyl acetate
Retinyl palmitate
N-(4-Carbethoxyphenyl)retinamide

CP112 $83.00
Methyl caffeate
3, 4 Dimethyl caffeate
3, 4 Dimethyl caffeate
Caffeic acid
Phenethyl caffeate
3,4 Dimethyl caffeate
β-Carotene
Canthaxanthin

CP113 $83.00
Bergenin
10-hydroxy Camptothecin
Andrographolide
L(+)Selenomethionine
Se-methylseleno-L-cysteine
Benzyl selenocyanate
p-Xyleneselenocyanate
Quinacrine

Drug Discovery Kit

CP114 $109.00
Epicatechin
Epigallocatechin gallate
Catechin 99%
Epigallocatechin gallate
Daidzein
Hesperetin
Green tea polyphenols
Epicatechin gallate

CP115 $95.00
4-Thiouridine
Ftorafur
Daunorubicin HCl
Dextromethorphan
Diclazuril
Enrofloxacin
Vitamin E
Vitamin D2

CP116 $109.00
S-Hexylglutathione
DL-Homocysteine thiolactone HCl
Homoharringtonin
N-(4-Hydroxyphenyl)retinamide
Hypocrellin A
Hypocrellin B
Idoxuridine
Ketotifen Fumarate

CP120 $89.00
Calcium folinate
Carnosic acid
Thiamphenicol Palmitate
Thiamphenicol Glycinate
Ciprofloxacin
Clindamycin hydrochloride
Clindamycin phosphate
Coumestrol

CP136 $95.00
Ifosfamide
Ipriflavone
Bilobalide
Ketoconazole
Levonorgestrel
Lomustine
Lycopene
Trimebutine Maleate

CP122 $76.00
L-Lysine in 50% DMSO
7-Methyl-6-mercaptopurine
9-Methyl-6-mercaptopurine
Megestrol Acetate
6-Mercaptopurine monohydrate
Methotrexate
Mesna
α-Methylbenzyl isothiocyanate

CP123 $109.00
Bleomycin sulfate
Brassinin
5-Bromo-2'-deoxyuridine
Neomycin sulfate
3-tert-Butyl-5-methoxy-1, 2-quinone
n-Butyric acid
Butyric Acid Sodium Salt
Bleomycin A5 HCl

CP124 $83.00
R(-)-a-Methylbenzyl isothio
S(+)-a-Methylbenzyl isothio
Metoprolol
Mitoxantrone
Molsidomine
Myricetin
Hydroquinone
Sulbactam

CP125 $95.00
Naproxen
Nigrin
Nitroso(acetoxymethyl)methylamine
Clindamycin HCl
Norfloxacin
Ochratoxin A
Pamidronate Disodium
Palmatine

CP126 $89.00
Bestatine Hydrochloride
1,4-Benzoquinone
Berberine hydrochloride hydrate
Bis(3,5-dibromosalicyl) fumarate
Bis(3,5-dibromosalicyl) succinate
Bis(salicyl) fumarate
Bisazir

CP127 $82.00
N-Acetyl-L-Cysteine
Actinomycin / Dactinomycin
Aflatoxin B1
Cyclosporin A
L(+)Alliin
Alloxan Monohydrate
Albendazol
Risedronate

CP128 $76.00
4-Aminophenylphosphate monosodium
Artemisinin (Qinghaosu)
11H-Benzo[a]fluorene
Celecoxib
S-(N-Benzylthiocarbamoyl)-L-cysteine
L-(+)-Selenomethionine
Thioctic Acid
Tobramycin Sulfate in 50% DMSO

CP129 $109.00
Selenomethionine
Penciclovir
Thienyloctyl isothiocyanate
Thalidomide
Thapsigarin
Theophylline
Thiamphenicol Palmitate
Lorglumide

CP130 $95.00
Phenylbutyl isothiocyanate
Curcumin
Indomethacin
Progesterone
Resiniferatoxin
ROPA
Rimantadine HCl
Rutin

CP131 $89.00
Actinomycin
Levamisole
Levonorgestrel
Leuprolide
Carboplatin
Calcimycin
Caffeine
3-Aminobenzamide

CP148 $109.00
Methotrexate
4-Aminophenylphosphate
Aminoglutethimide
Antipain
Artemisinin
L(+)Ascorbic Acid
Bioterin
Brefeldin A

CP133 $89.00
11H-Benzo[a]fluorene
Megestrol acetate
Chlorpromazine
Chymostatin
Chloroadenosine
Rimantadine HCl
Lactulose
Danazol

CP134 $89.00
Nabumetone
Neostigmine
Trimebutine Maleate
Cholecalciferol
Homoharringtonin
Tunicamycin
Uracil
Verapamil

CP135 $89.00
2-tert-Butyl-4-hydroxyanisole
3-tert-Butyl-4-hydroxyanisole
4-tert-Butyl-5-methoxy-catechol
3-tert-Butyl-5-methoxy-1, 2-quinone
4-tert-Butyl-5-methoxy-1, 2-quinone
2,5-Di-tert-butyl-4-hydroxyanisole
Butylated Hydroxyanisole
Butylated hydroxytoluene

CP136 $89.00
Toremifene
Tranilast
Tranylcypromine
Trichostatin A
Roscovitine
Sphingosine
Sphingosine-1-phosphate
Melphalan

CP137 $89.00
Cromolyn Sodium
Curcumin
Harringtonin
Disulfiram
Diphenhydramine
Doxycycline
S-Hexylglutathione

CP138 $103.00
Cyclohexamide
Cytarabine
Geranylgeraniol
Acyclovir
Clindamycin HCl
Esculetin
Esculin
Ethoxyquin

CP139 $148.00
Camptothecin
Camptothecin, 10-hydroxy
Irinotecan
Topotecan
Isorhamnetin
Kainic Acid
Oxaliplatin
DL-Homocysteine thiolactone HCl

CP140 $83.00
Fluocinolone Acetonide
Folic Acid
Ftorafur
Ganciclovir
Glucaric Acid
Puromycin
Phenylbutazone
Phenylbutyrates

Drug Discovery Kit

CP141 $83.00
Hydroxyurea
Glycyrrhetinic Acid
Palmitoyl-DL-carnitine
Palmitoyl-L-carnitine
Idoxuridine
Inositol
Ionomycin
Isopropyl Thiogalactoside

CP142 $76.00
Nerolidol
Tetracycline
S-Nitrosoglutathione
Nimesulide
Nonoxynol
Norepinephrine
1-Thio-b-D-glucose tetraacetate
Riboflavin

CP161 $105.00
Sulindac
Sulindac sulfide
Sulindac sulfone
Sedanolide
3-tert-Butyl-5-methoxy-catechol
6-Aminocaproic acid in 50% DMSO
Chlorogenic acid
Methylprednisolone

CP144 $795.00
9-cis Retinoic acid
Calcitriol
D-Limonene
Nicotinamide
trans-Retinoic acid
Vitamin A
Vitamin B12

CP145 $118.00
4'-Bromoflavone
Bezafibrate
Honokiol
Magnolol
Flutamide
Ifosfamide
Tanshinones I
Tanshinones IIA

CP146 $105.00
Auraptene
Geniposide
Limonin
Naringenin
Nomilin
Anethole-trithione
Oltipraz
DL-1'-Acetoxychavicol acetate

CP147 $118.00
Chalcone
Diosmin
Genistein
Hesperidin
Icariin
Kaempferol
Quercetin dihydrate
Silybin

CP166 $105.00
18β-Glycyrrhetinic acid
Carveol
Perillyl alcohol
Rubescensin A
Tubeimoside I .1 mmol
Ascorbyl palmitate
Troglitazone

CP149 $111.00
Dexamethasone
Exemestane
Medroxyprogesterone 17-acetate
Melatonin
Tamoxifen citrate
Lisinopril
Coumarin

CP150 $111.00
Ampiroxicam
Diflunisal
Flurbiprofen
Ibuprofen
S(+) Ibuprofen
Ketoprofen
Mefenamic acid
Tenoxicam

CP151 $111.00
β-Naphthoflavone
Ellagic acid
Phenethyl glucosinolate
Resveratrol
D-Naproxen
D,L-Naproxen
Tranilast
Theophylline

NA100 $89.00
Flurbiprofen
Ketoprofen
Piroxicam
Indomethacin
Sulindac
Sulindac sulfone
Sulindac sulfide
D,L-Naproxen

NA101 $111.00
Diclofenac
Diflunisal
D-Naproxen
DL-Naproxen
Flufenamic acid
Mefenamic acid
Phenylbutazone
Sulfasalazine

NA102 $111.00
Fenoprofen
Ibuprofen
S(+) Ibuprofen
Flurbiprofen
Ketoprofen
Tenoxicam
Nabumetone
Meloxicam

NA103 $111.00
Acemetacin
Acetyl salicyclic acid
Fenbufen
Niflumic acid
Nimesulide
Tolfenamic acid
Tolmetin sodium

NP100 $103.00
Artemisinin (Qinghaosu)
Ascorbic acid
Bergenin
Berberine HCl hydrate
Biochanin A
Bleomycin sulfate
Thioctic Acid

NP101 $95.00
Brassinin
Cafestol
Cafestol palmitate
Camptothecin
Carnosic acid
Catechin
Chalcone 97%

NP102 $76.00
Chrysin
L-Deoxyalliin
Diallyl sulfide, 97%
Diallyl trisulfide
Dipropyl sulfide
Diosmin
Doxorubicin Hydrochloride
Ellagic acid

NP103 $82.00
Epigallocatechin gallate
Epirubicin
Etoposide
Farnesol
Flavanone
Folic Acid
Folinic Acid in 50% DMSO
Galactosamine

NP104 $163.00
Ginsenoside
Ginkgolic acid
Ginkgolide A
Ginkgolide B
Ginkgolide C
Ginkgolides
Indole-3-carbinol hydrate
Bilobalide

NP105 $109.00
Phytic Acid
Protocatechuic acid
Puerarin
Quercetin dihydrate
Resiniferatoxin
Riboflavin
Rosmarinic Acid
Sedanolide

NP106 $116.00
Silybin
Sinomenine
L-Sulforaphane, 96%
Synephrine
Tanshinone IIA
Vinblastine sulfate
Vincristine sulfate

NP107 $272.00
Ginsenoside F1
Ginsenoside F2
Ginsenoside F3
Ginsenoside Rb1
Ginsenoside Rb2
Ginsenoside Rb3
Ginsenoside Rc
Ginsenoside Rd

NP108 $247.00
Ginsenoside Re
Ginsenoside Rg1
Ginsenoside Rg2
Ginsenoside Rg3
Ginsenoside Rh1
Ginsenoside Rh2
Ginsenoside X
Notoginsenoside R1

Drug Discovery Kit

NP109 $173.00
Panaxatriol
Panaxadiol
Protopanaxadiol
Protopanaxatriol
Pseudoginsenoside F11
Schisantherin A
R(+) Schisandrin A
S(-) Schisandrin B

NP124 $124.00
Cryptotanshinone
Dihydrotanshinone
Honokiol
Magnolol
Tanshinones I
Tanshinones IIA
Euphorbiasteroid
Asiatic acid

NP111 $111.00
Bulleyaconitine A
Lappaconitine
L-Tetrahydropalmatine
Lupinine
Palmatine
Peganine
Rutaecarpine
Curcumin

NP112 $154.00
5,6-Dehydrokawain
7,8-Dihydrokawain
Dihydromethysticin
Kahweol
Kahweol palmitate
Methoxyyangonin
Methysticin
Paeonol

NP113 $148.00
Auraptene
Kawain
D-Limonene
Limonin
Limonin glucoside
Naringin
Naringenin
Nomilin

NP114 $130.00
1-Isothiocyanato-7-(methylsulfinyl)-heptane
Alyssin
Benzyl isothiocyanate
Iberin
Phenethyl isothiocyanate
R,S-Sulforaphane
S-Sulforaphane
S-Sulforaphene

NP115 $161.00
Catharanthine base
Catharanthine sulfate
Catharanthine tartrate
Colchicine
Vindesine sulfate
Vindoline
Harringtonin
Homoharringtonin

NP116 $265.00
Aconitine
Caffeic acid
Cepharanthine
D,L-Tetrahydropalmatine sulfate
Staurosporine
Teniposide
Kainic Acid

NP117 $130.00
Daidzein
Genistein
Icariin
Luteolin
Myricetin
Paeoniflorin
Silymarin
18 β-Glycyrrhetinic acid

NP118 $179.00
Baicalin
Canthaxanthin .5 mmol
Capsaicin
Capsanthin
Lycopene .5 mmol
Green Tea Polyphenols
Glucaric acid

NP119 $333.00
Aristolochic acid A
Aristolochic acid C
7-Hydroxyaristolochic acid A
Andrographolide
Andrographolide, dehydro-
Andrographolide, deoxy-
α-Santonin
Carveol

NP120 $161.00
Allyl disulfide
Brefeldin A
Caffeine
Vitamin B12
Hypocrellin A
Hypocrellin B
Triptolide
Glycyrrhizic acid

NP136 $364.00
Madecassic acid
Myristicin
Paclitaxel, (Taxol)
Perillyl alcohol
Rubescensin A
Saikosaponin A
Saikosaponin C
Saikosaponin D

NP122 $235.00
Isorhamnetin
Kaempferol
Resveratrol
Rutin Hydrate
Nordihydroguiaretic acid
Geniposide
Phenethyl caffeate
Phenethyl glucosinolate

NP123 $469.00
Actinomycin
Bleomycin A5
Caerulomycin A
Colistin Sulphate
Ikarugamycin
Podophyllotoxin
Asiaticoside
Phorbol-12-myristate-13 acetate

ST100 $89.00
Simvastatin
Pravastatin
Mevinolin
Pravastatin
Mevastatin
Simvastatin
Fluvastatin

ST101 $1288.00
Phorbol 12,13-dibutyrate
Phorbol 12-Myristate 13- Acetate
4α-Phorbol 12-myristate 13-acetate
Roscovitine
Thapsigargin
Tyrphostin A25
Calyculin A
Tyrphostin AG490

ST102 $1288.00
Chelerythrne Chloride
Forskolin
H7
H8
H89
Lavendustin A
Okadaic Acid
Ceramide C16

ST103 $136.00
Ginkgolide A
Ginkgolide B
Ginkgolide C
Ginkgolide AB
Leflunomide
Lisinopril
Daunorubicin HCl
Epirubicin HCl

ST104 $111.00
L-Carnitine HCl
L-Carnitine tartrate
L-Cystine
N-Acetyl-L-Cysteine
Naphazoline HCl
Oxymetazoline HCl
Lagochiline

ST105 $111.00
Lappaconitine
Nefazodone
Tramadol HCl
Matrine
Flufenamic acid
Irsogladine maleate
Pantoprazole
Estradiol

ST106 $259.00
GABA
Palmitoyl-DL-carnitine chloride
Palmitoyl-L-carnitine chloride
Ribavirin
Staurosporine
Glimepiride
Glipizide
Ivermectin

ST107 $173.00
Prednisone
Prednisone acetate
Resiniferatoxin
Resiniferonil-9,13,14-orthophenyl
Memantine HCl
Nimodipine
Fluoxetine HCl

ST108 $518.00
D-Sphingosine
Sphingosine 1-phosphate
Suramin hexasodium salt
Saikosaponin A
Saikosaponin B1
Saikosaponin B2
Saikosaponin C
Saikosaponin D

Drug Discovery Kit

ST109 $173.00
7-Nitroindazole
Biopterin
D,L-1'-Acetoxychavicol acetate
Galanthamine hydrobromide
Isatin
Salsoline
Ochratoxin A
Rapamycin

ST124 $198.00
(-) Epinephrine
Chenodeoxycholic acid
Copper bis-3,5-diisopropylsalicylate
Imiquimod
Magnolol
Olomoucine
Trichostatin A
Etoposide

TT100 $143.00
Baccatin III
Paclitaxel
7-epi-Taxol
2'-Acetyltaxol
Cephalomannine
13-Acetyl-9-dihydrobaccatin-III
7-epi-10-Deacetyltaxol

TT101 $143.00
2'-Acetyltaxol
Taxol side chain Methyl Ester
Baccatin I 1-hydroxy
10-Deacetylbaccatin-III
7-epi-10-Deacetyltaxol
Taxol side chain Diol
Paclitaxel

TT102 $253.00
Taxol C
Xylosyltaxol C
Xylosyltaxol
10-Deactyl taxol
10-Deactyl-7-xylosyltaxol
10-Deactyltaxol B
10-Deactyltaxol C
2',7-bis Acetyltaxol

XX100 $148.00
11,12-Dimethoxydihydrokawain
11-Methoxyyangonin
Dihydromyristicin
Flavokawain A
Flavokawain B
1-ITC-6-(methylsulfenyl)-hexane
1-ITC-6-(methylsulfinyl)-hexane
Acarbose

XX101 $111.00
Levodopa
Methyldopa
4'-Demethylepipodophyllotoxin
Aminophylline anhydrous
Doxofylline
Raloxifene HCl
Sulfadimethoxine
Tazobactum

XX102 $111.00
Carbimazole
Fenbendazole
Letrozole
Pantoprazole sodium
Ricobendazole
Tenatoprazole
Tinidazole
Venlafaxine HCl

XX103 $130.00
17a-Hydroxyprogesterone
6-Phenyl-hex-3,5-dien-2-one
Azaperone
β-Ecdysone
Buspirone HCl
Canrenone
Ceftriaxone sodium
Idebenone

XX104 $105.00
Levofloxacin free base
Moxifloxacin HCl
Norfloxacin nicotinate
Ofloxacin HCl
Indapamide
Formononetin
Gabapentin
Pravastatin lactone

XX105 $111.00
5-Methoxyindole
Dipyridamole
Acipimox
Telmisartan
5-Aminosalicylic acid
Benzo[a]pyrene
Oxytetracycline

XX106 $105.00
Norethindrone
Spironolactone
Tibolone
Zopiclone
Dibenzoylmethane
Formestane
Ondansetron HCl
Fenoldopam mesylate

XX107 $118.00
2',3'-Dideoxyinosine
Anabasine HCl
Azelastine HCl
Bromhexine HCl
Carbamazepine
Tropicamide
Rebamipide
Glycidamide

XX108 $111.00
L-(+) Lysine monohydrate 50% DMSO
L-Arginine in 50% DMSO
L-Arginine monohydrochloride
L-Glutamine in 50% DMSO
L-Ornithine HCl
L-Theanine
Loratadine
Naphazoline nitrate

XX109 $111.00
Desoxypeganine HCl
Dopamine HCl
Famotidine
Glucosamine HCl
Tranylcypromine
Hypoxanthine
Phentolamine mesylate
Phentolamine HCl

XX124 $130.00
Adenosine Triphosphate disodium
Aniracetam
Paroxetine HCl
Salsolidine
Sibutramine HCl monohydrate
Vinorelbine tartrate
Ranitidine HCl
Roxatidine acetate HCl

XX111 $111.00
Carvedilol
Clopidogrel sulfate
Clopidol
Iohexol
L-Alaninol
L-Phenylalaninol
Salbutamol free base
Salbutamol sulphate

XX112 $105.00
Racecadotril
Ramipril
Toltrazuril
Uradipil
Uradipil HCl
Timolol maleate
Triadimenol
Vecuronium bromide

XX113 $105.00
Enalapril
Enalapril maleate
Enalaprilat
Flumazenil
Gemfibrozil
Minoxidil
Myclobutanil
Quinapril HCl

XX114 $111.00
Biotin
Doxazosin mesylate
Guaifenesin
Heparin sodium in 50% DMSO
Methylhesperidin
Tylosin phosphate
Tylosin tartrate

XX115 $111.00
Estriol
Estrone
Ethisterone
Etidronate disodium in 50% DMSO
Tropisetron HCl
Baclofen
Atracurium besylate
Aspartame

AA100-AA124 $1,403.00
AM100-AM119 $2,568.00
AN100-AN117 $3,023.00
AP100-AP118 $2,514.00
CP100-CP151 $4,626.00
NP100-NP123 $4,060.00
ST100-ST124 $3,881.00
XX100-XX115 $1,559.00
All 177 DDK's $23,218.00

Specialty Chemicals (Alphabetical List)

Voice: **1-888-558-5227**

Fax: **(651) 644-8357**

E-mail: **info@lktlabs.com**

Website: **www.lktlabs.com**

A0099

H-Asp-Arg-Val-Tyr-Ile-His-D-Ala-OH

A-779

$C_{39}H_{60}N_{12}O_{11}$ Mol.Wt.: 872.99

A potent and selective antagonist for the heptapeptide angiotensin-(1-7)[ANG-(1-7)]. It prevents ANG-(1-7)-induced inhibition of angiogenesis.

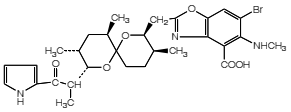
Santos, R.A; Campagnole-Santos, M.J.; Baracho, N.C., et.al. Brain Res. Bull 35:293-298 (1994).
Machado, R.D.; Santos, R.A., Andrade, S.P. Amer. J Physio-Reg. Integ. & Comp. Physio 280:R994-RR1000 (2001).

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

A23187, Free acid

See Calcimycin C0246

A0101



A23187, 4-Bromo

4-Bromo-A-23187, 4-BrA23187, 4-Bra23187

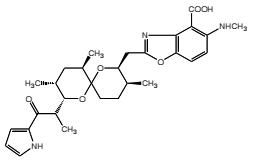
$C_{29}H_{36}BrN_3O_6$ Mol.Wt.: 602.52 [76455-82-8]

A halogenated analogue of A23187. It is a nonfluorescent Ca^{2+} ionophore used in calibration for determining cytoplasmic Ca^{2+} by fluorescent probes.

Deber CM., Tom-Kun J., Mack E., Grinstein S. Anal Biochem 146: 349-352 (1985)

1 mg	$72.00
5 mg	$294.00

A0102



A23187, Ca-Mg

$(C_{29}H_{36}N_3O_6)_2Mg$, $(C_{29}H_{36}N_3O_6)_2Ca$ Mol.Wt.: 523.62

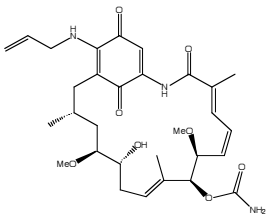
A calcium, magnesium salt of A23187, a calcium ionophore used to increase intracellular calcium levels in cells.

Mickelson *et.al.* Arch Biochem Biosphys. 242: 127-136 (1985).

Andersson D, Zygmunt P, Movahed P, Anderson T, Hogestatt E. Br J Pharmacol. 129: 1490-6 (2000)0

5 mg	$54.00
10 mg	$100.00

A0025



17-AAG

17-(Allylamino)-17-desmethoxy-geldanamycin; allylaminogeldanamycin

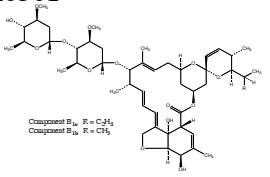
$C_{31}H_{43}N_3O_8$ Mol. Wt.: 585.69 [75747-14-7]

An anologue of geldanamycin. It is a Hsp90 antagonist that induces apoptosis in human leukemia cells. It has been shown to enhance paclitaxel-mediated cytotoxicity and downregulate vascular endothelial factor expression.

Rahmani M, Yu C, Dai Y et al. Cancer Research. 63:8420-7 (2003).
Nguyen DM, Lorang D, Chen GA et al. Annals of Thoracic Surgery. 72:371-8 (2001).

0.5 mg	$202.30
1 mg	$274.40

A0501



Abamectin

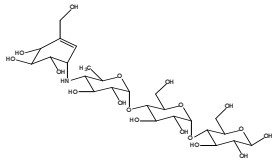
[71751-41-2]

An insecticide and antihelmintic agent made up of a mixture of avermectins.

Lasota JA, Dybas RA. Acta Leidensia. 59:217-225 (1990)
Ali A, Nayar JK. J Am Mosquito Control Assoc. 1:384-386 (1985).

1 g	$28.00
5 g	$95.20
25 g	$364.00

A0802



Acarbose

$C_{25}H_{43}NO_{18}$ Mol. Wt.: 645.60 [56180-94-0]

An α-glucosidase inhibitor that inhibits sucrose digestion in rats. It has been found to reduce the risk of cardiovascular disease and hypertension.

Krause HP, Keup U, Puls, W. Digestion. 23:486-94 (1982).
Chiasson JL, Josse RG, Gomis R et al. JAMA. 23:486-94 (2003).

1 g	$39.50
5 g	$154.00
25 g	$616.00

A0812

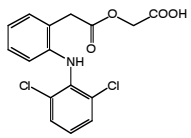
Ac-Asp-Glu-OH

Ac-D-E

$C_{11}H_{16}N_2O_8$ Mol.Wt.: 304.3

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

A1017



Aceclofenac

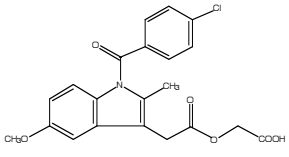
$C_{16}H_{13}Cl_2NO_4$ Mol. Wt.: 354.18 [89796-99-6]

A non-steroidal anti-inflammatory drug. It possesses potent inhibitory activity in several models of acute and chronic inflammation. It has a more favorable therapeutic ratio compared to indomethacin, diclofenac, naproxen, and phenylbutazone.

Yamazaki R, Kawai S, Matsuzaki T et al. Eur J Pharmacol. 329:181-7 (1997).
Grau M, Guasch J, Montero JL et al. Arzneimittelforschung. 41:1265-76 (1991).

5 g	$39.50
25 g	$154.00
100 g	$462.00

A0816 — **Acemetacin** — 1 g $21.80; 5 g $67.80



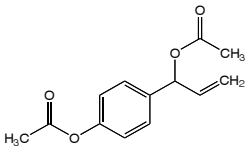
$C_{21}H_{18}ClNO_6$ Mol. Wt.: 415.82 [53164-05-9]

A derivative of indomethacin. Used as an anti-inflammatory drug. It is as potent as indomethacin as an inhibitor of COX-2, but less active on COX-1. It has been found to have anti-tumor activity in the colon of mice.

Tavares IA, Bennett A. Int. J Tisssue Reactions. 15:49-53 (1993).
Kisara S, Maekawa I, Sasaki K et al. Res. Comm. Chem Path. Pharm. 81: 247-250 (1993).

A0817 — **D,L-1'-Acetoxychavicol Acetate** — 25 mg $41.70; 100 mg $156.30; 250 mg $282.60

RT



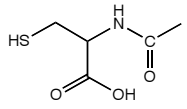
$C_{13}H_{14}O_4$ Mol. Wt.: 234.25 [52946-22-2]

A xanthine oxidase inhibitor shown to possess chemopreventive potential against both oral and colonic tumorigenesis in rats.

Ohnishi M, Tanaka T, Makita H et al. Jpn J Cancer Res. 87:349-356 (1996).
Tanaka T, Makita H, Kawamori T et al. Carcinogenesis. 18:1113-1118 (1997).

A0918 — **N-Acetyl-L-Cysteine** — 10 g $20.80; 25 g $36.00

RT

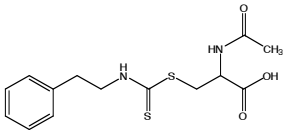


$C_5H_9O_3S$ Mol.Wt.: 163.19 m.p.: 109-111°C [616-91-1]

An antioxidant, that is effective in the early stages of carcinogenesis.

Bongers V, deJong J, Steen I, De Vries N, Bast A, Snow GB, Braakhuis B. J. Eur J. Cancer A(6):921-923 (1995).

A0920 — **N-Acetyl-S-(N'-phenethylthiocarbamoyl)-L-cysteine** — 25 mg $67.20; 100 mg $201.60; 500 mg $784.00

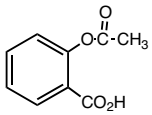


Phenethyl isothiocyanate N-acteyl-L-cysteine conjugate; PEITC N-acetyl-L-cysteine conjugate.

$C_{14}H_{18}N_2O_3S_2$ Mol. Wt.: 326.44

A0819 — **Acetylsalicylic Acid / Aspirin** — 500 g $34.40; 1 kg $59.20

RT



$C_9H_8O_4$ Mol.Wt.: 180.16 [50-78-2]

Non-steroidal anti-inflammatory agent. Has undergone clinical trials as a chemopreventive agent.

Kelloff GJ, Boone CW, Crowell JA et al. Cancer Epidemiol. Biomarkers Prev 3:85-98 (1994).

A0825 — **Ac-GPK-pNA** — 25 mg $680.00

Ac-Gly-Pro-Lys-PNA

$C_{21}H_{30}N_6O_6$ Mol.Wt.: 462.5

A0826 — **Ac-GPK(Ac)-pNA** — 25 mg $680.00

Ac-Gly-Pro-Lys(Ac)-PNA

$C_{23}H_{32}N_6O_7$ Mol.Wt.: 504.5

A0832 — **Ac-IEAR-pNA** — 25 mg $680.00

Ac-Ile-Glu-Ala-Arg-PNA·HCl

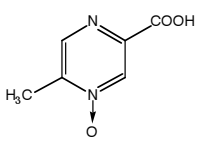
$C_{28}H_{43}N_9O_9$ Mol.Wt.: 649.7

A0834 — **Ac-IETD-pNA** — 25 mg $680.00

Ac-Ile-Glu-Thr-Asp-PNA

$C_{27}H_{38}N_6O_{12}$ Mol.Wt.: 638.6

A0833 — **Acipimox** — 1 g $61.10; 5 g $237.30; 10 g $406.60



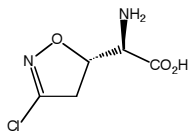
$C_6H_6N_2O_3$ Mol. Wt.: 154.12 [51037-30-0]

Acipimox inhibits lipolysis in peripheral tissues and induces large reduction in circulating serum-free fatty acids. The mechanism of triglyceride lowering appears to be an increase of VLDL-Tg clearance.

Nuutinen J, Minn H, Bergmand J *et al*. Br J. Cancer. 80:513-518 (1999).
Hannah JS, Bodkin NL, Paidi MS *et al*. Acta Diabetol. 32:279-283 (1995).

A0934

-20°C



Acivicin

$C_5H_7ClN_2O_3$ Mol. Wt.: 178.57 [42228-92-2]

A specific inhibitor of γ-glutamyl transpeptidase and transmembrane glutathione transport.

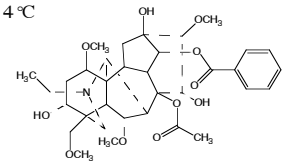
Potent antitumor and antileishmania agent. Induces apoptosis in human lymphoblastoid cells.

Griffith OW et al. Proc. Natl. Acad. Sci. USA 77:3384 (1980).
Earhart RH et al. Adv. Enzyme Regulation 24:179 (1986).
Mukherjee T et al. Biochem. Biophys. Res. Commun. 170:426 (1982).
Graber R, Losa GA. Int. J. Cancer. 62:443-8 (1995).

10 mg	$35.40
25 mg	$61.50
100 mg	$203.00

A0958

4 °C



Aconitine (See Page 3 for more information)

$C_{34}H_{47}NO_{11}$ Mol. Wt.: 645.74 [302-27-2]

A diterpene alkaloid isolated from Aconiti Carmichaeli Praeparata used to induce cardiac arrhythmias. It binds to neurotoxin binding site 2 of the alpha-sub-unit of the Na^+ channel protein.

Telang BV, Ng'ang'a JN. Ind J Phy Pharm. 19:1-10 (1975).
Ameri A. Prog Neurobiol. 56:211-235 (1998).

10 mg	$27.20
25 mg	$47.50
100 mg	$149.10

Acrinol

See Ethacridine lactate monohydrate

A0960

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-Asn-Gly-Ala-Glu-Asp-Glu-Ser-Ala-Glu-Ala-Phe-Pro-Leu-Glu-Phe-OH

ACTH (1-39), human

$C_{207}H_{308}N_{56}O_{58}S$ Mol.Wt.: 4541.1 [12279-41-3]

Adrenocorticotropic hormone.

1 mg	$680.00

A0961

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-Asn-Val-Ala-Glu-Asn-Glu-Ser-Ala-Glu-Ala-Phe-Pro-Leu-Glu-Phe-OH

ACTH (1-39), rat

$C_{210}H_{315}N_{57}O_{57}S$ Mol.Wt.: 4582.3

Adrenocorticotropic hormone.

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

A0962

H-Ser-Tyr-Ser-Met-OH

ACTH (1-4)

$C_{20}H_{30}N_4O_8S$ Mol.Wt.: 486.6

Adrenocorticotropic hormone.

1 mg	$19.20
2 mg	$32.00
5 mg	$57.60

A0963

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-OH

ACTH (1-10), human

$C_{59}H_{78}N_{16}O_{16}S_1$ Mol.Wt.: 1299.4

Adrenocorticotropic hormone.

1 mg	$25.60
2 mg	$43.20
5 mg	$76.80

A0964

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-OH

ACTH (1-13), human

$C_{75}H_{106}N_{20}O_{19}S_1$ Mol.Wt.: 1623.9

Adrenocorticotropic hormone.

0.5 mg	$38.40
1 mg	$65.60
2.5 mg	$115.20

A0965

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-OH

ACTH (1-14)

$C_{77}H_{169}N_{21}O_{20}S_1$ Mol.Wt.: 1680.9

Adrenocorticotropic hormone.

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

A0966

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-OH

ACTH (1-16), human

$C_{89}H_{133}N_{25}O_{22}S$ Mol.Wt.: 1937.27

Adrenocorticotropic hormone.

0.5 mg	$44.80
1 mg	$76.80
2.5 mg	$134.40

A0967

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-OH

ACTH (1-17), human

$C_{95}H_{145}N_{29}O_{23}S$ Mol.Wt.: 2093.5

Adrenocorticotropic hormone.

0.5 mg	$44.80
1 mg	$76.80
2.5 mg	$134.40

A0968

H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-OH

ACTH (1-24), human

$C_{136}H_{210}N_{40}O_{31}S$ Mol.Wt.: 2933.5

Adrenocorticotropic hormone.

0.5 mg **$44.80**
1 mg **$76.80**
2.5 mg **$134.40**

A0971

H-Met-Glu-His-Phe-Arg-Trp-Gly-OH

ACTH (4-10), human

$C_{44}H_{59}N_{13}O_{10}S_1$ Mol.Wt.: 962.1

Adrenocorticotropic hormone.

1 mg **$32.00**
2 mg **$54.40**
5 mg **$96.00**

A0970

H-Arg-Pro-Val-Lys-Val-Tyr-Pro-Asn-Gly-Ala-Glu-Asp-Glu-Ser-Ala-Glu-Ala-Phe-Pro-Leu-Glu-Phe-OH

ACTH (18-39), human

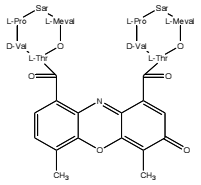
$C_{112}H_{165}N_{27}O_{36}$ Mol.Wt.: 2465.7

Adrenocorticotropic hormone.

1 mg **$83.20**
2 mg **$140.80**
5 mg **$249.60**

A0977

RT



Actinomycin D

Dactinomycin

$C_{62}H_{86}N_{12}O_{16}$, F.W. 1255.4, m.p.241-243 ºC (dec), [50-76-0]

An antibiotic from Streptomyces. Has antineoplastic activity.

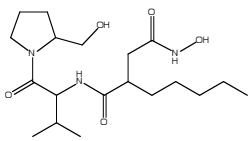
Hennings H, Boutwell RK. Life Sci., 6:173-181 (1967).
Harris CC. Cancer. 37 (2 Suppl):1014-1023 (1976).

5 mg **$73.20**
10 mg **$132.20**

Actinomycin D, 7-Amino

See 7-Amino-Actinomycin

A0978



Actinonin

$C_{19}H_{35}N_3O_5$ Mol. Wt.: 385.50 [13434-13-4]

A naturally occurring antibacterial agent that is a potent peptide deformylase (PDF) inhibitor.

It has shown dose-dependent antitumor effects on AKR leukemia in vivo.

Xu Y, Lai LT, Gabrilove JL, et al. Clinical Cancer Research. 4:171-6 (1998).
Chen DZ, Patel DV, Hackbarth CJ et al. Biochemistry. 39:1256-62 (2000).

5 mg **$70.60**

A1084

Ac-Val-Glu-Ile-Asp-PNA

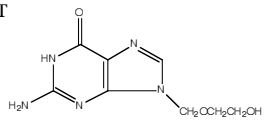
Ac-VEID-pNA

$C_{28}H_{40}N_6O_{11}$ Mol.Wt.: 636.6

25 mg **$680.00**

A1096

RT



Acycloguanosine

Acyclovir

$C_8H_{11}N_5O_3$, F.W. 225.20, m.p. 256.5-257^{0}C [59277-89-3]

An orally active acyclic nucleoside with inhibitory activity towards several herpes viruses.

Elion GB et al. Proc Nat Acad Aci USA. 74:5716 (1977).

50 mg **$54.70**
100 mg **$98.50**
500 mg **$386.80**

Acyclovir

See acycloguanosine

A1097

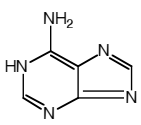
Ac-Tyr-Val-Ala-Asp-PNA

Ac-YVAD-pNA

$C_{29}H_{36}N_6O_{10}$ Mol.Wt.: 628.6

25 mg **$680.00**

A1318



Adenine

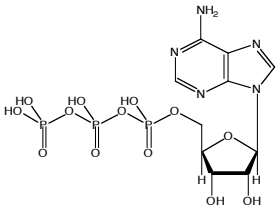
$C_5H_5N_5$ Mol. Wt.: 135.13 [73-24-5]

Inhibits HL-60 cell growth by induction of apoptosis. Also induces selective apoptosis toward MOLT4/HIV cells.

Tanaka Y, Yoshihara K, Tsuyuki M, Kamiya T. Exp. Cell Res. 213:242-52 (1994).
Hirasawa K, Yoshida O, Fujunami T et al. Biochem Biophys Res Commun. 273:1025-32 (2000).

10 g **$33.80**
25 g **$61.50**

A1319



Adenosine Triphosphate Disodium

ATP

$C_{10}H_{16}N_5Na_2O_{13}P_3$ Mol. Wt.: 551.14 [987-65-5]

A P2 purinergic agonist, it increases activity of Ca^{2+} activated K^+ channels.

Arkhammar P, Hallberg A, Kindmark H et al. Biochem J. 265:203-11 (1990).
Jaffar ZH, Pearce FL. Agents Actions. 40:18-27 (1993).

1 g	$24.70
5 g	$59.20
10 g	$96.10
25 g	$212.00

A1330

pGlu-Leu-Thr-Phe-Thr-Ser-Trp-Gly-NH_2

Adipokinetic Hormone

$C_{44}H_{60}N_{10}O_{12}$ Mol.Wt.: 921.0

Adipokinetic hormones are neurohormones that regulate the metabolism of carbohydrates and lipids during flight and locomotion.

Stone, J.V. Mordue, W. Batley, K.E., Morris, H.R. Nature 263:207-211 (1976).
Robinson, NL., Goldsworthy, G.J. J. Insect Physiol 23:9-16 (1977).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

A1331

H-Arg-Pro-Val-Lys-Val-Tyr-Pro-Asn-Gly-Ala-Glu-Asp-Glu-Ser-Ala-Glu-Ala-Phe-Pro-Leu-Glu-Phe-OH

Adipokinetic Hormone, AKH, locust

$C_{54}H_{74}N_{14}O_{15}$ Mol.Wt.: 1159.3

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

A1332

pGlu-Leu-Asn-Phe-Thr-Pro-Asn-Trp-Gly-Thr-NH_2

Adipokinetic Hormone II from Locusta migratoria

$C_{43}H_{58}N_{11}O_{11}$ Mol.Wt.: 903.9

A grasshopper neuropeptide.

Noves BE, Schaffer MH. DNA Cell Biol. 12(6):509-516 (1993).

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

A1333

pGlu-Leu-Asn-Phe-Ser-Ala-Gly-Trp-NH_2

Adipokinetic Hormone II from Schistocera gregaria

$C_{44}H_{60}N_{11}O_{12}$ Mol.Wt: 934.02

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

A1368

H-Tyr-Arg-Gln-Ser-Met-Asn-Asn-Phe-Gln-Gly-Leu-Arg-Ser-Phe-Gly-Cys-Arg-Phe-Gly-Thr-Cys-Thr-Val-Gln-Lys-Leu-Ala-His-Gln-Ile-Tyr-Gln-Phe-Thr-Asp-Lys-Asp-Lys-Asp-Asn-Val-Ala-Pro-Arg-Ser-Lys-Ile-Ser-Pro-Gln-Gly-Tyr-NH_2
(Disulfide Bridge Cys16-Cys21)

Adrenomedullin (1-52), human

$C_{264}H_{406}N_{80}O_{77}S_3$ Mol.Wt.: 6028.9

A potent vasodilating peptide found in human pheochromocytoma from the adrenal medulla. Intravenous administration of adrenomedullin resulted in a significant decrease in blood pressure along with total peripheral resistance.

Perret M. *et. al.* Life Sci. 53: 377-9 (1993).
Ishiyama Y. *et. al.* Eur J Pharmacol. 241:271-3 (1993).

0.5 mg	$403.20
1 mg	$684.80
2.5 mg	$1,209.60

A1369

H-Ser-Phe-Gly-Cys-Arg-Phe-Gly-Thr-Cys-Thr-Val-Gln-Lys-Leu-Ala-His-Gln-Ile-Tyr-Gln-Phe-Thr-Asp-Lys-Asp-Lys-Asp-Asn-Val-Ala-Pro-Arg-Ser-Lys-Ile-Ser-Pro-Gln-Gly-Tyr-NH_2
(Disulfide Bridge Cys16-Cys21)

Adrenomedullin (13-52), human

$C_{200}H_{308}N_{58}O_{59}S_2$ Mol.Wt.: 4533.17

0.5 mg	$320.00
1 mg	$544.00
2.5 mg	$960.00

A1370

H-Thr-Val-Gln-Lys-Leu-Ala-His-Gln-Ile-Try-Gln-Phe-Thr-Asp-Lys-Asp-Lys-Asp-Asn-Val-Ala-Pro-Arg-Ser-Lys-Ile-Ser-Pro-Gln-Gly-Tyr-NH2

Adrenomedullin (22-52), human

$C_{159}H_{252}N_{46}O_{48}$ Mol.Wt.: 3576.06

0.5 mg	$192.00
1 mg	$326.40
2.5 mg	$576.00

A1371

H-Tyr-Gly-Gly-Phe-Met-Arg-Arg-Val-NH_2

Adrenorphin

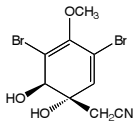
$C_{44}H_{69}N_{15}O_9S$ Mol.Wt.: 984.2

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

Adriamycin

See doxorubicin HCl

A1865



Aeroplysinin (See Page 3 for more information)

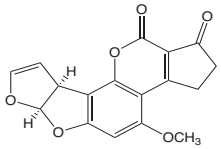
$C_9H_9Br_2NO_3$ Mol. Wt.: 338.98 [28656-91-9]

A naturally occurring tyrosine metabolite from the marine sponge *Verongia aerophoba* . It has been shown to interfere with key events in angiogenesis and displays a strong anti-tumor effect on epidermal growth factor dependent tumor lines. It has also been shown to have antileukemic acivity.

Rodriguez S, Gonzalez M, Carmona R, et al. FASEB Journal. 16:261-3 (2002).
Kreuter MH, Leake RE, Rinaldi F, et al. Comparative Biochem. 97:151-8 (1990).
Kreuter MH, Bernd A, Holzmann H, et al. Journal of Biosciences. 44:680-8 (1989).

100 µg	$85.00
5 x 100 µg	$380.00
1 mg	$680.00

A2044



Aflatoxin B1 (See Page 3 for more information)

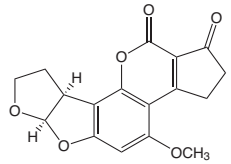
$C_{17}H_{12}O_6$ Mol.Wt.: 312.27 [1162-65-8]

A potent hepatoxin and hepatocarcinogen oxidizes to form the carcinogenic, 2,3-exo-epoxide. Chronic exposure produces necrosis, cirrhosis, and carcinoma of the liver.

Phillips, T., Tox. Sci. (52 Suppl), 118-126 (1999).
Daniels JM, Liu L, Stewart RK, Massey TE. Carcinogenesis. 5: 823-827 (1990).

1 mg	$25.00
5 mg	$100.00

A2046



Aflatoxin B2 (See Page 3 for more information)

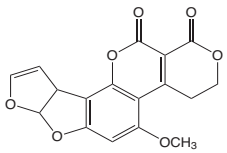
$C_{17}H_{14}O_6$ Mol.Wt.: 314.229 [7220-81-7]

A potent hepatoxin and hepatocarcinogen found in poorly stored grains and nuts. Chronic exposure is shown to produce mutagenesis, necrosis, and liver carcinogenesis.

Phillips, T., Tox. Sci. (52 Suppl), 118-126 (1999).
Daniels JM, Liu L, Stewart RK, Massey TE. Carcinogenesis. 5: 823-827 (1990).

1 mg	$68.00
5 mg	$330.00

A2048



Aflatoxin G1 (See Page 3 for more information)

$C_{17}H_{12}O_7$ Mol.Wt.: 328.27 [1165-39-5]

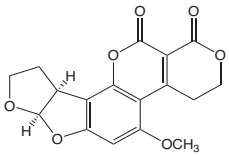
A mycotyxin produced by aspergillus parasiticus.

A toxic and carcinogenic mycotoxin that induces mutation of human chromosomes by forming guanyl-N7 adducts in liver DNA.

el-Zawahri MM, Morad MM, Khishin AF. J Environ Pathol Toxicol Oncol. 10:45-51 (1990).
Baertschi SW, Raney KD, Shimada T, Harris TM, Guengerich FP. Chem Res Toxicol. 2:114-2 (1989).

1 mg	$70.00
5 mg	$340.00

A2050



Aflatoxin G2 (See Page 3 for more information)

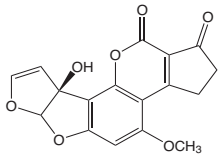
$C_{17}H_{14}O_7$ Mol.Wt.: 330.29 [7241-98-7]

A mycotyxin produced by aspergillus parasiticus. Binds to DNAse II, exhibits inhibition effects.

Lotter LH, Schabort JC. Int J Biochem. 15:817-25 (1983).

1 mg	$168.00
5 mg	$540.00

A2052



Aflatoxin M1 (See Page 3 for more information)

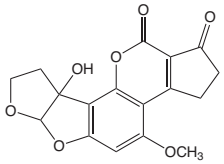
$C_{17}H_{12}O_7$ Mol.Wt.: 328.27 [6795-23-9]

A potent hepatotoxic mycotyxin metabolite of Aflatoxin B1. Often found in milk of cattle fed on AfB1 contaminated feed. Exhibits cytotoxic activities.

Neal G, Eaton D, Judah D, Verma A. Toxicol Appl Pharmacol. 151:1582-8 (1998).

100 µg	$54.00
1 mg	$316.00

A2054



Aflatoxin M2 (See Page 3 for more information)

$C_{17}H_{14}O_7$ Mol.Wt.: 330.29

Metabolite of Aflatoxin B2, which is found in milk of cattle fed on AfB2.

Purchase, I, Food Cosmet Toxicol. 5:339-42 (1967).

100 µg	$136.00
1 mg	$956.00

A2412

A-G-D-V

$C_{14}H_{24}N_4O_7$ Mol.Wt.: 360.37

H-Ala-Gly-Asp-Val-OH

5 mg	$96.00
10 mg	$163.20
25 mg	$288.00

A4369 — **A-K-R-R-R-L-S-S-L-R-A**

H-Ala-Lys-Arg-Arg-Arg-Leu-Ser-Ser-Leu-Arg-Ala-OH

$C_{54}H_{104}N_{24}O_{14}$ Mol.Wt.: 1313.58

1 mg **$38.40**
2 mg **$65.60**
5 mg **$115.20**

A4401 — **A-L-A-L**

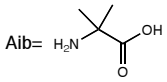
H-Ala-Leu-Ala-Leu-OH

$C_{18}H_{34}N_4O_5$ Mol.Wt.: 386.5

1 mg **$12.80**
2 mg **$22.40**
5 mg **$38.40**

A4400 — **Alamethicin**

Ac-Aib-Pro-Aib-Ala-Aib-Ala-Gln-Aib-Val-Aib-Gly-Leu-Aib-Pro-Val-Aib-Aib-Glu-Gln-Phl



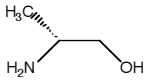
$C_{92}H_{150}N_{22}O_{25}$ Mol.Wt.: 1964.4 [27061-78-5]

Alamethicin is a channel-forming ionophore. It activates membrane enzymes by disrupting the membrane barriers of sarcolemmal vesicles, which gives substrates and activators access to enzymatic sites in the interior of the vesicles.

Jones, L.R., Maddock, S.W., Besch , H.R. Jr. J. Biol. Chem. 255:9971-9980 (1980).

1 mg **$34.00**
5 mg **$138.00**

A4402 — **L-Alaninol**



S(+)-2-Amino-1-propanol

C_3H_9NO Mol. Wt.: 75.11 [2749-11-3] mp 173-176° C $[\alpha]_{D20}$ = +18.0

An amino acid alcohol with anti-proliferative effect.

Landau O, Wasserman L, Deutsch AA. Cancer Lett. 69:203-8 (1993).

1 g **$29.60**
10 g **$203.30**

A4403 — **Alarelin Acetate**

Asp-Arg-Val-Tyr-Val-His-Pro-Phe-OH

$C_{56}H_{78}N_{16}O_{12}$ Mol. Wt.: 1167.3 [79561-22-1]

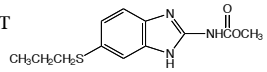
A gonadotropin-releasing hormone analogue shown to inhibit DNA synthesis and poliferation of rat gastric smooth muscle cells through GnRH receptors in vitro.

Chen L, He HX, Sun XD, Zhao J, Liu LH, Huang WQ, Zhang RQ. World J Gastroenterol. 10:1780-4 (2004).

Please inquire

A4606 — **Albendazole**

RT



Methyl-5(propylthio)-2-benzimidazolecarbamate

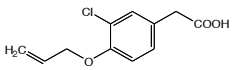
$C_{12}H_{15}N_3O_2S$, F.W. 265.33, m.p. 208-210^{0}C [54965-21-8]

10 g **$45.60**
50 g **$159.10**

Albendazole sulfoxide

See Ricobendazole

A4508 — **Alclofenac** (See page 23 for more information)



$C_{11}H_{11}ClO_3$ Mol. Wt.: 226.66 [22131-79-9]

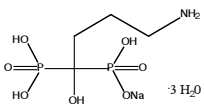
A non-steroidal anti-inflammatory agent commonly used in the treatment of rheumatoid arthritis.

Brogden RN, Heel RC, Speight TM, et al. Drugs. 14:241-59 (1977).
Aylward M, Parker RJ, Holly F, et al. British Medical Journal. 2:7-9 (1975).

5 g **$35.90**
25 g **$112.00**
100 g **$336.00**

A4515 — **Alendronate** (See page 5 for more information)

RT



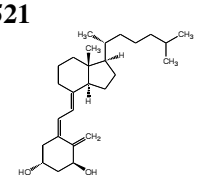
$C_4H_{12}NNaO_7P_2 \cdot 3\,H_20$ Mol. Wt.: 325.08

A second generation bisphosphonate used as bone resorptive inhibitor. It induces apoptosis of rabbit osteoclasts, human osteoclastoma-derived isteiclasts and human osteollclast-like cells i*n vitro* . The promotion of apoptosis of OCLs is related to the expression of FAS gene.

Woo T, Adachi JD. Baillieres Best Pract Res. Clin Rheumatol. 15:469-81 (2001).
Benford HL, McGowan NW, Helfrichg MH et al. Bone 28:465-73 (2001).
Wang XM, Yu SF, Yang ZP. Chin J Dent Res. 3:26-32 (2000).

100 mg **$45.60**
500 mg **$159.10**

A4521 — **Alfacalcidol**



$C_{27}H_{44}O_2$ Mol. Wt.: 400.64 [41294-56-8]

A bone resorption inhibitor. Has shown antitumor activity in non-Hodgkin's lymphomas.

Cunningham D, Gilchrist NL, Cowan RA et al. Brit Med J Clin Res. 291:1153-1155 (1985).
Shiraki M, Fukuchi M, Kiriyama T. J Bone Miner Metab. 22:352-359 (2004).

1 mg **$89.60**
5 mg **$364.00**

A4438

H-Ala-Pro-Ser-Gly-Ala-Gln-Arg-Leu-Tyr-Gly-Phe-Gly-Leu-NH_2

Allatostatin I

$C_{61}H_{94}N_{18}O_{16}$ Mol.Wt.: 1335.54

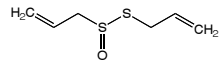
A neuropeptide that inhibits juvenile hormone synthesis in insects. Its inhibitory regulation of intestinal muscles, it was also found to modulate skeletal neuromuscular events.

Woodhead, AP., Stay, B, Seidel, SL, et al Proc. Natl. Acad. Sci.USA 86:5997-6001 (1989).
Kreissl, S. Weiss, T., Djokaj, S. Et al. Eur. J. Neurosci. 11:2519-2530 (1999).

1mg	$44.80
2 mg	$76.80
5 mg	$134.40

A4440

-80 °C



Allicin

$C_6H_{10}OS_2$, F.W. 162.27 [539-86-6]

10 mg/ml methanol/water/formic acid (60:40:0.1)

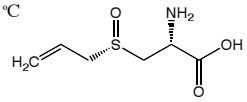
The main biologically active compound in garlic. It exerts various biological effects, including antiproliferative, chemopreventive, antioxidant, antihyperlipidaemic and antihypertensive effects. It has been shown to inhibit the growth of cancer cells of murine and human origin in addition to inhibiting telomerase activity and inducing apoptosis in gastric SGS-7901 cells.

Sela U, Ganor S, Hecht I et al. Immunology. 11:391-9 (2004).
Oommen S, Anto RJ, Srinivas G et al. Eur J Pharmacol. 485:97-103 (2004).
Sun L, Wang X. World J Gastroenterol. 9:1930-4 (2003).

1 mg	$145.80
5 mg	$512.30

A4443

4 °C



L(+) Alliin (See page 24 for more information)

3-(2-Propenylsulfinyl) alanine

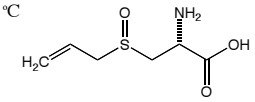
$C_6H_{11}NO_3S$, F.W. 177.22, m.p. 163-165 °C, $[\alpha]_D$ +60°

Optically pure form of alliin.

25 mg	$138.70
50 mg	$234.80
100 mg	$426.40

A4444

4 °C



L(±) Alliin (See page 24 for more information)

3-(2-Propenylsulfinyl) alanine

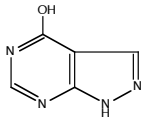
$C_6H_{11}NO_3S$, F.W. 177.22, m.p. 163-165°C

Racemic mixture

100 mg	$72.00
500 mg	$295.80
1 g	$476.30

A4445

RT



Allopurinol

4-Hydroxypyrazoleo[3,4-d]pyrimidine

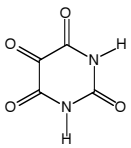
$C_5H_4N_4O$, F.W. 136.11, m.p. >350°C [315-30-0]

An isomer of hypoxanthine. It is a potent xanthine oxidase inhibitor.

Kelley WN, Beardmore TD. Science, 169:388-390 (1970).
Marchmont RJ, Houslay MD. Biochem J. 195:653-660 (1981).
Weber G, Prajda N. Adv Enz Reg. 34:71-89 (1994).

5 g	$15.10
10 g	$27.30

A4547



Alloxan Monohydrate

2,4,5,6(1H,3H)-pyrimidinetetrone monohydrate

$C_4H_2N_2O_4$ Mol. Wt.: 142.07

It is a cytotoxic compound which causes oxidative base damage to nuclear and mtDNA. It also inhibits pancreatic cancer by selectively destroying pancreatic islet cells, and gall bladder cancer.

Driggers WJ, Holmquist GP, LeDoux SP, Wilson GL. Nucleic Acids Res 25:4362-9 (1997).
Pour PM. Frontiers in Bioscience 2:271-282 (1997).
Pour PM, Donnelly K, Stepan K. Am J Pathology 110:310-4 (1983).

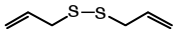
5 g	$14.70
10 g	$26.10
25 g	$49.20

S-Allyl-L-cysteine

See L-Deoxyalliin

A4544

4 °C



Allyl Disulfide (See Page 24 for more information)

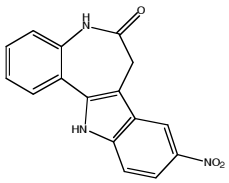
$C_6H_{10}S_2$ Mol. Wt.: 146.28 [2179-57-9] d 1.008

Garlic constituent. Known to have anticarcinogenic and antimicrobial activity. It inhibits human tumor cell proliferation, induces apoptosis in human colon tumor cells, and selectively kills HIV-1-infected cells.

Reddy S, Rao CV, Rivenson A, Kelloff G. Cancer Res. 35:3493-8 (1993).
Sundaran SG, Milner JA. Biochim Biophys Acta. 1315:15-20 (1996).
Sundaran SG, Milner JA. Carcinogenesis. 17:669-73 (1996).
Shoji S, Furuishi K, Yanase R et al. Biochem Biophys Res Commun. 194:610-21 (1993).

500 mg	$62.90
1 g	$118.80
5 g	$530.50

A4577



Alsterpaullone

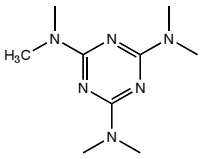
$C_{16}H_{11}N_3O_3$ Mol. Wt.: 293.28

The most active paullone. It is a potent inhibitor of glycogen synthase kinase-3 and cyclin-dependent kinase 5/p25. It has been shown to induce apoptosis and promote loss in clonogenicity in the Jurkate cell line.

Leost M, Schultz C, Link A et al. European J Biochem. 267:5983-94 (2000).
Lahusen T, De Siervi A, Kunick C et al. Molecular Carcinogenesis. 36:183-94 (2003).

1 mg	$98.80
5 mg	$444.60

A4578



Altretamine

$C_9H_{18}N_6$ Mol. Wt.: 210.28 [645-05-6]

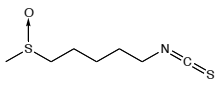
An antineoplastic agent. Active in ovarian cancer, lymphomas, bronchogenic carcinoma, and carcinoma of the breast.

Lake LM, Grunden EE, Johnson BM. Cancer Res. 35:2858-63 (1975).
Legha SS, Slavik M, Carter SK. Cancer. 38:27-35 (1976).

500 mg	$49.30
1 g	$74.00
5 g	$301.90

A4496

4 °C



Alyssin, 97%

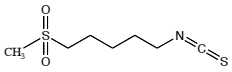
$C_7H_{13}NOS_2$. F.W. 191.32, [646-23-1]

Homolog of sulforaphane.

25 mg	$93.10
50 mg	$161.60
100 mg	$290.90
500 mg	$977.40

A4497

4 °C



Alyssin sulfone, 97%

$C_7H_{13}NO_2S_2$ Mol.Wt.: 207.31

25 mg	$85.80
50 mg	$143.10
100 mg	$257.40
500 mg	$867.30

A4498

pGlu-Gly-Arg-Leu-Gly-Thr-Gln-Trp-Ala-Val-Gly-His-leu-Met-NH_2

Alytesin

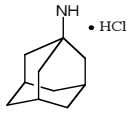
$C_{68}H_{106}N_{22}O_{17}S$ Mol.Wt.: 1535.8

A neuropeptide isolated from amphibian skin that stimulates gastric acid secretion, intestinal contraction and hypertension in dogs.

Anastasi *et. al*. Experientia. 27:166-7 (1971).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

A4802



Amantadine Hydrochloride

Adamantan-1-amine

$C_{10}H_{17}N.HCl$ Mol. Wt.: 187.71 [665-66-7]

An antiviral drug. Inhibits ion channels of influenza, and disrupts T-cell development.

Griffin SD, Beales LP, Clarke DS et al. FEBS Lett. 535:34-8 (2003).
Smith CA, Graham CM, Mathers K et al. Immunology. 105:306-13 (2002).

25 g	$51.80
100 g	$166.40

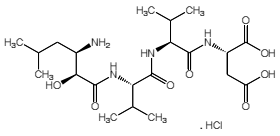
A4803

Amantadine Sulfate

$(C_{10}H_{17}N)_2.H_2SO_4$ Mol. Wt.: 400.58 [31337-23-8]

25 g	$51.80
100 g	$166.40

A4805



Amastatin Hydrochloride

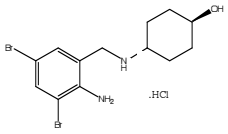
$C_{21}H_{38}N_4O_8$ .HCl M.W. 511.1 [100938-10-1]

An inhibitor of aminopeptidase shown to prolong the effect of both vasopressin and oxytocin.

Meisenberg G, Simmons WH. Peptides. 5:535-9 (1984).
Chen X, Pittman QJ. J Neurophysiol. 82:1689-96 (1999).

1 mg	$89.60
5 mg	$296.80
10 mg	$537.60

A4806



Ambroxol Hydrochloride

$C_{13}H_{18}Br_2N_2O$ .HCl Mol. Wt.: 414.57 [23828-92-4]

A metabolite of bromhexine that is a mucolytic agent. It prevents neutrophil-mediated A1AT inactivation via inhibition of HOCl production as well as HOCl scavenging, in addition to inhibiting proinflammatory cytokines.

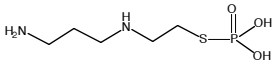
Su X, Wang L, Song Y et al. Intens Care Med. 30:133-40 (2004).
Ottonello L, Arduino N, Bertolotto M et al. Brit J Pharmacol. 140:736-42 (2003).
Sepulveda J, Velasquez BJ. Respiration. 43:363-88 (1982).

1 g	$28.00
5 g	$50.40
25 g	$168.00

L-(+)-Amethopterin Dihydrate

See Methotrexate

A4933



Amifostine

Aminopropyl aminoethylthiophosphate

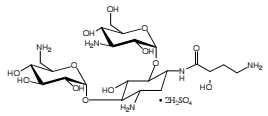
$C_5H_{15}N_2O_3PS$ Mol. Wt.: 214.22 [20537-88-6]

Amifostine is a chemoprotective drug used to selectively protect normal tissues from the of chemotherapeutic drugs such as cyclophosphamide, mitomycin-C and cisplatin, and ionizing radiation therapy.

50 mg	$66.00
100 mg	$117.10
500 mg	$439.10

Culy CR, Spencer CM. Drugs 61:641-84 (2001).
Grdina DJ, Kataoka Y, Murley JS. Drug Metabol Drug Interact 16:237-79 (2000).

A5132



Amikacin Disulfate

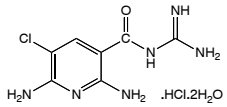
$C_{22}H_{43}N_5O_{13}.2H_2SO_4$ Mol. Wt.: 781.76 [39831-55-5]

An aminoglycoside antibiotic derived from Kanamycin A.

250 mg	$29.60
1 g	$74.00
5 g	$246.40

Danhauer FJ, Fortner CL, Schimpff SC et al. Clin Pharm. 1:539-43 (1982).
Guy H, Chavanet P, Portier H, et al. Nouv Presse Med. 10:654-6 (1981).

A5133



Amiloride HCl

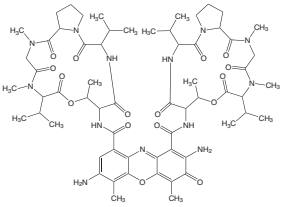
$C_6H_8CLN_7O.HCl.2H_2O$ F.W 302.12 [17440-83-4]

Potassium-sparing diuretic.

500 mg	$24.70
1 g	$33.30
5 g	$120.80

Baer JE, Jones CB, Spitzer SA, Russo HF. J Pharmacol Exp Ther 157:472-85 (1967).

A4930



7-Amino-actinomycin D

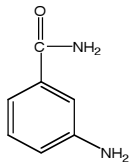
$C_{62}H_{87}N_{13}O_{16}$ Mol.Wt.: 1270.430 7240-37-1

A reagent used as a cytochemical probe. It forms complexes with DNA in solution resulting in shifts of both the excitation and emission wavelengths. It has been used successfully to identify apoptosis.

1 mg	$72.00
5 mg	$360.00

Gill, J.E.; Jotz, M.M.; Young, S.G et al. J Histochem & Cytochem. 23:793-799 (1975).
Philpott, N.J., Turner, A.J., Scopes, J. et al. Blood 87:2244-2241 (1996).

A4931



3-Aminobenzamide

$C_7H_8N_2O$ Mol. Wt.: 136.15

A poly (ADP-ribose) Polymerase (PARP) inhibitor. A stress response protein activated by cytotoxic agents and makes cells resistant to apoptosis. It inhibits the modification of specific sites in replicating DNA. It also stimulates repair replication after exposure to alkylating agents.

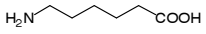
100 mg	$44.40
250 mg	$86.00
500 mg	$231.80

Lee YJ, Shacter E. J Biol Chem. 274:19792-8 (1999).
Kurian P, Kumari HL, Milo GE. Carcinogenesis. 13:489-91 (1992).
Cleaver JE. Carcinogenesis. 17:1-3 (1996).

γ-Amino-n-butyric acid

See GABA

A4935



6-Aminocaproic acid

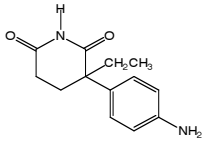
$C_6H_{13}NO_2$ Mol. Wt.: 131.17

A protease inhibitor with chemopreventive properties. It inhibits chemically induced carcinogenesis of the esophagus, peripheral nerve, brain and kidney in experimental animals.

10 g	$15.30
100 g	$23.20

Bespalov VG, Aleksandrov VA, Petrov AS, Troian DN. Vopr Onkol. 38(1):69-74. (1992).
Alexandrov VA, Bespalov VG, Petrov AS, Troyan DN, Lidaks MYu. Carcinogenesis. 17(9):1935-9 (1996).

A5032



DL-Aminoglutethimide

3-(4-Aminophenyl)-3-ethyl-2,6-piperidinedione

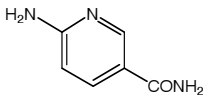
$C_{13}H_{16}N_2O_2$ Mol. Wt.: 232.28 [125-84-8]

An adrenocortical suppressant which also inhibits conversion of androgens to estrogens by the aromatase enzyme system. Reduces tumor multiplicity and increases latent period of MNU-induced mammary tumorigenesis.

500 mg	$46.10
1g	$76.90

Pelissero C, Lenczowski MJ, Chinzi D et al. J Steroid Biochem Mol Biol. 57:215-23 (1996).
Moon RC, Steele VE, Kelloff GJ et al. Anticancer Res. 14:889-93 (1994).

A4940



6-Aminonicotinamide

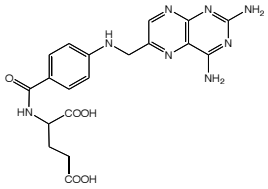
$C_6H_7N_3O$ Mol. Wt.: 137.14 [329-89-5]

Induces apoptosis in tumor cells. Member of the drug combination called PMA which induces regression of murine mammary tumors by depleting ATP.

Ogata S, Takeuchi M, Fujit, H et al. Biosci Biotechnol Biochem 64:327-332 (2000).
Nord, L.D., Stolfi, R.L., Alfieri, A.A., et al Cancer Chemother Pharmacol. 40:376-384 (1997).
Colofiore JR, Stolfi RL, Nord LD, Maartin DS. Biochem Pharmacol 50:1943-8 (1995).

1 g	**$98.00**
5 g	**$400.00**

A5001



Aminopterin

4-Aminofolic acid

$C_{19}H_{20}N_8O_5$ Mol. Wt.: 440.41 [54-62-6]

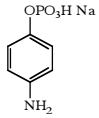
An inhibitor of dihydrofolate reductase shown to induce apoptosis mouse HGPRT(-) myeloma cell lines.

Chung YH, Youn J, Choi Y et al. Immunol Lett. 77:127-31 (2001).
Kremer P, Hartung G, Bauder-Wust U et al. Anticancer Drugs. 13:615-23 (2002).

25 mg	**$76.20**
100 mg	**$235.20**
500 mg	**$800.80**

A5030

-20 ºC



4-Aminophenylphosphate monosodium salt, 98%

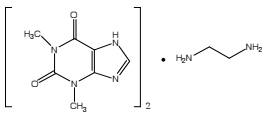
$C_6H_7NO_4PNa$, F.W. 211.09, [52331-30-3]

Substrate for the electrochemical measurement of alkaline phosphatase.

Frew JE, Foulds NC, Wilshere JM, Forrow NJ, Green MJ. J. Electroanal. Chem., 266:309-316 (1989).

10 mg	**$42.90**
50 mg	**$145.90**
100 mg	**$262.40**

A5134



Aminophylline Anhydrous

$C_{16}H_{24}N_{10}O_4$ Mol. Wt.: 420.43 [317-34-0]

The water soluble complex of Theophyline. A non-selective phosphodiesterase inhibitor.

Noguchi Y, Ito M, Katsumi K et al. Gastroenterol Jpn. 21:129-34 (1986).
Reddy SV, Maderdrut JL, Yaksh TL. J Pharmacol Exp Ther. 213:525-33 (1980).

25 g	**$43.20**
100 g	**$61.60**
500 g	**$184.80**

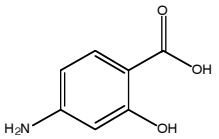
A5135

Aminophylline Dihydrate

$C_{16}H_{24}N_{10}O_4 2H_2O$ Mol. Wt.: 456.47

25 g	**$34.50**
100 g	**$43.20**
500 g	**$104.80**

A5033



4-Aminosalicylic acid

p-Aminosalicylic acid

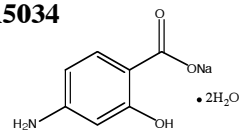
$C_7H_7NO_3$ Mol. Wt.: 153.14 [65-49-6]

An antituberculous agent. Effective in treatment of distal ulcerative colits.

Oda N, Matsumoto K. Yakushigaku Zasshi 36:161-6 (2001).
O'Donnell LJ, Arvind AS, Hoang P et al. Gut. 33:947-9 (1992).

25 g	**$12.40**
100 g	**$22.20**
500 g	**$98.60**

A5034



4-Aminosalicylic acid sodium dihydrate

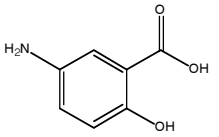
p-Aminosalicylic acid sodium salt

$C_7H_6NNaO_3.2H_2O$ Mol. Wt.: 211.15 [6018-19-5]

Sodium salt of p-Aminosalicylic acid.

25 g	**$12.40**
100 g	**$19.80**
500 g	**$92.40**

A5035



5-Aminosalicylic acid

Mesalazine; mesalamine

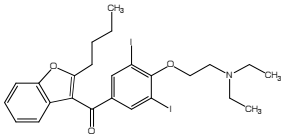
$C_7H_7NO_3$ Mol. Wt.: 153.14 [89-57-6]

The active metabolite of Sulphasalazine. Effective in remission of Crohn's disease.

Rhodes JM, Bartholomew TC, Jewell DP. Glut. 22:642-7 (1981)
Modigliani R, Colombel JF, Dupas JL et al. Gastroenterology 110:688-93 (1996).

25 g	**$61.60**
100 g	**$160.20**

A5037



Amiodarone Hydrochloride

$C_{25}H_{29}I_2NO_3.HCl$ Mol. Wt.: 681.78 [19774-82-4]

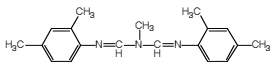
Benzofuran derivative with multiple electrophysiological effects.

Induces apoptosis in human and rat alveolar epithelial cells in vitro.

Bargout R, Jankov A, Dincer E et al. Am J Physiol Lung Cell Mol Physiol. 27:1039-44 (2000).
Abdul M, Hoosein N. Cancer Lett. 186:99-105 (2002).

1 g	**$30.80**
5 g	**$104.80**
10 g	**$172.50**

A5039



Amitraz

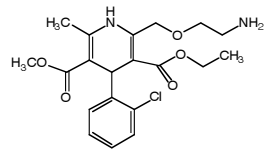
$C_{19}H_{23}N_3$ Mol. Wt.: 293.41 [33089-61-1]

Formamidine pesticide with carcinogenic potential. It has been shown that amitraz-induced mydriasis is mediated by postsynaptic alpha 2-adrenoreceptors while amitraz-induced bradycardia is mediated by presynaptic alpha 2-adrenoreceptors.

Moser VC, MacPhail RC. Toxicol Lett. 28:99-104 (1985).
Hsu WH, Kakuk TJ. Toxicol Appl Pharmacol 73:411-5 (1984).

5 g	$37.00
25 g	$98.60
100 g	$308.00

A5045



Amlodipine

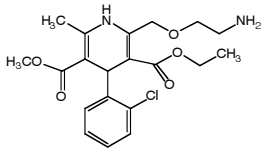
$C_{20}H_{25}ClN_2O_5$ Mol. Wt.: 408.88 [88150-42-9]

A calcium channel antagonist with potent antioxidant activity. It inhibits doxorubicin-induced myocyte apoptosis by supressing the mitochondrial apoptotic pathway.
It has been found to inhibit hyperplasia and hypertrophy in mesangial cells.

Yamanka S, Tatsumi T, Shiraishi J et al. J Am Coll Cardiol. 41:870-8 (2003).
Shultz PJ, Raij L. Am J Hypertens. 5:912-4 (1992).

1 g	$37.00
5 g	$141.70
10 g	$184.80

A5044



Amlodipine besylate

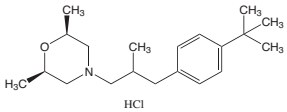
$C_{20}H_{25}ClN_2O_5.C_6H_5SO_3H$ Mol. Wt.: 567.06 [111470-99-6]

A calcium channel blocker commonly used in the treatment of hypertension and angina.
It also has shown antireproductive effects in male rats: a reduction in sperm density, the amount of mature spermatids, and the number of Sertoli cells.

Almeida SA, Teofilo JM, Anselmo JA et al. Exp Toxicol Pathol. 52:353-6 (2000).

1 g	$39.50
5 g	$145.40
10 g	$194.70

A5056



Amorolfine Hydrochloride

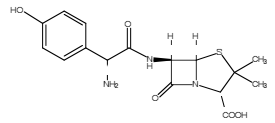
$C_{21}H_{35}NO \cdot HCl$ Mol.Wt.: 353.97

A morpholine antimycotic agent. It interferes with ergosterol biosynthesis.

Hiratani, T. Asaqu Y. Matsusaka, A et al. Jpn. J. Antibiot. 44:993-1006 (1991).
Polak A. Dermatology 184Suppl1:3-7 (1992).

100 mg	$40.00
250 mg	$75.00
1 g	$160.00

A5057



Amoxicillin

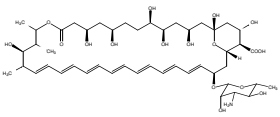
$C_{16}H_{19}N_3O_5S$ Mol. Wt.: 365.41 [26787-78-0]

A semi-synthetic antibiotic similar to penicillin.

Kochi T, Tachimori Y, Itoh N et al. Jpn J Antibiot. 34:1395-400 (1981).
Brogeden RN, Speight TM, Avery GS. Drugs. 9:88-140 (1975).

5 g	$28.00
25 g	$50.40
100 g	$151.20

A5130



Amphotericin B

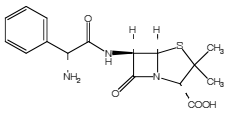
$C_{47}H_{73}NO_{17}$ Mol. Wt.: 924.08 [1397-89-3]

A polyene antibiotic produced by *Streptomycetes nodosus* that has shown antitumor activity.

Presant CA, Metter GE, Multhauf P et al. Cancer Treat Rep. 68:651-4 (1984).
Medoff J, Medoff G, Goldstein MN et al. Cancer Res. 35:2548-52 (1975).

100 mg	$39.20
250 mg	$65.00
500 mg	$112.00
1 g	$168.00

A5160



Ampicillin Trihydrate

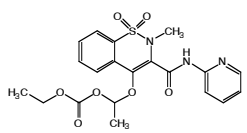
$C_{16}H_{19}N_3O_4S.3H_2O$ Mol. Wt.: 403.47 [7177-48-2]

An antibiotic. It is a semi-synthetic penicillin.

Visuri T, Antila P, Laurent LE. Ann Chir Gynaecol Suppl. 65:58-61 (1976).

5 g	$27.80
25 g	$67.80
100 g	$184.80

A5161



Ampiroxicam (See page 23 for more information)

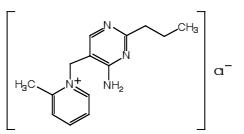
$C_{20}H_{21}N_3O_7S$ Mol. Wt.: 447.46 [99464-64-9]

A prodrug of piroxicam with reduced gastrointestinal irritation. It is a non-steroidal anti-inflammatory agent proven to be an effective chemopreventive agent.

Olkkola KT, Brunetto AV, Mattila MJ. Clin Pharmacokinet. 26:107-20 (1994).
Carty TJ, Marfat A, Moore PF et al. Agents Actions. 39:157-65 (1993).

1 g	$30.80
5 g	$80.10
25 g	$326.50

A5162



Amprolium Hydrochloride

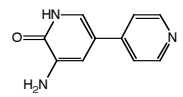
$C_{14}H_{19}ClN_4.HCl$ Mol. Wt.: 315.25 [137-88-2]

A coccidiostat mainly used in poultry feed. It inhibits the sporulation of the oocysts of several common strains of coccidia.

Joyner, LP., Norton, CC. Parasitology 75:155-164 (1977).

25 g	$27.20
100 g	$92.20

A5170



Amrinone

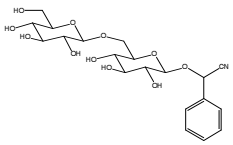
$C_{10}H_9N_3O$ Mol. Wt.: 187.20 [60719-84-8]

Selective phosphodiesterase III inhibitor. A nonglycoside, noncatecholamine agent with positive inotropic effect. Inhibits cyclic AMP-dependent protein kinase activity by competing with ATP but not cyclic AMP binding sites. It also inhibits platelet aggregation and induces disaggregation.

Ono S, Ueda S, Sakuma T et al. J Cardiov. Surgery 37:177-81 (1996).
Earl CQ, Linden J, Weglicki WB. Life Sciences 39:1901-8 (1986).
Kikura M, Kazama T, Ikeda T et al. Platelets 11:446-58 (2000).

250 mg	$37.00
1 g	$98.60

A5193



Amygdalin

$C_{20}H_{27}NO_{11}$ Mol. Wt.: 457.43 [29883-15-6]

A benzylic glycoside that has been used as an antineoplastic agent.

Fukuda T, Ito H, Makainaka et al. Biol Pharm Bull. 26:271-273 (2003).
Stock CC, Martin DS, Sugiura K et al. J Surgical Oncology. 10:89-123 (1978).

1 g	$22.40
5 g	$33.60
25 g	$134.40

A4844

H-Ala-Thr-Gln-Arg-Leu-Ala-Asn-Phe-Leu-Val-His-Ser-Ser-Asn-Asn-Phe-Gly-Ala-Ile-Leu-Ser-Ser-Thr-Asn-Val-Gly-Ser-Asn-Thr-Tyr-OH

Amylin (8-37), human

$C_{138}H_{215}N_{41}O_{46}$ Mol.Wt.: 3184.5

Putative polypeptide hormone from type 2 human diabetes and adult diabetic cats which consists of 37-amino acid peptide subunit of amyloid.

Edwards, B. J.; Morley, J. E. Life Sci. 51:1899-1912 (1992).

0.5 mg	$172.80
1 mg	$294.40
2.5 mg	$518.40

A4845

H-Ala-Thr-Gln-Arg-Leu-Ala-Asn-Phe-Leu-Val-Arg-Ser-Ser-Asn-Asn-Leu-Gly-Pro-Val-Leu-Pro-Pro-Thr-Asn-Val-Gly-Ser-Asn-Thr-Tyr-NH_2

Amylin (8-37), rat

$C_{140}H_{227}N_{43}O_{43}$ Mol.Wt.: 3200.63

0.5 mg	$172.80
1 mg	$294.40
2.5 mg	$518.40

A4846

H-Lys-Cys-Asn-Thr-Ala-Thr-Cys-Ala-Thr-Gln-Arg-Leu-Ala-Asn-Phe-Leu-Ile-Arg-Ser-Ser-Asn-Asn- Leu-Gly-Ala-Ile-Leu-Ser-Pro-Thr-Asn-Val-Gly-Ser-Asn-Thr-Tyr-NH_2
(Disulfide Bridge Cys2-Cys7)

Amylin (IAPP)(Feline)

$C_{165}H_{270}N_{52}O_{54}S_2$ Mol.Wt.: 3910.45

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

A4847

H-Lys-Cys-Asn-Thr-Ala-Thr-Cys-Ala-Thr-Gln-Arg-Leu-Ala-Asn-Phe-Leu-Val-His-Ser-Ser-Asn-Asn-Phe-Gly-Ala-Ile-Leu-Ser-Ser-Thr-Asn-Val-Gly-Ser-Asn-Thr-Tyr-NH_2

Amylin, human

$C_{165}H_{261}N_{51}O_{55}S_2$ Mol.Wt.: 3903.4 [122384-88-7]

A member of the calcitonin family of hormones that is co-secreted with insulin from the pancreas during and after food intake. It inhibits RINm5F islet beta-cell proliferation and evokes apoptosis associated with typical degenerative ultrastructural changes and DNA fragmentation.

Zhang S, Liu J, Saafi EL et al. FEBS Lett. 455:315-20 (1999).
Riediger T, Zuend D, Becskei C et al. Am J Physiol Regul Integr Comp Physiol. 286:R114-22 (2004).

0.5 mg	$103.10
1 mg	$174.80
2.5 mg	$309.20

A4850

H-Lys-Cys-Asn-Thr-Ala-Thr-Cys-Ala-Thr-Gln-Arg-Leu-Ala-Asn-Phe-Leu-Val-His-Ser-Ser-Asn-Asn-Leu-Gly-Pro-Val-Leu-Pro-Pro-Thr-Asn-Val-Gly-Ser-Asn-Thr-Tyr-NH_2
(Disulfide Bridge Cys2-Cys7)

Amylin, rat

$C_{167}H_{270}N_{52}O_{53}S_2$ Mol.Wt.: 3918.47

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

A4851

H-Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe-Glu-Val-Arg-His-Gln-Lys-Leu-Val-Gly-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-OH

β-Amyloid (1-40), rat

$C_{190}H_{291}N_{51}O_{57}S_1$ M.W.: 4233.81 [131438-79-4]

A protein that stimulates the release of nitric oxide in neuronal cell lines. It often forms the neurotoxic peptide deposits associated with Alzheimer's disease and aging.

Hu J, el-Fakahany EE. Neuroreport. 4(6):760-762 (1993).

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

A4852

H-Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-Glu-Val-His-His-Gln-Lys-Ieu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-OH

β-Amyloid (1-40), Ultra Pure, TFA

$C_{194}H_{295}N_{53}O_{58}S_1$ Mol.Wt.: 4329.9

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

A4853

H-Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-Glu-Val-His-His-Gln-Lys-Ieu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-Ile-Ala-OH

β–Amyloid (1-42), human

$C_{203}H_{311}N_{55}O_{60}S_1$ Mol.Wt.: 4550.18

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

A4849

H-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-OH

β-Amyloid (25-35)

$C_{45}H_{81}N_{13}O_{14}S_1$ Mol.Wt.: 1060.3 [131602-53-4]

The 11-residue functional domain of Amyloid- protein.

1 mg	$27.80
2 mg	$67.80
5 mg	$184.80

A4854

H-Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe-Glu-Val-Arg-His-Gln-Lys-Leu-Val-Gly-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-Ile-Ala-OH

β-Amyloid Peptide (1-42), rat

$C_{199}H_{307}N_{53}O_{59}S_1$ Mol.Wt.: 4454.09 [107761-42-2]

1 mg	$236.80
2 mg	$403.20
5 mg	$710.40

A4848

Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val

Amyloid-β Protein (1-40)

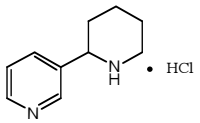
$C_{194}H_{293}N_{53}O_{58}S$ Mol Wt: 4329.8

A protein that stimulates the release of nitric oxide in neuronal cell lines. It often forms the neurotoxic peptide deposits associated with Alzheimer's disease and aging.

Hu J, el-Fakahany EE. Neuroreport. 4(6):760-762 (1993).

1 mg	$322.60

A5202



Anabasine Hydrochloride

$C_{10}H_{14}N_2$.HCl Mol. Wt.: 198.73 [15251-47-5]

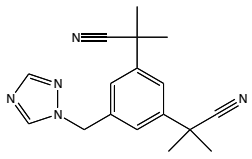
An anabisis aphylla alkaloid with antialcoholic effects. It has been shown to suppress breast cancer aromatase activity.

Kadohama N, Shintani K, Osawa Y. Cancer Lett. 75:175-82 (1993).
Mirzaez S. Farmakol Toksikol. 41:32-5 (1978).

25 mg	$24.70
100 mg	$64.10

A5302

RT



Anastrozole (See Page 4 for more information)

$C_{17}H_{19}N_5$ Mol.Wt.: 293.37 [120511-73-1]

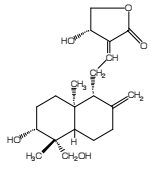
A selective aromatase inhitor used to treat hormone-responsive metastic breast cancer. It may be effective against recurrent ovarian adult granluosa cell tumors.

Plourde, PV., Dyroff, M., Dowsett, M. et al. J. Steroid Biochem. Mol. Biol 53:175-179 (1995).
Freeman, SA., Modesitt, SC. Gynecol Oncol. 103:753-758 (2006).

100 mg	$68.00
250 mg	$125.00
1 g	$380.00

A5313

0 °C



Andrographolide

$C_{20}H_{30}O_5$ Mol. Wt.: 350.45 [5508-58-7] m.p. 228~30 °C (dec.)

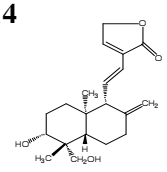
Andrographolide is from *Andrographis paniculata* . It inhibits PAP-induced human blood platelet aggregation, inhibits nitrite synthesis in macrophage, and restores vasocontractile response in thoracic aorta.

Amroyan E, Gabrielian E, Panossian A et al. Phytomedicine 6:27-31 (1999).
Chiou WF, Lin JJ, Chen CF. Br. J. Pharmacol. 125:327-334 (1998).

1 mg	$61.50
5 mg	$223.00
10 mg	$325.70

A5314

0 °C

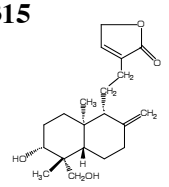


Andrographolide, dehydro-

$C_{20}H_{28}O_4$ Mol. Wt.: 332.43

1 mg	$61.50
5 mg	$223.00
10 mg	$325.70

A5315



Andrographolide, deoxy-

$C_{20}H_{30}O_4$ Mol. Wt.: 334.45

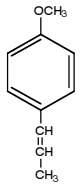
Anti-inflammatory drug isolated from *Andrographis paniculata* Nees. A potent cell differentiation-inducer of M1 cells.

Shen YC, Chen CF, Chiou WF. Planta Med. 66:314-7 (2000).
Matsuda T, Kuroyanagi M, Sugiyama S et al. Chem Pharm Bull 42:1216-25 (1994).

1 mg	$61.50
5 mg	$223.00
10 mg	$325.70

A5217

RT



trans-Anethole

p-Propenylanisole

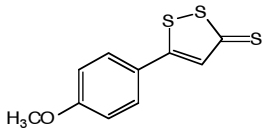
$C_{10}H_{12}O$, F.W. 148.20, m.p. 23°C [4180-23-8]

Induces Phase II drug-metabolizing enzymes. A potential anti-carcinogen in Ehrlich ascites tumor cells.

Rompelberg CJ, Verhagen H, van Bladeren PJ. Food Chem Toxicol., 31:637-645 (1993).
al-Harbi MM, Qureshi S, Raza M et al. Eur J Cancer Res. 4:307-318 (1995).

50 ml	$47.00
100 ml	$81.10

A5219



Anethole-trithione

$C_{10}H_8OS_3$ Mol. Wt.: 240.37 [532-11-6]

Analogue of the chemopreventive agent oltipraz. It was shown to increase cholinergic and adrenergic responsiveness in rats. Mechanism may act by stimulating some post-receptor effect in the coupling to the secretory response.

Lubet RA, Steele VE, Eto I et al. Int J Cancer. 72:95-101 (1997).
Glenert U. Eur J Pharmacol. 226:43-52 (1992).

25 mg	$55.50
100 mg	$178.70
500 mg	$616.00

A5225

Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Met-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr (Disulfide bridge Cys7-Cys23)

α-ANF(1-28), human

$C_{127}H_{203}N_{45}O_{39}S_3$ Mol.Wt.: 3080.46 [91917-63-4]

The major form of atrial natriuretic peptide in circulation throughout the body. Modulates saline and fluid balance in the blood by stimulating renin release.

Hisa H, Tomura Y, Satoh S. Am J Physiol. 257(3 Pt 1):E332-335 (1989).

0.5 mg	$172.80
1 mg	$294.40
2.5 mg	$518.40

A5228

Angiogenin

Mol. Wt. ~14,000 Da

An endogenous single chain protein that induces the formation of blood vessels.

Fett JW. Biochemistry 24:5480 (1985).
Shapiro R. Biochemistry 26:5141 (1987).

50 µg	$1,121.90

A5230

Angiostatin

A 38-kD fragment of plasminogen that is a potent endothelial cell growth inhibitor. It has been shown to inhibit angiogenesis in vivo and tumor growth in mice.

O'Reilly MS, Holmgren L, Chen C et al. Cell. 79:315-28 (1994).
Scappaticci FA, Smith R, Pathak A et al. Molecular Therapy. 3:186-96 (2001).

0.5 mg	$635.10

A5070

Asp-Arg-Val-Tyr-Val-His-Pro-Phe-OH

Angiotensin Acetate

$C_{49}H_{69}N_{13}O_{12}$ Mol.Wt. 1032.18

Please inquire

A5272

H-Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu-OH

Angiotensin, Canine, rat

$C_{41}H_{62}N_{12}O_{11}$ Mol.Wt.: 899.03

5 mg	$44.80
10 mg	$76.80
25 mg	$134.40

A5273

H-pGlu-Trp-Pro-Arg-Pro-Gln-Ile-Pro-Pro-OH

Angiotensin Converting Enzyme Inhibitor

$C_{53}H_{77}N_{14}O_{12}$ Mol.Wt.: 1102.29

5 mg	$25.60
10 mg	$43.20
25 mg	$76.80

A5275

H-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu-OH

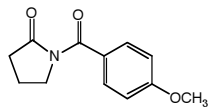
Angiotensin I [Des-Asp1-], human

$C_{58}H_{84}N_{16}O_{11}$ Mol.Wt.: 1181.42

5 mg	$19.20
10 mg	$32.00
25 mg	$57.60

A5276 Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu	**Angiotensin I, human** $C_{62}H_{89}N_{17}O_{14}$ Mol Wt: 1296.49 [~~0093~~-~~9~~-2] The decapeptide precursor to angiotensin II.	**5 mg** **10 mg** **25 mg**	**$19.20** **$32.00** **$57.60**
A5277 Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-OH	**Angiotensin II, human** $C_{50}H_{71}N_{13}O_{12}$ Mol.Wt.: 1046.19 [68521-88-0] A vasoactive agent that acts on the adrenal gland to stimulate the release of aldosterone. Wallace KB, Roth RA, Hook JB et al. Am J Physiol. 238:R395-399 (1980).	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5279 H-Asp-Arg-Val-Tyr-OH	**Angiotensin II (1-4), human** $C_{24}H_{37}N_7O_8$ Mol.Wt.: 551.6	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5280 H-Val-Tyr-Ile-His-Pro-Phe-OH	**Angiotensin II (3-8), human** $C_{40}H_{54}N_8O_8$ Mol.Wt.: 774.93	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5281 H-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-OH	**Angiotensin II (4-8), human** $C_{35}H_{45}N_7O_7$ Mol.Wt.: 675.79	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5282 H-Sar-Arg-Val-Tyr-Ile-His-Pro-Ile-OH	**Angiotensin II [Sar1 Ile8]** $C_{46}H_{74}N_{13}O_{10}$ Mol.Wt.: 968.1	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5283 H-Sar-Arg-Val-Tyr-Ile-His-Pro-Phe-OH	**Angiotensin II [Sar1]** $C_{49}H_{71}N_{13}O_{11}$ Mol.Wt.: 1018.19	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5284 H-Asp-Arg-Val-Tyr-Val-His-Pro-Phe-OH	**Angiotensin II, human [Val5]** $C_{49}H_{69}N_{13}O_{12}$ Mol.Wt.: 1032.18	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5278 H-Arg-Val-Tyr-Ile-His-Pro-Phe-OH	**Angiotensin III, human** $C_{46}H_{66}N_{12}O_9$ Mol.Wt.: 931.1 The amino-terminal degradation product of AngII. It is a central regulator of vasopressin release and blood pressure. It has been found to activate NF-kappaB and AP-1 and to increase MCP-1 in mesangial and mononuclear cells. Reaux A, Fournie-Zaluski MC, Llorens-Cortes C. Trends Endocrinol Metab. 12:15~~-~~62 (2001). Ruiz-Ortega M, Lorenzo O, Egido J. Kidney Int. 5~~-~~:2285-98 (2000).	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**
A5285 H-Arg-Val-Tyr-Ile-His-Pro-Ile-OH	**[Ile7] Angiotensin III** $C_{43}H_{68}N_{12}O_9$ Mol.Wt.: 897.1	**1 mg** **2 mg** **5 mg**	**$32.00** **$54.40** **$96.00**
A5287 H-Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu-Val-Ile-His-Asn-OH	**Angiotensinogen (1-14), human** $C_{83}H_{122}N_{24}O_{19}$ Mol.Wt.: 1760.05 A precursor of Angiotensin I. Angiotensinogen is cleaved by renin as a response to lowered blood pressure. Ohkubo H, Kageyama R, Ujihara M, Hirose T, Inayama S, Nakanishi S. Proc Natl Acad Sci USA. 80: 2196-200 (1983).	**5 mg** **10 mg** **25 mg**	**$32.00** **$54.40** **$96.00**

A5326



Aniracetam

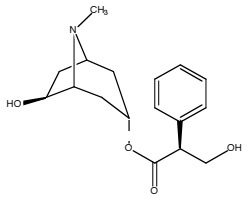
$C_{12}H_{13}NO_3$ Mol. Wt.: 219.24 [72432-10-1]

Cognition enhancer that potentiates AMPA receptor mediated ion conductance. It slows the rate of channel closing and the microscopic rates of desensitization. Antiapoptotic effects have been confirmed by the increase of intracellular ATP and phosphocreatine levels.

Lawrence JJ, Brenowitz S, Trussell LO. Mol Pharmacol. 64:269-78 (2003).
Gabryel B, Adamczyk J, Huzarska M et al. Neurotoxicology. 23:385-95 (2002).

100 mg	$55.50
500 mg	$166.40
1 g	$271.10

A5334



Anisodamine

$C_{17}H_{23}NO_4$ Mol. Wt.: 305.37 [55869-99-3]

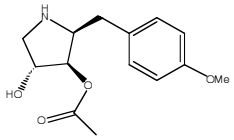
Has an inhibitory effect on acetylcholine receptor channels. Found to inhibit Shiga toxin-1-induced cytokine production, significantly decreasing lethality.

Zhang HM, Ou ZL, Gondaira F et al. J Lab Clin Med. 137:93-100 (2001).

Guo H, Lorenz RR, Vanhouette PM. Chin Med Sci J. 7:32-35 (1992).

100 mg	$35.90
500 mg	$89.60
1 g	$147.90

A5373



Anisomycin

Flagecidin

$C_{14}H_{19}NO_4$ Mol. Wt.: 265.31 [22862-76-6]

A protein synthesis inhibitor as well as an activator of p38 MAP kinase and c-Jun N-terminal kinases. Causes apoptosis of PC12 cells.

Torocsik B, Szeberenyi J. Biochem Biophys Res Comm. 278:550-6 (2000).
Ogawa T, Hayashi T, Kyoizumi S et al. Journal of Cell Science. 117:2087-96 (2004).

5 mg	$26.90
25 mg	$84.00
100 mg	$250.90

A5458

pGlu-His-Gly-OH

Anorexigenic Peptide

$C_{13}H_{17}N_5O_5$ Mol.Wt.: 323.4 [69275-10-1]

An appetite suppressing peptide isolated form urine of anorexia nervosa patients.

Coy *et. al.* J Physiol 341:225-235 (1981).

1 mg	$12.80
2 mg	$22.40
5 mg	$38.40

A5460

H-Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-OH

ANP (1-11), rat

$C_{49}H_{83}N_{20}O_{15}S_1$ Mol.Wt.: 1224.4

A potent natriuretic and vasodilatory peptide secreted by the heart atria.

Hirsch JR, Meyer M, Forssmann WG. Eur J Med Res. 27:447-54 (2006).

1 mg	$51.20
2 mg	$260.80
5 mg	$460.80

A5461

H-Ala-Pro-Arg-Ser-Met-Arg-Arg-Ser-Ser-Asp-Cys-Phe-Gly-Ser-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Met-Gly-Cys-Gly-Arg-Phe-OH
(Disulfide Bridge Cys11-Cys27)

ANP (1-30), frog

$C_{131}H_{215}N_{49}O_{41}S_4$ Mol.Wt.: 3260.73

0.5 mg	$12.80
1 mg	$22.40
2.5 mg	$38.40

A5476

H-Arg-D-Trp-N-Me-Phe-D-Trp-Leu-Met-NH_2

Antagonist G

$C_{49}H_{62}O_6N_{12}S$ Mol.Wt.: 951.2 [115150-59-9]

Antineoplastic agent

An anticancer peptide. A neuropeptide growth factor antagonist.

Jones, D.A.; Cummings, J.; Langdon, S. P.; Smyth, J. F. Gen Pharmacol. 28:183-9 (1997).

0.5 mg	$96.00
1 mg	$163.20
2.5 mg	$288.00

A5477

Ac-D-2-Nal-p-Chloro-D-Phe-β-(3-pyridyl)-D-Ala-Ser-Lys (nicotinoyl)-D-Lys(nicotinoyl)-Leu-Lys (isopropyl)-Pro-D-Ala-NH_2

Antide Acetate

$C_{82}H_{108}ClN_{17}O_{14}$ Mol.Wt.: 1591.32 [112568-12-4]

Please inquire

A5479

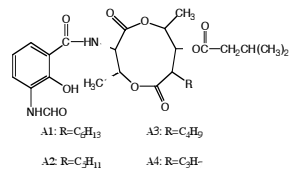
H-Cys-Asn-Val-Val-Pro-Leu-Tyr(PO_3H_2)-Asp-Leu-Leu-Leu-Glu-OH

Antiestrogen

$C_{64}H_{103}N_{13}O_{22}SP$ Mol.Wt.: 1469.65

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

A5378



A1: R=C_5H_{13} A3: R=C_7H_9

A2: R=C_9H_{11} A4: R=C_3H_7-

Antimycin A

[1397-94-0]

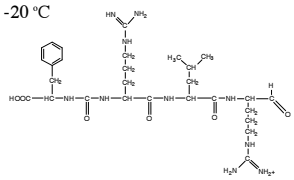
An inhibitor of mitochondrial respiratory chain complex III. Induces apoptosis in cell cultures.

Formigli L, Papucci L, Tani A et al. J. Cell Physiol. 182:41-9 (2000).
Mills KI, Woodgate LJ, Gilkes AF et al. Biochem Biophys Res Commun. 263:294-300 (1999).

10 mg	$55.90
50 mg	$221.80

A5478

-20 °C



Antipain

$C_{27}H_{44}N_{10}O_6$ F.W: 604.7

A natural protease inhibitor and known inhibitor of carcinogenesis induced by the S-phase dependent alkylating agent N-methyl-N-nitro-N-nitroso guanidine. It has been shown to supress chromosomal aberrations in human lymphocytes and reduce nuclear binding of estrogen-receptor complex in MCF-7 breast tumor cells.

Afzal V, Wiencke JK, Wolff S. Carcinogenesis. 10:1193-6 (1989).
Umans RS, Weichselbaum RR, Johnson CM, Kennedy AR. Carcinogenesis. 5:1355-7 (1984).

1 mg	$23.90
5 mg	$78.00
25 mg	$276.70

A6002

H-Cys-Asn-Cys-Lys-Ala-Pro-Glu-Thr-Ala-Leu-Cys-Ala-Arg-Arg-Cys-Gln-Gln-His-NH_2
(Cys1-Cys11, Cys3-Cys15)

Apamin

$C_{79}H_{131}N_{31}O_{24}S_4$ Mol.Wt.: 2027.37

A potent neurotoxic peptide isolated in honeybee venom, blocks calcium-activated potassium channels. Apamin is know to cause thermal and mechanical hypersensitivity in rats.

Chen YN, *et. al*. Neuroscience. 138: 631-40 (2006).

0.5 mg	$83.20
1 mg	$140.80
2.5 mg	$249.60

A6017

H-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe-OH

Apelin-13, human, bovine

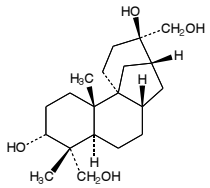
$C_{69}H_{111}N_{23}O_{16}S$ Mol.Wt.: 1550.86

An endogenous ligand for the G protein-coupled receptor.

Lee D.K. *et. al*. J Neurochem. 74: 34-41 (2000).

0.5 mg	$51.20
1 mg	$86.40
2.5 mg	$153.60

A6229



Aphidicolin

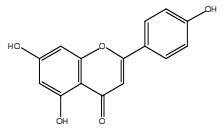
$C_{20}H_{34}O_4$ Mol. Wt.: 338.48 [38966-21-1]

DNA polymerase inhibitor. Potentiates apoptosis induced by therapeutic nucleosides.

Kuwakado K, Kubota M, Hirota H et al. Biochem Pharmacol. 46:1909-16 (1993).
Lin CK, Nguyen TT, Morgan TL et al. Exp Cell Res. 244:1-13 (1998).

1 mg	$80.00
5 mg	$300.00
10 mg	$525.00

A6234



Apigenin

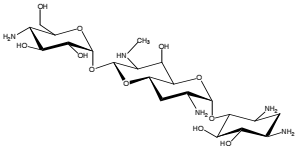
$C_{15}H_{10}O_5$ Mol. Wt.: 270.24 [520-36-5]

A nonmutagenic flavonoid, shown to inhibit cell proliferation, angiogenesis, and protein kinase. It also induces apoptosis in breast cancer cells via the phosphatidylinositol 3-kinase/Akt-dependent pathway.

Way TD, Kao MC, Lin JK. J Biol Chem. 279:4479-89 (2004).
Osada M, Imaoka S, Funae Y. FEBS Letters. 575:59-63 (2004).

5 mg	$20.20
25 mg	$58.30
100 mg	$165.80

A6264



Apramycin

$C_{21}H_{41}N_5O_{11}$ Mol. Wt.: 539.58 [37321-09-8]

Aminoglycoside antibiotic shown to be a potent inhibitor of protein synthesis in bacteria in vivo and in vitro. It works by inhibiting the translocation step of protein synthesis.

Perzynski S, Cannon M, Cundliffe E et al. Eur J Biochem. 99:623-8 (1979).
Davies J, O'Connor S. Antimicrob Agents Chemother. 14:69-72 (1978).

1 g	$37.00
5 g	$147.90

A6268

Aprotinin

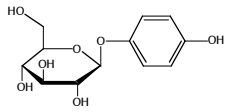
$C_{284}H_{432}N_{84}O_{79}S_7$ F.W 6511.83

A pancreatic basic trypsin inhibitor polypeptide found in tissues and blood.

Haberland G, McConn R. Fed Proc. 38:2760-67 (1979).

10 mg	$93.20
50 mg	$256.60

A6804 — **Arbutin**



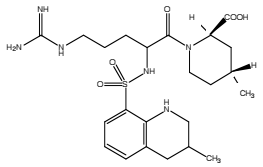
$C_{12}H_{16}O_7$ Mol. Wt.: 272.25 [497-76-7]

Antibacterial agent from traditional medicinal plants. It is present in the leaves of bearberry, blueberry, cranberry and pear. It was found to have depigmenting action in human melanocytes in culture. It inhibits tyrosinase activity.

Maeda K, Fukuda M. J Pharmacol Exp. Ther. 276:765-9 (1996).
Jin YH, Lee SJ, Chung MH et al. Arch Pharm Res 22:232-6 (1999).

5 g	$41.70
10 g	$69.30
25 g	$150.60

A6823 — **Argatroban**



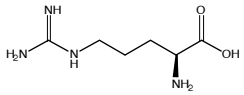
$C_{23}H_{36}N_6O_5S$ Mol. Wt.: 508.64 [74863-84-6]

A thrombin inhibitor that prevents tumor cell migration and bone metastasis. It has been shown to be more effective than heparin in preventing platelet loss and expression of P-selectin.

Kanemitsu S, Nishikawa M, Onoda K et al. J Thorac Cardiov Sur. 126:428-35 (2003).
Asanuma K, Wakabayashi H, Hayashi T et al. Oncology. 67:166-73 (2004).

10 mg	$103.10
25 mg	$224.00
100 mg	$616.00

A6825 — **L-Arginine**



$C_6H_{14}N_4O_2$ Mol. Wt.: 174.20 [74-79-3]

Plays a role in nitric oxide synthesis that induces vasodilation *in vivo* . Nitric oxide potentiates insulin-mediated glucose uptake through the increase in blood flow.

Dallinger S, Sieder A, Strametz J et al. Am J Physiol Endocrinol Metab. 284:E1106-11 (2003).
Paolisso G, Tagliamonte MR, Marfella R et al. Metabolism 46:1068-73 (1997).

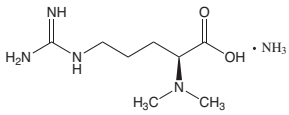
25 g	$18.50
100 g	$43.20
500 g	$110.90

A6826 — **L-Arginine Monohydrochloride**

$C_6H_{14}N_4O_2.HCl$ Mol. Wt.: 210.66 [1119-34-2]

25 g	$14.80
100 g	$37.00
500 g	$104.80

A6828 — **N ,N -Dimethyl-L-Arginine, Ammonium Salt**



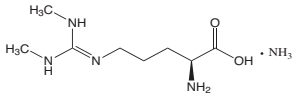
$C_8H_{18}N_4O_2NH_3$ Mol. Wt. 219.28

Nitric oxide inhibitor in *vitro* and in *vivo* .

Kotani K et. Al. J. Neurochem. 58:1127 (1992).

10 mg	$18.00
25 mg	$37.50
100 mg	$125.00

A6829 — **N^G,N'^G-Dimethyl-L-Arginine, Ammonium Salt**



$C_8H_{18}N_4O_2NH_3$ Mol.Wt. 219.28

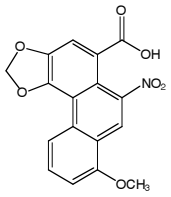
10 mg	$30.30
25 mg	$63.00
100 mg	$210.00

A6827 — **Argpressin Acetate** — Please inquire

$C_{46}H_{65}N_{15}O_{12}S_2$ MW:1084.23 [113-79-1]

C[Cys-Tyr-Phe-Gln-Asn-Cys]Pro-Arg-Gly-NH_2

A6932 — **Aristolochic acid A** (See page 4 for more information)



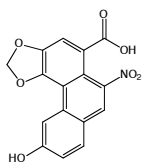
$C_{17}H_{11}NO_7$ Mol. Wt.: 341.27 [313-67-7] m.p. 287-292 °C (dec.)

Aristolochic acids are the active ingredients responsible for the hepatoxicity and renal toxicity of the Oriental herb *Aristolochic fangchi*. They form DNA adducts in renal tissue and are associated with urothelial carcinoma formation. They are known to induce hepatic nodules and forestomach tumors in rats.

Levi M, Guchelaar HJ, Woerdenbag HJ, Zhu YP. Pharm. World Sci. 20:43-4 (1998).
Mengs U, Stotzem CD. Arch. Tox. 67:307-11 (1993).
Schmeiser HH, Bieler CA, Wiessler M et al. Cancer Res. 56:2025-28(1996).

1 mg	$92.20
5 mg	$322.70
10 mg	$491.80

A6934 — **Aristolochic acid C** (See page 4 for more information)

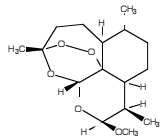


$C_{16}H_9NO_7$ Mol. Wt.: 327.25

See Aristolochic acid A

1 mg	$92.20
5 mg	$322.70
10 mg	$491.80

A6970



Artemether (See page 4 for more information)

$C_{16}H_{26}O_5$ Mol. Wt.: 298.37

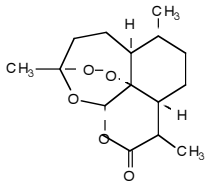
It is an oil-soluble derivative of the antimalarial agent artemesinin.

Zhao YH, Wang JY. Chinese Journal of Parasitology & Parasitic Diseases. 21:326-9 (2003).
White NJ, Waller D, Crawley J et al. Lancet. 339:317-21 (1992).
Xiao SH, Catto BA. Antimicrob Agents Chemother. 33:1557-62 (1989).

50 mg	**$44.80**
100 mg	**$65.00**
500 mg	**$246.40**
1 g	**$392.00**

A6978

-20 °C



Artemisinin (See page 4 for more information)

Qinghaosu, arteanuin

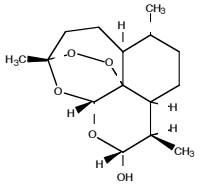
$C_{15}H_{22}O_5$, F.W. 282.35, m.p. 156-157, [63968-64-9]

Natural product isolated from the traditional Chinese antimalarial herb *Atremisia annua L* . Cytotoxic against several tumor cell lines, including Ehrlich ascites carcinoma cells.

Qinghaosu Antimalaria Coordinating Research Group. Chinese Med J. 92:811-816 (1979).
Zheng GQ. Planta Med. 60:54-57 (1994).
Beekman AC, Woerdenbag HJ, Van Uden W et al. J Pharm Pharmacol. 49:1254-1258 (1997).

100 mg	**$43.40**
500 mg	**$162.70**
1 g	**$263.20**

A6979



Dihydro-artemisinin (See page 4 for more information)

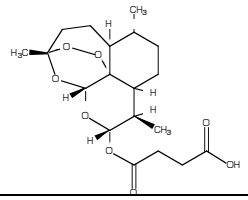
$C_{15}H_{24}O_5$ Mol. Wt.: 284.35

A more water-soluble analogue of artemisinin. It inhibits tumor cell growth and suppresses angiogenesis in vitro. It has been shown to reduce VEGF binding to its receptors on the surface of HUVEC.

Chen HH, Zhou HJ, Fang X. Pharmacological Research. 48:231-6 (2003).
Wu GD, Wang WQ, Zhou HJ et al. Cancer Chemotherapy & Pharmacology. 53:423-32 (2004).

50 mg	**$33.60**
100 mg	**$50.40**
500 mg	**$179.20**
1 g	**$274.40**

A6982



Artesunate (See page 4 for more information)

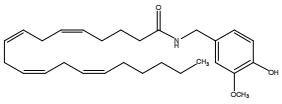
$C_{19}H_{28}O_8$ Mol. Wt.: 384.42 [88495-63-0]

A semi-synthetic derivative of artemisinin that is used as an anti-malarial drug. It has been shown to inhibit angiogenesis in vivo and in vitro.

Chen HH, Zhou HJ, Wu GD et al. Pharmacology. 71:1-9 (2004).
Zhao Y, Hanton WK, Lee KH. Journal of Natural Products. 49:139-42 (1986).

50 mg	**$35.90**
100 mg	**$53.80**
500 mg	**$207.20**
1 g	**$319.20**

A7085



Arvanil

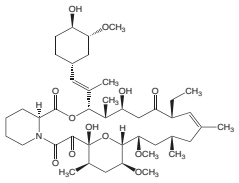
$C_{28}H_{41}NO_3$ Mol. Wt.: 439.63 [128007-31-8]

A capsaicin-anandamide hybrid molecule that is a CB1/VR1 agonist. It has been shown to induce apoptosis through a FADD/caspase-8-dependent pathway, in addition to exerting a potent analgesic effect.

Brooks JW, Pryce G, Bisogno T et al. Euro J Pharmacol. 439:83-92 (2002).
Sancho R, de la Vega L, Appendino G et al. Brit J Phamacol. 140:1035-44 (2003).

5 mg	**$47.10**

A7208



Ascomycin

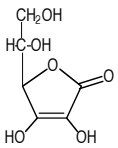
$C_{43}H_{69}NO_{12}$ Mol. Wt.: 792.01

Ascomycin is an antifungal antibiotic. Its anticonvulsant effect is the result of inhibition of calcineurin activity which is involved in picrotoxin-induced epileptic seizures.

Arai, T., Kouama, Y., Suenaga, T., Hoda, H. J. Antibiot. 15:231-232 (1962).
Vazquez-Lopez, A. Sierra-Paredes, ,G., Sierra-Marcuno, G. Pharmacol Biochem Behav. 84:511-516 (2006).

1 mg	**$160.00**
5 mg	**$720.00**

A7210



L(+)-Ascorbic Acid

Vitamin C

$C_6H_8O_6$ Mol. Wt.: 176.12 [50-81-7]

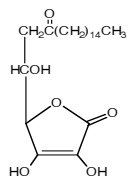
An antioxidant. Vitamin C reduces DNA single strand breaks and 1-hydroxyethyl-POBN adduct formation caused by ethanol. It has been shown to prevent oral carcinogenesis induced by dimethyl benzanthracene. Induces apoptosis in HL-60 cells.

Navasumrit P, Ward TH, Doss NJ, O'connor PJ. Carcinogenesis. 21:93-9 (2000).
Sawant SS, kandarker SV. Oral Dis. 6:241-247 (2000).
Satoh K, Ida Y, Hosaka M et al. Anticancer Res. 18:4371-5 (1998).

100 g	**$25.70**
500 g	**$57.20**

A7309

RT



Ascorbyl Palmitate

6-Palmitoylascorbic acid

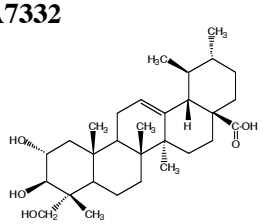
$C_{22}H_{38}O_7$, F.W. 414.53, m.p. 114-116°C, [137-66-6]

A lipophilic vitamin C analogue with greater stability than ascorbic acid and enhanced antioxidant activity. A potent chemopreventive agent against colon cancer.

Rao CV, Rivenson A, Kelloff GJ et al. Anticancer Res. 15:1199-1204 (1995).
Liu XY, Guo FL, Wu LM et al. Chem Phys Lipids. 83:39-43 (1996).
Austria R, Semenzato A, Bettero A. J Pharm Biomed Anal. 15:795-801 (1997).

25 g	$29.30
100 g	$80.90
500 g	$228.20

A7332



Asiatic Acid

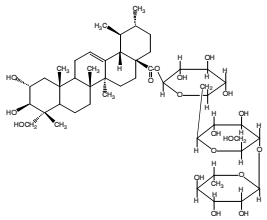
$C_{30}H_{48}O_5$ Mol. Wt.: 488.70

Asiatic acid is the aglycone of asiaticoside isolated from the plant *Centella asiatica* commonly used in wound healing.

Maquart FX, Chastang F, Simeon A et al. Europ. J Derm. 9:289-296 (1999).
Shukla A, Rasik AM, Jain GK et al. J. Ethnopharmacol. 65:1-11 (1999).
Yoosook C, Bunyapraphatsara N, Boonyakiat Y, Kantasuk C. Phytomedicine 6:411-419 (2000).
Medda S, Das N, Mahato SB et al. Indian J Biochem Biophys. 32:147-151 (1995).

100 mg	$59.60
500 mg	$241.30

A7333



Asiaticoside

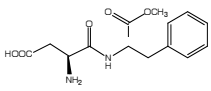
$C_{48}H_{78}O_{18}$ Mol. Wt.: 943.12 [16830-15-2] m.p. 230~3 °C

Asiaticoside is a triterpene glycoside from the plant *Centella asiatica* commonly used in wound healing. This activity is a result of stimulation of collagen and glycosaminoglycan synthesis. This glycoside was also found to have activity against herpes simplex virus 1 and 2 and mycobacterium tuberculosis.

Maquart FX, Chastang F, Simeon A et al. Europ. J Derm. 9:289-296 (1999).
Shukla A, Rasik AM, Jain GK et al. J. Ethnopharmacol. 65:1-11 (1999).
Yoosook C, Bunyapraphatsara N, Boonyakiat Y, Kantasuk C. Phytomedicine 6:411-419 (2000).
Medda S, Das N, Mahato SB et al. Indian J Biochem Biophys. 32:147-151 (1995).

1 mg	$84.60
5 mg	$307.50
10 mg	$491.80

A7462



Aspartame

$C_{14}H_{18}N_2O_5$ Mol. Wt.: 294.30 [22839-47-0]

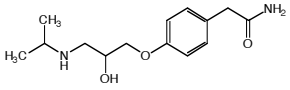
A dipeptide ester used as low-calorie artificial sweetener. In solution, it is 160 times sweeter than sucrose.

1 g	$27.20
5 g	$67.80
25 g	$271.10

Aspirin

See acetylsalicylic acid

A7618



Atenolol

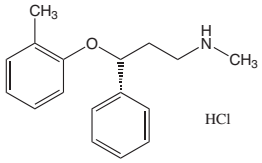
$C_{14}H_{22}N_2O_3$ Mol. Wt.: 266.34 [29122-68-7]

A beta-adrenoceptor antagonist; antihypertensive; antianginal.

Elijovich F, Laffer CL, Schiffrin EL. I Hum Hypertens. 11:313-9 (1997).
Plosker GL, Clissold SP. Drugs. 43:382-414 (1992).

1 g	$49.30
5 g	$86.30
25 g	$277.20

A7656



Atomoxetine Hydrochloride

$C_{17}H_{21}NO{\cdot}HCl$ Mol.Wt.: 281.82 [82248-59-7]

Atomoxetine is a selective noradrenaline reuptake inhibitor. It is used to treat attention-deficit/hyperactivity disorder.

Oberlender, R. Nichols, DE. Ramachandran PV Srebnik M, J. Pharm Pharmacol. 39:1055-1056 (1987).
Kratochvil CJ. Vaughan, BS. Harrington MJ Burke WJ. Expert Opin Pharmacother. 4:1165-1174 (2003).

25 mg	$85.00
100 mg	$280.00
250 mg	$500.00

A7657

c[Mpr-D-Tyr(OEt)-Ile-Thr-Asn-Cys]-Pro-D-Arg-Gly-NH_2

Atosiban Acetate

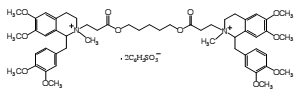
$C_{43}H_{67}N_{11}O_{12}S_2$ Mol.Wt.: 994.2 [90779-69-4]

A competitive oxytocin and vasopressin antagonist by exhibiting high affinity for both receptors. It is used to treat preterm labors.

Williams et. al. Adv Exp Med Biol. 449:473-479 (1998).
Bossmar T. J Perinant Med. 26:458-45 (1998).

Please inquire

A7668



Atracurium Besylate

$C_{65}H_{82}N_2O_{18}S_2$ Mol. Wt.: 1243.50 [64228-81-5]

A competitive neuromuscular blocking agent.

Hughes R, Chapple DJ. Br J Anaesth. 53:31-44 (1981).

50 mg	$40.90
100 mg	$66.00
500 mg	$256.20

A7669

H-Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr-OH
(Disulfide Bridge Cys7-Cys23)

Atrial Natriuretic Peptide (1-28), rat

$C_{128}H_{205}N_{45}O_{39}S_2$ Mol.Wt.: 3062.47

A diuretic and natriuretic peptide isolated from rat atrial myocytes that exhibits vasorelaxant activity.

Grammer RT, Fukumi H, Inagami T, Misono KS. Biochem Biophys Res Commun. 16(2):696-703 (1983).

0.5 mg	$153.60
1 mg	$260.80
2.5 mg	$460.80

A7670

H-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-OH
(Disulfide Bridge Cys7-Cys23)

Atriopeptin I

$C_{83}H_{135}N_{29}O_{30}S_2$ Mol.Wt.: 2083.31

A biologically active petide isolated from mammalian cardiac atria. A natriuretic and diuretic peptide that selectively relaxes intestinal but not vascular smooth muscle strips.

Currie *et. al*. Science. 223:67-69 (1984).

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

A7071

H-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-OH
(Disulfide Bridge Cys7-Cys23)

Atriopeptin II (rat, rabbit, mouse)

$C_{98}H_{156}N_{34}O_{32}S_2$ Mol.Wt.: 2386.67

A biologically active petide isolated from mammalian cardiac atria. It exhibits strong natriuretic and diuretic activities that relaxes both intestinal and vascular smooth muscle strips. Atriopeptin II also exhibits potent renal vasodilatating effects in rats.

Oshima T, Currie MG, Geller DM, Needleman P. Circ Res. 54:612-616 (1984).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

A7072

H-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr-OH
(Disulfide Bridge Cys7-Cys23)

Atriopeptin III

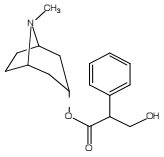
$C_{107}H_{165}N_{35}O_{34}S_2$ Mol.Wt.: 2549.85

An analogue of atrial natriuretic peptide that inhibits carotid body chemoreceptor nerve activity induced by hypoxia.

He L, Dinger B, Fidone S. Am J Physiol Cell Physiol. 278: C845-852 (2000).

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

A7672



Atropine Sulfate

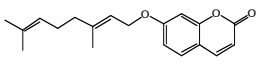
$(C_{17}H_{23}NO_3)_2.H_2SO_4.H_2O$ Mol. Wt.: 694.84 [5908-99-6]

Antimuscarinic drug that has antagonistic activity against alpha(1)-ARs. It is an effective bronchodilator.

Shinoura H, Tsujimoto G, Teranishi Y et al. Naunyn Schmiedebergs Arch Pharmacol. 366:368-71 (2002).
Klock LE, Miller TD, Morris AH et al. Am Rev Respir Dis. 112:371-6 (1975).

5 g	$49.30
10 g	$86.30
25 g	$215.60

A8070



Auraptene

$C_{19}H_{22}O_3$ Mol. Wt.: 298.38 [495-02-3]

Natural product from citrus fruit. Exerts tumor-preventive action through apoptosis and cell proliferation-dependent mechanisms. Increases the activities of Phase II drug-metabolizing enzymes in the liver and colon.

Tanaka T, Kawabata K, Kakumoto M et al. Cancer Res. 12:2550-6 (1998).
Mori H, Niwa K, Zheng Q et al. Mutat Res. 480:201-7 (2001).

25 mg	$37.00
100 mg	$123.20
500 mg	$462.00

A8071

H-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-OH
(Disulfide Bridge Cys7-Cys23)

Auriculin A

$C_{104}H_{168}N_{38}O_{33}S_2$ Mol.Wt.: 2542.86

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

A8077

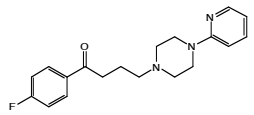
H-Lys-Lys-Ala-Leu-Arg-Arg-Gln-Glu-Thr-Val-Asp-Ala-Leu-OH

Autocamtide 2

$C_{65}H_{118}N_{22}O_{20}$ Mol.Wt.: 1527.8

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

A9801



Azaperone

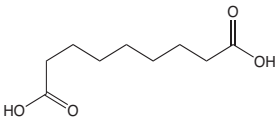
$C_{19}H_{22}FN_3O$ Mol. Wt.: 327.40 [1649-18-9]

Butyrophenone tranqulizer, and neuroleptic. Exerts an alpha adrenergic blocking action and retards pre-adrenoreceptor activation of heart rate in pigs.

Gregory NG, Wilkins LJ. J Vet Pharmacol Ther. 9:164-70 (1986).
Hughes RN, Syme LA, Syme GJ. Psychopharmacology. 52:107-9 (1997).

500 mg	$92.40
1 g	$147.90
5 g	$591.40

A9817



Azelaic acid (See page 4 for more information)

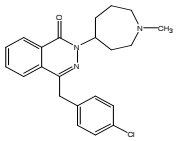
$C_9H_{16}O_4$ Mol. Wt.: 188.22 [123-99-9]

A naturally occurring dicarboxylic acid. It is non-toxic, non-teratogenic, and non-mutagenic. It is cytotoxic to melanocytes of human melanoma.

Nazzaro-Porro M. Passi S. Zina G. et al Lancet 1:1109-1111 (1980).

5 g	$35.00
25 g	$100.00

A9818



Azelastine HCl

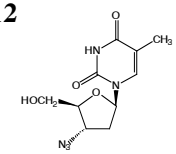
$C_{22}H_{24}ClN_3O$ Mol. Wt.: 381.90 [58581-89-8]

H1-Histamine receptor antagonist. It inhibits the release of leukotriene C4 and D4, and TNF -alpha.

Hamamoto Y, Nagai K, Muto M, Asagami C. Exptal Derm. 2:231-235 (1993).
Katayama S, Tsunoda H, Sakuma Y et al. Int. Arch Allergy Appl Immun. 83:284-289 (1987).

100 mg	$40.70
500 mg	$115.30
1 g	$183.10

A3212



3'-Azido-3'-deoxythymidine

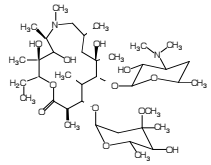
AZT, Azidothymidine, Zidovudine

$C_{10}H_{13}N_5O_4$ Mol. Wt.: 267.24 [30516-87-1]

Antiviral agent. Effective against HIV.

25 mg	$36.70
100 mg	$102.50
250 mg	$226.80
1 g	$366.00

A9834



Azithromycin

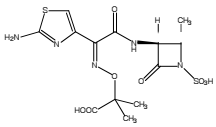
$C_{38}H_{72}N_2O_{12}$ Mol. Wt.: 748.98 [83905-01-5]

A 16-membered ring macrolide found to have potent antibacterial action against gram-negative organism.

Retsema J, Girard A, Schelkly W et al. Antimicrob Agents Chemother. 31:1939-47 (1987).

500 mg	$46.10
1 g	$69.30
5 g	$276.70

A9978



Aztreonam

$C_{13}H_{17}N_5O_8S_2$ Mol. Wt.: 435.43 [78110-38-0]

A synthetic monobactam antibiotic.

Stutman HR, Welch DF, Scribner RK et al. Antimicrob Agents Chemother. 25:93-97 (1984).
Paradelis AG, Stathopoulis GA, Salpigides GN et al. Method Find Exp Clin. 5:375-383 (1983).

10 mg	$28.00
50 mg	$67.20
250 mg	$224.00

AZT

See 3'Azido-3'deoxythymidine

B0000

Biotin-Arg-Arg-Ala-Ala-Glu-Glu-Leu-Asp-Ser-Arg-Ala-Gly-Ala-Pro-Gln-Leu-OH

2B-(A)

$C_{81}H_{137}N_{28}O_{28}S$ Mol.Wt.: 1983.23

1 mg	$102.40
2 mg	$174.40
5 mg	$307.20

B0072

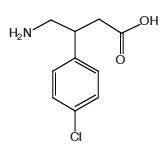
Biotin-Arg-Arg-Ala-Ala-Glu-Glu-Leu-Asp-Ser-Arg-Ala-Gly-Ala-Pro-Gln-Leu-OH

2B-(S)

$C_{81}H_{137}N_{28}O_{28}S$ Mol.Wt.: 1983.23

1 mg	$102.40
2 mg	$174.40
5 mg	$307.20

B0110



Baclofen

$C_{10}H_{12}ClNO_2$ Mol. Wt.: 213.66 [1134-47-0]

A GABA-b receptor agonist.

Brogden RN, Speight TM, Avery GS. Drugs 8:1-14 (1974).

1 g	$26.30
5 g	$109.80
10 g	$175.80

B0108

H-Arg-Leu-Cys-Arg-Ile-Val-Val-Ile-Arg-Val-Cys-Arg-OH (Disulfide Bridge Cys3-Cys11)

Bactenecin, bovine

$C_{63}H_{118}N_{24}O_{13}S_2$ Mol.Wt.: 1483.9

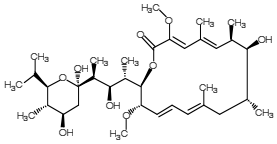
A 12-amino acid cationic antimicrobial peptide from bovine neutrophis found to be cytotoxic to neuronal and glial cells.

Wu M, Hancock RE. J Biol Chem. 274:29-35 (1999).
Radermacher SW, Schoop VM, Schluesener HJ. J Neurosci Res. 36:657-62 (1993).

0.5 mg **$172.80**
1 mg **$294.40**

B0025

-20 °C



Bafilomycin A1 (see page 5 for more information)

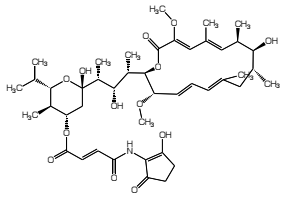
$C_{35}H_{58}O_9$ Mol. Wt. 622.8 [88899-55-2]

Macrolide isolated from *Streptomyces sp*. that has been shown to decrease multi-drug resistance. It also has shown apoptotic and antibiotic properties.

Altan et al. Journal of Experimental Medicine.187:1585 (1998).
Montcourrier P et al. Clinical & Experimental Metastasis. 15:382(1997).
Martinez-Zaguilan R et al. Biochemical Pharmacology. 57:1037(1999).

50 µg **$183.10**
5 x 50 µg **$677.60**

B0026



Bafilomycin B1 (see page 5 for more information)

$C_{44}H_{65}NO_{13}$ Mol. Wt.: 815.99 [88899-56-3]

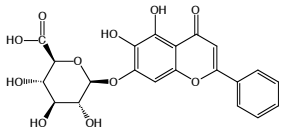
Macrolide isolated from *Streptomyces sp* . that exhibits antibiotic properties.

Werner G, Hagenmaier H, Drautz H et al. Journal of Antibiotics. 37:110-7 (1984).

1 mg **$109.80**

B0133

0 °C



Baicalin

$C_{21}H_{18}O_{11}$ Mol. Wt.: 446.36 [21967-41-9] m.p. 223 °C

Baicalin is a flavonoid found in the radix of *Scutellaria baicalensis* that has antioxidant activity. It has anti-inflammatory effects, anti-HIV activity, apoptosis induction and inhibition of colon aberrant crypts properties.

GAo Z, Huang K, Yang X, Xu H. Biochem Biophys Acta. 1472:643-650 (1999).
Lin CC, Shieh DE. Am. J. Chin. Med. 24:31-36 (1996).
Kitamura K, Honda M, Yoshizaki H et al. Antiviral Res. 37:131-140 (1998).
Wu X, Akatsu H, Okada H. Jpn J Med Sci. Biol. 48:79-87 (1995).

1 mg **$49.20**
5 mg **$192.20**
10 mg **$269.10**

A0248

H-Tyr-Gly-Gly-Phe-Met-Arg-Arg-Val-Gly-Arg-Pro-Glu-OH

BAM-12P

$C_{62}H_{97}N_{21}O_{16}S$ Mol.Wt.: 1424.66

Dodecapeptide isolated from bovine adrenal medulla. It is a Pro-Met-enkephalin precursor.

Mizuno K, Minamino N, Kangawa K, Matsuo H. Biochem Biophys Res Commun. 29:1482-8 (1980).

1 mg **$64.00**
2 mg **$108.80**
5 mg **$192.00**

A0249

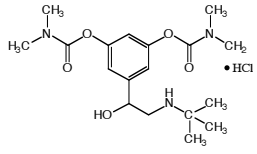
H-Tyr-Gly-Gly-Phe-Met-Arg-Arg-Val-Gly-Arg-Pro-Glu-Trp-Trp-Met-Asp-Tyr-Gln-Lys-Arg-Tyr-Gly-OH

BAM-22P

$C_{130}H_{184}N_{38}O_{31}S_2$ Mol.Wt.: 2839.28

1 mg **$147.20**
2 mg **$249.60**
5 mg **$441.60**

B0150



Bambuterol Hydrochloride

$C_{18}H_{29}N_3O_5.HCl$ Mol. Wt.: 403.91 [81732-46-9]

A bronchodilator. It inhibits plasma cholinesterase during metabolism and prolongs suxamethonium-induced neuromuscular blockade.

Bang U, Viby-Mogensen J, Wiren JE et al. Acta Anaethesiol Scand. 34:596-9 (1990).
Sitar DS, Aoki FY, Warren CP et al. Chest. 103:771-6 (1993).

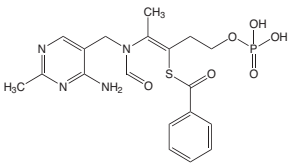
500 mg **$86.30**
1 g **$123.20**
5 g **$468.20**

BCNU

N,N'-Bis(2-chloroethyl)-N-nitrosourea

See Carmustine

B1753 **Benfotiamine** — 250 mg $30.00; 1 g $60.00; 5 g $125.00



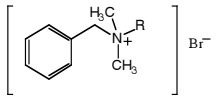
S -Benzoylthiamine *O* -monophosphate

$C_{19}H_{23}N_4O_6PS$ Mol.Wt.: 466.453 [22457-89-2]

A lipid-soluble thiamine derivative found in Allium family vegetables such as garlic, onions, leeks and shallots. As a treatment for diabetic neuropathy, benfotiamine is more effective at increasing thiamine levels in blood and tissues than water-soluble salts like the previous vitamin B1.

Altern Med Rev.11: 238-242 (2006).
Marchetti *et. al*. Diabetes. 55: 2231-7 (2006).

B1545 **Benzalkonium Bromide** — 100 g $49.30; 500 g $154.00



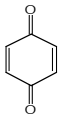
R=C_8H_{17}- to $C_{18}H_{37}$-

[91080-29-4]

Ulcerative agent. Preservative in most ophthalmic topical solutions. On epithelial conjunctival cells in vitro, cells die by necrosis at high concetrations and by apoptosis at low concentration.

Wilmer JL, Burleson FG, Kayama F et al. J Invest Dermatol. 102:915-22 (1994).
De Saint Jean M, Brignole F, Bringuier AF et al. Invest Ophthalmol Vis Sci. 40:619-30 (1999).

B1853 **1,4-Benzoquinone** — 100 g $21.70; 500 g $61.50



$C_6H_4O_2$ Mol. Wt.: 108.09 [106-51-4]

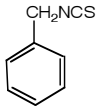
It is one of the major metabolites of benzene. It causes DNA damage and apoptosis through H_2O_2 generation in cells.

S -Benzoylthiamine O -monophosphate

See Benfotiamine

B1653 **Benzyl isothiocyanate** — 5 g $20.80; 10 g $33.30

+4 °C



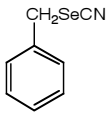
C_8H_7NS, F.W.149.22, b.p.242-243°C, [622-78-6] d. 1.125

Inhibitor of methylazoxymethanol acetate-induced intestinal carcinogenesis.

Sugie S, Okamoto K, Okumura A et al. Carcinogenesis. 8:1555-1560 (1994).

B1654 **Benzyl selenocyanate** — 100 mg $38.40; 250 mg $79.90; 500 mg $144.90

+4 °C



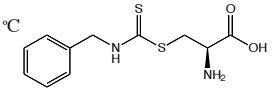
C_8H_7NSe, F.W.196.11, [4671-93-6]

A versatile synthetic organoselenium chemopreventive agent. Found to be effective in several animal tumor model systems.

Fiala ES, Sohn OS, Li H et al. Carcinogenesis. 9:1809-1815 (1997).

B1655 **S-(N-Benzylthiocarbamoyl)-L-cysteine** (See page 10 for more information) — 500 mg $55.70; 1 g $96.50; 5 g $325.40

+4 °C

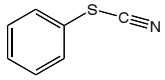


$C_{11}H_{14}N_2O_2S_2$ Mol.Wt.: 270.37 m.p. 191-193°C [35446-36-7]

Cysteine conjugate of benzyl isothiocyanate.

B1656 **Benzyl thiocyanate, 97%** — 50 g $28.20; 100 g $44.30

RT

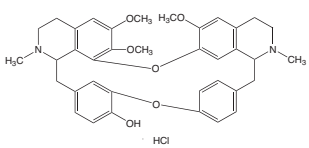


C_7H_5NS Mol.Wt.: 135.17 [3012-37-1]

Effective against methylazoxymethanol acetate-induced intestinal carcinogenesis.

Sugie S, Okamoto K, Okumura A, Tanaka T, Mori H. Carcinogenesis. 8:1555-1560 (1994).

B1669 **Berbamine Hydrochloride, 95%** (see page 5 for more information) — 5 g $35.00; 10 g $60.00; 25 g $120.00

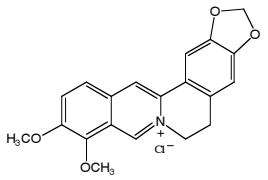


$C_{37}H_{40}N_2O_6$.HCl Mol. Wt. : 608.731 [478-61-5]

A non-steroidal anti-inflammatory that exhibits anti-arrhythmia, anti-hypertensive, anti-neoplastic, and antioxidative effects. Berbamine induces Caspaces 3 mediated apoptosis of leukemia cells, suggesting that berbamine may be a novel anticancer drug.

Sun *et.al*. Zhonghua Yi Xue Za Zhi. 86: 2246-51 (2006).
He Z, Zhao X, Xu R, Wu D. Zhejiang Da Xue Xue Bao Yi Xue Ban. 35: 209-14 (2006).
Guo Z, Fu J, Zhongguo Zhong Xi Yi Jie He Za Zhi. 25: 765-8 (2005).

B1870



Berberine hydrochloride hydrate

$C_{20}H_{18}NO_4^+Cl^-$ Mol. Wt.: 371.82 [633-65-8]

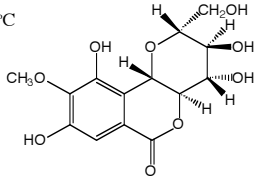
It is an isoqinoline alkaloid found in plants. It was shown to have chemopreventive properties against colon tumor formation by inhibiting the enzyme cyclooxygenase-2 (cox-2) and Activator Protein 1 (AP-1).

Fukuda k et. al. Journal of Ethnoph. 66:227-33 (1999).
Fukuda k, Hibiya Y, Mutah M et al. Planta Med. 65:381-3 (1999).

5 g	$23.20
10 g	$30.80

B1769

0 °C



Bergenin

$C_{14}H_{16}O_9 .H_2O$ Mol. Wt.: 346.3 [477-90-7]

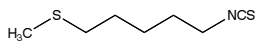
Bergenin is an isocoumarin isolated from various medicinal plants. It shows mild anti-HIV activity and has antihepatotoxic and antiulcer activity.

Lim HK, Kim HS, Chung MW, Kim YC. J. Ethnopharmacol. 70:69-72 (2000).
Goel RK, Maiti RN, Manickam M, Ray AB. Indian J. Exp. Biol. 35:1080-1083 (1997).
Liu W. Chung Kuo Chung Yao Tsa Chih. 16:102-104, 128 (1991).

1 mg	$61.50
5 mg	$223.00
10 mg	$325.70

B1668

4 °C



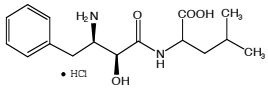
Berteroin, 97%

$C_7H_{13}NS_2$ Mol.Wt.: 175.43 [4430-42-6]

25 mg	$65.20
50 mg	$113.10
100 mg	$194.40
500 mg	$654.20

B1874

0 °C



Bestatin Hydrochloride

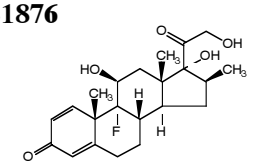
$C_{16}H_{24}N_2O_4.HCl$ Mol. Wt.: 344.87 [65391-42-6]

It is a specific inhibitor against aminopeptidase B and leucine aminopeptidase. It has also exhibits a direct antileukemic and antitumor effect against non-small cell cancer through induction of apoptosis.

Sekine K, Fujii H., Abe F. Leukemia. 13:729-34 (1999).
Ezawa K, Minato K., Dobashi K. Biomed Parmacother. 50:283-9 (1996).

1 mg	$29.40
5 mg	$82.90
10 mg	$130.60

B1876



Betamethasone

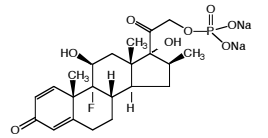
$C_{22}H_{29}FO_5$ Mol. Wt.: 392.46 [378-44-9]

A Glucocorticoid. It induces gene expression and apoptosis.

Hofmann TG, Hehner SP, Bacher S et al. FEBS Lett. 441:441-6 (1998).
Kalthoff FS, Chung J, Musser P et al. Clin Exp Immunol. 133:350-9 (2003).

100 mg	$123.20
500 mg	$400.40

B1878



Betamethasone 21-phosphate sodium salt

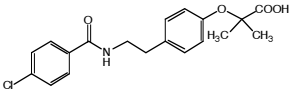
$C_{22}H_{28}FNa_2O_8P$ Mol. Wt.: 516.40 [151-73-5]

A water soluble, anti-inflammatory glucocorticoid. It has exhibited an antiulcerative effect on colonic lesions.

Kitano A, Matsumoto T, Tabata A et al. Nippon Shokakibyo Gakkai Zasshi. 90:24-32 (1993).
Faro CJ, Reidelberger RD, Palmer JM. Am J Physiol Regul Integr Comp Physiol. 278:118-24 (2000).

250 mg	$74.00
1 g	$207.00

B1898



Bezafibrate

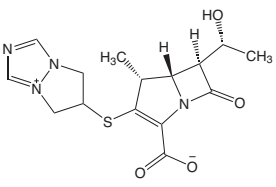
$C_{19}H_{20}ClNO_4$ Mol. Wt.: 361.82 [41859-67-0]

A peroxisome proliferator and hypolipidaemic agent. A derivative of clofibrate. It has been shown to be effective in preventing mammary tumors induced by radiation together with DES, possibly by reducing prolactin and triglyceride concentrations.

Inano H, Suzuki K, Wakabayashi K. Carcinogenesis. 17:2641-6 (1996).
Goll V, Viollon-Abadie C, Nicod L et al. Hum Exp Toxicol. 19:193-202 (2000).

1 g	$21.00
5 g	$66.60
25 g	$219.30

B3203



Biapenem

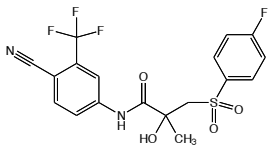
$C_{15}H_{18}N_4O_4S$ Mol. Wt. : 350.397 [120410-24-4]

A parenteral carbepenem that exhibits antibacterial activities against a wide range of gram-positive and –negative bacteria. Biapenem is also stable to human renal dehydropeptidase I (DHP-1), hence coadministration of DHP-1 enzyme inhibitor is not required.

Aldridge K, Morice N, Schiro D. Antimicrob Agents Chemother. 38: 889-93(1994).
Hikida *et. al*. Antimicrob Agents Chemother. 36: 481-3 (1992).

10 mg	$35.00
25 mg	$60.00
100 mg	$136.00

B3209



Bicalutamide (see page 5 for more information)

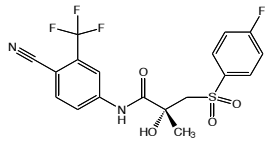
$C_{18}H_{14}F_4N_2O_4S$ Mol. Wt.: 430.37 [90357-06-5]

A nonsteroidal antiandrogen which has been shown effective in the treatment of prostate cancer. It has also been shown to induce cell death by a pathway that is independent of changes in mitochondrial membrane potential and Bcl-2 actions.

Maucher A, von Angerer E. J Canc Res Clin Oncol. 119:669-74 (1993).
Lee EC, Zhan P, Schallhom R et al. Cell Death & Differentiation. 10:761-71 (2003).

100 mg	**$44.80**
250 mg	**$81.20**
1 g	**$244.20**

B3210



R-Bicalutamide (see page 5 for more information)

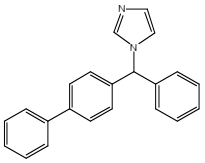
$C_{18}H_{14}F_4N_2O_4S$ Mol.Wt.: 430.37 [113299-40-4]

A chiral nonsteroidal antiandrogen which has been shown to inhibit CYP3A4, with lesser effect on CYP2C9, 2C19 and 2D6.

Cockshott ID. Clin Pharmacokinet. 43: 855-78 (2004).

100 mg	**$89.60**
250 mg	**$162.40**
1 g	**$488.40**

B3320



Bifonazole

$C_{22}H_{18}N_2$ Mol. Wt.: 310.39 [60628-96-8]

An imidazole antifungal agent and calmodulin antagonist. It causes a reduction in glycolysis and ATP levels in B16 melanoma cells.

Penso J, Beitner R. Eur J Pharmacol. 342:113-7 (1998).
Glass-Marmor L, Morgenstern H, Beiter R. Eur J Pharmacol. 313:265-71 (1996).

1 g	**$22.20**
5 g	**$67.80**
25 g	**$228.00**

B3324

H-Cys-Ser-Cys-Ser-Ser-Leu-Met-Asp-Lys-Glu-Cys-Val-Tyr-Phe-Cys-His-Leu-Asp-Ile-Ile-Trp-Val-Asn-Thr-Pro-Glu-His-Val-Val-Pro-Tyr-Gly-Leu-Gly-Ser-Pro-Arg-Ser-OH
(Cys1-Cys15, Cys3-Cys11)

Big Endothelin-1 (1-38), human

$C_{189}H_{282}N_{48}O_{56}S_5$ Mol.Wt.: 4282.96 [124363-98-0]

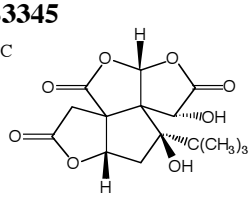
A vasoconstrictor peptide that induces slow developing, long-lasting, and strong vasoconstriction, indicating its physiological importance in vascular homeostasis.

Kimura *et. al*. J Cardiovasc Pharmacol. 13 (Suppl 5): discussion S18 (1989).

0.5 mg	**$326.40**
1 mg	**$555.20**
2.5 mg	**$979.20**

B3345

0 °C



Bilobalide

$C_{15}H_{18}O_8$ Mol. Wt.: 326.30 [33570-04-6]

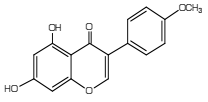
Naturally occurring diterpene from *Ginkgo biloba* . It has anti-ischemic and anti-convulsant properties.

Janssens D, Remacle J, Drieu K, Michiels C. Biochem Pharmacol. 58:109-19 (1999).
Sasaki K, Hatta S, Haga M, Ohshika H. Eur J Pharmacol. 367:165-73 (1999).

5 mg	**$100.10**
10 mg	**$153.70**
25 mg	**$307.50**

B3358

+4 °C



Biochanin A (see page 13 for more information)

5,7-Dihydroxy-4'-methoxyisoflavone

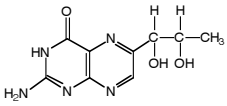
$C_{16}H_{12}O_5$, F.W. 284.26, m.p. 210-213^{0}C, [491-80-5]

An isoflavone with anticancer proliferation, differentiation and chemopreventive effects. Inhibits metabolic activation of benzo[a]pyrene.

Chae Y.-H, Ho DK, Cassady JM et al. Chem. Biol. Interactions 82: 181-193 (1992).
Jing Y, Waxman S. Anticancer Res. 15(4): 1147-1152 (1995).

100 mg	**$25.60**
250 mg	**$51.50**
1 g	**$148.70**

B3458



Biopterin

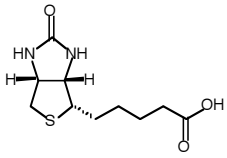
$C_9H_{11}N_5O_3$ Mol. Wt.: 237.22 [22150-76-1]

An obligate cofactor of inducible nitric oxide synthase.

Weinberg JB, Misukonis MA, Shami PJ et al. Blood 86:1184-95 (1995).

5 mg	**$46.10**
10 mg	**$84.60**
25 mg	**$215.30**

B3278



Biotin

D-Biotin;Vitamin H

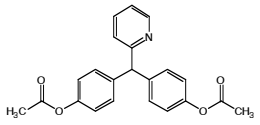
$C_{10}H_{16}N_2O_3S$ Mol. Wt.: 244.31 [58-85-5]

A coenzyme that offers three possible binding sites. Used for pretargeted therapy, which increases the amount of radioactivity delivered to a cancer cell.

Sigel H. Experientia. 37:789-98 (1981).
Correa-Gonzalez L, Arteaga de Murphy C, Ferro-Flores G et al. Nucl Med Biol. 30:135-40 (2003).

500 mg	**$29.60**
1 g	**$44.40**
5 g	**$191.00**
10 g	**$351.20**

B3374



Bisacodyl

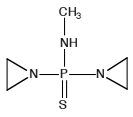
$C_{22}H_{19}NO_4$ Mol. Wt.: 361.39 [603-50-9]

A diphenolic laxative. It is suggested that intestinal inhibition of (Na^+K^+) ATPhase activity, increase of mucosal PGE2 content, and possibly also stimulation of adenyl cyclase activity might contribute to the net water accumulation induced by bisacodyl.

Farack UM, Nell G. Digestion. 30:191-4 (1984).
Rachmilewitz D, Karmeli F, Okon E. Dig Dis Sci. 25:602-8 (1980).

10 g	$59.20
25 g	$64.10

B3373



Bisazir

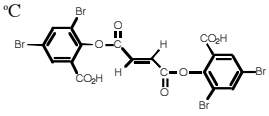
Bis(aziridinyl)methylamino phosphine sulfide

$C_4H_{12}N_3SP$, F.W. 177.21 [13687-09-7]

500 mg	$53.20
1 g	$89.90
5 g	$357.40

B3272

4 ºC



Bis(3,5-dibromosalicyl) fumarate

$C_{18}H_8O_8Br_4$, F.W. 671.87, m.p. 225-228ºC, [71337-53-6]

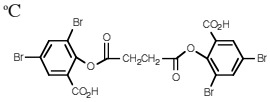
Potent acylating agent of intracellular hemoglobin that cross-links beta chains of hemoglobin.

Walder JA, Zaugg RH, Walder RY et al. Biochemistry. 18:4265-4270 (1979).
Zaugg RH. Walder JA, Walder RY et al. J Biol Chem. 255:2816-21 (1980).

100 mg	$14.70
500 mg	$51.30
1 g	$73.20
5 g	$146.40

B3275

4 ºC



Bis(3,5-dibromosalicyl) succinate

$C_{18}H_{10}O_8Br_4$, F.W. 673.89, m.p. 194-196ºC [71337-52-5]

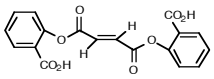
Potent acylating agent of intracellular hemoglobin. It cross-links beta chains of hemoglobin.

Walder JA, Zaugg RH, Walder RY, Steele JM, Klotz IM. Biochemistry, 18:4265-4270 (1979).
Zaugg RH, Walder JA, Walder RY, Steele JM, Klotz IM. J. Biol. Chem., 255:2816-21 (1980).

100 mg	$14.70
500 mg	$51.30
1 g	$73.20
5 g	$146.40

B3280

4 ºC



Bis(salicyl) fumarate

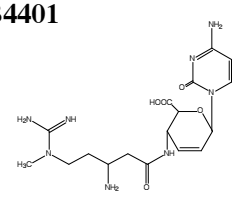
$C_{18}H_{12}O_8$, F.W. 356.29, m.p. 178-180ºC,

Potent acylating agent of intracellular hemoglobin. It cross-links beta chains of hemoglobin.

Zaugg RH, Walder JA, Walder RY et al. J Biol Chem. 255:2816-21 (1980).

100 mg	$14.70
500 mg	$51.30
1 g	$73.20
5 g	$146.40

B4401



Blasticidin S

$C_{17}H_{26}N_8O_5$ Mol. Wt.: 422.44 [2079-00-7]

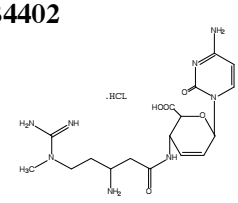
An aminohexosylcytosine nucleoside that inhibits protein synthesis.

It has also been shown to induce apoptosis in certain models.

Johnson CR, Jiffar T, Fischer UM et al. Leukemia. 17:2140-8 (2003).
Petropoulos AD, Xaplanteri MA, Dinos GP et al. J Biol Chem. 279:26518-25 (2004).

25 mg	$100.80
50 mg	$156.80
100 mg	$282.30

B4402



Blasticidin S Hydrochloride

$C_{17}H_{26}N_8O_5$. HCL Mol. Wt.: 458.5 [3513-03-9]

An aminohexosylcytosine nucleoside that inhibits protein synthesis.

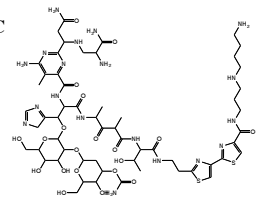
It has also been shown to induce apoptosis in certain models.

Johnson CR, Jiffar T, Fischer UM et al. Leukemia. 17:2140-8 (2003).
Petropoulos AD, Xaplanteri MA, Dinos GP et al. J of Biol Chem. 279:26518-25 (2004).

25 mg	$103.10
50 mg	$165.80
100 mg	$263.20

B4517

4 ºC



Bleomycin A5 Hydrochloride (See page 6 for more information)

Pingyangmycin

$C_{57}H_{89}N_{19}O_{21}S_2$.nHCl Mol. Wt.: 1440.56

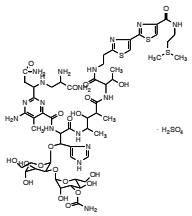
Pingyangmycin is an antitumor antibiotic. It induces apoptosis.

Tai KW, Chou MY, Hu CC, Yan, JJ, Chang YC. Oral Oncol. 36:242-7 (2000).
Li XT. Chung Kuo I Hsueh Ko Hsueh Yuan Hsueh Pao. 12:182-6 (1990).

5 mg	$233.70
10 mg	$391.90
25 mg	$806.90

B4518 — **Bleomycin sulfate** (See page 6 for more information)

4 °C



$C_{55}H_{84}N_{17}O_{21}S_3 \cdot H_2SO_4$ [9041-93-4]

1.5-2.0 Units per mg.

A glycopeptide antibiotic consisting of a mixture of bleomycin sulfate salts.

Bleomycin A2 is pictured.

Lown JW, Sim S-K. Biochem. Biophys. Res. Commun. 77: 1150 (1977).
Haidle CW, Lloyd RS. Antibiotics 5: 124 (1979).

5 mg	$184.50
10 mg	$269.10
25 mg	$538.00

B5560 — **BNP (1-32), rat**

H-Asn-Ser-Lys-Met-Ala-His-Ser-Ser-Ser-Cys-Phe-Gly-Gln-Lys-Ile-Asp-Arg-Ile-Gly-Ala-Val-Ser-Arg-Leu-Gly-Cys-Asp- Gly-Leu-Arg-Leu-Phe-OH
(Disulfide Bridge Cys10-Cys26)

$C_{146}H_{239}N_{47}O_{44}S_3$ Mol.Wt.: 3453.01

A brain diuretic-natriuretic and vasorelaxant peptide found in the brain and atrium of rats.

Kojima M, Minamino N, Kangawa K, Matsuo H. Biochem Biophys Res Commun. 159: 1420-6 (1989).

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

B5561 — **BNP (1-32), human**

H-Ser-Pro-Lys-Met-Val-Gln-Gly-Ser-Gly-Cys-Phe-Gly-Arg- Lys-Met-Asp-Arg-Ile-Ser-Ser-Ser-Ser-Gly-Leu-Gly-Cys-Lys- Val-Leu-Arg-Arg-His-OH
(Disulfide Bridge Cys10-Cys26)

$C_{143}H_{244}N_{50}O_{42}S_4$ Mol.Wt.: 3464.1

A brain natriuretic peptide secreted by the human heart in response to cardiac volume or pressure.

Al-Meslmani BM, Fahoum SK, Shamia MG. Clin Lab. 53: 35-9 (2007).

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

B5608 — **Boc-FAAGRK-AMC**

Boc-Phe-Ala-Ala-Gly-Arg-Lys-AMC

$C_{44}H_{63}N_{11}O_6$ Mol Wt: 906.0

20 mg	$512.00

B5609 — **Boc-GRR-AMC**

Boc-Gly-Arg-Arg-AMC

$C_{29}H_{44}N_{10}O_7$ Mol Wt: 644.7

20 mg	$344.00

B5610 — **Boc-PRR-AMC**

Boc-Pro-Arg-Arg-AMC

$C_{32}H_{48}N_{10}O_7$ Mol Wt: 684.8

20 mg	$344.00

B5611 — **Boc-RRR-AMC**

Boc-Arg-Arg-Arg-AMC

$C_{33}H_{53}N_{13}O_7$ Mol Wt: 743.8

20 mg	$344.00

B5648 — **Bombesin**

pGlu-Gln-Arg-Leu-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2

$C_{71}H_{111}N_{24}O_{18}S$ Mol Wt: 1619.86 [31362-50-2]

A gut tetradecapeptide with the ability to stimulate the release of numerous hormones. It inhibits growth of pancreatic ductal adenocarcinoma (H2T) in nude mice.

Chen LW, Hsu CM, Huang JK et al. J Formos Med Assoc. 99:491-8 (2000).
Farre A, Ishizuka J, Gomez G et al. Pancreas. 9:652-6 (1994).

1 mg	$25.60
2 mg	$43.20
5 mg	$76.80

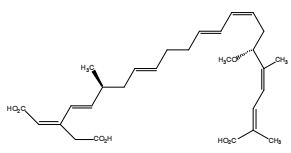
B5649 — **[Tyr4] Bombesin**

pGlu-Gln-Arg-Tyr-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2

$C_{74}H_{108}N_{24}O_{19}S$ Mol.Wt.: 1669.9

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

B5753 — **Bongkrekic acid**



$C_{28}H_{38}O_7$ Mol. Wt.: 486.60 [11076-19-0]

A mitochondrial permeability transition pore blocker. It has been shown to inhibit apoptosis by preventing PARP cleavage and DEVDase activity.

Yoon HS, Moon SC, Kim ND et al. Biochem Bioph Res Co. 276:151-6 (2000).
Zamora M, Granell M, Mampel T et al. FEBS Letters. 563:155-60 (2004).

100 µg	$274.40

Bothrops alternatus

(See snake venom)

Bothrops neuwiedi diporus

(See snake venom)

B6800

Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg

Bradykinin

$C_{50}H_{73}N_{15}O_{11}$ Mol Wt: 1060.22 [59-11-3]

A pro-inflammatory polypeptide that is an important mediator of hyperalgesia, inflammatory diseases, asthma and cancer. It has been shown to possess potent anti-cancer activities in both in vitro and in vivo cancer models.

Stewart JM. Curr Pharm Des. 9:2036-42 (2003).
Sharma JN, Al-Dhalmawi GS. Drugs. 6:381-6 (2003).

10 mg	$32.00
20 mg	$54.40
50 mg	$96.00

B6802

H-Arg-Pro-Pro-OH

Bradykinin (1-3)

$C_{16}H_{28}N_6O_4$ Mol.Wt.: 368.4

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B6803

H-Arg-Pro-Pro-Gly-Phe-OH

Bradykinin (1-5)

$C_{27}H_{40}N_8O_6$ Mol.Wt.: 572.67

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B6804

H-Arg-Pro-Pro-Gly-Phe-Ser-OH

Bradykinin (1-6)

$C_{30}H_{45}N_9O_8$ Mol.Wt.: 659.75

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B6805

H-Arg-Pro-Pro-Gly-Phe-Ser-Pro-OH

Bradykinin (1-7)

$C_{35}H_{52}N_{10}O_9$ Mol.Wt.: 756.87

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B6806

H-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg-OH

Bradykinin (2-9)

$C_{44}H_{61}N_{11}O_{10}$ Mol.Wt.: 904.04

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B6807

H-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-OH

Bradykinin [Des-Arg9]

$C_{44}H_{61}N_{11}O_{10}$ Mol.Wt.: 904.04

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

B6808

H-Arg-Pro-Gly-Phe-Ser-Pro-Phe-Arg-OH

Bradykinin [Des-Pro2]

$C_{45}H_{66}N_{14}O_{10}$ Mol.Wt.: 963.12

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

B6809

H-Arg-Pro-Pro-Gly-Phe-Ser-DPhe-Phe-Arg-OH

Bradykinin [DPhe7]

$C_{54}H_{75}N_{15}O_{11}$ Mol.Wt.: 1110.29

1 mg	$25.60
2 mg	$43.20
5 mg	$76.80

B6810

H-Arg-Pro-Hyp-Gly-Phe-Ser-Pro-Phe-Arg-OH

Bradykinin [Hyp3]

$C_{30}H_{72}N_{15}O_{10}$ Mol.Wt.: 1077.23

0.5 mg	$38.40
1 mg	$65.60
2.5 mg	$115.20

B6811

H-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Tyr-Arg-OH

[Tyr8] Bradykinin

$C_{50}H_{73}N_{15}O_{12}$ Mol.Wt.: 1076.23

5 mg	$44.80
10 mg	$76.80
50 mg	$134.40

B6812 — **Bradykinin Potentiator B**

$C_{56}H_{91}N_{15}O_{13}$ Mol.Wt.: 1182.46

pGlu-Gly-Leu-Pro-Pro-Arg-Pro-Lys-Ile-Pro-Pro-OH

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

B6813 — **Bradykinin Potentiator C**

$C_{51}H_{77}N_{11}O_{13}$ Mol.Wt.: 1052.26

pGlu-Gly-Leu-Pro-Pro-Gly-Pro-Pro-Ile-Pro-Pro-OH

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

B3346 — **Brain injury-derived Neurotrophic Peptide (3)**

BINP

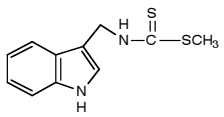
Glu-Ala-Leu-Glu-Leu-Ala-Arg-Gly-Ala-Ile-Phe-Gln-Ala

$C_{62}H_{101}N_{17}O_{19}$ Mol Wt: 1388.58

1 mg	$96.00
2 mg	$163.20
5 mg	$288.00

B6801 — **Brassinin**

4 °C



$C_{11}H_{12}N_2S_2$. F.W. 236.36, m.p.132-133°C, [1057-48-59-2]

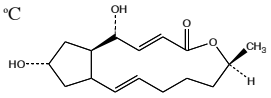
A phytoalexin found in Chinese cabbage. An effective inhibitor of stage two skin carcinogenesis. An inducer of Phase II enzymes and inhibitor of chemically induced carcinogenesis.

Mehta RG, Liu J, Constantinou A et al. Carcinogenesis 16: 399-404 (1995).

50 mg	$76.90
100 mg	$123.00
250 mg	$256.20

B6816 — **Brefeldin A** (See page 6 for more information)

4 °C



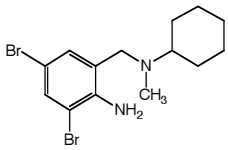
$C_{16}H_{24}O_4$ Mol. Wt.: 280.36

Macrolide possessing antifungal, antiviral and antitumor properties.

Misumi, Y., et al., J. biol. Chem. 261:11398 (1986).
Mordente, J.A., Konno, S., Chen, Y. et al J. Urol 159:2075-9 (1998).

5 mg	$115.40
10 mg	$179.90

B6957 — **Bromhexine Hydrochloride**



$C_{14}H_{20}Br_2N_2$.HCl Mol. Wt.: 412.60 [611-75-6]

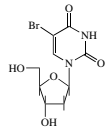
A mucolytic agent. Exerts both a secretagogic action on submucosal glands and a mucolytic action toward acid glycoproteins inside cells in vivo.

Takeda H, Abe Y, Misawa M et al. Jpn J Pharmacol. 35:445-50 (1984).
Gotz VH. Arzneimittelforschung. 25:607-15 (1975).

100 g	$49.30
500 g	$154.00

B6856 — **5-Bromo-2'-deoxyuridine**

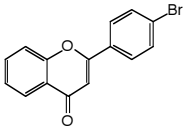
4 °C



$C_9H_{11}BrN_2O_5$, F.W. 307.11, m.p. 193-197°C, [59-14-3]

250 mg	$21.40
500 mg	$34.40
1 g	$58.00
5 g	$188.50

B6857 — **4'-Bromoflavone** (See page 6 for more information)



$C_{15}H_9BrO_2$ Mol. Wt.: 301.13

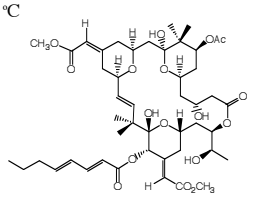
A potent Phase II detoxifying enzyme inducer. Inhibits DMBA-induced mammary tumorigenesis in the rat.

Song, L. L., Kosmeder, J.W., Lee, S.K., et al Cancer Res. 59:5708-585 (1999).

1 g	$69.30
5 g	$230.50
10 g	$307.50

B6998 — **Bryostatin 1**

-20 °C



$C_{47}H_{68}O_{17}$ Mol. Wt.: 905.03 [83314-01-6]

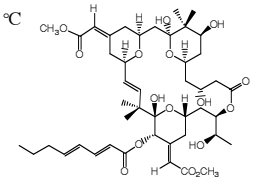
It is a partial Protein kinase C (PKC) agonist that has potent antitumor and immunomodulatory activity. It also enhances cytotoxicity of most chemotherapeutic agents.

Caponigro F, French RC, Kaye SB. Anticancer Drugs. 8:26-33 (1997).
Dowlati A et. al. American Society of Clinical Oncology Online (2000).
Koutcher J A et. al. Clinical Cancer Research. 6:1498-1507 (2000).

10 µg	$162.40
25 µg	$275.10

B6999

-20 °C



Bryostatin 2

$C_{45}H_{66}O_{16}$ Mol. Wt.: 863.00 [87745-28-6]

10 µg	$192.20
25 µg	$366.00

B8010

Gly-Met-Asp-Ser-Leu-Ala-Phe-Ser-Gly-Gly-Leu-NH_2

Buccalin

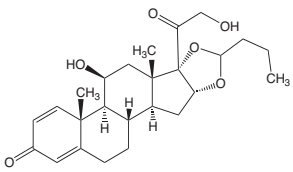
$C_{45}H_{72}N_{12}O_{15}S$ Mol Wt: 1053.20

A modulatory neuropeptide.

Cropper EC, Miller MW, Tenenbaum R et al. Proc Natl Acad Sci USA. 85:6177-81 (1988).

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

B8112



Budesonide (See page 6 for more information)

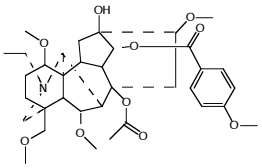
$C_{25}H_{34}O_6$ Mol. Wt.: 430.53 [51333-22-3] MP: 226°C

A glucocorticoid steroidal anti-inflammatory agent used for the treatment of asthma, non-infectious rhinitis and nasal polyposis. Budesonide is also know to be a potent chemopreventive agent in mice by decreasing the size of lung tumors, reversing DNA hypomethylation and altering mRNA gene expression.

Pereira MA, Tao L, Liu Y, Li L, Steele VE, Lubet RA. Int J Cancer.120:1130-3 (2007).

100 mg	$35.00
250 mg	$100.00
1 g	$280.00

B8144



Bulleyaconitine A (See page 3 for more information)

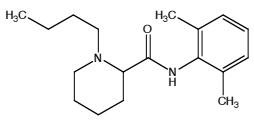
$C_{35}H_{49}NO_{10}$ Mol. Wt.: 643.76 [107668-79-1]

An active principle component from Aconitum bulleyanum Diel has analgesic property.

Tang XC, Liu XJ, Lu WH. Acta Pharm Sinica. 21:886-891 (1986).

10 mg	$36.70
100 mg	$213.90

B8262



Bupivacaine Hydrochloride

$C_{18}H_{28}N_2O.HCl.H_2O$ Mol. Wt.: 342.91 [14252-80-3]

Local anesthetic with a cytotoxic effect on muscle fibers. Inhibits TREK-1 channels and depolarizes the cell membrane.

Punke MA, Licher T, Pongs O et al. Anesth Analg. 96:1663-73 (2003).
Nonaka I, Fujita T, Sugita H. Muscle Nerve. 7:400-7 (1984).

1 g	$24.70
5 g	$83.80
25 g	$308.00

B8271

H-Lys-His-Gly-NH_2

Bursin

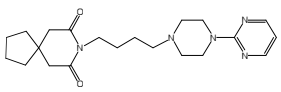
$C_{14}H_{25}N_7O_3$ Mol.Wt.: 339.39 [60267-34-7]

A tripeptide isolated from avian bursa of Fabricius that selectively induces differentiation in B precursor cells nut to T precursor cells.

Audhya T, Viamontes G, Babu U, Goldstein G. Scand J Immunol. 31: 199-204 (1990).

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

B8274



Buspirone Hydrochloride

$C_{21}H_{31}N_5O_2.HCl$ Mol. Wt.: 421.97 [33386-08-2]

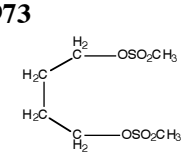
An azaspirodecanedione that has anxiolytic actions. Affects dopaminergic, serotonergic and noradrenergic pathways, as well as the GABA-benzodiazepine receptor chloride ionophore complex.

Skolnick P, Paul SM, Weissman BA. Pharmacotherapy. 4:308-14 (1984).
Dringenberg HC, Kornelsen RA, Vanderwolf CH. Pharmacol Biochem Behav. 49:737-41-6 (1994).

1 g	$37.00
5 g	$123.20

B7973

RT



Busulfan

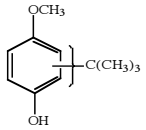
$C_6H_{14}O_6S_2$, F.W. 246.30, m.p.114-117°C [55-98-1]

A DNA alkylating agent used as an antitumor drug. Effective in chronic myelocytic leukemia.

Fulmer Shealy Y. In "Cancer Chemotherapeutic Agents" Foye WO, Ed., (1995).
ACS Professional Reference, pp. 149-153, (1995).

10 g	$26.60
25 g	$51.30

B8174 — **Butylated Hydroxyanisole** — 50 g $23.20; 100 g $33.80

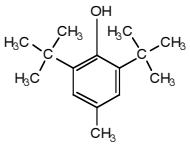


$C_{11}H_{16}O_2$ Mol. Wt.: 180.24

An antioxidant that is a mixture of 2-tert-butyl-4-methoxyphenol and 3-tert-butyl-4-methoxy phenol. It induces phase II detoxifying enzymes that inhibit the action of carcinogens. Dietary BHA induces forestomach tumors.

Ito N, Hirose M. Adv. Cancer Res. 53:247-302 (1989).
Ito N, Fukushima S, Tsuda H. CRC Crit Rev Toxicol. 15:109-150 (1985).

B7977 — **Butylated hydroxytoluene (BHT)** — 100 g $16.70; 500 g $29.50

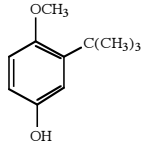
RT 

$C_{15}H_{24}O$, F.W. 220.35, m.p. 69-70°C, [128-37-0]

An antioxidant shown to be chemopreventive against a variety of carcinogens. Low doses have a modulating effect on liver and bladder carcinogenesis.

Williams GM, Tanaka T, Maruyama et al. Cancer Res. 51:6224-6230 (1991).

B8070 — **2-tert-Butyl-4-hydroxyanisole, 99%** — 100 mg $53.70; 500 mg $154.30; 1 g $241.10

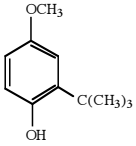
RT 

$C_{11}H_{16}O_2$ F.W. 180.25 [88-32-4]

Minor isomer of BHA mixture. It has different biological activity than the 3-BHA isomer.

Lam LKT, Pai RP, Wattenberg LW. J Med Chem. 20:569-571 (1979).
Ito N, Hirose M, Urata Y et al. Gann. 75:471-474 (1984).

B8071 — **3-tert-Butyl-4-hydroxyanisole, 99%** — 10 g $107.00; 50 g $359.70

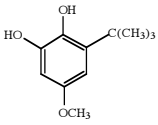
RT 

$C_{11}H_{16}O_2$, F.W. 180.25, m.p. 58-60°C, [121-00-6]

Antioxidant used to stabilize fatty food. It was found to inhibit chemically-induced tumor formation in animals. Under high dose conditions it was carcinogenic to the forestomach of rodents.

Ito N, Hirose M. Adv. Cancer Res. 53:247-302 (1989).
Ito N, Fukushima S, Tsuda H. CRC Crit Rev Toxicol. 15:109-150 (1985).
Wattenberg LW, Lam LKT. in "Inhibition of Tumor Induction and Development". M.S. Zedeck and M. Lipkin, eds. pp. 1-22. Plenum Press, N.Y. (1981).
Fukuda K et. al. Journal of Ethnoph. 66:227-33 (1999).
Fukuda K, Hibiya Y, Mutah M et al. Planta Med. 65:381-3 (1999).

B8072 — **3-tert-Butyl-5-methoxy-catechol** — 10 mg $60.10; 50 mg $182.20; 100 mg $321.30

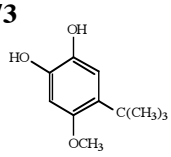
-20 °C 

$C_{11}H_{16}O_3$, F.W. 196.25, m.p. 95-96°C, [80284-15-7]

Cytotoxic agents to P388 and KB cells.

Lam LKT, Garg P, Swanson SM, Pezzuto JM. J Pharm Sci. 77: 393-5 (1988).

B8073 — **4-tert-Butyl-5-methoxy-catechol** — 10 mg $68.80; 50 mg $214.20; 100 mg $374.60

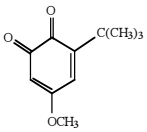
-20 °C 

$C_{11}H_{16}O_3$, F.W. 196.25, m.p. 89-90°C, [91352-66-8]

Cytotoxic agents to P388 and KB cells.

Lam LKT, Garg P, Swanson SM, Pezzuto JM. J Pharm Sci. 77: 393-5 (1988).

B8074 — **3-tert-Butyl-5-methoxy-1, 2-quinone** — 50 mg $96.50; 100 mg $171.30; 500 mg $552.30

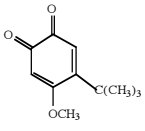
-20 °C 

$C_{11}H_{14}O_3$, F.W. 194.25, m.p. 73-74°C, [2940-63-8]

Cytotoxic agents to P388 and KB cells.

Lam LKT, Garg P, Swanson SM, Pezzuto JM. J Pharm Sci. 77: 393-5 (1988).

B8075 — **4-tert-Butyl-5-methoxy-1, 2-quinone** — 50 mg $139.30; 100 mg $246.40; 500 mg $792.00

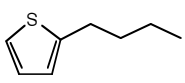
-20 °C 

$C_{11}H_{14}O_3$, F.W. 194.25, m.p. 92-95°C, [36122-03-9]

Cytotoxic agents to P388 and KB cells.

Lam LKT, Garg P, Swanson SM, Pezzuto JM. J Pharm Sci. 77: 393-5 (1988).

B8176 — **2-n-Butylthiophene, 97%** — 5 g $53.70; 10 g $98.60

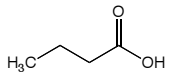


$C_8H_{12}S$, F.W.140.25, b.p.181-182° C, [1455-20-5]

An inhibitor of DMH-induced aberrant crypt formation in colon.

Lam LKT, Zhang J. Carcinogenesis. 12:2311-2315 (1995).

B8275 — **n-Butyric acid** — 10 ml $27.60; 100 ml $38.50

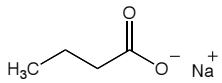


$C_4H_8O_2$ Mol. Wt.: 88.11

Has chemopreventive activity against colon cancer by inducing apoptosis.

Kellof G J et al. Journal of Cellular Biochemistry-Supplement. 20:1-24 (1994).

B8276 — **Butyric acid sodium salt** — 5 g $73.70; 25 g $172.20



Sodium butanoate

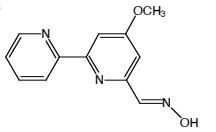
$C_4H_7NaO_2$ Mol. Wt.: 110.09 [156-54-7]

A potent inhibitor of cell growth and differentiation inducer. It is shown that in P53-mutated human colon cancer cells, butyrate activates the WAF1 promoter and induces WAF1 protein production, which is an inhibitor of cyclin-dependent kinases.

Bartram HP, Scheppach W, Englert S et al. J Parenter Entera Nutr. 19:182-6 (1995).
Nakano K, Yamagashi H, Oka T, Sakai T. Nippon Geka Gakkai Zasshi. 99:373-8 (1998).

C0016 — **Caerulomycin A** — 1 mg $307.50

-20 °C



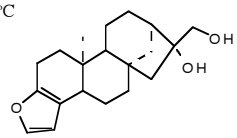
$C_{12}H_{11}N_3O_2$ Mol. Wt.: 229.23

Pyridine derivative antibiotic. Produced by several actinomycete species. Also known as cerulomycin. Caerulomycin A is a fungicide that exhibit activities against human tumor cells.

Divekar P V et al. Can. J. Chem. 45: 1215 (1967),
McInnes A G et al. Can. J. Chem. 57: 3200 (1979).

C0020 — **Cafestol** (See page 7 for more information) — 50 mg $117.40; 100 mg $182.20; 500 mg $642.10

-20 °C



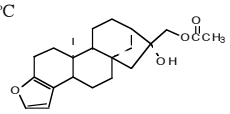
$C_{20}H_{28}O_3$, F.W. 316.44, m.p. 156-158°C, [469-83-0]

Natural product isolated from the unsaponifiable fraction of petroleum ether extract of coffee beans. It is an inducer of the detoxifying enzyme glutathione S-transferase.

Bengis RO, Anderson RJ. J. Biol. Chem. 47:99-113 (1932).
Slotta KH, Neisser K. Ber. 71:1991-1994 (1938).
Lam LKT, Sparnins VL, Wattenberg LW. Cancer Res. 42:1193-1198 (1982).

C0021 — **Cafestol acetate** (See page 7 for more information) — 50 mg $121.00; 100 mg $192.70; 500 mg $663.80

-20 °C

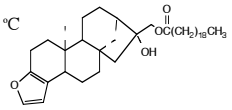


$C_{22}H_{30}O_4$, F.W.358.48, m.p. 163.5-165°C, [81760-48-7]

Inducer of glutathione S-transferase.

C0025 — **Cafestol eicosanate** (See page 7 for more information) — 25 mg $109.60; 50 mg $192.00; 100 mg $316.60

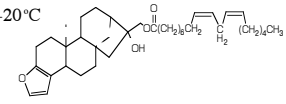
-20 °C



$C_{40}H_{66}O_4$, F.W. 610.95

C0027 — **Cafestol linoleate** (See page 7 for more information) — 25 mg $106.40; 50 mg $185.50; 100 mg $295.80

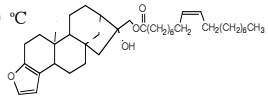
-20°C



$C_{38}H_{58}O_4$, F.W. 578.87

C0029 — **Cafestol oleate** (See page 7 for more information) — 25 mg $120.00; 50 mg $215.90; 100 mg $327.80

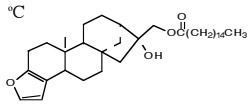
-20 °C



$C_{38}H_{60}O_4$, F.W. 580.88

C0022 — **Cafestol palmitate** (See page 7 for more information) — 50 mg $123.40; 100 mg $192.70; 500 mg $663.80

-20 °C



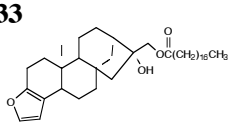
$C_{36}H_{58}O_4$, F.W. 554.43, m.p.43°C, [81760-46-5]

Naturally occurring ester present in green coffee beans.

Lam LKT, Sparnins VL, Wattenberg LW. Cancer Res. 42:1193-1198 (1982).

C0033

-20 °C



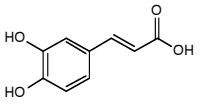
Cafestol stearate (See page 7 for more information)

$C_{38}H_{62}O_4$, F.W. 582.90

25 mg	**$102.50**
50 mg	**$181.40**
100 mg	**$289.50**

C0121

RT



Caffeic acid (See page 7 for more information)

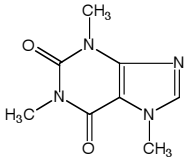
$C_9H_8O_4$, F.W. 180.16, m.p. 194-198°C (dec.), [331-39-5]

Inhibitor of ornithine decarboxylase and protein tyrosine kinase.

Rao CV, Desai D, Kaul B, Amin S, Reddy BS. Chem. Biol.Interactions 84:277-290 (1992).

5 g	**$29.70**
25 g	**$103.90**

C0221



Caffeine

3,7-Dihydro-1,3,7-trimethyl-1H-purine-2,6-dione

$C_8H_{10}N_4O_2$ Mol. Wt.: 194.19 [58-08-2]

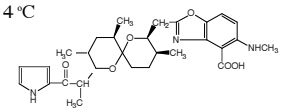
Caffine has inhibitory action against lung tumorigenesis, colonic carcinogenesis and UV-induced carcinogenesis.

Chuang FL, Wang M, Rivenson A, Iatropoules MI et al. Cancer Res. 58:4096-101 (1998).
Hagiwara A, Boonyaphiphat P, Tanaka H et al. Jpn J Cancer Res. 90:399-405 (1999).
Lu YP, Lou YR, Li XH et al. Cancer Res. 60:4785-91 (2000).

10 g	**$18.50**
50 g	**$46.10**
100 g	**$69.30**

C0246

4 °C



Calcimycin

$C_{29}H_{37}N_3O_6$ Mol. Wt.: 523.62 [52665-69-7]

Induces apoptosis in the lens epithelium, which leads to opacification.

Li WC, Kuszak JR, Wang GM et al. Exp. Eye Res. 61:91-8 (1995).

1 mg	**$39.50**
5 mg	**$92.40**
10 mg	**$141.70**

C0247

H-Ile-Thr-Ser-Phe-Glu-Glu-Ala-Lys-Gly-Leu-Asp-Arg-Ile-Asn-Glu-Arg-Met-Pro-Pro-Arg-Arg-Asp-Ala-Met-Pro-OH

Calcineurin Autoinhibitory Peptide

$C_{124}H_{205}N_{39}O_{39}S_2$ Mol.Wt.: 2930.38

Specific calcineurin inhibitor. Corresponds to a C-terminal domain (residues 457-482) of the calmodulin-binding domain of calcineurin.

Hashimoto, Y.; Perrino, B. A.; Soderling, T. R. J. Biol. Chem. 265:1924(1990).
Perrino, B. A.; Ng, L. Y.; Soderlinget, T. R. J. Biol. Chem. 270:340 (1995).

0.5 mg	**$89.60**
1 mg	**$152.00**
2.5 mg	**$268.80**

C0248

Asp-Leu-Asp-Val-Pro-Ile-Pro-Gly-Arg-Phe-Asp-Arg-Arg-Val-Ser-Val-Ala-Ala-Glu

Calcineurin Substrate

$C_{92}H_{150}N_{28}O_{29}S$ Mol Wt: 2112.4

0.5 mg	**$80.00**
1 mg	**$136.00**
2.5 mg	**$240.00**

C0146

H-Cys-Ala-Ser-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asp-Val-Gly-Ala-Gly-Thr-Pro-NH_2
(Disulfide Bridge Cys1-Cys7)

Calcitonin, chicken

$C_{145}H_{240}N_{42}O_{46}S_2$ Mol.Wt.: 3371.91

A peptide hormone produced by thyroid cells, shown to inhibit osteoclasts activity.

Liu *et. al.* Sheng Wu Gong Cheng Xue Bao. 22: 539-44 (2006).

0.5 mg	**$96.00**
1 mg	**$163.20**
2.5 mg	**$288.00**

C0152

H-Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-AspVal-Gly-Ala-Gly-Thr-Pro-NH_2
(Disulfide Bridge Cys1-Cys7)

Calcitonin, eel

$C_{146}H_{241}N_{43}O_{47}S_2$ Mol.Wt.: 3414.94

1 mg	**$96.00**
2 mg	**$163.20**
5 mg	**$288.00**

C0148

Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly-Thr-Tyr-Thr-Gln-Asp-Phe-Asn-Lys-Phe-His-Thr-Phe-Pro-Gln-Thr-Ala-Ile-Gly-Val-Gly-Ala-Pro-NH_2
(Disulfide bridge Cys1-Cys7)

Calcitonin, human

$C_{145}H_{240}N_{44}O_{48}S_2$ Mol Wt: 3417.88

A carrier peptide that can be used to better internalize fusion proteins.

Machova Z, Muhle C, Krauss U et al. Chembiochem. 3: 672-677 (2002).

0.5 mg	**$86.40**
1 mg	**$147.20**
2.5 mg	**$260.80**

C0153

Calcitonin, rat

H-Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly-Thr-Tyr-Thr-Gln-Asp-Leu-Asn-Lys-Phe-His-Thr-Phe-Pro-Gln-Thr-Ser-Ile-Gly-Val-Gly-Ala-Pro-NH_2
(Disulfide Bridge Cys1-Cys7)

$C_{148}H_{228}N_{40}O_{46}S_3$ Mol.Wt.: 3399.9

0.5 mg	$86.40
1 mg	$147.20
2.5 mg	$260.80

C0149

Calcitonin, salmon

Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly-Thr-Pro-NH_2
(Disulfide bridge Cys1-Cys7)

$C_{151}H_{229}N_{45}O_{45}S_3$ Mol Wt: 3417.87

0.5 mg	$72.00
1 mg	$121.60
2.5 mg	$214.40

C0244

α-Calcitonin Gene Related Peptide, chicken

H-Ala-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Asp-Phe-Leu-Ser-Arg-Ser-Gly-Gly-Val-Gly-Lys-Asn-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2
(Disulfide Bridge Cys2-Cys7)

$C_{165}H_{260}N_{52}O_{50}S_2$ Mol.Wt.: 3836.37

Calcitonin gene-related peptide is important for neurotransmission, cardiovascular and respiratory function. It is released by motor neurons where it exerts both short and long term effects on skeletal muscle fibers.

Nimmagadda D. G.S. Indian J. Pharmacol. 36:277 (2004).
Feuerstein, G. et al. Can. J. Physiol. Pharmacol. 73:1070 (1995).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C0151

α-Calcitonin Gene Related Peptide, human

Ala-Cys-Asp-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asn-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2
(Disulfide bridge Cys2-Cys7)

$C_{163}H_{257}N_{51}O_{49}S_2$ Mol Wt: 3789.33

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C0245

Calcitonin Gene Related Peptide, rat

H-Ser-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asp-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Glu-Ala-Phe-NH_2
(Disulfide Bridge Cys2-Cys7)

$C_{162}H_{260}N_{50}O_{52}S_2$ Mol.Wt.: 3804.33

0.5 mg	$172.80
1 mg	$294.40
2.5 mg	$518.40

C0243

Calcitonin Gene Related Peptide (8-37), human

H-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asn-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2

$C_{139}H_{230}N_{44}O_{38}$ Mol.Wt.: 3125.65

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

C0249

Calcitonin Gene Related Peptide (8-37), rat

H-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asp-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Glu-Ala-Phe-NH_2

$C_{138}H_{224}N_{42}O_{41}$ Mol.Wt.: 3127.58

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

C0250

Calcitonin Gene Related Peptide II, human

Ala-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Met-Val-Lys-Ser-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2
(Disulfide Bridge (Cys2-Cys7)

$C_{162}H_{267}N_{51}O_{48}S_3$ Mol.Wt.:3793.38

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C0251

Calcitonin Gene Related Peptide II, rat

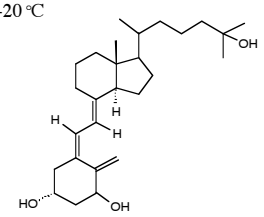
H-Ser-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asp-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2
(Disulfide Bridge Cys2-Cys7)

$C_{163}H_{265}N_{51}O_{50}S_2$ Mol.Wt.: 3803.39

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C0145

-20 °C



Calcitriol

1 alpha, 25-Dihydroxyvitamin D_3

$C_{27}H_{44}O_3$, F.W. 416.64, [32222-06-3]

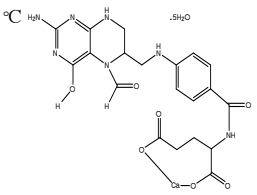
The active hormonal form of vitamin D3. Induces cell differentiation and prevents proliferation of cancer cells. Along with dietary calcium, reduces the risk of colon cancer. It was shown recently to be a preventive factor in the metastasis of lung cancer.

Garland C, Garland FC. Int J Epidemiol. 9:227-231 (1980).
Mehta RG, Moriarty RM, Mehta RR et al. J Natl Cancer Inst. 89:212-21(1997).
Nahagawa K, Kawauna A, Keto S et al. Carcinogenesis. 26:429-440 (2005).

50 µg	**$135.60**
5 x 50 µg	**$542.10**
1 mg	**$1,355.20**

C0147

4 °C



Calcium Folinate, Pentahydrate

5-Formyl-5,6,7,8-tetrahydrofolic acid calcium salt, Leucovorin

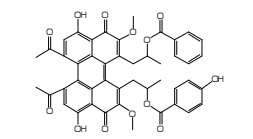
$C_{20}H_{21}CaN_7O_7.5H_2O$ Mol. Wt.: 601.58 [6035-45-6]

When administered after methotrexate. It supplies cells with tetrahydrofolate and diminishes methotrexate toxicity without abolishing the antitumor effect.

Stoller RG, Hande KR. Jacobs SA et al. New Eng. J. Med. 297:630-634 (1977).

100 mg	**$34.50**
500 mg	**$145.40**
1 g	**$244.00**

C0344



Calphostin C

$C_{46}H_{38}O_{13}$ Mol. Wt.: 798.79 [121263-19-2]

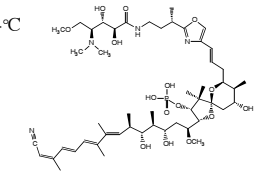
A highly specific inhibitor of PKC. Acts as at the regulatory domain. Induces apoptosis in HL-60 human promyelocytic leukemia cells and human glioblastoma cells.

Jarvis, W.D., Yurner, A.J., Povirk, L.F., et al. Cancer Res. 54:1707-14 (1994).
Begemann, M., Kashimawo, S.A., Lunn, R.M., et al. Anticancer Res. 18:3139-52 (1998).

100 µg	**$216.70**

C0346

4 °C



Calyculin A

$C_{50}H_{81}N_4O_{15}P$ Mol. Wt.: 1009.17 [101932-71-2]

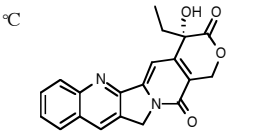
Protien phosphatase inhibitor. Induces apoptosis in epithelial tumor cell line, HeLa and KB, and human breast tumor cells.

Von Zezschwitz C, Vorwerk H, Tergau F, Steinfelder HJ. FEBS Lett. 413:147-51 (1997).
Kiguchi K, Glesne D, Chubb CH et al. Cell Growth Differ. 5:995-1004 (1994).

10 µg	**$124.50**
50 µg	**$439.10**

C0150

4 °C



Camptothecin (See page 8 for more information)

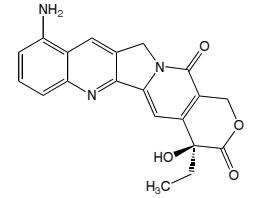
$C_{20}H_{16}N_2O_4$, F.W. 348.35, m.p.276-278°C, [7689-03-4]

A cytotoxic antitumor agent, that acts by inhibition of topoisomerase I.

Hertzberg RP, Caranfa MJ, Hecht SM. Biochemistry. 28:4629-4638 (1989).

25 mg	**$26.30**
100 mg	**$84.90**
250 mg	**$190.20**

C0152



Camptothecin, 9-amino (See page 8 for more information)

$C_{20}H_{17}N_3O_4$ Mol. Wt.: 363.37 [91421-43-1]

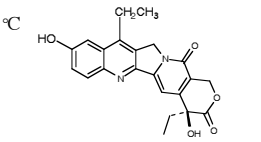
An active derivative of camptothecin, which belongs to the general group of chemotherapy drugs called topoisomerase inhibitors.

Takimoto, C.H.; Thomas, R. Ann. N.Y. Acad. Sci. 922: 224-36 (2000).

10 mg	**$113.80**
25 mg	**$237.20**
50 mg	**$395.40**

C0154

4 °C



Camptothecin, 7-ethyl-10-hydroxy (See page 8 for more information)

SN38

$C_{22}H_{20}N_2O_5$ Mol. Wt.: 392.40

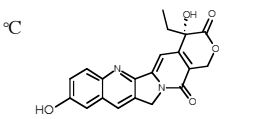
The active metablite of irinotecan that is a topoisomerase I inhibitor.

Kaneda N, Nagata H, Furuta T, Yokokura T. Cancer Research. 50:1715-20 (1990).

10 mg	**$109.80**
50 mg	**$409.90**
100 mg	**$658.70**

C0155

4 °C



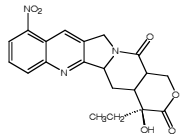
Camptothecin, 10-hydroxy (See page 8 for more information)

$C_{20}H_{16}N_2O_5$ Mol. Wt.: 364.35 [19685-09-7]

25 mg	**$41.70**
100 mg	**$116.50**

C0156

4 °C



Camptothecin, 9-nitro-20(S)

(See page 8 for more information)

$C_{20}H_{19}N_3O_6$ Mol. Wt.: 397.38

Active derivative of camptothecin. Induces apoptosis and inhibits HIV.

Chatterjee D. Schmitz I. Krueger A et al. Cancer Res. 61:7148-54 (2001).

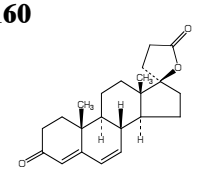
Hung CL. Doniger J. Palini A et al. J Med Virology. 64:238-44 (2001).

25 mg	$51.30
50 mg	$87.90
100 mg	$146.40

Canrenoic acid potassium salt

See Potassium Canrenoate

C0160



Canrenone

$C_{22}H_{28}O_3$ Mol. Wt.: 340.46 [976-71-6]

Active metabolite of spironolactone. Inhibits aldosterone biosynthesis. Blocker of ouabin effects.

Cittadini et al. Cardiovasc Res. 58:555-64 (2003).

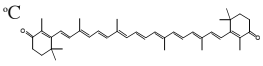
Balzan S, Nicolini G, Bellitto L et al. J Cardiovasc Pharmacol. 42:32-6 (2003).

Datta P, Dasgupta A. Ther Drug Monit. 25:478-82 (2003).

1 g	$30.80
5 g	$92.40
25 g	$369.60

C0168

4 °C



Canthaxanthin

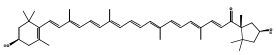
$C_{40}H_{52}O_2$, F. W. 564.84, [514-78-3]

An antioxidant that suppresses cell proliferation in oral cancer cells.

Tanak T, Makita H, Ohnishi M et al. Cancer Res. 55:4059-4064 (1995).

5 g	$40.80
10 g	$77.40
25 g	$124.10

C0260



Capsanthin

$C_{40}H_{56}O_3$ Mol. Wt.: 584.87 [465-42-9]

A natural carotenoid isolated from red paprika. It has chemopreventive and anti-tumor activity.

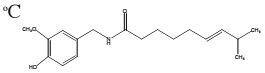
Nishino H et al. Cancer Metastasis Rev. 21:257-64 (2002).

Perez-Galvez A, Martin HD, Sies H, Stahl W. Br J Nutr. 89:787-93 (2003).

50 g	$70.30
100 g	$109.80

C0266

4 °C



Capsaicin, natural

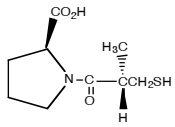
$C_{18}H_{27}NO_3$ Mol. Wt.: 305.41 [404-86-4]

Capsaicin, 65%, dihydrocapsaicin, ~20%, nordihydrocapsaicin, ~4 %.

100 mg	$36.70
250 mg	$44.00
1 g	$95.10

C0261

RT



Captopril

$C_9H_{15}NO_3S$ Mol.Wt.: 217.29 m.p. 103-104^{0}C [62571-86-2]

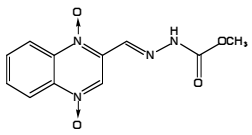
The first orally active inhibitor of angiotensin-converting enzyme. A reversible and competitive inhibitor of LTA4 hydrolase.

Kostis J. Am Heart J. 116: 1591 (1988).

Orning L et al. J Biol Chem. 266:16507 (1991).

1 g	$32.20
5 g	$88.00
25 g	$286.20

C0268



Carbadox

$C_{11}H_{10}N_4O_4$ Mol. Wt.: 262.22 [6804-07-5]

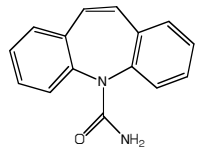
Broad spectrum antimicrobial agent.

Prapasarakul N, Ochi K, Adachi Y . J Vet Med Sci. 65:1275-80 (2003).

Drumev D. Vet Med Nauki. 18:10-25 (1981).

25 g	$24.70
100 g	$74.00

C0270



Carbamazepine

$C_{15}H_{12}N_2O$ Mol. Wt.: 236.27 [298-46-4]

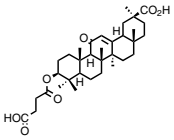
Cytochrome P450 3A4 inducing anti-epileptic drug. It increases metabolism of CPT11 and Paclitaxel, and many tyrosine kinase inhibitors. Used in the treatment of shooting neuralgic pain attacks.

van den Bent MJ. Eur J Cancer. 39:2114-20 (2003).

Lindner V, Deuschl G. Schmerz.18:53-60 (2004).

1 g	$14.80
5 g	$30.80
25 g	$98.60

C0169



Carbenoxolone

$C_{34}H_{50}O_7$, F.W. 570.76, m.p. 291-294°C, [5697-56-3]

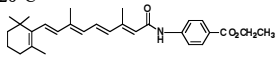
A triterpenoid chemopreventive agent.

Rao CV, Rivenson A, Kelloff GJ, Reddy BS. Anticancer Res. 15:1199-1204 (1995).

1 g	$26.80
5 g	$88.00
25 g	$297.70

C0170

-20°C



N-(4-Carbethoxyphenyl)retinamide

$C_{29}H_{37}NO_3$ Mol. Wt.: 447.61

A derivative of the chemopreventive agent fenretinide.

100 mg	$44.00
500 mg	$146.40
1 g	$228.40

C0175

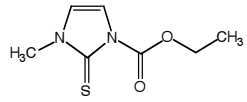
Butyryl-Tyr(Me)-Ile-Gln-Asn-Cys-Pro-Leu-Gly-NH_2 (Sulfide bond: Butyryl-4-yl and Cys)

Carbetocin Acetate

$C_{45}H_{69}N_{11}O_{12}S$ Mol.Wt.: 988.17

Please inquire

C0172



Carbimazole

$C_7H_{10}N_2O_2S$ Mol. Wt.: 186.23 [22232-54-8]

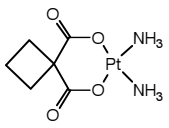
Thyroid inhibitor.

Wise PH, Marion M, Tain R. Clin Endocrinol (Oxf)10:655-64 (1979).

1 g	$30.80
5 g	$104.50
10 g	$184.50

C0171

-20°C



Carboplatin (See page 8 for more information)

cis-Diammine[1,1-cyclobutane dicarboxylato] platinum

$C_6H_{12}N_2O_4Pt$, F.W. 371.3 [41575-94-4]

An analogue of cisplatin. It is an antitumor agent.

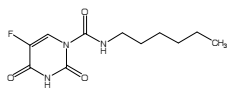
Smith IE et al. Cancer Treat. Rep 69:43 (1985).

Calvert AH et al. Cancer Chemother. Pharmacol. 9:140 (1982).

25 mg	$41.70
100 mg	$141.30
250 mg	$282.60

C0174

4°C



Carmofur

$C_{11}H_{16}FN_3O_3$ Mol. Wt.: 257.26 [61422-45-5]

Orally active cytostatic derivative of fluorouracil.

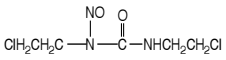
Noda T, Kosakai H, Tsujimura, K et al. Gan Kagaki Ryoho 10:1972-1979 (1983).

Grohn P, Heinonen E, Kumpulainen E, et al. Am. J. Clin. Oncology. 13:477-179 (1990).

1 g	$47.50
5 g	$203.30

C0173

4°C



Carmustine (See page 8 for more information)

$C_5H_9Cl_2N_3O_2$ Mol. Wt.: 214.05 [154-93-8]

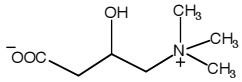
Also known as BCNU. It is an antitumor alkylating agent used in the treatment of malignant glioma.

Engelhard, HH. Surg Neuraol 53:458-64 (2000).

Carter SK, Schabel FM Jr, Broder LE, Johnston TP. Adv. Cancer Res 16:273-332 (1972).

25 mg	$36.90
100 mg	$138.40

C0262



L-Carnitine

$C_7H_{15}NO_3$ Mol. Wt.: 161.20 [541-15-1]

A neuromodulator and antiaging agent. Plays a vital role in fatty acid transport across the mitochondrial membrane. Prevents neurotoxicity caused by drug abuse. Vitamin-like nutrient.

Juliet PA, Balasubramaniam D, Balasubramaniam N, Panneerselvam C. J Gerontol A Biol Sci Med Sci. 58:970-4 (2003).

1 g	$11.80
5 g	$30.80
25 g	$123.20

C0263

L-Carnitine HCl

$C_7H_{15}NO_3.HCl$ Mol. Wt.: 197.66 [6645-46-1]

See L-Carnithine

1 g	$11.10
5 g	$28.40
25 g	$110.90

C0264

L-Carnitine tartrate

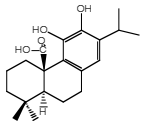
$2(C_7H_{15}NO_3)_2.C_4H_6O_6$ Mol. Wt.: 472.49 [36687-82-8]

The preferred forms are L-carnitine (68%) and natural L-tartaric acid (32%).

1 g	$11.10
5 g	$28.40
25 g	$110.90

C0265

-20 °C



Carnosic acid, 90 %

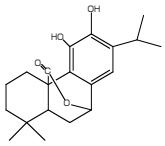
$C_{20}H_{28}O_4$ Mol. Wt.: 332.43

Antioxidant isolated from Rosemary. Has shown chemoprotective effects.

Richheimer, SL, Bernart M W, King Greg A et al. JAOCS 73:507-14 (1996).
Danilenko M, Wan X, Studzinski GP. J Natl Cancer Inst. 93:1224-33 (2001).
Offord EA, Mace K, Avanti O, Pfeifer AM. Cancer Letters. 114:275-81 (1997).

25 mg	$69.30
50 mg	$115.40

C0267



Carnosol

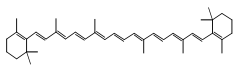
$C_{20}H_{26}O_4$ Mol. Wt.: 330.42 [5957-80-2]

A naturally occurring phytopolyphenol found in Rosemary that functions as an antioxidant, antimicrobial, and anticarcinogen. It has been shown to inhibit the induction of COX-2 by blocking PKC signaling.

Subbaramaiah K, Cole PA, Dannenberg AJ. Cancer Res. 62:2522-30 (2002).
Lo AH, Liang YC, Lin-Shiau SY et al. Carcinogenesis. 23:983-91 (2002).

1 mg	$70.60
5 mg	$282.30

C0269



β-Carotene

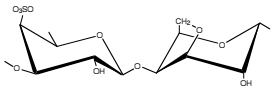
$C_{40}H_{56}$, F.W. 536.87, [7235-40-7]

An antioxidant known to inhibit carcinogenisis. Found to decrease levels of IQ-DNA adducts in animal hepatocytes.

Rousseau EJ, Davison AJ. Free Radic Biol Med. 13:407-433 (1992).
Uehara N, Iwahori Y, Asamoto M et al. Jpn J Cancer Res. 87:342-348 (1996).

1 g	$28.80
5 g	$81.60

C0370



Carrageenan Sodium

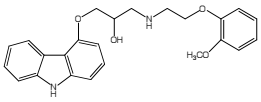
[9000-07-1]

Structural polysaccharide of the red sea weed.

Used to induce inflammation in experimental animals.

5 g	$15.30
25 g	$38.50

C0365



Carvedilol

$C_{24}H_{26}N_2O_4$ Mol. Wt.: 406.47 [72956-09-3]

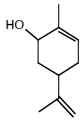
A non-selective β1-adrenergic antagonist. It protects against induced mitochondrial cardiomyopathy.

Flordellis CS, Goumenos D, Kourounis G et al. J. Curr Top Med Chem. 4:487-98 (2004).
Santos DL, Moreno AJ, Leino RL et al. Toxicol Appl Pharmacol. 185:218-27 (2002).

1 g	$59.20
5 g	$221.80
10 g	$394.30

C0368

RT



Carveol

$C_{10}H_{16}O$, F. W. 152.23, [99-48-9]

A terpene that inhibits mammary carcinogenesis.

Crowell PL, Keenan WS et al. Carcinogenesis. 13:1261-1264 (1992).

10 g	$25.90
50 g	$82.40

C0372

H-Arg-Arg-Arg-Asp-Asp-Asp-Ser-Asp-Asp-Asp-OH

Casein Kinase 2 Assay Kit

$C_{45}H_{73}N_{19}O_{24}$ Mol.Wt.:1264.2

1 mg	$112.00
2 mg	$188.80
5 mg	$332.80

C0374

H-Tyr-Pro-Phe-Val-Glu-Pro-Ile-OH

β-Casomorphin, human

$C_{44}H_{61}N_7O_{11}$ Mol.Wt.: 864.02

5 mg	$44.80
10 mg	$76.80
25 mg	$134.40

C0375

Ac-Asp-Glu-Val-Asp-pNA

Caspase 3, Substrate, Colorimetric

$C_{26}H_{34}N_6O_{13}$ Mol.Wt.: 638.6

1 mg	$33.60
2 mg	$57.60
5 mg	$99.20

C0379

H-Ala-Met-Pro-Met-Leu-Arg-Leu-NH_2

Catch-Relaxing Peptide (CARP)

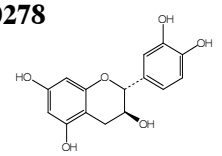
$C_{36}H_{67}N_{11}O_7S_2$ Mol.Wt.: 830.13

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

C0277 **Catechins, 90 %** — 5 g $23.20; 10 g $38.50

A mixture of catechins.

C0278 **Catechin, 99 %** — 1 mg $30.80; 5 mg $76.90

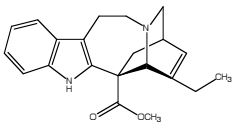


$C_{15}H_{14}O_6$ Mol. Wt.: 290.27 [154-23-4]

A natural flavonoid that has chemopreventive and antitumor properties.

Azuine M A, Bhide SV. Journal of Ethnopharmaclogy. 44:211-7 (1994).
Bhattacharyya J, Biswas S, Datta AG. Curr Med Chem.11:359-68 (2004).

C0376 **Catharanthine base** (See page 9 for more information) — 25 mg $78.70; 100 mg $196.60; 500 mg $738.70

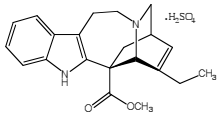


$C_{21}H_{24}N_2O_2$ Mol. Wt.: 336.43 [2468-21-5]

It is one of the many alkaloids present in *Catharanthus roseus*. Can be used as a starting material for the synthesis of the anti-tumor drugs vinblastine and vincristine. It is less active as an inhibitor of tubulin self-assembly into microtubules than the latter two compounds.

Uniyal GC, Bala S, Mathur Ak et al. Phytochem Anal. 12:206-210 (2001).
Prakash V, Timasheff SN. Biochemistry. 30:873-880 (1991).
Pennanen S, Huhtikangas A. Photochem Photobiol. 51:515-518 (1990).

C0377 **Catharanthine sulfate** (See page 9 for more information) — 25 mg $65.10; 100 mg $187.10; 500 mg $704.80

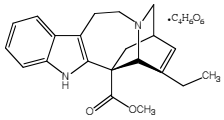


$C_{21}H_{24}N_2O_2 \cdot H_2SO_4$ Mol. Wt.: 434.51

Catharanthine is a precursor of vinblastine-type alkaloids. It was found to have antitumor activity.

Zhao J, Hu Q, Guo YQ, Zhu WH. Appl Microbiol Biotechnol. 55:693-8 (2001).

C0378 **Catharanthine tartrate** (See page 9 for more information) — 25 mg $65.10; 100 mg $187.10; 500 mg $704.80



$C_{21}H_{24}N_2O_2 \cdot C_4H_6O_6$ Mol. Wt.: 486.52

C0476 **CB-TH** — 1 mg $124.80; 2 mg $211.20; 5 mg $374.40

Arg-Trp-Lys-Ile-Phe-Lys-Lys-Ile-Glu-Lys-Met-Gly-Gly-Ser-Tyr-Cys-Asn-Arg-Arg-Thr-Gly-Lys-Cys-Gln-Arg-Met

$C_{138}H_{230}N_{46}O_{34}S_4$ Mol.Wt.: 3205.9

A hybrid peptide containing the N-terminal residue of cecropin B (CB) and C-terminal end of thanatin (TH) that shows antimicrobial activity.

Hongbiao,W.; Baolong, N.; Mengkui, X.; Lihua, H.; Weifeng, S.; Zhiqi, M. J. Pept. Res. 66:382-6 (2005).

CCNU

See lomustine

C1600 **CEA (605-613)** — 1 mg $124.80; 2 mg $211.20; 5 mg $374.40

Tyr-Leu-Ser-Gly-Ala-Asn-Leu-Asn-Leu

$C_{43}H_{69}N_{11}O_{14}$ Mol.Wt.: 964.09

C1601 **CEA (605-613) analogue** — 1 mg $38.40; 2 mg $65.60; 5 mg $115.20

Tyr-Leu-Ser-Gly-Ala-Asp-Leu-Asn-Leu

$C_{43}H_{68}N_{10}O_{15}$ Mol.Wt.: 965.08

C1609 **Cecropin B** — 1 mg $185.60; 2 mg $315.20; 5 mg $556.80

H-Lys-Trp-Lys-Val-Phe-Lys-Lys-Ile-Glu-Lys-Met-Gly-Arg-Asn-Ile-Arg-Asn-Gly-Ile-Val-Lys-Ala-Gly-Pro-Ala-Ile-Ala-Val-Leu-Gly-Glu-Ala-Lys-Ala-Leu-NH_2

$C_{176}H_{302}N_{52}O_{41}S$ Mol.Wt.: 3834.76 [80451-05-4]

Antibacterial peptide isolated from pig intestine and moths.

Lee, J.-Y., et al. Proc. Nat. Acad. Sci. USA 86:9159-9162 (1989).

C1619 — **CEF3**

H-Ser-Ile-Ile-Pro-Ser-Gly-Pro-Leu-Lys-OH

$C_{42}H_{74}N_{10}O_{12}$ Mol.Wt.: 911.12

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

C1621 — **CEF4**

H-Arg-Val-Leu-Ser-Phe-Ile-Lys-Gly-Thr-Lys-OH

$C_{53}H_{93}N_{15}O_{13}$ Mol.Wt.: 1148.42

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

C1622 — **CEF6**

H-Leu-Pro-Phe-Asp-Lys-Thr-Thr-Val-Met-OH

$C_{48}H_{78}N_{10}O_{14}S$ Mol.Wt.: 1051.28

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

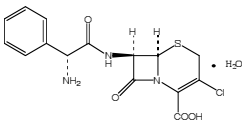
C1623 — **CEF10**

H-Cys-Leu-Gly-Gly-Leu-Leu-Thr-Met-Val-OH

$C_{39}H_{71}N_9O_{11}S$ Mol.Wt.: 906.2

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

C1627 — **Cefaclor**



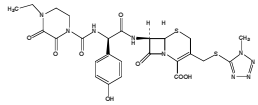
$C_{15}H_{13}ClN_3O_4S \cdot H_2O$ Mol. Wt.: 385.83 [70356-03-5]

Antimicrobial agent. It has a broad spectrum of activity against the most prevalent gram-positive and gram-negative respiratory tract pathogens.

Stock I, Sherwood KJ, Wiedemann B. Diagn Microbiol Infect Dis. 48:5-15 (2004).
Guay DR. Clin Ther. 24:473-8 9 (2002).
Meyers BR. Clin Ther. 22:154-66 (2000).

500 mg	$61.60
1 g	$98.60
5 g	$369.60

C1629 — **Cefoperazone Acid**



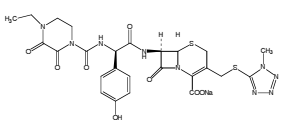
$C_{25}H_{27}N_9O_8S_2$ Mol. Wt.: 645.67 [62893-19-0]

Antimicrobial agent that possesses potent beta-lactamase-inhibitory properties.

Jamieson CE, Lambert PA, Simpson IN. Antimicrob Agents Chemother. 47:1652-7 (2003).
Cuchural GJ Jr. Pharmacotherapy. 11(2 (Pt 2)):51S-55S (1991).

1 g	$49.30
5 g	$147.90

C1630 — **Cefoperazone Sodium**



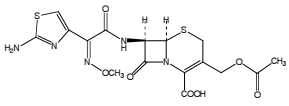
$C_{25}H_{26}N_9NaO_8S_2$ Mol. Wt.: 667.65 [62893-20-3]

Antimicrobial agent. Used for prevention of postoperative infection. It inhibits the inactivation of alpha(1)-antitrypsin.

Uchiyama K, Kawai M, Onishi H et al. Dig Dis Sci. 48:1955-9 (2003).
Dallegri F, Dapino P, Arduino N et al. Antimicrob Agents Chemother. 43:2307-10 (1999).

1 g	$43.20
5 g	$123.20

C1632 — **Cefotaxime Acid**



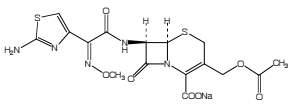
$C_{16}H_{17}N_5O_7S_2$ Mol. Wt.: 455.47 [63527-52-6]

Antimicrobial agent. It is effective against postoperative complications in surgical treatment of pulmonary, tracheal and mediastinal tumors.

Petrova MV, Korniak AV, Krasnova TE. Anesteziol Reanimatol. 5:58-60 (2001).
Kern WV, Cometta A, De Bock R et al. N Engl J Med. 341:312-8 (1999).

500 mg	$61.60
1 g	$101.10
5 g	$394.30

C1633 — **Cefotaxime Sodium**



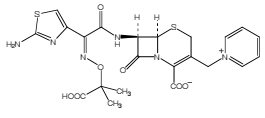
$C_{16}H_{16}N_5NaO_7S_2$ Mol. Wt.: 477.45 [64485-93-4]

Antimicrobial agent. It is used for prevention of postoperative infection in patients who undergo head and neck cancer surgery with major flap reconstruction.

Bhathena HM, Kavarana NM. Acta Chir Plast. 40:36-40 (1998).

500 mg	$49.30
1 g	$86.30
5 g	$351.20

C1635 — **Ceftazidime**



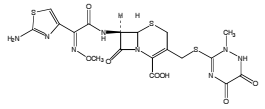
$C_{22}H_{22}N_6O_7S_2$ Mol. Wt.: 546.58 [72558-82-8]

Antimicrobial agent. It is used for treating febrile neutropenia in patients with cancer.

Hung KC, Chiu HH, Tseng YC et al. J Microbiol Immunol Infect. 36:254-9 (2003).
Mustafa MM, Carlson L, Tkaczewski I et al. Pediatr Infect Dis J. 20:362-9 (2001).

1 g	$64.10
5 g	$258.80

C1637



Ceftriaxone sodium

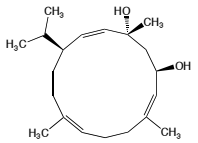
$C_{18}H_{18}N_8Na_2O_7S_3.3\frac{1}{2}H_2O$ Mol. Wt.: 661.60 [104376-79-6]

A broad-spectrum antimicrobial agent. It is used also in the treatment of febrile granulocytopenic children with cancer.

Gorschluter M et al. Support Care Cancer. 11:362-70 (2003).

250 mg	$43.20
500 mg	$67.80
1 g	$110.90

C1648



α-Cembrenediol

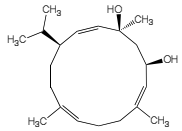
$C_{20}H_{34}O_2$ Mol.Wt.: 306.48

A compound found in cigarette smoke condensate and were shown to inhibit tumor promotion by tetradecanoylphorbol acetate by inhibiting the early antigen of the Epstein-Bar virus.
Their degradation products are responsible for tobacco flavors.

Saito, Y., Tsujino, Y., Kaneko, H., Yoshida, D., Mizusaki, S. Agric. Biol. Chem. 51:941 (1987).
Crombie, L.; McNamara, D.; Firth, D. F.; Smith, S.; Bevana, P. C. Phytochemistry 27:1685-1693 (1988).

10 mg	$131.20

C1649



β-Cembrenediol

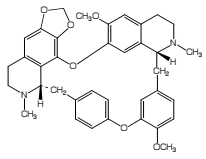
$C_{20}H_{34}O_2$ Mol.Wt.: 306.48 [57605-81-9]

A compound found in cigarette smoke condensate and were shown to inhibit tumor promotion by tetradecanoylphorbol acetate by inhibiting the early antigen of the Epstein-Bar virus.
Their degradation products are responsible for tobacco flavors.

Saito, Y., Tsujino, Y., Kaneko, H., Yoshida, D., Mizusaki, S. Agric. Biol. Chem. 51:941 (1987).
Crombie, L.; McNamara, D.; Firth, D. F.; Smith, S.; Bevana, P. C. Phytochemistry 27:1685-1693 (1988).

10 mg	$131.20

C1718



Cepharanthine, 98%

(See page 9 for more information)

$C_{37}H_{38}N_2O_6$ Mol. Wt.: 606.71 [481-49-2] m.p. 145-55 °C

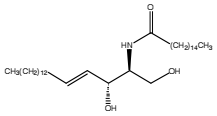
Cepharanthine is a biscoclaurine alkaloid isolated from *Stephania cepharantha* Hayata.

It has anti-inflammatory, anti-allergic and immunomodulatory activity

Kondo Y, Takano F, Hojo H. Biochem. Pharmacol. 46:1887-1892 (1993).
Okamoto M, Okamoto T, Baba M. Antimicrob Agents Chemother. 43:492-497 (1999).

100 mg	$27.60
500 mg	$100.10
1 g	$153.70

C1867



Ceramide-C16

$C_{34}H_{67}NO_3$ Mol. Wt.: 537.90 [24696-26-2]

A constituent of arthropod spingolipids. Ceramides are important intracellular second messengers that play a role in the regulation of cell growth, differentiation, and programmed cell death.

Fillet M, Bentires-Alj M, Deregowski V, Greimers R et al. Biochem Pharmacol. 65:1633-42 (2003).
Aschrafi A, Franzen R, Shabahang S et al. Acta. 1634:30-9 (2003).

5 mg	$128.80
25 mg	$474.40

C1868

H-Ser-Gly-Ser-Ala-Lys-Val-Ala-Phe-Ser-Ala-Ile-Arg-Ser-Thr-Asn-His-OH

Cerebellin

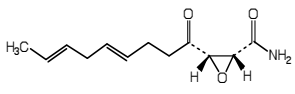
$C_{69}H_{113}N_{23}O_{23}$ Mol.Wt.: 1632.81

A cerebellum peptide used as a Purkinje cell marker for monitoring neurodevelopment.

Slemmon JR, Danho W, Hempstead JL, Morgan JI. Proc Natl Acad Sci U S A. 82: 7145-8 (1985).

1 mg	$128.00
2 mg	$217.60
5 mg	$384.00

C1869



Cerulenin

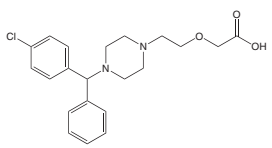
$C_{12}H_{17}NO_3$ Mol. Wt.: 223.27 [17397-89-6]

Noncompetitive inhibitor of fatty acid synthase. It induces apoptosis in tumor cell lines.

Pizer ES, Jakisch C, Wood FD et al. Cancer Res. 56:2745-7 (1996).
Furuya, Y., Akimoto, S., Yasuda, K., Ito, H. Anticancer Res. 17:4589-93 (1997).

1 mg	$35.40
5 mg	$92.20
10 mg	$153.70

C1876



Cetirizine

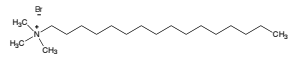
$C_{21}H_{25}ClN_2O_3$ Mol. Wt.: 388.892 [83881-51-0]

A carboxylated metabolite of hydroxyzine that has been shown to block the influx of eosinophils into the site of antigen-stimulated skin blisters.

Snyder SH, Snowman AM. Ann Allergy. 59(6 Pt 2):4-8 (1987).
Naclerio RM. Allergy Proc. 12:187-191 (1991).

1 g	$50.00
5 g	$215.00

C1878



Cetrimide

Hexadecyltrimethylammonium bromide

$C_{19}H_{42}BrN$ Mol.Wt.: 364.45 [57-09-0]

A mixture of chiefly tetradecyltrimethylammonium bromide together with smaller amounts of dodecyltrimethylammonium bromide and cetrimonium bromide.

50 g	**$33.30**
250 g	**$117.10**

C1879

Cetrorelix Acetate

Please inquire

$C_{70}H_{92}N_{17}O_{14}$ Mol.Wt.: 1431.06 [130143-01-0]

Ac-3-(2-naphthyl)-D-Ala-4Chloro-D-Phe-3(3-pyridyl)-D-Ala-Ser-Tyr-D-Cit-Leu-Arg-Pro-D-Ala-OH

Injectable cetrorelix acetate is a synthetic decapeptide with gonadotropin-releasing hormone (GnRH) antagonistic activity. Cetrorelix acetate is an analogue of native GnRH with substitutions of amino acids at positions 1, 2, 3, 6, and 10.

C2468

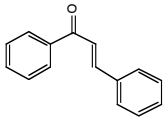
β-CGRP, human

1 mg	**$358.40**

$C_{162}H_{26}N_{31}O_{48}S_3$ Mol Wt: 3˜93.38

Ala-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Met-Val-Lys-Ser-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH_2
(Disulfide bridge Cys2-Cys7)

C2800



Chalcone 97% (See page 13 for more information)

trans-Benzylideneacetophenone

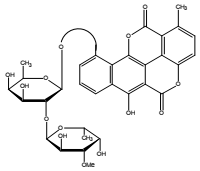
$C_{15}H_{12}O$ Mol.Wt.: 208.26 m.p. 55-57°C [614-47-1]

An open chain flavonoid. Inhibits lung and forestomach carcinogenesis.

Wattenberg, LW, Coccia, JB, Galbraith, AR. Cancer Lett. 83:165-169 (1994).

25 g	**$20.80**
100 g	**$49.70**
500 g	**$173.90**

C2803



Chartreusin

Lambdamycin

$C_{32}H_{32}O_{14}$ Mol. Wt.: 640.6 [6377-18-0]

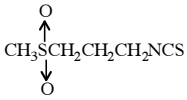
An antitumor antibiotic from *Streptomyces chartreusis*. It inhibits topoisomerase II and has been shown to inhibit DNA and RNA synthesis in certain models.

Obrig T, Frenkel GD. Res Commun Chem Path. 34:1˜3-6 (1981).
Lorico A, Long BH. Eur J Cancer. 29A:1985-91 (1993).

5 mg	**$81.60**
25 mg	**$329.30**

C2816

-20 °C

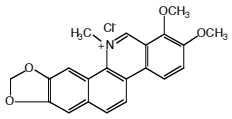


Cheirolin, 98%

$C_5H_9NO_2S_2$, F.W. 179.26, [505-34-0]

25 mg	**$85.80**
50 mg	**$143.10**
100 mg	**$257.40**
500 mg	**$867.30**

C2818



Chelerythrine Chloride

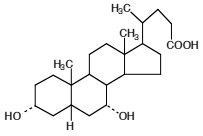
$C_{21}H_{18}ClNO_4$ Mol. Wt.: 383.82 [3895-92-9]

A natural benzophenanthridine alkaloid. Inhibits protein kinase C and induces apoptosis in HL-60 human promyelocytic leukemia cells.

Jarvis WD, Turner AJ, Povirk LF. Cancer Res. 54:1˜0˜-14 (1994).
Anthony ML, Zhao M, Brindle KM. J Biol Chem. 2˜4:19686-92 (1999).

1 mg	**$35.30**
5 mg	**$128.80**

C2916



Chenodeoxycholic Acid

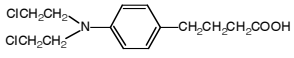
$C_{24}H_{40}O_4$ Mol. Wt.: 392.57 [474-25-9]

Bile acid that induces apoptosis via a protein kinase C-dependent signaling pathway.

Matinez, J.D., Stratagoules, E.D., LaRue, J.M., et al. Nutr. Cancer 31:111-8 (1998).

1 g	**$23.20**
5 g	**$69.30**
25 g	**$230.50**

C2946



Chlorambucil

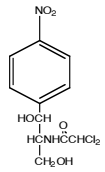
$C_{14}H_{19}Cl_2NO_2$ Mol. Wt.: 304.21 [305-03-3]

A nitrogen mustard alkylating agent commonly used to treat lymphocytic leukemia. It induces apoptosis in chronic lymphocytic leukemia cells.

Begleiter A, Mowat M, Israels LG, Johnston JB. Leuk Lymphoma. 23:18˜-201 (1996).
King D, Pringle JH, Hutchinson M, Cohen GM. Leukemia. 12:1553-60 (1998).

100 mg	**$13.20**
500 mg	**$27.00**
1 g	**$38.20**
10 g	**$341.10**

C2844 RT



Chloramphenicol

$C_{11}H_{12}Cl_2N_2O_5$ F.W. 323.13, m.p. 150.5-151.5^{0}C [56-75-7]

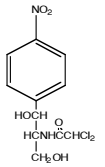
A broad spectrum antibiotic. It induces apoptosis in the developing brain.

Guimaraes CA, Linden R. Neuropharmacology. 39:1673-9 (2000).

C11H12Cl2N2O5 F.W. 323.13, m.p. 150.5-151.50C [56-75-7]

5 g	$23.30
10 g	$40.10
50 g	$99.30

C2845



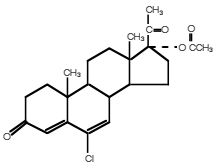
Chloramphenicol Levo

$C_{11}H_{12}Cl_2N_2O_5$ F.W. 323.13, m.p. 150.5-151.5^{0}C [56-75-7]

Optically active chloramphenicol.

5 g	$24.70
10 g	$42.60
50 g	$100.80

C2847



Chlormadinone Acetate

$C_{23}H_{29}ClO_4$ Mol. Wt.: 404.93

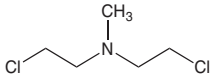
Progestogen with questionable antiandrogenic activity. It suppresses ACTH hypersecretion and lowers plasma testosterone levels.

Kageyama Y, Kitahara S, Tsukamoto T et al. Endocr J. 42:505-8 (1995).

Labrie F, DuPont A, Belanger A et al. Cancer Metastasis Rev. 6:615-36 (1987).

1 g	$100.10
5 g	$450.40

C2942



Chlormethine (See page 9 for more information)

Mechlorethamine

$C_5H_{11}C_{12}N$ Mol. Wt.: 156.055 [51-75-2]

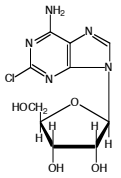
A chemotherapeutic agent showing antitumor activity attributed to its ability to cross-link the twin strands of DNA. A one-hour exposure caused a transient late S/G2 cell cycle arrest in both the HL-60 cell line and the Colo 320HSR human colon cancer cell line.

Xie J, Shults K, Flye L et al. J Cell Biochem. 95:339-351 (2005).

Balcome S, Park S, Quirk Dorr DR et al. Chem Res Toxicol. 17:950-962 (2004).

5 g	$65.00
10 g	$115.00
25 g	$200.00

C2948



Chloroadenosine

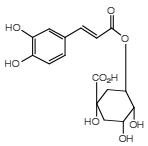
$C_{10}H_{12}ClN_5O_4$ Mol. Wt.: 301.69 [146-77-0]

Adenosine receptor site agonist that induces apoptosis.

Szondy Z. Biochem J. 304:877-85 (1994).

5 mg	$22.60
10 mg	$39.70
50 mg	$113.70

C2944 RT



Chlorogenic Acid

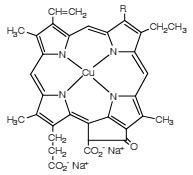
$C_{16}H_{18}O_9$ F.W. 354.31, m.p. 207-209ºC (dec.), [327-97-9]

A chemopreventive analogue of caffeic acid.

Tanaka T, Kojima T, Kawamori T et al. Carcinogenesis. 14:1321-1325 (1993).

100 mg	$16.10
250 mg	$32.50
1 g	$91.10

C2945 RT



Chlorophyllin

Sodium-Copper Salt

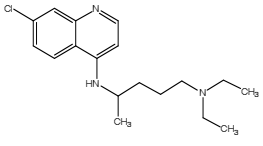
[15611-43-5]

Sodium salt of copper complex have a water soluble salt of chlorophyll which inhibits activation and degradation of electrophyllic intermediates.

Tachino H, Guo D, Dashwood WM et al. Mutat Res. 308:191-203 (1994).

5 g	$14.90
25 g	$37.50
100 g	$130.60

C2950



Chloroquine Phosphate

$C_{18}H_{26}ClN_3.2H_3PO_4$ Mol. Wt.: 515.87 [50-63-5]

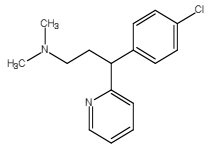
Antimalarial agent that has been found to have a distinct affinity for melanin. It is used in the treatment of malaria, arthritis, and Lupus.

Graves PR, Kwiek JJ, Fadden P, Ray R et al. Mol Pharmacol. 62:1364-72 (2002).

Ono C, Yamada M, Tanaka M. J Pharm Pharmcol. 55:1647-54 (2003).

25 g	$30.80
50 g	$59.20
100 g	$86.30

C2949



Chlorpheniramine Maleate

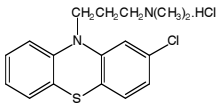
$C_{16}H_{19}ClN_2.C_4H_4O_4$ Mol. Wt.: 390.87 [113-92-8]

An antihistamine that has chemopreventive property. It inhibits carcinogen-induced aberrant crypt foci. Inhibits ornithine decarboxylase induction in experimental mammary tumors and in MCF-7 cells.

Medina MA, Garcia de Veas R et al. Breast Cancer Res Treat. 35:187-94 (1995).
Wargovich MJ, Jimenez A, McKee K et al. Carcinogenesis. 21:1149-55 (2000).

5 g	**$24.70**
25 g	**$37.00**
100 g	**$86.30**

C2947



Chlorpromazine

2-Chloro-10-(3-dimethylaminopropyl)phenothiazine

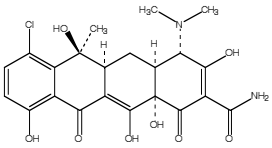
$C_{17}H_{20}Cl_2N_2S$ Mol. Wt.: 355.3 [69-09-0]

A neuroleptic or antipsychotic drug used to reduce hallucinations and delusions in persons with mental illness. It also has chemopreventive property. Chlorpromazine increases protein synthesis and chromatin susceptibility to enzymatic degradation.

Lonacar-Stevanoic H et al. Journal of environmental Pathology, toxicology & Oncology. 17:331-7 (1998).
Peak MJ, Pafaff M, Peraino C. Br J Cancer. 60:220-2 (1989).

10 g	**$27.60**
25 g	**$38.50**
100 g	**$115.40**

C2951



Chlortetracycline Hydrochloride

$C_{22}H_{23}ClN_2O_8.HCl$ Mol. Wt.: 515.35 [64-72-2]

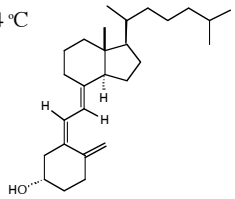
An antibiotic found to modulate TNF-alpha production.

Ball SJ, Warren EW. J Comp Pathol. 76:255-9 (1999).
Akunda JK, Johnson E, Ahrens FA et al. Comp Immunol Microb. 24:81-9 (2001).

5 g	**$28.00**
25 g	**$78.40**
100 g	**$224.00**

C2956

+4 °C



Cholecalciferol

Vitamin D3

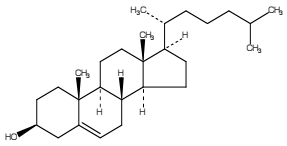
$C_{27}H_{44}O$ Mol.Wt.: 384.64 [67-97-0]

A form of vitamin D in fortified milk. Upon metabolic activation, induces cell differentiation and prevents proliferation of cancer cells. Along with dietary calcium, reduces the risk of colon cancer.

Garland C, Garland FC. Int J Epidemiol. 9:227-231 (1980).
Mehta RG, Moriarty RM, Mehta RR et al. J Natl Cancer Inst. 89:212-218 (1997).

1 g	**$26.10**
5 g	**$116.10**
25 g	**$330.40**

C2957



Cholesterol

$C_{27}H_{46}O$ Mol. Wt.: 386.65 [57-88-5]

Major component of all biological membranes. It has been shown to inhibit basal channel activity in the brain.

Crowley JJ, Treistman SN, Dopico AM. Mol Pharmacol. 64:365-72 (2003).
Peres C, Yart A, Perret B et al. FEBS Letters. 534:164-8 (2003).

5 g	**$22.40**
25 g	**$33.60**
100 g	**$106.40**

C2962

Cholinesterase Assay (See page 31 for more information)

Ph-F

25 Tests	**$178.10**
100 Tests	**$446.90**

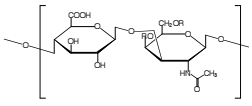
C2963

Cholinesterase and Apoptosis Assay (See page 31 for more information)

Ph-F and SR-VAD-FMK

25 Tests	**$211.70**
100 Tests	**$536.50**

C2960



Chondroitin Sulfate

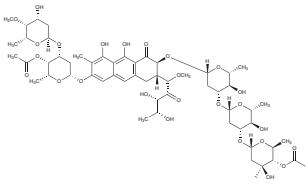
Mol. Wt. ~50,000 [9007-28-7]

A naturocetic agent. Effective against osteoarthritis.

Reginster JY, Bruyere O, Lecart MP, Henrotin Y. Curr Opin Rheumatol. 15:651-5 (2003).
Hungerford DS, Jones LC. J Arthroplasty. 8(3 Suppl 1):5-9 (2003).
Walker-Bone K. Drugs Aging. 20:517-26 (2003).

5 g	**$27.20**
25 g	**$104.80**

C2969



Chromomycin A3

$C_{5}H_{82}O_{26}$ Mol. Wt.: 1183.2488 [7059-24-7]

The major component of a streptomycete contaminant in a marine fungal culture that is an aureolic acid derivative that is a minor groove DNA-binding antibiotic.

Skarbek JD, Brady LR. Lloydia. 38:369-377 (1975).
Marx C, Berger C, Xu F et al. Assay Drug Dev Technol. 4:273-284 (2006).
Marco E, Gago F. Mol Pharmacol. 68:1559-1567 (2005).

1 mg	$32.00
5 mg	$112.00
10 mg	$200.00

C2971

H-Ser-Asp-Glu-Asp-Ser-Asp-Gly-Asp-Arg-Pro-Gln-Ala-Ser-Pro-Gly-Leu-Gly-Pro-Gly-Pro-OH

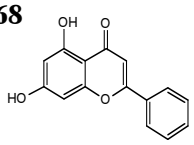
Chromostatin, bovine

$C_{78}H_{120}N_{24}O_{35}$ Mol.Wt.: 1953.97

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

C2968

RT



Chrysin (See page 13 for more information)

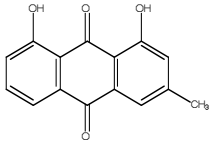
$C_{15}H_{10}O_{4}$, F.W. 254.2, [480-40-0]

A flavone which inhibits metabolic activation of benzo[a]pyrene.

Chae, Y-H., Ho, D.K., Cassady, J.M., et.al. Chem.-Biol. Int., 82:181-193 (1992).

5 g	$22.10
25 g	$87.50

C2970



Chrysophanol

1,8-Dihydroxy-3-methyl-9,10-anthracenedione, Chrysophanic acid

$C_{15}H_{10}O_{4}$ Mol. Wt.: 254.24 [481-74-3]

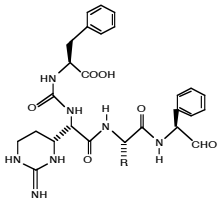
An anthraquinone found in the root of Rheum wittrochii. It has been shown to increase intracellular Ca^{2+} concentration and exhibit antifungal activities.

Agarwal SK, Singh SS, Verma S et al. J Ethanopharmacol. 72:43-46 (2000).
Kagedal K, Bironaite D, Ollinger K. Free Radical Res. 31:419-28 (1999).

10 mg	$84.00
25 mg	$123.20
100 mg	$392.00

C2997

0 °C



Chymostatin

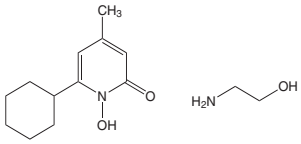
N-[-Na-Carbonyl-Cpd-X-Phe-al]-Phe [9076-44-2]

A highly specific chymotrypsin inhibitor produced by actinomycetes. It also has anticarcinogenic properties. It was found to suppress the incidence of squamous cell carcinomas of the anal gland.

Billings PC, Newberne PM, Kennedy AR. Carcinogenesis. 11:1083-86 (1990).
Billings PC, et. Al,. Proc Natl Aca Sci. 84:4801-5 (1987).

1 mg	$26.00
5 mg	$78.00
25 mg	$337.30
50 mg	$648.30

C3208



Ciclopirox Olamine

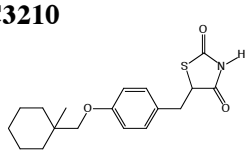
$C_{12}H_{17}NO_{2}.C_{2}H_{7}NO$ Mol.Wt.:268.355 [41621-49-2]

A substituted pyridone antimycotic with activity against a broad spectrum of dermatophytes, yeasts, actinomycetes, molds, other fungi, and a variety of bacteria.

Jue SG, Dawson GW, Brogden RN. Drugs. 29:330-341 (1985).

1 g	$30.00
5 g	$100.00

C3210



Ciglitazone

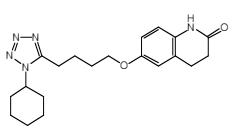
$C_{18}H_{23}NO_{3}S$ Mol. Wt.: 333.45 [74772-77-3]

An antidiabetic thiazolidinedione. A PPAR-gamma agonist. It induces apoptosis, inhibits COX-2. It provides protection against cancers of the breast, lung, colon and prostrate.

Han S, Roman. J. Biochem Biophys Res Commun. 314:1093-9 (2004).
Ignatenko NA, Babbar N, Mehta D et al. Mol Carcinog. 39:91-102 (2004).
Mitsiades CS, Mitsiades N, Richardson PG et al. Semin Oncol. 30:309-12 (2003).

1 mg	$55.50
5 mg	$191.00

C3246



Cilostazol

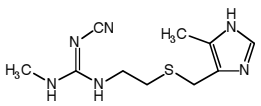
$C_{20}H_{27}N_{5}O_{2}$ Mol. Wt.: 369.46 [73963-72-1]

A selective inhibitor of phosphodiesterase-III with antiplatelet, antithrombotic and vasodilating properties. Cilostazol inhibits colon cancer cell motility and is effective as an anti-metastasis drug.

Chapman TM, Goa KL. Am J Cardiovasc Drugs. 3:117-38 (2003).
Fareed J, Hoppensteadt DA, Bick RL. Clin Appl Thromb Hemost. 9:101-8 (2003).
Murata K et al. Clin Exp Metastasis.17:325-30 (1999).
Inada H, Shindo H, Tawata M, Onaya T. ife Sci. 65:1413-22 (1999).

50 mg	$98.60
100 mg	$154.00
500 mg	$616.00

C3250



Cimetidine

$C_{10}H_{16}N_6S$ Mol. Wt.: 252.34 [51481-61-9]

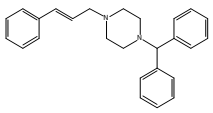
An immunomodulator. Suppresses the growth of several tumors, including gastrointestinal cancer.

An anti-angiogenic agent. Used in stage IV colorectal cancer.

Scheinfeld N. Dermatol Online J. 9:4 (2003).
Tomita K, Izumi K, Okabe S. J Pharmacol Sci. 93:321-30 (2003).
Yoshimatsu K et al. Gan To Kagaku Ryoho. 30:1794-7 (2003).

5 g	$43.20
10 g	$55.50
25 g	$120.80

C3251



Cinnarizine

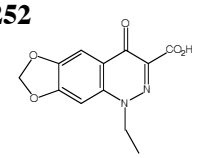
$C_{26}H_{28}N_2$ Mol. Wt.: 368.51 [298-57-7]

Calcium channel blocker. It is known to induce Parkinsonism.

Teive HA, Troiano AR, Germiniani FM et al. Parkinsonism Relat D. 10:243-5 (2004).
Terland O, Flatmark T. Neuropharmacology. 38:879-82 (1999).
Emanuel MB, Chamberlain JA, Whiting S et al. Brit J Clin Pharmaco. 7:189-95 (1979).

10 g	$24.70
100 g	$179.20

C3252



Cinoxacin

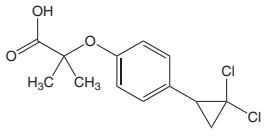
$C_{12}H_{10}N_2O_5$ Mol. Wt.: 262.22 [28657-80-9]

Antimicrobial agent most effective against gram-negative pathogens.

Sisca TS, Heel RC, Romankiewicz JA. Drugs. 25:544-69 (1983).

1 g	$36.70
5 g	$146.40

C3260



Ciprofibrate

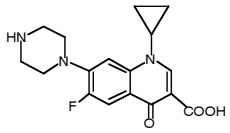
$C_{13}H_{14}Cl_2O$ Mol. Wt.: 289.157 [52214-84-3]

A hypolipidemic compound that can induce proliferation of peroxisomes in liver cells of rats. Rat tumor liver cell line 7777 underwent apoptosis *in vivo*.

Lalwani ND, Reddy MK, Qureshi SA et al. Hum Toxicol. 2:27-48 (1983).
Clemencet MC, Muzio G, Trombetta A et al. Cancer Lett. 222:217-226 (2005).

25 mg	$70.00
100 mg	$200.00

C3262



Ciprofloxacin (See page 13 for more information)

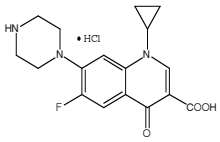
$C_{17}H_{18}FN_3O_3$ F.W 331.35

It has activity against anaerobic bacteria *in vitro* and is used in postexposure prophylaxis against inhalation anthrax.

Watt B, Brown FV, Jantimicrob. Chemother. 17:605. (1986).
Friedlandeder, A.M., Welkos, S.L. Pitt, M.L., et al J Infect Diseases 167:1239-43 (1993).

5 g	$23.20
25 g	$61.50
50 g	$92.20

C3263



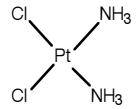
Ciprofloxacin Hydrochloride

$C_{17}H_{18}FN_3O_3.HCl.H_2O$ Mol. Wt.: 385.82 [86393-32-0]

5 g	$20.20
25 g	$56.00
50 g	$95.20

C3374

+4 °C



Cisplatin (See page 9 for more information)

cis-Platinum(II)diammine dichloride

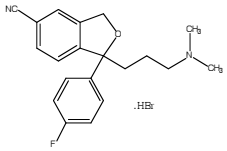
$Cl_2H_6N_2Pt$, F.W. 300.04, m.p. 270^{0}C (dec.) [15663-27-1]

A platinum coordination complex with antitumor activity.

Tomson, A.J. Rec. Res. Cancer Res. 48: 38 (1974).

50 mg	$35.60
100 mg	$56.20
500 mg	$199.70

C3477



Citalopram Hydrobromide

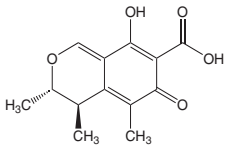
$C_{20}H_{21}FN_2O.HBr$ Mol. Wt.: 405.31 [59729-32-7]

A selective serotonin reuptake inhibitor and antidepressant. It has shown evidence of being effective at reducing aberrant motor behaviors in Alzheimer disease.

Pousti A, Deemyad T, Malihi G. Hum Psychopharm. 19:347-50 (2004).

25 mg	$50.40
100 mg	$162.40
500 mg	$504.00

C3479



Citrinin

$C_{13}H_{14}O_5$ Mol. Wt.: 250.249 [518-75-2]

A mycotoxin produced by *Penicillum citrinum* that has been shown to result in enlarged kidneys and livers in young broiler chicks.

Ames DD, Wyatt RD, Marks HL, Washburn KW. Poult Sci. 55:1294-1301 (1976).

1 mg	$25.00
5 mg	$78.00
10 mg	$145.00

C4274

H-Leu-Gln-Asn-Arg-Arg-Gly-Leu-Asp-Leu-Leu-Phe-Leu-Lys-Glu-Gly-Gly-Leu-OH

CKS-17

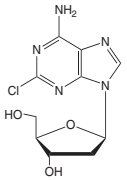
$C_{87}H_{148}N_{26}O_{24}$ Mol.Wt.: 1942.31

17-amino acid peptide which is highly immunosuppressive. CKS-17 has also been shown to induce cyclic adenosine monophosphate *in vitro*.

Haraguchi, S.; Good, R. A.; Cianciolo, G. J.; Engelman, R. W.; Day, N. K. J. Leukoc. Biol. 61:654-66 (1997).

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

C4402



Cladribine

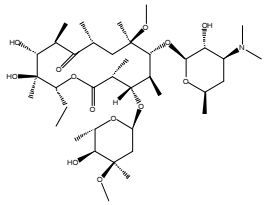
$C_{10}H_{12}ClN_3O_3$ Mol. Wt.: 285.69 [4291-63-8]

A nucleoside analogue that was found to induce DNA double-strand breaks and cell death in log-phase Chinese hamster V79 cells.

Tanabe K, Hiraoka W, Kuwabara M et al. Chem Biol Interact. 71:167-175 (1989).

5 mg	$62.00
10 mg	$98.00
25 mg	$220.00

C4502



Clarithromycin

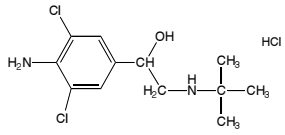
$C_{38}H_{69}NO_{13}$ Mol. Wt.: 747.95 [81103-11-9]

A macrolide antibiotic.

Hardy, D.J., Guay, D.R., Jones, R.N Diagn Microbiol Infect Dis. 15:38-53 (1992).

100 mg	$43.20
250 mg	$76.90
1 g	$230.50

C4517



Clenbuterol Hydrochloride (See page 10 for more information)

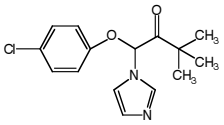
$C_{12}H_{18}Cl_2N_2O \cdot HCl$ Mol.Wt.: 313.65 [21898-19-1]

A beta 2 agonist that may potentiate hypoxemia as a result of increased shunt fraction in horses anesthetized by the IV route. This beta 2 agonist has also been shown to enhance memory in sham-lesioned male Sprague Dawley rats.

Dodam JR, Moon RE, Olson NC et al. Am J Vet Res. 54:776-782 (1993).
Introini-Collison IB, Miyazaki B, McGaugh JL. Psychopharmacology (Berl). 104:541-544 (1991).

25 mg	$35.00
100 mg	$100.00
250 mg	$150.00

C4510



Climbazole

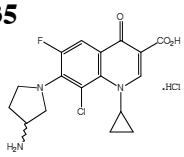
$C_{15}H_{17}ClN_2O_2$ Mol. Wt.: 292.76 [38083-17-9]

A potent inducer and inhibitor of P450-dependent drug metabolizing enzymes, which is also used as antifungal and antidandruff agent.

Mayser P, Argembeaux H, Rippke F. J Cosmet Sci. 54:263-70 (2003).
Kobayashi Y et al. Biol Pharm Bull. 25:53-7 (2002).

5 g	$43.20
10 g	$59.20
25 g	$123.20

C4535



Clinafloxacin Hydrochloride (See page 13 for more information)

$C_{17}H_{17}ClFN_3O_3.HCl$ Mol. Wt.: 402.24 [105956-99-8]

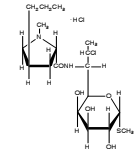
Antimicrobial fluoroquinolone inhibits topoisomerase IV.

Pan, X.S., Fisher, L.M. Antimicrob Agents Chemother. 43:1129-36 (1999).

1 g	$115.40
5 g	$461.00

C4532

RT



Clindamycin Hydrochloride

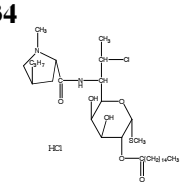
$C_{18}H_{34}Cl_2N_2O_5S$, F.W. 461.44, m.p. 141-143^{0}C [21462-39-5]

An effective antibacterial agent against gram-positive bacteria. Clindamycin HCl attaches to the 50S subunit of bacterial ribosomes and suppresses protein synthesis.

Reusser, F. Antimicrobial Agents Chemother. 7: 32 (1975).

10 mg	$40.80
50 mg	$147.10
100 mg	$263.80

C4534 RT



Clindamycin Palmitate HCl

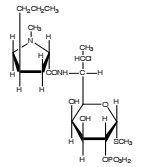
$C_{34}H_{63}ClN_2O_6S$ Mol. Wt.: 663.39

Inactive molecule which is hydrolyzed into its active form by small-intestine enzymes.

Cimbollek, M., Nies, B., Liebendorfer, A., Wenz, R. J. Controlled Release 33:47-53 (1995).

10 mg	$40.10
50 mg	$146.20
100 mg	$269.10

C4533 RT



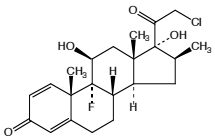
Clindamycin Phosphate

$C_{18}H_{34}ClN_2O_8PS$, F.W. 504.96 [24729-96-2]

The 2-dihydrogen phosphate analog of Clindamycin.

10 mg	$36.10
50 mg	$120.00
100 mg	$211.10

C4659



Clobetasol Propionate

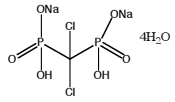
$C_{25}H_{32}ClFO_5$ Mol. Wt.: 466.98 [25122-46-7]

An anti-inflammatory, antipruritic and vasoconstrictive agent. Shown to be effective against tufted angioma.

Melian EB, Spencer CM, Jarvis B. Am J Clin Dermatol. 2:89-92; discussion 93 (2001).
Bernstein EF, Kantor G, Howe N et al. J Am Acad Dermatol. 31:307-11 (1994).

100 mg	$30.80
500 mg	$110.90
1 g	$203.30

C3449



Clodronate Disodium (See page 5 for more information)

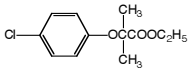
$CH_2Cl_2Na_2O_6P_2$ $4H_2O$ Mol. Wt.: 360.92 [88416-50-6]

A bisphosphonate bone resorption inhibitor.

Plosker, G.L., Goa, K.L. Drugs 47:945-82 (1994).

10 mg	$33.50
50 mg	$135.90
100 mg	$245.90

C4557



Clofibrate

2-(4-Chlorophenoxy)-2-methylpropionic acid ethyl ester

$C_{12}H_{15}ClO_3$ Mol. Wt.: 242.70 [637-07-0]

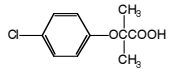
A peroxisome proliferator and hypolipidemic drug. Induces apoptosis in hepatoma cells. Also a liver tumor promoter.

Canuto, R.A.., Muzio, G., Bonelli, G., et al. Cancer Detect Prev. 22:357-66 (1998).

Adinehzadeh, M., Reo, N.V. Chem Res Toxicol 11:428-40 (1998).

1 g	$38.50
5 g	$123.00

C4556



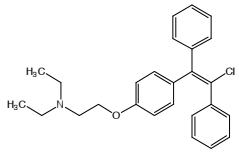
Clofibric acid

$C_{10}H_{11}ClO_3$ Mol. Wt.: 214.65 [882-09-7]

A drug used to reduce cholesterol levels in the blood.

10 g	$18.50
50 g	$29.40

C4559



Clomiphene Citrate

Clomifene citrate

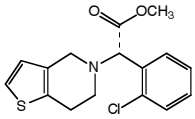
$C_{26}H_{28}ClNO.C_6H_8O_7$ Mol. Wt.: 598.09 [50-41-9]

A selective estrogen receptor modulator. It is used as an antileukemic drug which kills cells by apoptosis mediated by oxidative stress and activation of PKC.

Haskell SG. South Med J. 96:469-76 (2003).
Hayon T, Dvilansky A, Oriev L, Nathan I. Anticancer Res. 19:2089-93 (1999).

1 g	$24.70
5 g	$67.80
10 g	$110.90

C4658



Clopidogrel Sulfate

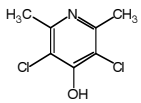
$C_{16}H_{16}ClNO_2S.H_2SO_4$ Mol. Wt.: 419.90 [135046-48-9]

An ADP receptor antagonist that inhibits platelet aggregation.

Lecompte T. Arch Mal Coeur Vaiss. 94:1225-32 (2001).
Reist M et al. Drug Metab Dispos. 28:1405-10 (2000).

500 mg	$61.60
1 g	$104.80
5 g	$462.00

C4656



Clopidol

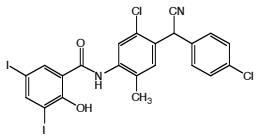
$C_7H_7Cl_2NO$ Mol. Wt.: 192.04 [2971-90-6]

An antiplatelet drug.

Izaguirre-Avila R et al. Clin Appl Thromb Hemost. 8:169-77 (2002).

1 g	$34.00
5 g	$74.60
25 g	$338.80

C4758



Closantel Sodium

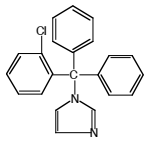
$C_{22}H_{14}Cl_2I_2N_2O_2Na$ Mol. Wt.: 686.1 [61438-64-0]

A potent anthelmintic agent that is also used in combination with levamisole to control gastrointestinal infection in sheep.

Swan GE. J S Afr Vet Assoc. 70:61-70 (1999).
Maingi N, Munyua WK, Gichigi MN. Acta Trop. 84:93-100 (2002).

1 g	$30.80
5 g	$55.50
25 g	$203.30

C4657



Clotrimazole

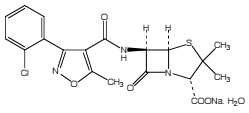
$C_{22}H_{17}ClN_2$ Mol. Wt.: 344.84 [23593-75-1]

An antifungal imidazole, found to inhibit Ca (2+)-dependent K+ transport and cell dehydration in sickel erythrocytes.

Brugnara, C., de Franceschi, L. Alper, S.L. J Clin Invest. 92:520-6 (1993).

5 g	$46.10
10 g	$76.90
25 g	$153.70

C4756



Cloxacillin sodium

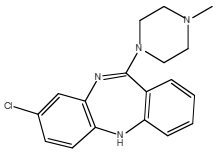
$C_{19}H_{18}ClN_3NaO_5S.H_2O$ Mol. Wt.: 475.88 [7081-44-9]

A semi-synthetic antibiotic related to penicillin.

Mattie H, Zhang LC, van Strijen E et al. Antimicrob Agents Ch. 41:2083-8 (1997).
Dan M, Asherov J, Poch F. Diagn Micr Infec Dis. 33:39-42 (1999).

1 g	$28.00
5 g	$78.40
25 g	$224.00

C4757



Clozapine

Clozaril, Leponex

$C_{18}H_{19}ClN_4$ Mol. Wt.: 326.82 [5786-21-0]

Antipsychotic drug. It is effective in the treatment of levodopa-induced dyskinesias in severe Parkinson's disease, and it increases both acetylcholine and dopamine release in rat ventral hippocampus.

Chung YC, Li Z, Dai J et al. Brain Res. 1023:54-63 (2004).
Durif F, Debilly B, Galitzky M et al. Neurology. 62:381-8 (2004).

25 mg	$44.80
100 mg	$151.20

C5196

H-Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu-OH

C-Myc Peptide

$C_{51}H_{86}N_{12}O_1$ Mol.Wt.: 1203.32

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

C5260

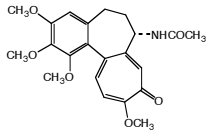
Gly-Leu-Ser-Lys-Gly-Cys-Phe-Gly-Leu-lys-Leu-Asp-Arg-Ile-Gly-Ser-Met-Ser-Gly-Leu-Gly-Cys
(Disulfide bridge Cys6-Cys22)

CNP-22, human, porcine, rat

$C_{93}H_{157}N_{27}O_{28}S_3$ Mol Wt: 2797.61

1 mg	$188.20

C5645



Colchicine, 97 %

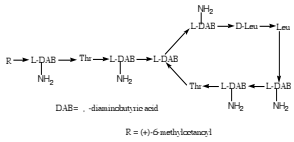
$C_{22}H_{25}NO_6$ Mol. Wt.: 399.44 [64-86-8]

Microtubule disrupting agent that induces apoptosis in human lymphoma cells and neuroblastoma cells.

Takano, Y., Okudaira, M., Harmon, B.V. Pathol Res Pract. 189:197-203 (1993).
Nakagawa-Yagi, Y. Biochem Biophys Res Commun. 199:807-17 (1994).

500 mg	$37.00
1 g	$59.20

C5647



Colistin sulphate

[1264-72-8]

A cationic polypeptide antibiotic from the polymyxin family. It is effective in the management of Pseudomonas aeruginosa infections in patients with cystic fibrosis.

Beringer P. Curr Opin Pulm Med. 7:434-40 (2001).
Evans ME, Feola DJ, Rapp RP. Ann Pharmacother. 33:960-7 (1999).

100 mg	$24.70
500 mg	$92.40
1 g	$123.20
5 g	$394.30

C5646

H-Cys-Gln-Asp-Ser-Glu-Thr-Arg-Thr-Phe-Tyr-OH

Collagen Binding Fragment

$C_{52}H_{75}N_{14}O_{20}S$ Mol.Wt.: 1248.32

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

C5654 — **Concanavalin A**

[11028-71-0]

A plant lectin that is a T cell mitogen. It induces apoptosis in human fibroblasts.

Nagase, F., Abo, T., Hiramatsu, K., et al. Microbiol Immunol. 42:567-74 (1998).
Kulkarni, G.V., Lee, W., Seth, A., McCulloch, C.A., Exp Cell Res. 245:170-8 (1998).

50 mg	$26.90
250 mg	$95.20
500 mg	$155.70
1 g	$236.00

C5655 — **α-Conotoxin GI**

H-Glu-Cys-Cys-Asn-Pro-Ala-Cys-Gly-Arg-His-Tyr-Ser-Cys-NH_2
(Cys2-Cys7, Cys3-Cys13)

$C_{55}H_{76}N_{20}O_{18}S_4$ Mol.Wt.: 1433.63

Causes postsynaptic inhibition at the neuromuscular junction.

Gray, W. R.; Luque, A.; Olivera, B. M.; Barrett, J.; Cruz, L. J. J. Biol. Chem. 256:4734, (1981).

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

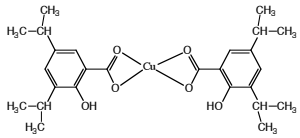
C5656 — **α-Conotoxin IMI**

H-Gly-Cys-Cys-Ser-Asp-Pro-Arg-Cys-Ala-Trp-Arg-Cys-NH_2
(Cys2-Cys8, Cys3-Cys12)

$C_{52}H_{74}N_{20}O_{15}S_4$ Mol.Wt.: 1347.58

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

C5662 — **Copper bis-3,5-diisopropylsalicylate**



$C_{26}H_{34}O_6Cu$ Mol. Wt.:506.11

A superoxide dimutase compound that inhibits protein kinase C in rat liver and reduces the activity of TPA stimulated protein kinase C. It is shown that a pretreatment of normal golblet cells of the colonic mucosa by this material sensitizes them to apoptosis induced by sodium deoxycholate (bile salt).

Nilsson K, Cancer Lett. 47: 169-77 (1989).
Washo-Stultz D, Holgen N, Bernstein H, Bernstein C, Payne CM. Nutr Cancer. 35:180-8 (1999).

1 g	$38.50
5 g	$115.40

C5768 — **Corazonin**

pGlu-Thr-Phe-Gln-Tyr-Ser-Arg-Gly-Trp-Thr-Asn-NH_2

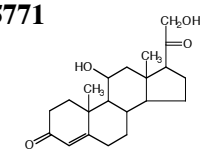
$C_{62}H_{86}N_{18}O_{19}$ Mol.Wt.: 1369.49 [122984-73-0]

A potent cardioactive peptide isolated from a variety of insects.

Predel R, Neupert S, Russell WK, Scheibner O, Nachman RJ. Peptides. 28: 3-10 (2006).

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

C5771 — **Corticosterone**



$C_{21}H_{30}O_4$ Mol. Wt.: 346.46 [50-22-6]

Elevation of plasma corticosterone level induces apoptosis in murine bone marrow.

Garvy, B.A., King, L.E., Telford, W.G., et al. Immunology. 80:587-92 (1993).

100 mg	$17.20
250 mg	$33.00
500 mg	$59.10

C5770 — **Corticotropin Releasing Factor, bovine**

H-Ser-Gln-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Thr-Lys-Ala-Asp-Gln-Leu-Ala-Gln-Gln-Ala-His-Asn-Asn-Arg-Lys-Leu-Leu-Asp-Ile-Ala-NH_2

$C_{206}H_{340}N_{60}O_{63}S$ Mol.Wt.: 4697.44

It is a neurotransmitter which also releases ACTH and endorphin from the anterior pituitary.

Eckart, K., et al. Curr. Med. Chem. 6:1035-1053 (1999).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C5772 — **Corticotropin Releasing Factor, human, rat**

Ser-Glu-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Ala-His-Ser-Asn-Arg-Lys-Leu-Met-Glu-Ile-Ile-NH_2

CRF

$C_{208}H_{344}N_{60}O_{63}S_2$ Mol Wt: 4757.49 [86784-80-7]

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C5774 — **Corticotropin Releasing Factor, ovine**

H-Ser-Gln-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Thr-Lys-Ala-Asp-Gln-Leu-Ala-Gln-Gln-Ala-His-Ser-Asn-Arg-Lys-Leu-Leu-Asp-Ile-Ala-NH_2

$C_{205}H_{339}N_{59}O_{63}S$ Mol.Wt.: 4370.41

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

C5773

H-Pro-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Ser-Ser-Cys-Lys-OH
(Disulfide Bridge Cys2-Cys13)

Cortistatin 14, (rat)

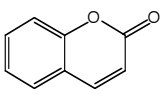
$C_{81}H_{113}N_{19}O_{19}S_2$ Mol Wt: 1721.02

A neuropeptide that binds all SS receptor subtypes and ghrelin's receptors. It has been found to inhibit cell proliferation of human thyroid carcinoma cell lines.

Broglio F, Arvat E, Benso A et al. J Clin Endocrinol Metab. 87:3783-90 (2002).
Cassoni P, Muccioli G, Marrocco T et al. J Endocrinol Invest. 25:362-8 (2002).

0.5 mg **$192.00**
1 mg **$326.40**
2.5 mg **$576.00**

C5782



Coumarin

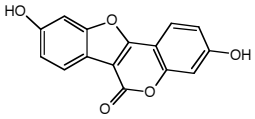
2H-1-Benzopyan-2-one
$C_9H_6O_2$ Mol. Wt.: 146.14 [91-64-5]

An anticoagulant found in medicinal plants and used in phytomedicine for the treatment of venous diseases. It is found to have anti-tumor activities in several human cells lines.

Weber US, Steffen B, Siegers CP. Res Commun Mol Pathol Pharmacol. 99:193-206 (1998).
Pineo G, Hull RD. Hematol Oncol Clin North Am. 17:201-16 (2003).

10 g **$18.50**
50 g **$30.80**

C5680



Coumestrol

$C_{15}H_8O_5$ Mol.Wt.: 268.2 [479-13-0]

A plant estrogen and highly potent inhibitor of 17-β-hydroxysteroid oxidoreductase.

Poutanen, M., Lehtimaki, J., Kostian, M.L., Santti, R., Vihko, R. Proc.Soc.Exp.Biol.Med. 208:51-59 (1995).

10 mg **$151.00**
25 mg **$301.90**

C6018

H-Glu-Val-Glu-Asp-Leu-Gln-Val-Arg-Asp-Val-Glu-Leu-Ala-Gly-Ala-Pro-Gly-Glu-Gly-Gly-Leu-Gln-Pro-Leu-Ala-Leu-Glu-Gly-Ala-Leu-Gln-OH

C-Peptide, dogs

$C_{137}H_{225}N_{37}O_{49}$ Mol.Wt.: 3174.54

0.5 mg **$160.00**
1 mg **$272.00**
2.5 mg **$480.00**

C6019

H-Glu-Ala-Glu-Asp-Leu-Gln-Val-Gly-Gln-Val-Glu-Leu-Gly-Gly-Gly-Pro-Gly-Ala-Gly-Ser-Leu-Gln-Pro-Leu-Ala-Leu-Glu-Gly-Ser-Leu-Gln-OH

C-Peptide, human

$C_{129}H_{211}N_{35}O_{48}$ Mol.Wt.: 3020.33

0.5 mg **$160.00**
1 mg **$272.00**
2.5 mg **$480.00**

C6916

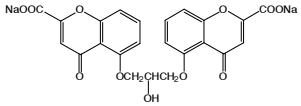
H-Lys-Arg-Arg-Glu-Ile-Leu-Ser-Arg-Arg-Pro-Ser-Tyr-Arg

CREBtide

$C_{73}H_{127}N_{29}O_{18}$ Mol.Wt.: 1699.01

1 mg **$147.20**
2 mg **$249.60**
5 mg **$441.60**

C6955



Cromolyn sodium

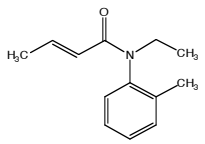
$C_{23}H_{14}Na_2O_{11}$ Mol. Wt. 512.3 [15826-37-6]

A chemopreventive and anti-inflammatory agent. In rats, it was found that application of cromolyn sodium prior to benzo[a]pyrene administration prevents tumor formation and provokes a significant inhibition of the carcinogenic process.

Matsuo N, Shinoda T, Matsuse H, Obase Y, Asai S, Kohno S. Ann allergy Asthma Immunol. 84:72-8 (2000).
Vickova A, Horakova K, Sloboda J, Ulrich L, Babinska M, Babulova A. Carcinogenesis. 7:371-4 (1986).

1 g **$38.50**
5 g **$115.40**

C6956



Crotamiton

$C_{13}H_{17}NO$ Mol. Wt.: 203.28 [483-63-6]

Used in the treatment of scabies, crotamiton with phototherapy. Effective against pruritus of breast carcinoma skin infiltration.

Buffet M, Dupin N. Fundam Clin Pharmacol. 17:217-25 (2003).
Holme SA, Mills CM. J Pain Symptom Manage. 22:803-5 (2001).

25 g **$61.60**
100 g **$221.80**

C6957

RT

Croton Oil

[8001-28-3]

A natural source of phorbol and phorbol esters.

100 g **$135.90**
1 kg **$607.20**

Crotalus durissus terrificus

(See snake venom)

C6982

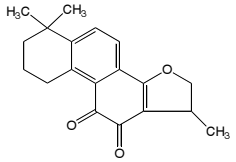
H-Pro-Phe-Cys-Asn-Ala-Phe-Thr-Gly-Cys-OH
(Disulfide Bridge Cys3-Cys9)

Crustacean Cardioactive Peptide, CCAP

$C_{42}H_{56}N_{10}O_{12}S_2$ Mol.Wt.: 957.1

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

C7097



Cryptotanshinone

$C_{19}H_{20}O_3$ Mol. Wt.: 296.36

A quinoid diterpene isolated from the root of the Chinese medicinal plant Salvia miotiorrhiza bunge. It has antibacterial and antimutagenic activities. Its antibacterial activity was attributed to its ability to generate superoxide radicals.

Pan, X., Niu, G., Liu, H. J. Chromatography A. 922:371-375 (2001).
Lee, D.S., Lee, S.H., Noh, J.G., Hong, S.D. Biosci Biotech Biochem. 63:2236-2239 (1999).

10 mg	$105.80
25 mg	$223.70
100 mg	$715.60

C7098

H-Trp-Gly-OH

Crystalline

$C_{13}H_{15}N_3O_3$ Mol.Wt.: 261.2

1 mg	$12.00
2 mg	$20.00
5 mg	$36.00

C7602

H-D-Phe-Cys-Tyr-D-Trp-Arg-Thr-Pen-Thr-NH_2
(Disulfide bridge Cys2-Pen7)

CTAP

$C_{51}H_{67}N_{13}O_{11}S$ Mol.Wt.: 1102.33

μ-selective opioid receptor antagonist.

Abbruscato, T. J.; Thomas, S. A.; Hruby, V. J.; Davis, T. P. J. Pharmacol. Exp. Ther. 280:402 (1997).

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

C7618

H-Glu-Lys-Ala-His-Asp-Gly-Gly-Arg-OH

C-telopeptide

$C_{34}H_{56}N_{14}O_{13}$ Mol.Wt.: 868.91

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

C7692

Leu-Ile-Pro-Pro-Phe-Trp-Lys-NH_2

CTX IV (6-12)

$C_{48}H_{70}N_{10}O_7$ Mol Wt: 899.14

1 mg	$56.00
2 mg	$96.00
5 mg	$168.00

C7693

Arg-Asn-Arg-Leu-Ile-Pro-Pro-Phe-Trp-Lys-Thr-Arg-NH_2

[Arg3,14] CTX IV (3-14)

$C_{74}H_{119}N_{25}O_{14}$ Mol Wt: 1582.91

1 mg	$88.00
2 mg	$150.40
5 mg	$264.00

C7997

H-Gly-Leu-Ser-Lys-Gly-Cys-Phe-Gly-Leu-Lys-Leu-Asp-Arg-Ile-Gly-Ser-Met-Ser-Gly-Leu-Gly-Cys-OH
(Disulfide bridge Cys6-Cys22)

C-Type Natriuretic Peptide (1-22), human

$C_{93}H_{157}N_{27}O_{28}S_3$ Mol.Wt.: 2197.64

C-type natriuretic peptide (CNP) is a peptide produced by the vascular endothelium with vasodilative properties. CNP was found to play an important role in linear growth and is believed to be an endothelium-derived hyperpolarizing factor.

Sandow, S. L.; Tare, M. Trends Pharmacol. Sci. 28:61-7 (2007).
Olney, R. C. Growth Horm. IGF Res. A:S6-14 (2006).

0.5 mg	$115.20
1 mg	$195.20
2.5 mg	$345.60

C7998

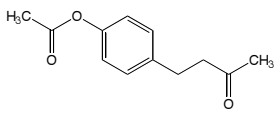
H-Gly-Leu-Ser-Arg-Ser-Cys-Phe-Gly-Val-Lys-Leu-Asp-Arg-Ile-Gly-Ser-Met-Ser-Gly-Leu-Gly-Cys-OH
(Disulfide bridge Cys6-Cys22)

C-Type Natriuretic Peptide, chicken

$C_{93}H_{157}N_{29}O_{29}S_3$ Mol.Wt.: 2241.66

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

C8017



Cuelure

4-(3-Oxobutyl)phenyl acetate

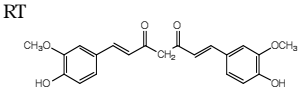
$C_{12}H_{14}O_3$ Mol. Wt.: 206.24 [3572-06-3]

An insect sex hormone used to interrupt the mating of melon flies.

100 mg	$39.20
250 mg	$72.80
1 g	$188.20

C8069 — **Curcumin** — **5 g $20.90**; **10 g $36.60**; **50 g $146.20**

RT

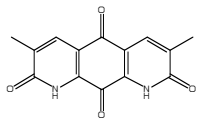


$C_{21}H_{20}O_6$, F.W. 368.38, m.p. 183°C, [458-37-7]

An antipromoter with antioxidant and anti-inflammatory activities. Inhibits lipoxygenase and cyclooxygenase.

Huang, M-T., Lysz, T., Ferraro, T et al. Cancer Res., 51:813-819 (1991).

C8500 — **CV-65** — **100 µg $168.00**; **1 mg $896.00**

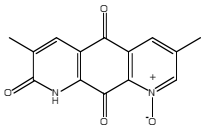


$C_{13}H_7N_2O_4$ Mol. Wt.: 270.24

Diaza-anthracene compound known to inhibit ERK and JNK kinases.

Pipaon, C., Gutierrez, P., Montero, J.C., et al Mol.Cancer Ther. 10:811-819 (2002).

C8501 — **CV-66** — **100 µg $168.00**; **1 mg $896.00**

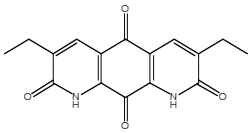


$C_{14}H_{10}N_2O_4$ Mol. Wt.: 270.24

Diaza-anthracene compound known to inhibit ERK and JNK kinases.

Pipaon, C., Gutierrez, P., Montero, J.C., et al Mol.Cancer Ther. 10:811-819 (2002).

C8502 — **CV-70** — **100 µg $168.00**; **1 mg $896.00**



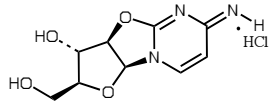
$C_{16}H_{14}N_2O_4$ Mol. Wt.: 298.29

Diaza-anthracene compound known to inhibit ERK and JNK kinases.

Pipaon, C., Gutierrez, P., Montero, J.C., et al Mol.Cancer Ther. 10:811-819 (2002).

C9677 — **Cyclocytidine hydrochloride** — **1 g $46.10**; **5 g $193.70**

RT



2,2'-Anhydro-1-b-D-arabinofuranosylcytosine hydrochloride

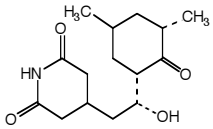
$C_9H_{11}N_3O_4.HCl$ Mol.Wt.: 261.66 m.p. 269-270°C (dec.) [10212-25-6]

An antitumor agent.

Hoshi, A., Kanzawa, F., Kuretani, K. Gann., 63:353-360 (1972).

Ip, C., Ganther, H.E. Carcinogenesis 7:1167-1170 (1992).

C9709 — **Cycloheximide, 96%** — **1 g $53.90**; **5 g $153.70**



$C_{15}H_{23}NO_4$ Mol. Wt.: 281.35 [66-81-9]

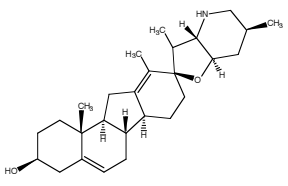
A protein synthesis inhibitor. Induces apoptosis in tumor cell lines.

Collins, R.J., Harmon, B.V., Souvlis, T., et al. Br J Cancer. 64:518-22 (1991).

Gong, J., Li, X., Darzynkiewicz, Z. J Cell Physiol. 157:263-70 (1993).

Ishii, H.H., Etheridge, M.R., Gobe, G.C. Immunol Cell Biol. 73:463-8 (1995).

C9710 — **Cyclopamine** (See Page 10 for more information) — **1 mg $107.60**; **5 mg $425.60**



$C_{27}H_{41}NO_2$ Mol. Wt.: 411.62 [4449-51-8]

A steroidal alkaloid isolated from the desert plant Veratrum californicum with both teratogenic and antitumor activities. It inhibits hedgehog/smoothened signaling.

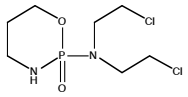
Coventry S, Kapur RP, Siebert JR. Pediatr Devel Pathol. 1:29-41 (1998).

Chen JK, Taipale J, Cooper MK et al. Gene Dev. 16:2743-8 (2002).

Qualtrough D, Buda A, Gaffield W et al. Int J Cancer. 110:831-7 (2004).

C9609 — **Cyclophosphamide monohydrate** (See page 10 for more information) — **1 g $33.00**; **5 g $93.60**

RT



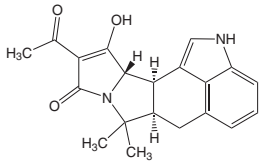
$C_7H_{15}Cl_2N_2O_2P.H_2O$, F.W. 279.10, m.p. 49-51°C [6055-19-2]

An alkylating agent used in cancer therapy. Induces apoptosis in tumor cells and endothelial cells within tumors.

Meyn, R.E., Stephens, L.C., Hunter, N.R., Milas, L. Cancer Chemother Pharmacol 33:410-4 (1994).

Browder, T., Butterfied\ld, C.E., ktaling, B.M. et al Cancer Res. 60:1878-86 (2000).

C9809



Cyclopiazonic acid

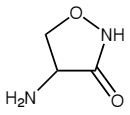
$C_{20}H_{20}N_2O_3$ Mol. Wt.: 336.389 [181172-33-3]

An inhibitor of the sarco/endoplasmic reticulum calcium pump that has produced hypokinesia, hypothermia, catalepsy, ptosis, and sedation without loss of righting reflex, tremor, gait disturbance, dyspnoea, opisthotonus, atypical convulsion, and prolonged barbiturate-induced sleep in mice.

Nishie K, Cole RJ, Dorner JW. Food Chem Toxicol. 23:831-839 (1985).
Gover TD, Moreira TH, Kao JP, Weinreich D. Cell Calcium. 41:389-396 (2007).

5 mg	**$52.00**
10 mg	**$90.00**

C9610



D-Cycloserine

$C_3H_6N_2O_2$ Mol. Wt.: 102.09 [68-41-7]

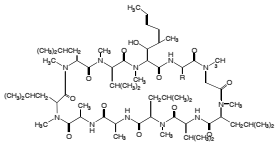
A partial NMDA receptor allosteric agonist found to improve cognitive functions in humans.

Nitsche MA, Jaussi W, Liebetanz D et al. Neuropsychopharmacology. 29:1573-8 (2004).
Ogawa M, Shigeto H, Yamamoto T et al. J Neurol Sci. 210:53-6 (2003).

1 g	**$42.60**
5 g	**$168.00**

C9611

RT



Cyclosporin A (See page 11 for more information)

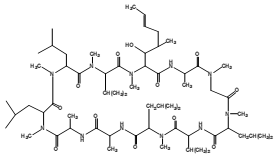
$C_{62}H_{111}N_{11}O_{12}$ Mol. Wt.:1202

Immunosuppressive, nonpolar, cyclic oligopeptide. Inhibits the activity of transcription factors of NFAT cell family. Interferes with the induction of cytokines and other inducibles immune response genes. Induces apoptosis and inhibits angiogenesis induced by VEGF.

Wiederrecht, G., Lam, E., Hung, S., et al. Ann N Y Acad Sci. 696:9-19 (1993).
Mongini, C., Waldner, C., Lopes, E.C. et al. Int. J Mol Med. 7:431-7 (2001).
Hernandez, G.L., Volpert, O.V., Iniguez, M.A. et al. J Exp Med. 193:607-20 (2001).

10 mg	**$69.30**
50 mg	**$223.00**
100 mg	**$345.90**

C9615

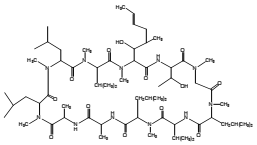


Cyclosporin B (See page 11 for more information)

$C_{61}H_{109}N_{11}O_{12}$ Mol. Wt.: 1188.59 [63775-95-1]

1 mg	**$218.40**
5 mg	**$873.60**

C9612

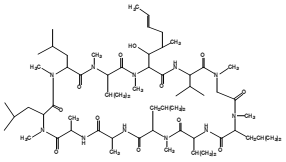


Cyclosporin C (See page 11 for more information)

$C_{62}H_{111}N_{11}O_{13}$ Mol. Wt.: 1218.61 [59787-61-0]

1 mg	**$61.10**
5 mg	**$223.70**

C9613

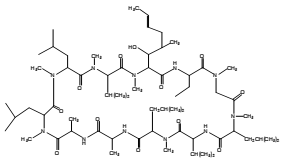


Cyclosporin D (See page 11 for more information)

$C_{63}H_{113}N_{11}O_{12}$ Mol. Wt.: 1216.64 [63775-96-2]

1 mg	**$89.50**
5 mg	**$332.10**

C9614

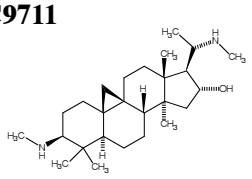


Cyclosporin H (See page 11 for more information)

$C_{62}H_{111}N_{11}O_{12}$ Mol. Wt.: 1202.61 [83602-39-5]

1 mg	**$89.50**
5 mg	**$332.10**

C9711



Cyclovirobuxine D

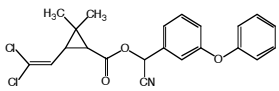
$C_{26}H_{46}N_2O$ Mol. Wt.: 402.66 [860-79-7]

An anti-atrial fibrillating agent. It induces release of endothelial nitric oxide.

Wang YX, Zheng YM, Tan YH, Sheng BH. Yao Xue Xue Bao. 31:481-6 (1996).
Grossini E et al. Life Sci. 65:PL59-65 (1999).

25 mg	**$49.30**
100 mg	**$123.20**
500 mg	**$486.70**

C9660



Cypermethrin

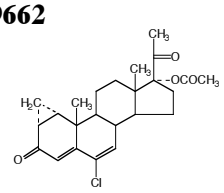
$C_{22}H_{19}Cl_2NO_3$ Mol. Wt.: 416.30 [52315-07-8]

Synthetic pyrethroid insecticide that inhibits protein phosphatase. It was found to induce cytochrome P450 2B1 in primary rat hepatocyte cultures.

10 mg	$87.90
25 mg	$175.80
100 mg	$512.30

Enan, E., Matsumura, F. Biochem Pharmacol 43:1777-84 (1992).
Heder, A.F., Hirsch-Ernst, K.I., Bauer, D. et al Biochem Pharmacol 62:71-9 (2001).

C9662



Cyproterone Acetate

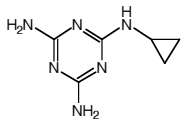
$C_{24}H_{29}ClO_4$ Mol. Wt.: 416.94 [427-51-0]

A hepatomitogen and tumor promoter. Induces apoptosis in hepatocytes.

100 mg	$38.50
250 mg	$115.40
1 g	$192.20

Oberhammer, F.A., Pavelka, M., Sharma, S., et al. Proc. Natl Acad Sci, USA. 89:5408-12 (1992).
Kasper, P., Mueller, L. Carcinogenesis. 20:2185-8 (1999).

C9670



Cyromazine

$C_6H_{10}N_6$ Mol. Wt.: 166.18 [66215-27-8]

A non-organophosphorus insect growth regulator.

25 g	$67.80
100 g	$228.00

Jukes AA, Collier RH, Finch S. Meded. Rijksuniv Gent Fak Landbouwkd Toegep Biol Wet. 66:395-402 (2001).
Schwartz L, Wolf D, Markus A et al. J Agric Food Chem. 51:5972-6 (2003).

C9673

Cysteamine hydrochloride

RT

2-Aminoethanothiol hydrochloride

$C_2H_7NS \cdot HCl$ Mol.Wt.: 113.61 m.p.66-68°C [156-57-0]

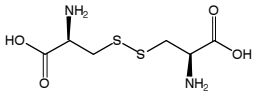
$HSCH_2CH_2NH_2.HCl$

An inhibitor of DMBA-induced mammary tumors.

25 g	$37.50
100 g	$123.00

Tatsuta M, Iishi H, Baba M, Taniguchi H. International Journal of Cancer. 48:605-8 (1991).
IP C, Ganther HE. Carcinogenesis. 13:1167-70 (1992).
Tatsuta M, Lishi H, Baba M, Taniguchi H. International Journal of Cancer. 44:1008-11 (1989).

C9773



L-Cystine

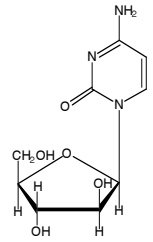
$C_6H_{12}N_2O_4S_2$ Mol. Wt.: 240.30 [56-89-3]

Non-essential amino acid vital for human development formed by the dimerization of two cysteines. Its derivatives as ligangs for neuronal nicotine receptors and have various pharmacological activities.

25 g	$18.50
100 g	$49.30
500 g	$184.80

Boido CC, Tasso B, Boido V, Sparatore F. Farmaco. 58:265-77 (2003).
Breining SR. Curr Top Med Chem. 4:609-29 (2004).

C9778



Cytarabine

Cytosine β-D-arabinofuranoside

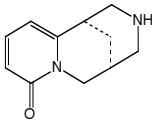
$C_9H_{13}N_3O_5$ Mol. Wt.: 243.22 [147-94-4]

Cytarabine (Cytosine beta-D-arabinofuranoside) is an antimetabolite compound which is proven to be one of the most effective agents available to treat leukemia. It exerts its cytotoxic effect by inactivating DNA polymerases alpha, delta, and epsilon.

100 mg	$18.50
500 mg	$49.20
1 g	$80.00

Tothova E, Fricova M, Kafkova A et al. Neoplasma. 47:125-8 (2000).
Mirzayans R, Cubitt S et al. Carcinogenesis. 15: 2319-24 (1994).
Okamura T, Hinyokika Kiyo. 34:1895-902 (1992).

C9779



Cytisine

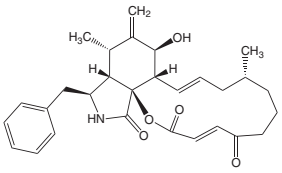
$C_{11}H_{14}N_2O$ Mol. Wt.: 190.24 [485-35-8]

Potent ligand for many nAChR subtypes. Known for analgesic, antihypertensive and inotropic activities.

5 mg	$37.00
25 mg	$123.20
100 mg	$326.50

Boido CC, Tasso B, Boido V, Sparatore F. Farmaco. 58:265-77 (2003).

C9878 **Cytochalasin A** (See page 11 for more information) — **1 mg** **$40.00** / **5 mg** **$172.00**

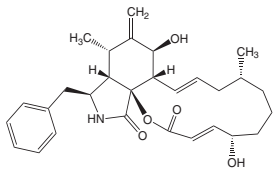


$C_{29}H_{33}NO_5$ Mol. Wt.: 477.598 [14110-64-6]

An anti-cytoskeletal drug which inhibits actin polymerization and has caused low stationary motility and membrane ruffling in K1735-M2 mouse melanoma cells.

Suelmann R, Fischer R. Cell Motil Cytoskeleton. 45:42-50 (2000).
Torralba S, Raudaskoski M, Pedregosa AM, Laborda F. Microbiology. 144(Pt 1):45-53 (1998).
Hofmann-Wellenhof R, Smolle J, Helige C et al. Exp Dermatol. 3:219-226 (1994).

C9879 **Cytochalasin B** (See page 11 for more information) — **1 mg** **$28.00** / **5 mg** **$102.00**

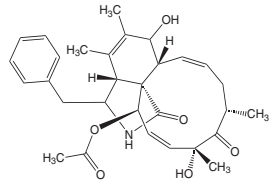


$C_{29}H_{37}NO_5$ Mol. Wt.:479.613 [14930-96-2]

An actin-disrupting agent that blocks activated hKv1.5 channels and endogenous I(K,ur) in a cytoskeleton-independent manner.

Choi BH, Park JA, Kim KR et al. Am J Physiol Cell Physiol. 289:C425-436 (2005).

C9880 **Cytochalasin C** (See page 11 for more information) — **1 mg** **$88.00** / **5 mg** **$364.00**

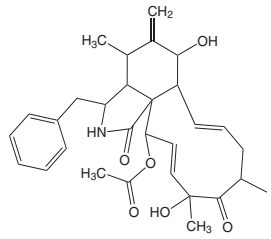


$C_{30}H_{37}NO_6$ Mol. Wt.: 507.623 [22144-76-9]

An actin-disrupting agent that increases the rate of transcription of the TGF-beta 1 gene and of the collagenase gene.

Varedi M, Ghahary A, Scott PG, Tredget EE. J Cell Physiol. 172:192-199 (1997).

C9881 **Cytochalasin D** (See page 11 for more information) — **1 mg** **$88.00** / **5 mg** **$364.00**

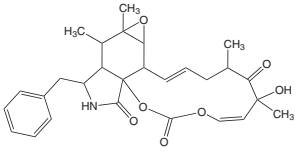


$C_{30}H_{37}NO_6$ Mol. Wt.: 507.623 [22144-77-0]

An anti-cytoskeletal drug that promotes actin depolymerization.

D'Souza VM, Bareford LM, Ray A, Swaan PW. J Nutr Biochem. 17:821-829 (2006).

C9882 **Cytochalasin E** (See page 11 for more information) — **1 mg** **$42.00** / **5 mg** **$175.00**



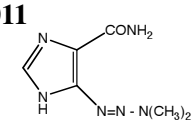
$C_{28}H_{33}NO_7$ Mol. Wt.: 495.569 [36011-19-5]

An inhibitor of actin microfilament polymerisation that strongly induces interleukin-8 through epithelial cell line HeLa.

Yun BW, Atkinson HA, Gaborit C et al. Plant J. 34:768-777 (2003).
Ikewaki N, Yamada A, Inoko H. Microbiol Immunol. 47:775-783 (2003).

C9782 **Cytotoxicity Test** — **125 Tests** **$256.50** / **250 Tests** **$424.50**

D0011 **Dacarbazine** (See page 11 for more information) — **100 mg** **$30.80** / **1 g** **$161.40**

RT 

$C_6H_{10}N_6O$ Mol. Wt.: 182.18

Used in the treatment of malignant melanoma and sarcomas.

Flaherty LE, Redman BG, Chabot GG et al. Cancer. 65:2471-2477 (1990).

D0025

H-Tyr-D-Ala-Gly-N-Me-Phe-Gly-OL

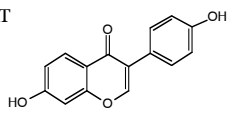
DAGO

$C_{26}H_{35}N_5O_6$ Mol.Wt.: 513.0

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

D0032

RT



Daidzein (See page 13 for more information)

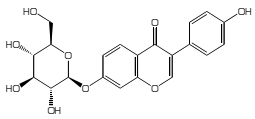
$C_{15}H_{10}O_4$ Mol.Wt.: 254.2 [486-66-8]

An isoflavone that inhibits metabolic activation of benzo[a]pyrene. An inhibitor of hydrogen peroxide production in 12-O-tetradecanoylphorbol-13-acetate stimulated HL-60 cells.

Chae Y-H, Ho DK, Cassady JM et al. Chem.-Biol. Int. 82:181-193 (1992).
Giles D, Wei H. Nutr. Cancer 29:77-82 (1997).

250 mg	$38.50
1 g	$115.40
5 g	$230.50

D0033



Daidzin (See page 11 for more information)

$C_{21}H_{20}O_9$ Mol.Wt.: 416.378 [552-66-9]

A kudzu isoflavone. Demonstrates chemopreventive activities by inhibiting the bioactivation of carcinogenic arylamines. Daidzin is also a potent inhibitor of human mitochondrial aldehye dehydrogenase.

Hammons et. al. Nutr. Cancer. 33: 46-52 (1999).
Keung WM, Vallee BL. Proc Natl Acad Sci U S A.90: 1247-51 (1993).

1 mg	$50.00
5 mg	$165.00

D0044

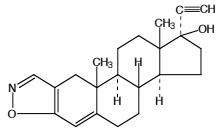
D-Ala-D-Ala

D-Ala-D-Ala

$C_6H_{12}N_2O_3$ Mol Wt: 160.17 [923-16-0]

250 mg	$56.00

D0253



Danazol

$C_{22}H_{27}NO_2$ Mol. Wt.: 337.46 [17230-88-5]

It is a synthetic gonadotropin inhibitor which has preventive effects on estrogen-related endometrial carcinogenesis in mice. Danazol therapy has also resulted in regression of established mammary carcinoma in rats.

Niwa K, Hashimoto M, Morishita S et al. Cancer Lett. 158:133-9 (2000).
Peters TG, Lewis JD, Wilkinson EJ, Fuhrman TM. Cancer. 40: 2797-800 (1977).

100 mg	$43.20
250 mg	$90.40
1 g	$338.30

D0254

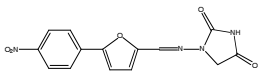
Dansyl-Tyr-Val-Gly

Dansyl-Y-V-G

$C_{28}H_{34}N_4O_7S$ Mol.Wt.: 571.63

25 mg	$147.20
50 mg	$250.30
125 mg	$441.60

D0255



Dantrolene sodium

$C_{14}H_9N_4NaO_5.3\frac{1}{2}H_2O$ Mol. Wt.: 399.29 [24868-20-0]

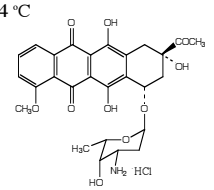
A skeletal muscle relaxant that inhibits intracellular calcium release. It has shown inhibitory effects on G6PD activity both *in vitro* and *in vivo*, in addition to showing antioxidant effects.

Beydemir S, Gulcin I, Kufrevioglu OI et al. Pol J Pharmacol. 55:787-92 (2003).
Buyukokuroglu ME, GulcIn I, Oktay M et al. Pharmacol Res. 44:491-4 (2001).
Tanii H, Taniguchi N, Tsujio I et al. Psychiat Clin Neuros. 51:415-9 (1997).

100 mg	$39.20
250 mg	$72.80
1 g	$207.20

D0182

+4 °C



Daunorubicin Hydrochloride

Daunomycin

$C_{27}H_{29}NO_{10}.HCl$, F.W. 564.0 [23541-50-6]

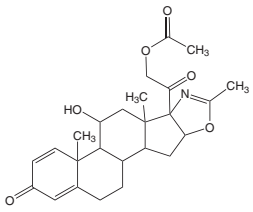
An anthracycline antibiotic clinically used as an antitumor agent.

Effective against leukemia. It is an inhibitor of topoisomerase II and induces apoptosis by intercalation into DNA.

Gieseler F, Nussler V, Brieden T et al. Int. J Clin Pharmacol Ther. 36:25-8 (1998).
Ferraro C, Quemeneur L, Prigent AF. Cancer Res. 60:1901-7 (2000).
Hande K. R. Biochim Biophys Acta 1400:173-84 (1998).

10 mg	$92.20
50 mg	$344.20
100 mg	$599.50

D1624



Deflazacort

$C_{25}H_{31}NO_6$ Mol.Wt.: 441.52 [14484-47-0]

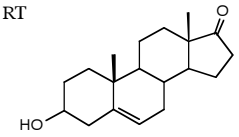
A glucocorticoid with anti-inflammatory and immunosuppressive activities. Deflazacort is a treatment of various muscle disorders, with the benefit of inducing less bone loss compared to prednisone.

100 mg	$35.00
250 mg	$80.00
1 g	$200.00

Schiatti P, Selva D, Barone D, Restelli A, Glasser A. Arzneimittelforschung. 30:1543-9 (1980).
Rizzato G, Fraioli P, Montemurro L. Chest. 99:301-9 (1991).

D1629

RT



Dehydroepiandosterone

DHEA

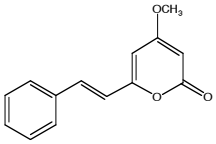
$C_{19}H_{28}O_2$, F.W. 288.40, m.p. 149-151°C, [53-43-0]

A broad-spectrum cancer chemopreventive agent. A potent inhibitor of glucose-6-phosphate dehydrogenase.

5 g	$42.60
25 g	$170.70
100 g	$511.80

Schwartz AG, Pashko LL. J. CellBiochem.Suppl. 17G:73-79 (1993).

D1628



5,6-Dehydrokawain (See page 18 for more information)

$C_{14}H_{12}O_3$ Mol. Wt.: 228.24

One of the six main active ingredients (α-pyrones) of kava kava, found to have antiplatelet activity which is due to the inhibition of thromboxane A2 formation.

5 mg	$99.50
10 mg	$153.70

Teng CM, Hsu SY, Lin CH et al. Chin J Physiol 33:41-8 (1990).

D1643

H-Trp-Ala-Gly-Gly-Asp-Ala-Ser-Gly-Glu-OH

Delta Sleep Inducing Peptide

$C_{35}H_{48}N_{10}O_{15}$ Mol.Wt.: 848.83 69431-45-4

A neuropeptide found in neurons, peripheral organs and plasma. It induces sleep in mammals with antistress and antihypoxic effects in rats.

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

Boglepov et. al. Morfologiia. 123:15-30 (2003).
Dovedova EL, Khrustalev DA, Khudoerkov RM. Bull Exp Biol Med. 140:514-6 (2005).

D1644

Tyr-D-Ala-Phe-Asp-Val-Val-Gly-NH_2

Deltorphin 1

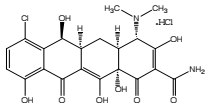
$C_{37}H_{52}N_8O_{10}$ Mol Wt: 768.87

A high potency opioid neuropeptide isolated from amphibian skin.

5 mg	$121.60
10 mg	$206.40
25 mg	$364.80

Stefano GB, Melchiorri P, Negri L et al. Proc Natl Acad Sci USA. 89:9316-20 (1992).

D1748



Demeclocycline Hydrochloride

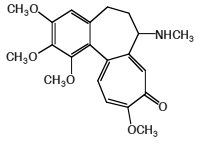
$C_{21}H_{21}ClN_2O_8.HCl$ Mol. Wt.: 501.30 [64-73-3]

A tetracycline antibacterial that has antimalarial activity.

100 mg	$24.50
250 mg	$36.70
1 g	$70.50

Kumar A, Dutta GP. Ann Trop Med Parasit. 83:199-206 (1989).

D1749



Demecolcine

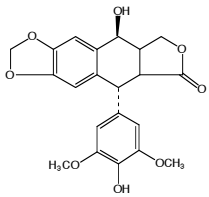
$C_{21}H_{25}NO_5$ Mol. Wt.: 371.43 [477-30-5]

Inhibitor of spindle fiber formation in the M phase cell cycle. Induces apoptosis in V79 cells.

1 mg	$34.70
5 mg	$84.00
10 mg	$149.60
50 mg	$587.90

Fujikawa-Yamamoto K, Teralka K, Zong ZP et al. Cell Struct Funct.19:391-6 (1994).

D1849



4'-Demethylepipodophyllotoxin

$C_{21}H_{20}O_8$ Mol. Wt.: 400.38

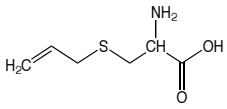
A derivative of the antitumor agent VP-16-213 in the podophyllotoxin family.

500 mg	$47.00
1 g	$73.20
5 g	$270.90

Van Maanen JM, van den Akker E, de Vries J et al. Eur J Cancer Clin Oncol. 24:1415-9 (1988).

D1757 — **L-Deoxyalliin** (See page 23 for more information)

+4 °C



S-Allyl-L-cysteine

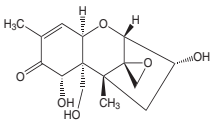
$C_6H_{11}NO_2$ Mol.Wt.:161.22 [21593-77-1]

A water soluble organosulfur compound from garlic. It is a candidate for chemoprevention clinical trial.

Sumiyoshi H, Wargovich M. J. Cancer Res. 50:5084-5087 (1990).
Kelloff GJ et al. J.Cell.Biochem.Suppl. 26:1-28 (1996).

1 g	$81.00
5 g	$359.70

D1759 — **Deoxynivalenol**



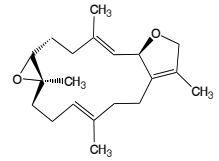
$C_{15}H_{20}O_6$ Mol. Wt. 296.32 [51481-10-8]

A Fusarium mycotoxin found in cereals, grains, and foodstuffs that can increase the frequency of stillborn piglets by inhibiting protein synthesis.

Kamimura H, Nishijima M, Yasuda K et al. J Assoc Off Anal Chem. 64:1067-1073 (1981).
Diaz-Llano G, Smith TK. J Anim Sci. 84:2361-2366 (2006).

1 mg	$126.00
5 mg	$500.00

D0368 — **Deoxysarcophine, 2-epi-16-** (See page 21 for more information)



$C_{20}H_{30}O_2$ Mol.Wt.: 302.45

It is a useful template for synthesis of a more active cancer chemopreventive agents. Several of studies were carried out in order to optimize its anticancer potential.

Sawant, S. S. Youssef, D. T. A. Reiland, J. and Ferniz, M. et. al. J. Nat. Prod. 69:1010-1013 (2006).
El Sayed, K. A. Hamann, M. T. Waddling, C. A. Jensen, C. and Lee, S. K. *et. al.* J. Org. Chem.63:7449-7455 (1998).
Katsuyama, I. Fahmy, H. Zjawiony, J. K. Khalifa, S. I. And Kilada, R. W. *et. al.* J. Nat. Prod. 65:1809-1814 (2002).
Sawant, S. S. Sylvester, P. W. Avery, M. A. and Desai, P. *et. al.* J. Nat. Prod. 67:2017-2023 (2004).

10 mg	$125.30

D1768 — **Dermaseptin I**

Ala-Leu-Trp-Lys-Thr-Met-Leu-Lys-Lys-Leu-Gly-Thr-Met-Ala-Leu-His-Ala-Gly-Lys-Ala-Leu-Gly-Ala-Ala-Ala-Ala-Asp-Thr-Ile-Ser-Gln-Gly-Thr-Gln

$C_{152}H_{257}N_{43}O_{44}S_2$ Mol Wt: 3455.08

A 34-amino acid residue cationic antimicrobial peptide.

Ammar B, Perianin A, Mor A et al. Biochem Biophys Res Commun. 247:870-5 (1998).

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

D1767 — **Dermenkephalin**

H-Tyr-D-Met-Phe-His-Leu-Met-Asp-NH_2

$C_{44}H_{62}N_{10}O_{10}S_2$ Mol.Wt.: 955.17

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

D1769 — **Dermorphin**

Tyr-D-Ala-Phe-Gly-Tyr-Pro-Ser-NH_2

$C_{40}H_{50}N_8O_{10}$ Mol Wt: 802.88

A naturally occurring heptapeptide. It is a μ-selective opioid agonist with potent analgesic effects.

Melchiorri P, Negri L. Gen Pharmacol. 27:1099-107 (1996).
Fontani G, Vergnani L, Salvadori S et al. Life Sci. 52:323-8 (1993).

1 mg	$121.60
2 mg	$206.40
5 mg	$364.80

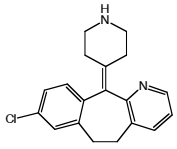
D1770 — **Dermorphin Analog**

H-Tyr-D-Arg-Phe-Sar-Tyr-Pro-Ser-NH_2

$C_{44}H_{59}N_{11}O_{10}$ Mol.Wt.: 902.03

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

D1774 — **Desloratadine**



$C_{19}H_{19}ClN_2$ Mol. Wt.: 310.82 [100643-71-8]

A non-sedating H1-receptor agonist free from antimuscarinic/anticholinergic effects. It has novel anti-allergic and anti-inflammatory effects.

Monroe EW. Skin Therapy Lett. 7:1-2, 5 (2002).
Henz BM. Allergy. 56 Suppl 65:7-13 (2001)

100 mg	$61.60
500 mg	$246.40
1 g	$431.20

D1775 — **Deslorelin Acetate**

Pyr-His-Trp-Ser-Tyr-D-Trp-Leu-Arg-Pro-NHEt

$C_{64}H_{83}N_{17}O_{12}$ Mol.Wt.: 1282.47 [57773-65-6]

Deslorelin acetate is a potent LHRH agonist. Induction of ovulation in mares.

Please inquire

D1776 Desmopressin

Map-Tyr-Phe-Gln-Asn-Cys-Pro-D-Arg-Gly-NH_2
(Disulfide bridge, Map1-Cys6)

Minirin

$C_{46}H_{64}N_{14}O_{12}S_2$ Mol Wt: 1069.1

A hemostatic agent with strong vasodilatory effects.

Kaufmann JE, Iezzi M, Vischer UM. J Thromb Haemost. 1:821-8 (2003).

1 mg	$80.00
2 mg	$136.00
5 mg	$240.00

D1777 Desmopressin Acetate

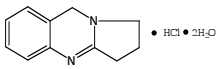
Please inquire

c[Mpr-Tyr-Phe-Gln-Asn-Cys]-Pro-D-Arg-Gly-NH_2

$C_{46}H_{64}N_{14}O_{12}S_2$ Mol.Wt.: 1069.24 [16679-58-6]

Desmoressin acetate is a synthetic analogue of vasopressin with low vasopressor activity. Used in the treatment of nocturnal enuresis, central diabetes insipidus, polyuria, polydipsia mild and moderate forms of hemophilia A and von Willebrand disease.

D1873 Desoxypeganine hydrochloride



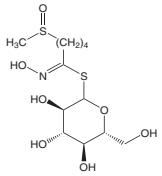
$C_{11}H_{12}N_2$ Mol. Wt.: 172.23 [61939-05-7]

Acetylcholinesterase inhibitor. It is used in the treatment of Alzheimer's dementia.

Tuliaganov N, Sadritdinov FS, Suleimanova GA.Farmakol Toksikol. 49:37-40 (1986).
Lockhart B, Closier M, Howard K et al. Naunyn Schmiedebergs Arch Pharmacol. 363:429-38 (2001).

25 mg	$39.20
100 mg	$109.80

D1875 Desulfo-glucoraphanin



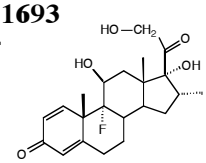
$C_{12}H_{23}NO_7S_2$ Mol. Wt. 357.44 [287966-62-5]

A glucoraphanin analogue.

1 mg	$68.00
5 mg	$270.00

D1693 Dexamethasone

RT



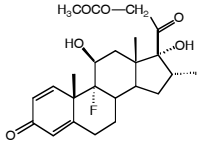
$C_{22}FH_{29}O_5$ F.W. 392.50, m.p. 262-264ºC, [50-02-2]

A potent glucocorticoid found to inhibit pulmonary carcinogenesis.

Wattenberg LW. J.Cell.Biochem.Suppl. 22:162-168 (1995).
Wattenberg LW, Estensen RD. Cancer Res. 56:5132-5135 (1996).

100 mg	$37.30
500 mg	$115.60
1 g	$171.70

D1694 Dexamethasone Acetate



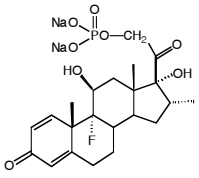
$C_{24}H_{31}FO_6 . H_20$ Mol. Wt. 452.52 [1177-87-3]

A glucocorticoid found to be most effective in adjunctive treatment against acute bacterial meningitis and in patients with resistant multiple myeloma.

Chaudhuri A. Lancet Neurol. 3:54-62 (2004).
Dimopoulos MA, Anagnostopoulos A, Weber D. J Clin Oncol. 21:4444-54 (2003).

100 mg	$37.00
500 mg	$114.60
1 g	$172.50

D1695 Dexamethasone Sodium Phosphate



$C_{22}H_{28}FO_8PNa_2$ Mol. Wt. 516.4 [2392-39-4]

A systemic corticosteroid. It induces apoptosis and inhibits sodium phosphate symporter. Used in the treatment of emetic effects of cancer therapy and epicondylitis.

Hayreh SS, Zimmerman B. Ophthalmology.110:1204-15 (2003).
Li GF, Chen JH, Yang J et al. Di Yi Jun Yi Da Xue Xue Bao. 24:11-4 (2004).
Chen Y, Chen XY. Ai Zheng. 21:498-503 (2002).
Cassileth PA, Lusk EJ, Torri S et al. Arch Intern Med.143:1347-9 (1983).

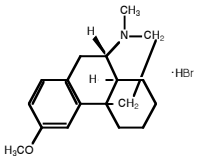
100 mg	$37.00
500 mg	$114.60
1 g	$172.50

Dexibuprofen

See S(+) Ibuprofen

D1792 Dextromethorphan Hydrobromide

RT



$C_{18}H_{25}NO.HBr$ Mol. Wt.: 352.32 [125-69-9]

d-Form of Racemethorphan

Widely used as a cough suppressant. New use includes its anticonvulsive and neuro-protective properties. It was found to improve cerebral ischemia. A NMDA receptor agonist.

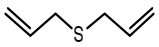
Tortella FC, Pellicano M, Bowery NG. Trends Pharmacol Sci. 10:501-7 (1989).
Choi DW, Peters S. Viseskul V. J Pharmacol Exp Ther. 242:713-20 (1987).

5 g	$33.80
10 g	$61.50
50 g	$245.90

Diallyl disulfide

See allyl disulfide

D3201 +4°C



Diallyl sulfide, 97% (See page 24 for more information)

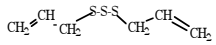
25 ml $30.30
100 ml $96.10

Allyl sulfide
$C_6H_{10}S$ F.W.114.21, b.p. 138° C, [592-88-1] d. 0.887

A modulator of drug metabolizing enzyme P450 system and inducer of the phase II detoxifying enzyme GST. Inhibitor of chemical-induced carcinogenesis in many tissues.

Yang CS, Chhabra S, Hong JY, Smith TJ. J Nutr. 131:1041S-5S (2001).
Wargovich MJ, Imada O, Stephens LC. Cancer Lett. 64:39-42 (1992).
Srivastava SK, Hu X, Zaren HA et al. Cancer Lett. 118:61-67 (1997).

D3202 -20 °C



Diallyl trisulfide (See page 24 for more information)

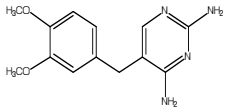
100 mg $54.10
500 mg $170.80
1 g $296.70

$C_6H_{10}S_3$ F.W. 178.34, b.p. 44-46°C (0.02 mm) [2050-87-5]

One of many sulfur containing compounds from garlic and onion. Inducer of phase II detoxifying enzymes. It was found to inhibit tumorigenesis and suppress tumor cell proliferation.

Sparnins VL, Barany G, Wattenberg LW. Carcinogenesis 9:131-134 (1988).
Sakamoto K, Lawson LD, Milner JA. Nutr Cancer. 29:152-6 (1997).
Hu X, Singh SV. Arch Biochem Biophys. 340:279-86 (1997).

D3301



Diaveridine

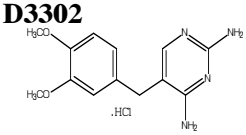
1 g $31.40
10 g $168.00

$C_{13}H_{16}N_4O_2$ Mol. Wt.: 260.29 [5355-16-8]

A coccidiostat and antiprotozoal drug.

Ono-Ogata T, Ogino T, Nishikawa M et al. Environ Mol Mutagen. 39:43-8 (2002).
Yoshimura H. Mutat Res. 261:149-52 (1991).

D3302

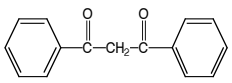


Diaveridine HCl

1 g $33.60
10 g $173.60

$C_{13}H_{16}N_4O_2$.HCl Mol. Wt.: 296.74

D3304



Dibenzoylmethane

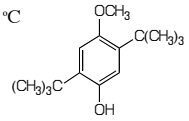
10 g $20.80
25 g $38.50
100 g $115.40

1,3-Diphenyl-1,3-propanedione
$C_{15}H_{12}O_2$ Mol. Wt.: 224.25 [120-46-7]

A minor constituent of licorice. It was found to inhibit mammary tumorigenesis and lymphomas/leukemias in mice.

Lin CC, Lu YP, Lou YR et al. Cancer Lett. 168:125-32 (2001).
Huang MT, lou YR, Xie JG et al. Carcinogenesis 19:1697-700 (1998).

D3575 +4 °C



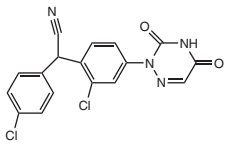
2,5-Di-tert-butyl-4-hydroxyanisole

1 g $85.70
5 g $289.00

$C_{15}H_{24}O_2$ F.W. 212.33 [1991-52-2]

An antioxidant.

D3208



Diclazuril

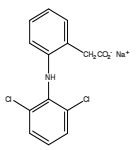
500 mg $38.50
1 g $64.60
5 g $253.70

$C_{17}H_{10}Cl_2N_4O_2$ Mol. Wt.: 373.19

A benzenacetonitril anticoccidial that prevents toxoplasmosis and coccidiosis.

Lindsay, Dubey J. Parasitol. 86:164 (1999).

D3209



Diclofenac, Sodium Salt (See page 23 for more information)

10 g $35.20
25 g $78.00
100 g $248.90

$C_{14}H_{10}Cl_2NNaO_2$ F.W. 318.13, [15307-79-6]

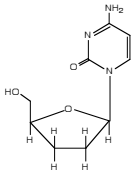
A non-steroidal anti-inflammatory agent with potent chemopreventive activity.

Hixson LJ, Alberts DS, Krutzsch M et.al. Cancer Epidemiol. Biomarkers Prev. 3:433-438 (1994).

Didanosine

See 2',3'-Dideoxyinosine

D3212



2',3'-Dideoxycytidine

DDC, Zalcitabine

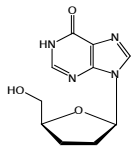
$C_9H_{13}N_3O_3$ Mol. Wt.: 211.22 [7481-89-2]

Antiviral pyrimidine nucleoside analogue effective against HIV. When activated to its triphosphate, it is incorpoated into DNA by HIV-1 reverse transcriptase, causing DNA chain termination and viral replication.

100 mg	$69.30
250 mg	$147.70
500 mg	$261.30

Anderson KS. Antivir Chem Chemother. 12 Suppl 1:13-7 (2001).
Broder S. Am J Med. 88:2S-7S (1990).
Akintonwa DA. Med Hypotheses. 57:249-5 (2001).

D3214



2',3'-Dideoxyinosine

DDI, Didanosine

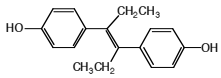
$C_{10}H_{12}N_4O_3$ Mol. Wt.: 236.23 [69655-05-6]

A potent anti-retroviral agent. Most effective in combination therapy for the treatment of HIV and related lymphoma.

1 mg	$24.70
5 mg	$104.80
25 mg	$308.00

McKinney RE Jr, Cunningham CK. Curr Opin Pediatr. 16:76-9 (2004).
Cooper DA. J Int Assoc Physicians AIDS Care (Chic Ill). 1:15-25 (2002).
Wiernik PH. Semin Hematol. 38:27-31 (2001).

D3218



Diethylstilbestrol

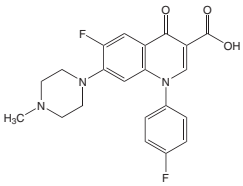
$C_{18}H_{20}O_2$ Mol. Wt.: 268.35 [56-53-1]

Synthetic estrogen. Induces apoptosis in hormone-insensitive prostate cancer cells.

1 g	$30.80
5 g	$100.10
10 g	$153.70

Robertson CN, Roberson KM, Padilla GM et al. J Natl Cancer Inst. 88:908-17 (1996).

D3223



Difloxacin (See page 13 for more information)

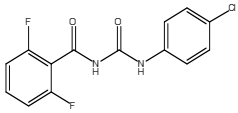
$C_{21}H_{19}F_2N_3O_3$ Mol. Wt. 399.39 [98106-17-3]

A quinolone antimicrobial antibiotic that may reverse drug resistance in human neuroblastoma cells.

5 g	$45.00
25 g	$150.00
100 g	$450.00

Norris MD, Madafiglio J, Gilbert J et al. Med Pediatr Oncol. 36:177-180 (2001).

D3219



Diflubenzuron

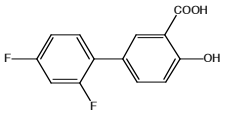
$C_{14}H_9ClF_2N_2O_2$ Mol. Wt.: 310.68 [35367-38-5]

Benzoyl-urea insectiside, found to be a potent inhibitor of melanosome synthesis in mouse melanoma cells. It has also been shown to inhibit TCDD-induced CYP1A1 expression in HepG2 cells.

10 g	$61.60
25 g	$109.80
100 g	$336.00

Norman JO, Meola SM. Antimicrob Agents Ch. 23:313-6 (1983).
Ledirac N, Delescluse C, Lesca P et al. Toxicol Appl Pharm. 164:273-9 (2000).

D3322



Diflunisal

$C_{13}H_8F_2O_3$ Mol. Wt.: 250.20 [22494-42-4]

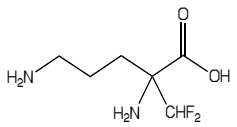
A non steroidal anti-inflammatory analgesic that has unusually long duration of action. Recently, it was found to have anti-proliferative activity against colon adenocarcinoma cells.

5 g	$34.00
10 g	$56.90
50 g	$203.30

Forbes JA, Beaver WT, White EH et al. JAMA 248:2139-2142 (1982).
Cannell GR, Vesey DA, Dickinson RG. Life Sci. 70:37-48 (2001).

D3221

-20 °C



Difluoromethylornithine

DFMO, Eflornitine

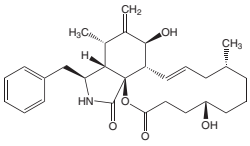
$C_6H_{12}F_2N_2O_2$ F.W. 182.17 [67037-37-0]

An irreversible inhibitor of ornithine decarboxylase. Carcinogenesis inhibitor, induces apoptosis and has antiangiogenic activity.

10 mg	$46.10
25 mg	$109.70

Gupta S, Ahmad N, Marengo SR. Cancer Res. 60:5125-33 (2000).
Takahashi Y, Mai M, Nishiojka K. Int. J Cancer 85:243-7 (2000).
Meyskens FL Jr, Gerner EW. J Cell Biochem Suppl. 22:126-31 (1995).

D3429



Dihydrocytochalasin B

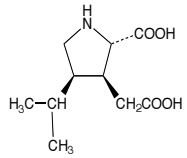
$C_{28}H_{39}NO_5$ Mol. Wt. 481.62 [39156-67-7]

Inhibits cellular motile processes such as membrane ruffling, axon growth cone activity, blood clot retraction, cytoplasmic streaming, photodinesis, and cytokinesis.

Lin S, Lin DC, Flanagan MD. Proc Natl Acad Sci U S A. 75:329-333 (1978).

1 mg	$76.00
5 mg	$300.00

D3328



Dihydrokainic acid

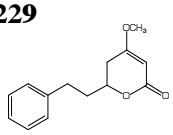
$C_{10}H_{17}NO_4$ Mol. Wt.: 215.25

The saturated analogue of kainic acid. Reduction of the isopropylene side-chain destroys the affinity to binding sites. It enhances the antitumor activity of doxorubicin presumably acting as a glutamate transporter inhibitor.

London ED, Klemm N, Coyle JT. Brain Res. 192:463-476 (1980).
Sadzuka Y, Yamashita Y, Sugiyama T, Sonobe T. Cancer Letters. 179:157-163 (2002).

10 mg	$149.10
25 mg	$338.80

D3229



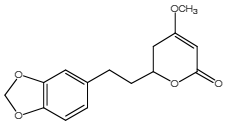
7,8-Dihydrokawain (See page 18 for more information)

$C_{14}H_{16}O_3$ Mol. Wt.: 232.28 [587-63-3]

One of the six main active ingredients (α-pyrones) of kava kava.

5 mg	$99.50
10 mg	$153.70

D3227



Dihydromethysticin (See page 18 for more information)

$C_{15}H_{16}O_5$ Mol. Wt.: 276.28 [3155-57-5]

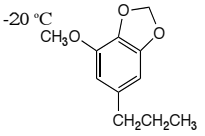
One of the six main kavalactones (α-pyrones) found in kava kava. It exhibits neuroprotective and antinociceptive activity.

Backhauss C, Krieglstein J. Eur J Pharmacol 215:265-9 (1992).
Jamieson DD, Duffield PH. Clin Exp Pharmacol Physiol 17:495-507 (1990).

5 mg	$99.50
10 mg	$153.70

D3228

-20 °C



Dihydromyristicin

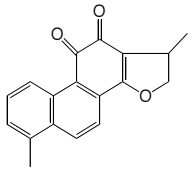
$C_{11}H_{14}O_3$ Mol. Wt.: 194.23 [607-91-0]

Hydrogenated product of myristicin, a natural constituent of parsley. Inducer of glutathione S-transferase enzymes.

Zheng G-q, Kenney PM, Lam LKT. J. Agri. Food Chem. 40:107-110 (1992).

100 mg	$51.50
500 mg	$172.40
1 g	$310.50

D3330



Dihydrotanshinone

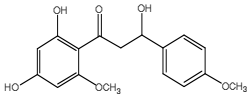
$C_{18}H_{14}O_3$ Mol. Wt.: 278.30

It is one of several active components of the medicinal herb *Salvia miltiorrhiza* Bunge. It has antibacterial and antimutagenic activities. It was found to down-regulate IL-12 production at the transcription level.

Sato M, Sato T, Ose Y et al. Mutation. Res. 265:149-154 (1992).
Lee DS, Lee SH, Noh JG et al. Biosci. Biotech. Biochem. 63:2236-2239 (1999).
Kang BY, Chung SW, Kim SH et al. Immunopharm. 49:355-361 (2000).

10 mg	$105.80
25 mg	$223.70
100 mg	$715.60

D3231



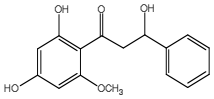
1-(2,4-Dihydroxy-6-methoxy-phenyl)-3-hydroxy-3-(4-methoxy-phenyl)-propan-1-one

$C_{17}H_{18}O_6$ Mol. Wt.: 318.32

One of the minor components of kava kava.

5 mg	$143.40
10 mg	$245.90

D3230



1-(2,4-Dihydroxy-6-methoxy-phenyl)-3-hydroxy-3-phenyl-propan-1-one

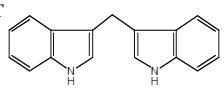
$C_{16}H_{16}O_5$ Mol. Wt.: 288.30

One of the minor components of kava kava.

5 mg	$143.40
10 mg	$245.90

D3232

RT



3,3'-Diindolylmethane (See page 18 for more information)

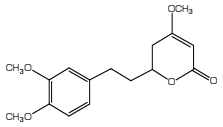
$C_{17}H_{14}N_2$ Mol. Wt.: 246.31 [1968-05-4]

Induces apoptosis in human MCF-7 cancer cells, independent of P53 pathway.

Ge X, Yannai S, Rennert G et al. Biochem Biophy Res Commun 228:153-158 (1996).

1 g	$20.80
5 g	$79.90
10 g	$144.00

D3348



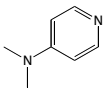
11,12-Dimethoxydihydrokawain (See page 18 for more information)

$C_{16}H_{20}O_5$ Mol. Wt.: 292.33

One of the minor components of kava kava.

5 mg	$143.40
10 mg	$245.90

D3351



4-Dimethylaminopyridine

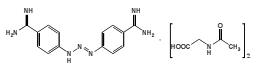
$C_7H_{10}N_2$ Mol. Wt.: 122.17

An acylation catalyst that is more powerful than pyridine. It is used as a coupling agent for the synthesis of peptides. Also found to be an effective cardiac inotropic agent in vitro.

10 g	$19.10
25 g	$35.90
100 g	$112.00

Savage AO. Arch Int Pharmacod T. 273:262-76 (1985).
Wang SS, Tam JP, Wang BS et al. Int J Pept Prot Res. 18:459-67 (1981).
Fell V, Lee CR. J Chromatogr. 121:41-7 (1976).

D3353



Diminazene Aceturate

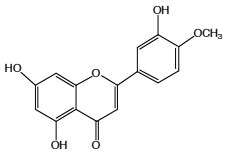
$C_{22}H_{29}N_9O_6$ Mol. Wt.: 515.52 [908-54-3]

An anti-trypanosomal and anti-protozoal drug.

1 g	$33.60
5 g	$140.00
25 g	$515.20

Gilbert RJ. Brit J Pharmacol. 80:133-9 (1983).
Diack A, Moloo SK, Peregrine AS. Vet Parisitol. 70:13-23 (1997).

D3356



Diosmetin

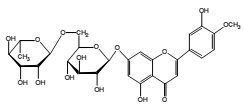
$C_{16}H_{12}O_6$ Mol. Wt.: 300.26 [520-34-3]

A natural flavonoid that inhibits human CYP1A enzyme activity. Diosmetin has anti-mutagenic and anti-allergic characteristic.

1 g	$126.00
5 g	$310.50
25 g	$1,011.30

Huang MT, Wood AW, Newmark HL et al. Carcinogenesis. 4:1631-7 (1983).
Cheong H, Ryu SY, Oak Mh et al. Arch Pharm Res. 21:478-80 (1998).

D3357



Diosmin

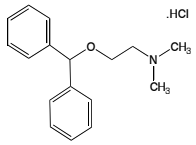
$C_{28}H_{32}O_{15}$ Mol. Wt.: 608.54 [520-27-4]

A natural flavonoid that has anti-inflammatory and chemopreventive effects. It was found to inhibit chemical carcinogenesis in the bladder, esophagus and colon.

1 g	$12.40
5 g	$29.30
25 g	$107.60

Crespo M E, Galvez J, Cruz T et al. Planta Med. 65:651-3 (1999).
Yang m, Tanaka T, Hirose Y et al. Int J Cancer. 73:719-24 (1997).
Tanaka T, Makita H, Kawabata K et al. Carcinogenesis. 18:761-9 (1997).

D3462



Diphenhydramine hydrochloride

Allergina

$C_{17}H_{21}NO{\cdot}HCl$ Mol. Wt.: 291.82 [147-24-0]

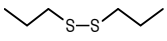
H1 histamine receptor antagonist was found to inhibit tumor promotion.

10 g	$23.20
25 g	$38.50
100 g	$61.50

Fischer SM, Patrick KE, Patamalai B, Slaga TJ. Carcinogenesis. 11:991-6 (1990).

D3261

RT



Dipropyl disulfide

Propyl disulfide

$C_6H_{14}S_2$ F.W.150.31 b.p.195-196°C [629-19-6]

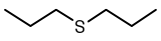
An inhibitor of BP-induced forestomach cancer in mice.

25 g	$25.10
100 g	$75.00

Srivastava SK, Hu X, Zaren HA et al. Cancer Lett 118: 61-67 (1997).

D3262

RT



Dipropyl sulfide

Propyl sulfide

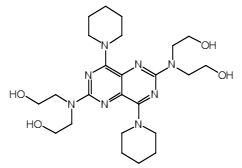
$C_6H_{14}S$ Mol. Wt.: 118.24 b.p.142-143ºC [111-47-7]

An inhibitor of BP-induced forestomach cancer in mice.

10 g	$28.80

Srivastava SK, Hu X, Zaren HA et al. Cancer Lett 118:61-67 (1997).

D3362



Dipyridamole

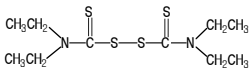
$C_{24}H_{40}N_8O_4$ Mol. Wt.: 504.63 [58-32-2]

A cardiovascular drug that has antitumor properties. Inducer of FAT/CD36 mobilizing branch. An effective antiplatelet agent.

Luiken JJ, Coort SL, Willems J et al. Mol Pharmacol. 65:639-45 (2004).
Boyer CR, Karjian PL, Wahl GM at al. Anticancer Drugs. 13:29-36 (2002).

1 g	$22.20
5 g	$61.60
25 g	$209.50

D3374



Disulfiram

Tetraethylthiuram disulfide

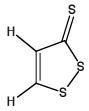
$C_{10}H_{20}N_2S_4$ Mol. Wt.: 296.54 [97-77-8]

An anti-carcinogen and DIG1 inducer. Widely used in avoidance therapy for alcohol abuse and has protective effects against chemically-induced toxicity and carcinogenesis. It exerts its chemopreventive effect by inhibiting metabolism of carcinogenes. It also induces apoptosis.

Brady JF, Xiao F, Wang MH, Li Y et al. Toxicol Appl Pharmacol. 108: 366-73 (1991).
Proc. Am Assoc Cancer Res. 38:A3879 (1997).
Liu GY, Frank N, Bartsch H, Lin JK, Molecular Carcinogenesis. 22:235-46 (1998).

50 g	$18.50
100 g	$30.80
250 g	$46.10

D0010



3H-1,2-dithiole-3-thione

D3T

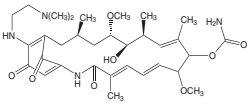
$C_3H_2S_3$ Mol. Wt.: 134.25

A potent antioxidant that has chemopreventive properties. It is known to induce detoxication enzymes and inhibit chemically-induced tumors in multiple tissues.

Otieno MA, Kensler TW, Guyton KZ. Free Radic Biol Med. 28:944-52 (2000).

25 mg	$37.00
100 mg	$123.20
500 mg	$486.70

D4802



17-DMAG

17-Dimethyaminoethylamino-demethoxygeldanamycin

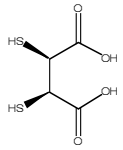
$C_{32}H_{48}N_4O_8$ Mol. Wt. 616.75 [467214-20-6]

A novel heat shock protein 90 inhibitor that enhances radiosensitization of MiaPaCa tumor cells.

Chatterjee M, Jain S, Stuhmer T et al. Blood 109: 720-728 (2007).
Dote H, Burgan WE, Camphausen K, Tofilon PJ. Cancer Res. 66:9211-9220 (2006).

1 mg	$76.00
5 mg	$300.00

D4873



DMSA (Meso-2,3-dimercaptosuccinic acid)

Succimer

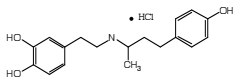
$C_4H_6O_4S_2$ Mol. Wt.: 182.22 [304-55-2]

A water soluble chelating agent found to exert a hypotensive effect in cultured vascular smooth muscle cells (VSMCs) from rat aorta.

Kramer HJ, Mensikova V, Backer A et al. Biochem Pharmacol. 65:1741-6 (2003).
Vineeta N, Singh V, Makkar S. J Indian Soc Pedom Prev Dent. 19:160-3 (2001).

1 g	$20.20
5 g	$53.80
25 g	$201.60

D5607



Dobutamine Hydrochloride

$C_{18}H_{23}NO_3.HCl$ Mol. Wt.: 337.85 [49745-95-1]

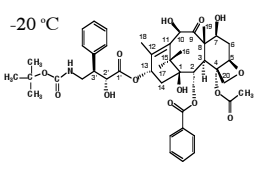
Inotropic agent useful in a non-invasive approach for evaluating subclinical anthracycline cardiotoxicity.

Cottin Y, L'huillier I, Casasnovas O et al. Eur J Echocardiogr. 1:180-3 (2000).
Subhedar NV, Shaw NJ. Cochrane Database Syst Rev. 3:CD001242 (2003).

10 mg	$37.00
50 mg	$147.90
100 mg	$221.80

D5709

-20 °C



Docetaxel

$C_{43}H_{53}NO_{14}.3H_2O$ Mol. Wt.: 861.91 [114977-28-5]

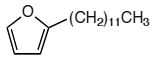
A derivative of paclitaxel. Microtubule inhibitor. Induces apoptosis and inhibits angiogensis.

Wang, T.H., Wang, N.R., Mason, K.A., Milas, L. Mund-, Kiefer- und Gesichtschirurgie. 3:210-2 (1999).
Matsuura, M., Hasegawa, M., Hayakawa, K et al. Oncol Reports. 7:289-93 (2000).

5 mg	$230.50
10 mg	$368.90
25 mg	$691.50

D5612 — 2-n-Dodecylfuran

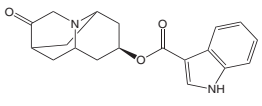
4 ℃



$C_{16}H_{28}O$, F.W. 212.38, [75308-12-2]

1 g	$68.80
5 g	$235.60
10 g	$428.30

D5746 — Dolasetron



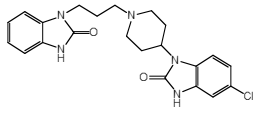
$C_{19}H_{20}N_2O_3$ Mol. Wt. 324.37 [115956-12-2]

An antiserotonin used as an antiemetic to prevent nausea and vomiting brought on by general anaesthesia or chemotherapy.

Hesketh PJ, Gandara DR, Hesketh AM et al. Support Care Cancer. 4:141-146 (1996).
Fujii Y. Clin Drug Investig. 26:427-437 (2006).

5 mg	$68.00
25 mg	$275.00
100 mg	$750.00

D5649 — Domperidone



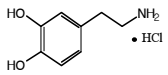
$C_{22}H_{24}ClN_5O_2$ Mol. Wt.: 425.91 [57808-66-9]

A potent inotropic agent. Effective against interleukin 2 induced hypotension.

Subhedar NV, Shaw NJ. Cochrane Database Syst Rev. CD001242 (2003).
Zeilender S, Davis D, Fairman RP, Glauser FL. Cancer Res. 49:4423-6 (1989).

50 mg	$32.10
250 mg	$123.20
1 g	$394.30

D5662 — Dopamine Hydrochloride



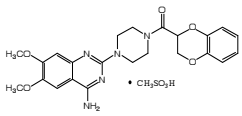
$C_8H_{11}NO_2.HCl$ Mol. Wt.: 189.64 [62-31-7]

A vasopressor that modulates cortical activation. It attenuates iNOS through a D(1), beta1&2 adrenergic receptor-linked adenylate cyclase-mediated cAMP cascade.

Ashby FG, Casale MB. Neural Netw. 16:973-84 (2003).
Mazzio E, Becker A, Soliman KF. J Neuroimmunol.131:70-82 (2002).

5 g	$24.10
25 g	$61.60
100 g	$234.10

D5690 — Doxazosin Mesylate



Doxazosin methanesulfonate

$C_{23}H_{25}N_5O_5.CH_3SO_3H$ Mol. Wt.: 547.59 [77883-43-3]

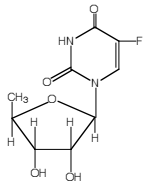
An alpha-blocker drug. It reduces progression of benign prostatic hyperplasia.

McConnell JD et al. N Engl J Med. 349:2387-98 (2003).
Stafford RS, Furberg CD, Finkelstein SN et al. JAMA. 291:54-62 (2004).

50 mg	$61.60
250 mg	$246.40
1 g	$554.40

D5692 — Doxifluridine (See page 12 for more information)

RT



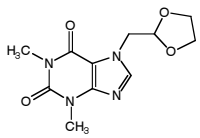
$C_9H_{11}FN_2O_5$ Mol. Wt.: 246.19

A prodrug of 5-FU converts to the active antitumor agent by pyrimidine nucleoside phosphorylase. Has remarkable antitumor activity in human colorectal and advanced gastrointestinal cancer.

De Cesare, M. Pratesi, G. De Braud, F., et al Anticancer Res. 14:549-54 (1994).
Di Bartolomeo M, Bajetta E, Somma L, Buzzoni R. Tumori. 81:147-50 (1995).

50 mg	$76.90
100 mg	$141.40

D5792 — Doxofylline



Doxophylline

$C_{11}H_{14}N_4O_4$ Mol. Wt.: 266.25 [69975-86-6]

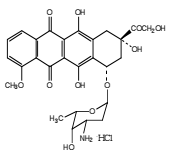
A novel xanthine bronchodilator known to inhibit phosphodiesterase activities.

Dini FL, Cogo R. Curr Med Res Opin. 16:258-68 (2001).

1 g	$55.50
5 g	$215.60
25 g	$677.60

D5794 — Doxorubicin Hydrochloride

4℃



14-Hydroxydaunomycin

Adriamycin

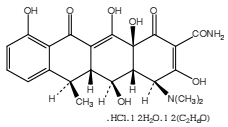
$C_{27}H_{29}NO_{11}.HCl$, F.W. 580.0 [25316-40-9]

An anthracycline antibiotic clinically used for chemotherapy of malignant tumors, particularly solid tumors by acting on DNA topoisomerase II.

Giuliani FC, Liu LF, Israel M et al. Cancer Res. 49:5969-78 (1989).
Wasserman K, Markovits J, Jaxel C. Mol Pharmacil 38:38-45 (1990).

5 mg	$93.30
10 mg	$163.90
50 mg	$623.40

D5897



Doxycycline Hyclate

Doxycycline hydrochloride hemiethanolate hemihydrate

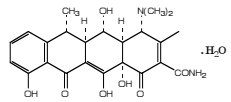
$C_{22}H_{24}N_2O_8 .HCl .1/2(H_2O) .1/2(C_2H_6O)$ Mol. Wt.: 512.9 [24390-14-5]

An antimicrobial agent. Used in the treatment of severe purulent inflammatory diseases such as pneumonia, lung abscesses, pyothorax, skin and soft tissue infections, peritonitis, purulent cholangitis and others.

1 g	$14.40
5 g	$35.70
10 g	$64.10
25 g	$113.80

Barkhordar RA, Russel T. J Calif Dent Assoc. 26:842-5 (1998).
Pozdniakova VP et al. Antibiot Khimioter. 37:43-6 (1992).

D5898



Doxycycline Monohydrate

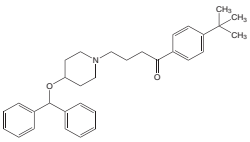
$C_{22}H_{24}N_2O_8.H_2O$ Mol. Wt.: 462.45 [17086-28-1]

Doxycycline is a synthetic teracycline. Inhibits angiogenesis in a quantitative in vitro assay of angiogeneis. Inhibits proliferation of the human leukemia cell line K562. It reduces lung metastases by inhibiting the secretion and acitivity of matrix metalloproteinases (MMPs).

1 g	$15.30
5 g	$38.50
10 g	$69.30
25 g	$123.00

Fife RS, Sledge GW Jr, Sissons S, Zerler B. Cancer Lett. 153:75-8 (2000).
Kasono K et al. Cancer Gene Ther. 7:151-9 (2000).
Lokeshwar BL. Ann NY Acad Sci. 878:271-89 (1999).

E0403



Ebastine

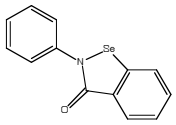
$C_{32}H_{39}NO_2$ Mol. Wt. 469.66 [90729-43-4]

A non-sedating histamine H1 receptor antagonist that also inhibits T cell migration and may find a use in the treatment of Th2-type autoimmune diseases.

1 g	$50.00
5 g	$200.00

Roberts DJ. Drugs. 52 Suppl 1:8-14 (1996).
Nori M, Iwata S, Munakata Y et al. Clin Exp Allergy. 33:1544-1554 (2003).

E0073



Ebselen

$C_{13}H_9NOSe$ Mol. Wt.: 274.18 [60940-34-3]

A seleno-organic compound showing glutathione peroxidase-like activity that has anti-inflammatory, anti-oxidant, and anti-malarial effects. It has been shown to inhibit NO-induced apoptosis of differentiated PC12 cells and protect Ca^{2+} blockage.

5 mg	$35.00
25 mg	$80.00

Moretto MB, Franco J, Posser T et al. Neurochem Res. 29:1801-6 (2004).
Lindenblatt N, Schareck W, Belusa L et al. Thromb Haemostasis. 90:882-92 (2003).
Sarker KP, Biswas KK, Rosales JL et al. J Neurochem. 87:1345-53 (2003).

E0180

-20 °C

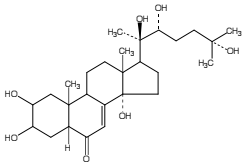
Ebulin 1

Ebulin is a type 2 ribosome-inactivating protein isolated from elder bark. It has shown antiviral activity and inhibition of protein synthesis.

1 mg	$224.50

Girbes T et al. J.Biol..Chem. 268:18195 (1993).
Olsnes S et al. J. Biol. Chem. 249:803 (1993).

E0812



β-Ecdysone

(2b, 3b, 14a, 20, 22[R], 25-Hexahydroxy-7-cholesten-6-one)

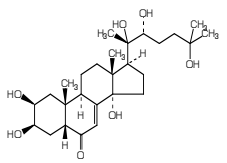
C_2-$H_{44}O$- Mol. Wt.: 480.63 [5289-74-7]

Insect development hormone that stimulates DNA synthesis in animal lymphocytes activated by polyclonal mitogens.

1 mg	$27.60
5 mg	$92.20
25 mg	$322.70

Fomovskaia GN, Berdyshev AG, Kholodova ID. Ukr Biokhim Zh. 64:56-61 (1992).

E0813



Ecdysterone

20-Hydroxyecdysone

C_2-$H_{44}O$- Mol. Wt.: 480.63 [5289-74-7]

A steroid hormone used as anobolic drug, found to induce apoptosis. It modulates antitumor activity of cytostatics and biosynthesis of macromolecules.

5 mg	$86.30
10 mg	$154.00
25 mg	$308.00

Thummel CS. Insect Biochem Mol Biol. 32:113-20 (2002).
Buszczak M, Segraves WA. Curr Biol. 10:R830-3 (2000).
Konovalova NP, Mitrokhin IuI, Volkova LM et al. Izv Akad Nauk Ser Biol. 6:650-8 (2002).

E2424

Egg Laying Hormone of Aplysia

H-Ile-Ser-Ile-Asn-Gln-Asp-Leu-Lys-Ala-Ile-Thr-Asp-Met-Leu-Leu-Thr-Glu-Gln-Ile-Arg-Glu-Arg-Gln-Arg-Tyr-Leu-Ala-Asp-Leu-Arg-Gln-Arg-Leu-Leu-Glu-Lys-NH_2

$C_{190}H_{329}N_{59}O_{57}S_1$ Mol.Wt.: 4384.17

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

E4408

Elcatonin Acetate

Please inquire

Ser-Asn-Leu-Ser-Thr-Asu-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asp-Val-Gly-Ala-Gly-Thr-Pro Ser----Asu

$C_{148}H_{244}N_{42}O_{47}$ Mol.Wt.: 3363.8 [60731-46-6]

A synthetic eel calcitonin analogue. For the treatment of osteoporosis, paget's disease and hypercalcemia.

E4416

Eledoisin

pGlu-Pro-Ser-Lys-Asp-Ala-Phe-Ile-Gly-Leu-Met-NH_2

$C_{54}H_{85}N_{13}O_{15}S_1$ Mol.Wt.: 1188.44

A potent vasodilating peptide that increases vascular permeability.

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

Sicuteri F, Michelacci S, Lombardi V, Fanciullacci M.Arch Int Pharmacodyn Ther. 151:3 8-40 (1964).
Saria A, Yan Z, Wolf G, Loidolt D, Martling CR, Lundberg JM. Acta Otolaryngol Suppl. 457: 25-8 (1989).

E4417

Eledoisin Related Peptide

H-Lys-Phe-Ile-Gly-Leu-Met-NH_2

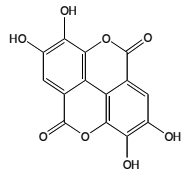
$C_{34}H_{58}N_8O_6S$ Mol.Wt.: 706.96

5 mg	$64.00
10 mg	$108.80
25 mg	$192.00

E4444

Ellagic acid

RT



$C_{14}H_6O_8$, F.W. 302.20, m.p. >300°C, [476-66-4]

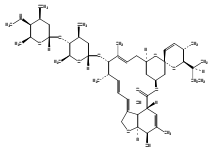
Polyphenol found in plants. Its precursors are ellagitannins commonly present in grapes, pomegranates, raspberries, and strawberries. It is an inhibitor of Phase I enzymes, an inducer of Phase II enzymes and an inhibitor of chemical carcinogenesis.

10 g	$87.50
50 g	$296.80

Bate-Smith EC. In "The Pharmacology of Plant Phenolics" Fairbairn, J.W., Ed., Academic Press: New York, pp 133-147 (1959).
Mandal S, Shivapurkar N, Galati AJ, Stoner GD. Carcinogenesis. 9:1313-16 (1988).
Das M, Bickers DR, Mukhtar H. Carcinogenesis 6:1409-13 (1985).
Siglin JC, Barch DH, Stoner GD. Carcinogenesis 16:1101-1106 (1995).

E4902

Emamectin B1 Benzoate



$C_{49}H_{75}NO_{13}$ Mol. Wt.: 886.12 [137512-74-4]

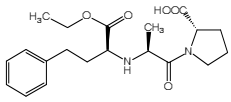
An avermectin pesticide. It has been shown to cause neurotoxicity in rats at high doses.

100 mg	$33.60
250 mg	$56.00
1 g	$168.00

Wise LD, Allen HL, Hoe CM et al. Neurotoxicol Teratol. 19:315-26 (1997).
Hakalahti T, Lankinen Y, Valtonen ET. Dis Aquat Organ. 60:197-204 (2004).

E5202

Enalapril



$C_{20}H_{28}N_2O_5$ Mol. Wt.: 376.45 [75847-73-3]

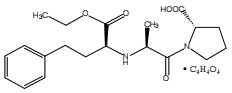
An antihypertensive agent known to reduce the incidence of vascular dementia and Alzheimer's disease. Found to have a potential for colon cancer prevention.

1 g	$30.80
5 g	$123.20

Frishman WH. Heart Dis. 4:380-6 (2002).
Yasumaru M et al. Cancer Res. 63:6726-34 (2003).

E5201

Enalapril Maleate



$C_{20}H_{28}N_2O_5.C_4H_4O_4$ Mol. Wt.: 492.52 [76095-16-4]

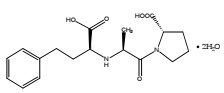
An angiotensin-converting enzyme inhibitor. It actively interferes with the renin-angiotensin-aldosterone system.

1 g	$34.00
5 g	$135.60

Cleary JD, Taylor JW. Drug Intel Clin. Pharm. 20:177-186 (1986).

E5200

Enalaprilat



$C_{18}H_{24}N_2O_5.2H_2O$ Mol. Wt.:384.42 [76420-72-9]

The active metabolite of enalapril.

10 mg	$61.10
50 mg	$264.40
100 mg	$487.90

Shioya H, Shimojo M, Kawahara Y. Biomedical Chromatography 6:59-62 (1992).

E5210	**Endomorphin-1**	**5 mg**	**$121.60**
H-Tyr-Pro-Trp-Phe-NH_2	$C_{34}H_{38}N_6O_5$ Mol.Wt.: 610.72	**10 mg**	**$206.40**
	An endogenous μ-opioid receptor agonist which has potent analgesic and gastrointestinal effects.	**25 mg**	**$364.80**
	Somogyvari-Vigh, A. et al. Exp. Brain Res. 156:224 (2004). Zadina, J. et al. Ann. NY. Acad. Sci. 897:136 (1999).		
E5211	**Endomorphin-2**	**5 mg**	**$120.00**
H-Tyr-Pro-Phe-Phe-NH_2	$C_{32}H_{37}N_5O_5$ Mol.Wt.: 571.68	**10 mg**	**$206.40**
		25 mg	**$364.80**
E5212	**Endonuclease Antigenic Site**	**1 mg**	**$160.00**
Glu-Thr-Gly-Gln-Glu-Thr-Ala-Tyr-Phe-Leu-Leu-Lys-Leu-Ala-Gly-Arg-Trp-Pro-Val-Lys	$C_{108}H_{167}N_{27}O_{29}$ Mol Wt: 2307.67	**2 mg**	**$272.00**
		5 mg	**$480.00**
E5214	**α-Endorphin**	**1 mg**	**$57.60**
H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-OH	$C_{77}H_{120}N_{18}O_{26}S$ Mol.Wt.: 1745.98	**2 mg**	**$97.60**
	α-endorphin is 1-16 fragment of α-endorphin. It binds to neuronal opiate receptors and has a stimulatory effect on immune system.	**5 mg**	**$172.80**
	Waterfield, A. A. Eur. J. Pharmacol. 58:11 (1979).		
E5215	**Acetyl, α-Endorphin**	**1 mg**	**$64.00**
Ac-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-OH	$C_{79}H_{122}N_{18}O_{27}S$ Mol.Wt.: 1788.02	**2 mg**	**$108.80**
		5 mg	**$192.00**
E5216	**α-Endorphin, camel**	**1 mg**	**$147.20**
H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-Leu-Phe-Lys-Asn-Ala-Ile-Ile-Lys-Asn-Ala-His-Lys-Lys-Gly-Gln-OH	$C_{155}H_{250}N_{42}O_{44}S$ Mol.Wt.: 3438.04	**2 mg**	**$249.60**
		5 mg	**$441.60**
E5217	**α-Endorphin, human**	**1 mg**	**$96.00**
H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-Leu-Phe-Lys-Asn-Ala-Ile-Ile-Lys-Asn-Ala-Tyr-Lys-Lys-Gly-Glu-OH	$C_{158}H_{251}N_{39}O_{46}S$ Mol.Wt.: 3465.06	**2 mg**	**$163.20**
		5 mg	**$288.00**
E5218	**α-Endorphin, rat**	**1 mg**	**$160.00**
H-Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr-Leu-Phe-Lys-Asn-Ala-Ile-Ile-Lys-Asn-Val-His-Lys-Lys-Gly-Gln-OH	$C_{157}H_{254}N_{42}O_{44}S$ Mol.Wt.: 3466.09	**2 mg**	**$272.00**
		5 mg	**$480.00**
E5219	**Endothelin-1, human**	**0.5 mg**	**$320.00**
H-Cys-Ser-Cys-Ser-Ser-Trp-Leu-Asp-Lys-Glu-Cys-Val-Tyr-Phe-Cys-His-Leu-Asp-Ile-Ile-Trp-OH (Cys1-Cys15, Cys3-Cys11)	$C_{109}H_{159}N_{25}O_{32}S_5$ Mol.Wt.: 2491.95	**1 mg**	**$544.00**
	It is produced by endothelial cells, neurons and astrocytes in the central nervous system, hepatocytes and Sertoli cells. It has an important role in the paracrine regulation of cardiovascular functions in humans.	**2.5 mg**	**$960.00**
	Yanagisawa, M. et al. Nature. 332:411 (1988).		
E5221	**Endothelin-2, human**	**0.5 mg**	**$320.00**
H-Cys-Ser-Cys-Ser-Ser-Trp-Leu-Asp-Lys-Glu-Cys-Val-Tyr-Phe-Cys-His-Leu-Asp-Ile-Ile-Trp-OH (Cys1-Cys15, Cys3-Cys11)	$C_{115}H_{160}N_{26}O_{32}S_4$ Mol.Wt.: 2546.97	**1 mg**	**$544.00**
	Mainly produced in the kidney and intestine.	**2.5 mg**	**$960.00**

E5222 — **Endothelin-3, human**

H-Cys-Thr-Cys-Phe-Thr-Tyr-Lys-Asp-Lys-Glu-Cys-Val-Tyr-Tyr-Cys-His-Leu-Asp-Ile-Ile-Trp-OH
(Cys1-Cys15, Cys3-Cys11)

$C_{121}H_{168}N_{26}O_{33}S_4$ Mol.Wt.: 2643.1

Mainly produced in the kidney and intestine.

0.5 mg $320.00
1 mg $544.00
2.5 mg $960.00

E5220 — **Enfuvirtide (T-20)**

CH_3CO-Tyr-Thr-Ser-Leu-Ile-His-Ser-Leu-Ile-Glu-Glu-Ser-Gln-Asn-Gln-Gln-Glu-Lys-Asn-Glu-Gln-Glu-Leu-Leu-Glu-Leu-Asp-Lys-Trp-Ala-Ser-Leu-Trp-Asn-Trp-Phe-NH_2

$C_{204}H_{301}N_{51}O_{64}$ Mol. Wt.: 4462.0

1 mg $160.00
2 mg $272.00
5 mg $480.00

E5240 — **Leu-Enkephalin**

H-Tyr-Gly-Gly-Phe-Leu-OH

$C_{28}H_{38}N_6O_6$ Mol.Wt.: 554.65

Leu-enkephalin has multiple effects on the central nervous system, including the neuroendocrine hypothalamus. It is an endogenous agonist for the receptors that are stimulated by opiate alkaloids.

Dudás, B. and I. Merchenthaler et al. J. Clin. Endo. Met. 88:1842 (2003).
Zhang, N. et al. J. Biol. Chem. 278:12729 (2003).

25 mg $38.40
50 mg $65.60
125 mg $115.20

E5241 — **Met-Enkephalin**

H-Tyr-Gly-Gly-Phe-Met-OH

$C_{27}H_{35}N_5O_7S$ Mol.Wt.: 573.67

25 mg $44.80
50 mg $76.80
125 mg $134.40

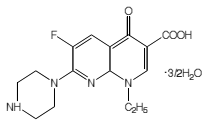
E2542 — **Met-Enkephalin, amide**

H-Tyr-Gly-Gly-Phe-Met-NH_2

$C_{27}H_{36}N_6O_6S$ Mol.Wt.: 572.69

10 mg $33.60
20 mg $56.00
50 mg $99.20

E5358 — **Enoxacin**



$C_{15}H_1$-N_4O_3F·3/2 H_2O Mol.Wt.:320.32 [74011-58-8]

Quinolone antibacteral agent. Acts on DNA gyrase.

Yoshida H. Nakamura M, Bogaki M et al. Antimicrob Agents Chemother 37:839-45 (1993).

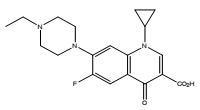
500 mg $38.10
1 g $61.50

Enoxolone

See 18β-Glycyrrhetinic acid

E5369 — **Enrofloxacin**

RT



$C_{19}H_{22}FN_3O_3$ Mol. Wt.: 359.39

A plant fungicide and antibacterial agent.

Schroder J, J S Afr. Vet Assoc. 60:122-4 (1989).

5 g $49.20
10 g $76.90
50 g $304.40

E5276 — **Enterostatin, human**

Ala-Pro-Gly-Pro-Arg

$C_{21}H_{36}N_6O_6$ Mol Wt: 496.57

A pentapeptide released from the exocrine pancreas and gastrointestinal tract that regulates fat intake. It possesses anti-analgesic activities.

Takenaka Y, Nakamura F, Usui H et al. Peptides. 24:735-9 (2003).
Lin L, Thomas SR, Kilroy G et al. Am J Physiol Regul Integr Comp Physiol. 285:R321-8 (2003).

1 mg $33.60
2 mg $56.00
5 mg $99.20

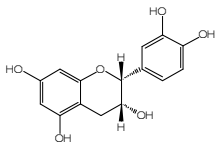
E5277 — **Enterostatin, porcine, rat**

Val-Pro-Asp-Pro-Arg

$C_{25}H_4N_8O_8$ Mol. Wt: 582.66

1 mg $33.60
2 mg $56.00
5 mg $99.20

E6231 — **(-)Epicatechin**

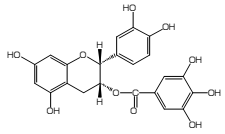


$C_{15}H_{14}O_6$ Mol. Wt.: 290.27 [490-46-0]

Natural product from green tea.

1 mg $26.10
5 mg $100.10

E6232 — **(-)Epicatechin gallate**

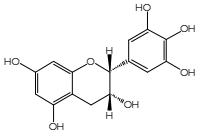


$C_{22}H_{18}O_{10}$ Mol. Wt.: 442.37 [1257-08-5]

Natural product from green tea, induces apoptosis.

1 mg	$18.50
5 mg	$61.50

E6233 — **(-)Epigallocatechin**



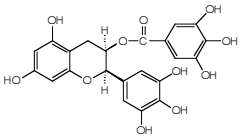
$C_{15}H_{14}O_7$ Mol. Wt.: 306.27 [970-74-1]

Natural product from green tea.

1 mg	$17.10
5 mg	$61.50

E6234 — **Epigallocatechin gallate** (See page 13 for more information)

+4 ºC



EGCG

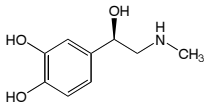
$C_{22}H_{18}O_{11}$, F.W. 458.37 [989-51-5]

An active component of tea for the chemoprevention of cancer. An antioxidant that acts as an anti-promoter of carcinogenesis, inhibits angiogenesis and induces apoptosis.

Bhimani RS, Troll W, Grunberger D, Frenkel K. Cancer Res. 53:4528-4533 (1993).
Fujiki H, Suganuma M, Komori A et al. Cancer Detect. Prev.18: 1-7 (1994).
Dong Z, Ma W, Huang C, Yang CS. Cancer Res. 57:4414-4419 (1997).

25 mg	$27.60
50 mg	$45.50
100 mg	$80.00

E6432 — **(-)-Epinephrine**



Adrenalin; L-Adrenaline; L-Epinephrine

$C_9H_{13}NO_3$ Mol. Wt.: 183.20 [51-43-4]

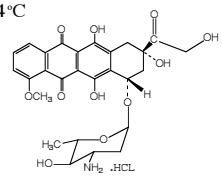
A predominent neurotransmitter. Found to be effective beta2-agonist bronchodilator.

King Vj et al.Arch Pediatr Adolesc Med.158:127-37 (2004).
Rosol TJ, Yarrington JT, Latendresse J, Capen CC..29:41-8 (2001).

1 g	$18.50
5 mg	$49.30
10 g	$86.30
100 g	$431.20

E6235 — **Epirubicin hydrochloride**

+4 ºC



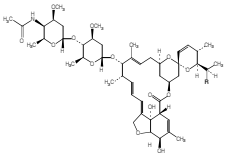
4'-Epidoxorubicin hydrochloride, Farmorubicin, pharmorubicin

$C_{27}H_{29}NO_{11}$.HCl Mol. Wt.: 579.99 [56390-09-1]

An analog of doxorubicin.

1 mg	$47.30
5 mg	$199.70
10 mg	$335.90

E6470 — **Eprinomectin**



B_{1a} R=C_2H_5 $C_{50}H_{75}NO_{14}$ Mol. Wt.: 914.13 [133305-88-1]

B_{1b} R=CH_3 $C_{49}H_{73}NO_{14}$ Mol. Wt.: 900.10 [133305-89-2]

An insecticide commonly used as a topical anthelmintic.

Lespine A, Sutra JF, Dupuy J et al. Parasitol Res. 89:120-2 (2003).
Chartier C, Pors I. Vet Parasitol. 125:415-9 (2004).

100 mg	$67.20
250 mg	$112.00
1 g	$358.40

E6376 — **Eptifibatide**

Map-Har-Gly-Asp-Trp-Pro-Cys-NH_2
(Disulfide bridge, Map1-Cys6)

Integrilin

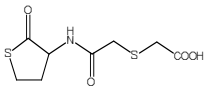
$C_{35}H_{49}N_{11}O_9S_2$ Mol Wt: 832.4 [148031-34-9]

A selective inhibitor of platelet glycoprotein IIb/IIIa receptors.

Plosker GI, Ibbotson T. Pharmacoeconomics. 21:885-912 (2003).

5 mg	$160.00
10 mg	$272.00
25 mg	$480.00

E6814 — **Erdosteine**



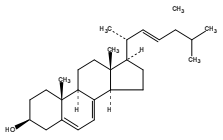
$C_8H_{11}NO_4S_2$ Mol. Wt.: 249.31 [84611-23-4]

A homocysteine-derived expectorant. It undergoes metabolic conversion to produce a thiol containing compound that has mucolytic and free radical scavenging activity.

Dechant KL, Noble S. Drugs 52:875-81 (1996).
Hosoe H, Kaise T, Ohmori K. J Pharm Pharmacol 51:959-66 (1999).

100 mg	$38.50
500 mg	$100.10
1 g	$166.10

E6825 — Ergosterol



$C_{28}H_{44}O$ Mol. Wt.: 396.65 [57-87-4]

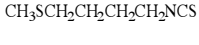
A membrane lipid found almost exclusively in fungi. It is used as an indicator of living fungal biomass.

Mille-lindblom C, von Wachenfeldt E, Tranvik LJ. J Microbiol Methods. 59:253-62 (2004).
Kasparovsky T, Blein JP, Mikes V. Plant Physiol Biochem. 42:429-35 (2004).

5 g	$39.20
10 g	$67.20
25 g	$134.40
100 g	$442.40

E6880 — Erucin

-20 °C

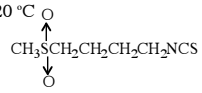


$C_6H_{11}NS_2$ Mol.Wt. 161.29 [4430-36-8]

25 mg	$65.20
50 mg	$113.10
100 mg	$193.40

E6896 — Erysolin

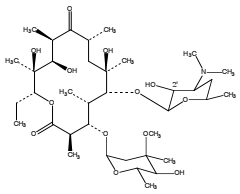
-20 °C



$C_6H_{13}NO_2S_2$ Mol.Wt.: 193.29 [504-84-7]

25 mg	$85.80
50 mg	$143.10
100 mg	$257.40
500 mg	$867.40

E6994 — Erythromycin



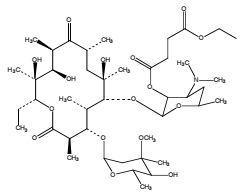
$C_{37}H_{67}NO_{13}$ Mol. Wt.: 733.93 [114-07-8]

Erythromycin is a macrolide antibiotic, found to exert anti-inflammatory effect. It inhibits NF-kappaB DNA binding activities, IL-8 NF-kappaB transcription, and CYP3A4/5.

Aoki Y, Kao PN. Antimicrob Agents Chemother. 43:2678-84 (1999).
Tran JQ, Di Cicco RA, Sheth SB et al. J Clin Pharmacol. 39:513-9 (1999).

5 g	$33.60
25 g	$95.20
100 g	$296.80

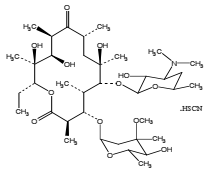
E6995 — Erythromycin Ethylsuccinate



$C_{43}H_{75}NO_{16}$ Mol. Wt.: 862.05 [41342-53-4]

5 g	$33.60
25 g	$95.20
100 g	$296.80

E6996 — Erythromycin Thiocyanate



$C_{37}H_{67}NO_{13}$.HSCN Mol. Wt.: 793.0 [7704-67-8]

An antimicrobial agent.

Vanhaecke E, De Backer P, Remon JP, Devriese LA. J Vet Pharmacol Ther. 13:356-60 (1990).

25 g	$80.10
100 g	$246.40

E6993 — Erythromycin resistance peptide MRLFV

Met-Arg-Leu-Phe-Val

$C_{31}H_{52}N_8O_6S$ Mol Wt: 664.86

1 mg	$33.60
2 mg	$56.00
5 mg	$99.20

E6997 — Erythropoietin

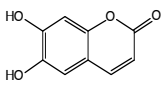
Human, Recombinant, Ultra Pure

Key regulator of erythroid blood cell proliferation and differentiation. It induces p21ras activation and p120GAP tyrosine phosphorylation in human erythroleukemia cells.

Torti M, Marti KB, Altschuler D et al. J Biol Chem. 267:8293-8 (1992).
Wuelle FW, Wojchowski DM. J biol Chem. 266:609-14 (1991).

50 U	$539.60

E7309 — Esculetin



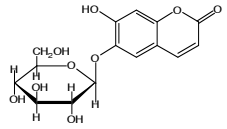
$C_9H_6O_4$ Mol. Wt.: 178.14 [305-01-1]

A lipoxygenase inhibitor. Potent chemopreventive agent capable of reducing oxidative stress in liver, inhibiting carcinogen DNA binding in human bronchial epithelial cells and inducing reduced glutathione in buffalo and rat liver cells.

Matsunaga K, Yoshimi N, Yamada Y et al. Jpn J Cancer Res. 89:496-501 (1998).
Lin WL, Wang CJ, Tsai YY et al. Arch Toxicol.74:467-72 (2000).
Sharma S, Stutzman JD, Kelloff GJ, Steele VE. Cancer Res. 54:5848-55 (1994).

1 g	$44.60
5 g	$199.70

E7310 Esculin



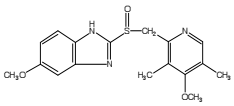
$C_{15}H_{16}O_9$ Mol. Wt.: 340.28 [531-75-9]

A naturally occuring antioxidant. It inhibits chemically induced carcinogenesis in the mouse skin and kidney.

Van Duren BL, Goldschmidt BM. J Natl Cancer Inst. 56:1237-42 (1976).
Imaida K, Hirose M, Yamaguchi S et al. Cancer Lett. 55:53-9 (1990).

5 g	$23.20
10 g	$38.50

E7357 Esomeprazole potassium



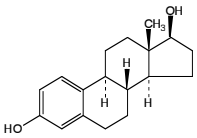
$C_{17}H_{19}N_3O_3S$ Mol. Wt.: 345.42

A proton pump inhibitor. Used as an antiulcerative agent.

Garnett WR. Ann Pharmacother. 30:1425-36 (1996).

25 mg	$59.20
100 mg	$166.40
500 mg	$677.60

E7376 Estradiol



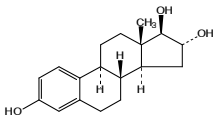
$C_{18}H_{24}O_2$ Mol. Wt.: 272.38 [50-28-2]

Potent mammalian estrogenic hormone useful in the prevention of neuro-degenerative diseases such as Alzheimer's and Parkinson disease, in both men and women. Found to be major steroid mitogen in premenopausal women.

Bhavnani BR. J Steroid Biochem Mol Biol. 85:473-82 (2003).

1 g	$27.20
5 g	$110.90
25 g	$363.50

E7377 Estriol



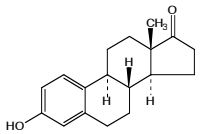
$C_{18}H_{24}O_3$ Mol. Wt.: 288.38 [50-27-1]

Estradiol metabolite was found to prevent bone loss in osteoporotic rats and post menopausal women. Provides protection against mammary carcinogenisis and urogenital tract aging.

Rajkumar L, Guzman RC, Yang J et al. Breast Cancer Res. 6:R31-7 (2004).
Luo XH, Liao EY. Endocr Res. 29:343-51 (2003).
Dessole S et al. Menopause. 11:49-56 (2004).

100 mg	$24.70
500 mg	$61.60
1 g	$104.80

E7378 Estrone



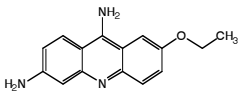
$C_{18}H_{22}O_2$ Mol. Wt.: 270.37 [53-16-7]

Estradiol metabolite found to reduce colon tumorigenesis in mice, independently of ERalpha. Found to inhibit BCRP-mediated drug efflux and overcome drug resistance.

Guo JY et al. J Nutr. 134:179-82 (2004).
Imai Y, Tsukahara S, Ishikawa E et al. Jpn J Cancer Res. 93:231-5 (2002).

1 g	$22.20
5 g	$88.80
25 g	$369.60

E7228 Ethacridine Lactate Monohydrate



Acrinol; ethodin; 6,9-Diamino-2-ethoxyacridine-DL-lactate monohydrate

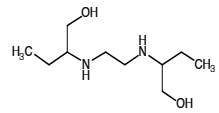
$C_{15}H_{15}N_3O.C_3H_6O_3.H_2O$ Mol. Wt.: 361.39 [6402-23-9]

An antiseptic agent found to be an effective abortifacient.

Bygdeman M. Clin Obstet Gynaecol. 11:573-84 (1984).
Gupta S, Sachdeva L, Gupta R. Indian J Matern Child Health. 4:59-61 (1993).

25 g	$55.50
50 g	$92.40
100 g	$154.00

E7230 Ethambutol



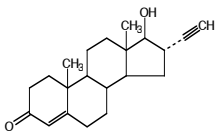
$C_{10}H_{24}N_2O_2$ Mol. Wt.: 204.31 [74-55-5]

An antibacterial agent.

Bernard EM, Edwards FF, Kiehn TE et al. Antimicrob Agents Chemother. 37:2323-6 (1993).

25 g	$92.40
100 g	$246.40

E7324 Ethisterone



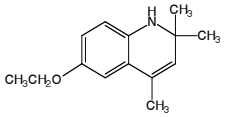
$C_{21}H_{28}O_2$ Mol. Wt.: 312.45 [434-03-7]

A progestogen that counteracts the estrogenic proliferative effect on the endometrium.

Ferrero S, Gerbaldo D, Fulcheri E, Cristoforoni P. Minerva Ginecol. 54:519-30 (2002).

1 g	$18.50
5 g	$37.00
25 g	$123.20
100 g	$400.40

E7329 Ethoxyquin



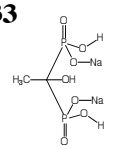
$C_{14}H_{19}NO$ Mol. Wt.: 204.29 [91-53-2]

A synthetic antioxidant that inhibits chemically induced carcinogenesis. It exerts its chemopreventive action by inducing glutathione synthetase, one of the enzymes in the synthesis of glutathione, and the phase II drug metabolizing enzyme, glutathione S-transferase (GST).

Shpherd AG, Manson MM, Ball Hw, Mclellan LI. Carcinogenesis. 21:1827-34 (2001).
Hayes JD, Mc Leod R, Ellis EM et al. IARC Sci Publ. 139:175-87 (1996).

100 g	$42.90
250 g	$93.20
1 kg	$302.70

E7433 Etidronate Disodium (See page 5 for more information)

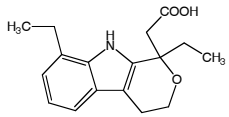


$C_2H_6Na_2O_7P_2$ Mol. Wt.: 249.99 [7414-83-7]

A bisphosphonate bone resorption inhibitor.

1 g	$51.30
5 g	$204.90

E7556 Etodolac



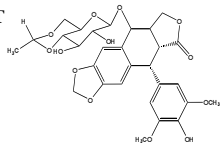
$C_{17}H_{21}NO_3$ Mol. Wt.: 287.35 [41340-25-4]

A COX-2 inhibitor with anti-inflammatory and analgesic activity. It has been shown to inhibit growth and PCNA expression and induce cell cycle arrest in human hepatocellular carcinoma cell lines, in addition to suppressing the occurrence of aberrant crypt foci and tumors in colitis-induced tumorigenesis in rats.

Cheng J, Imanishi H, Liu W et al. Cancer Sci. 95:666-73 (2004).
Takeda J, Kitajima K, Fujii S et al. Oncol Rep. 11:981-5 (2004).
Lynch S, Brogden RN. Drugs. 31:288-300 (1986).

100 mg	$42.60
250 mg	$84.00
1 g	$224.00

E7657 Etoposide

RT 

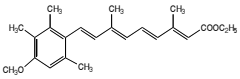
$C_{29}H_{32}O_{13}$, F.W. 588.56, m.p.236-251°C, [33419-42-0]

An anticancer agent, topoisomerase inhibitor, and apoptosis inducer.

Fearnhead JO. Biochem.Pharmacol. 48:1073-1079 (1994).
deJong RS, Chwalinski ., Snowden RT et al. Anticancer Res. 15:2319 (1995).

100 mg	$88.00
500 mg	$351.80

E7668 Etretinate (See page 12 for more information)



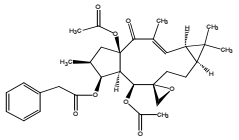
$C_{23}H_{30}O_3$ Mol.Wt.: 354.48 [54350-48-0]

An aromatic retinoid used in treatment of severe psoriasis, lichen amyloidosus and keratotic genodermatosis.

Helander I. Hopsu-Havu VK. Clin Exp Dermatol. 11: 574-77 (1986).
Brazzell, RK, Colburn, WA. J Am Acad Dermatol. 6: 643–651 (1982).

25 mg	$45.00
100 mg	$125.00
500 mg	$400.00

E8129 Euphorbiasteroid

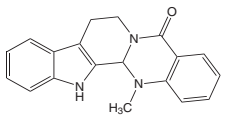


$C_{32}H_{40}O_8$ Mol. Wt.: 552.66

Natural product isolated from *Euphorbia lathyris* L.

10 mg	$34.00
25 mg	$65.10
100 mg	$196.60

E8657 Evodiamine



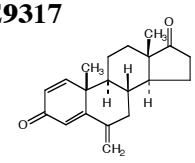
$C_{19}H_{17}N_3O$ Mol. Wt. 303.36 [518-17-2]

A non-pungent vanilloid receptor agonist isolated from Evodia rutaecarpa that induces apoptosis in leukemic U937 cells.

Kobayashi Y, Nakano Y, Kizaki M et al. Planta Med. 67:628-633 (2001).
Lee TJ, Kim EJ, Kim S et al. Mol Cancer Ther. 5:2398-2407 (2006).

100 mg	$80.00
250 mg	$150.00
1 g	$450.00

E9317 Exemestane



$C_{20}H_{24}O_2$ Mol. Wt.: 296.40 [107868-30-4]

A steroidal aromatase inhibitor.

Giudici, D. J. Steroid Biochem 30:391-394 (1988).

25 mg	$51.60
100 mg	$142.40

E9416	**Exendin-3**	**0.5 mg**	**$249.60**
H-His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH_2	$C_{184}H_{282}N_{50}O_{61}S$ Mol.Wt.: 4202.66	**1 mg**	**$424.00**
		2.5 mg	**$748.80**
E9417	**Exendin-4**	**0.5 mg**	**$249.60**
H-His-Gly-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH_2	$C_{184}H_{282}N_{50}O_{60}S$ Mol.Wt.: 4186.03	**1 mg**	**$424.00**
		2.5 mg	**$748.80**
E9418	**Exendin (9-39)**	**0.5 mg**	**$320.00**
H-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH_2	$C_{149}H_{234}N_{40}O_{47}S$ Mol.Wt.: 3369.83	**1 mg**	**$544.00**
		2.5 mg	**$960.00**
F0010	**FAM FLICA™ Poly Caspases Assay Kit** (See page 30 for more information)	**25 Tests**	**$144.50**
	FAM-VAD-FMK	**100 Tests**	**$413.30**
F0011	**FAM FLICA™ Caspase 1 Assay Kit** (See page 30 for more information)	**25 Tests**	**$144.50**
	FAM-YVAD-FMK	**100 Tests**	**$413.30**
F0012	**FAM FLICA™ Caspase 2 Assay Kit** (See page 30 for more information)	**25 Tests**	**$155.70**
	FAM-YDVAD-FMK	**100 Tests**	**$435.70**
F0013	**FAM FLICA™ Caspase 3 & 7 Assay Kit** (See page 30 for more information)	**25 Tests**	**$144.50**
	FAM-DEVD-FMK	**100 Tests**	**$413.30**
F0014	**FAM FLICA™ Caspase 6 Assay Kit** (See page 30 for more information)	**25 Tests**	**$144.50**
	FAM-VEID-FMK	**100 Tests**	**$413.30**
F0015	**FAM FLICA™ Caspase 8 Assay Kit** (See page 30 for more information)	**25 Tests**	**$155.70**
	FAM-LETD-FMK	**100 Tests**	**$435.70**
F0016	**FAM FLICA™ Caspase 9 Assay Kit** (See page 30 for more information)	**25 Tests**	**$155.70**
	FAM-LEHD-FMK	**100 Tests**	**$435.70**
F0017	**FAM FLICA™ Caspase 10 Assay Kit** (See page 30 for more information)	**25 Tests**	**$155.70**
	FAM-AEVD-FMK	**100 Tests**	**$435.70**
F0018	**FAM FLICA™ Caspase 13 Assay Kit** (See page 30 for more information)	**25 Tests**	**$144.50**
	FAM-LEED-FMK	**100 Tests**	**$413.30**

F0019 **FAM-Phe-CMK FLISP™ Assay Kit** (See page 30 for more information)
FFCK — **25 Tests** **$144.50** / **100 Tests** **$413.30**

F0020 **FAM-Lys-CMK FLISP™ Assay Kit** (See page 30 for more information)
FKCK — **25 Tests** **$144.50** / **100 Tests** **$413.30**

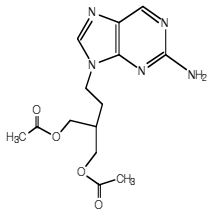
F0021 **FAM-Leu-CMK FLISP™ Assay Kit** (See page 30 for more information)
FLCK — **25 Tests** **$144.50** / **100 Tests** **$413.30**

F0022 **FAM-Spacer-Phe-CMK FLISP™ Assay Kit** (See page 30 for more information)
FSFCK — **25 Tests** **$144.50** / **100 Tests** **$413.30**

F0023 **FAM-Spacer-Leu-CMK FLISP™ Assay Kit** (See page 30 for more information)
FSLCK — **25 Tests** **$144.50** / **100 Tests** **$413.30**

F0024 **FAM-Leu-DAP FLISP™ Assay Kit** (See page 30 for more information)
FLDAP — **25 Tests** **$144.50** / **100 Tests** **$413.30**

F0048 **Famciclovir** — **50 mg** **$38.50** / **100 mg** **$64.60** / **500 mg** **$269.10**

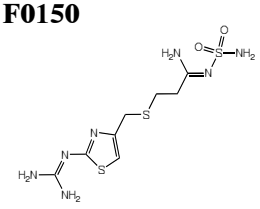


$C_{14}H_{19}N_5O_4$ Mol. Wt.: 321.33

Antiviral agent that is an ester of penciclovir for improved absorption.

Enright AM, Prober C. Herpes. 10:32-7 (2003).
Lilie HM, Wassilew S. Drugs Aging. 20:561-70 (2003).

F0150 **Famotidine** — **500 mg** **$30.80** / **1 g** **$49.30** / **5 g** **$178.70**

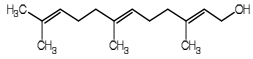


$C_8H_{15}N_7O_2S_3$ Mol. Wt.: 337.45 [76824-35-6]

An antiulcerative agent that has an immunomodulating effect. Effective in the prevention and control of chemotherapy-induced gastric mucosal injury.

Hahm KB, Kim WH, Lee SI et al. Scand J Gastroenterol. 30:265-71 (1995).
Mori K, Tominaga K, Yokoyama K et al. J Cancer Res Clin Oncol. 121:367-70 (1995).

F0268 **Farnesol** — **50 ml** **$73.70** / **100 ml** **$119.20**

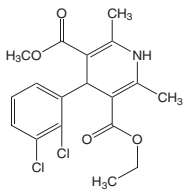


$C_{15}H_{26}O$ Mol. Wt.: 222.37 [4602-84-0]

Polyprenyl alcohol found in plant essential oils. Induces apoptosis in cell cultures.

Haug JS, Goldner CM, Yazlovitskaya EM et al. Biochim Biophys Acta. 1223:133-40 (1994).
Yaguchi M, Miyazawa K, Katagiri T et al. Leukemia. 11:779-87 (1997).

F1745 **Felodipine** — **50 mg** **$50.00** / **100 mg** **$80.00** / **250 mg** **$150.00**

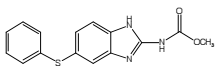


$C_{18}H_{19}Cl_2NO_4$ Mol. Wt. 384.25 [72509-76-3]

Felodipine is effective at preventing angina pectoris.

Detry JM, De Coster PM, Renkin J. Am J Cardiol. 52:453-457 (1983).

F1650



Fenbendazole

$C_{15}H_{13}N_3O_2S$ Mol. Wt.: 299.35 [43210-67-9]

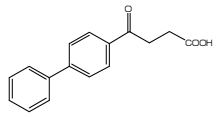
A highly effective anthelmintic used to control trematodes and cestodes.

It is a potent CYP1A2 inducer.

Baeder C, Bahr H, Christ O et al. Experientia. 30:753-754 (1974).

5 g	$24.50
10 g	$43.40
100 g	$264.40

F1652



Fenbufen

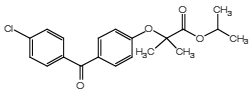
$C_{16}H_{14}O_3$ Mol. Wt.: 254.28 [36330-85-5]

An anti-inflammatory analgesic.

Child RG, Osterberg AC, Slobida AE et al. J. Pharm Sci 66:466-476 (1977).

1 g	$27.20
5 g	$67.80
10 g	$115.30

F1853



Fenofibrate

$C_{20}H_{21}ClO_4$ Mol. Wt.: 360.83 [49562-28-9]

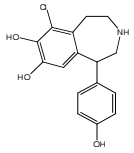
A hypolipidemic drug useful in prevention of myocardial inflammation and fibrosis.

PPARalpha activator that is a potent and well tolerated lipid lowering drug.

Diep QN, Benkirane K, Amiri F et al. J Mol Cell Cardiol. 36:295-304 (2004).
Roberts WC. Cardiology. 76:169-79 (1989).

5 g	$29.60
25 g	$92.40
100 g	$258.80

F1654



Fenoldopam mesylate

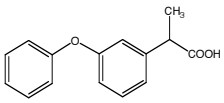
$C_{16}H_{16}ClNO_3$ Mol. Wt.: 305.76 [67227-56-9]

A renal vasodilator that stimulates renal vascular dopamine receptors with little effect on the central dopamine receptors.

Hahn RA, Wardell JR Jr, Sarau HM, Ridley PT. J. Pharm & Expt Ther. 223:305-313 (1982).

25 mg	$51.60
100 mg	$162.70
500 mg	$609.90

F1655



Fenoprofen

$C_{15}H_{14}O_3$ Mol. Wt.: 242.27 [31879-05-7]

A NSAID inhibits prostaglandin synthesis and adherence of polymorphonuclease leukocytes. It has antiproliferative effects on human colon cancer cells.

Venezio FR, DiVincenzo C, Pearlman F, Phair JP. J Infec Diseases. 152:690-694 (1985).
Patrono C, Ciabattoni G, Grossi-Belloni D. Pharmacol Res Comm. 6:509-518 (1974).
Hixson LJ, Alberts DS, Krutzsch M et al. Cancer Epid Biomark Prev. 3:433-438 (1994).

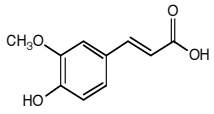
1 g	$24.50
5 g	$48.90
10 g	$81.40

Fenretinide

See N-(4-Hydroxyphenyl)retinamide

F1669

RT



Ferulic acid

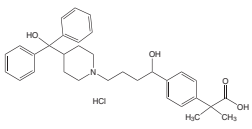
$C_{10}H_{10}O_4$, F.W. 194.18, m.p. 168-171°C, [1135-24-6]

A chemopreventive analogue of caffeic acid.

Tanaka T, Kojima T, Kawamori T et al. Carcinogenesis 14:1321-1325 (1993).

5 g	$17.70
25 g	$55.70

F1895



Fexofenadine Hydrochloride

$C_{32}H_{40}ClNO_4$ Mol. Wt. 538.12 [153439-40-8]

A non-sedating H1 receptor antagonist that may be useful to treat daily symptoms of eczematous diseases.

Bronsky EA, Falliers CJ, Kaiser HB et al. Allergy Asthma Proc. 19:135-141 (1998).
Katagiri K, Arakawa S, Hatano Y, Fujiwara S. J Dermatol. 33:75-79 (2006).

25 mg	$40.00
100 mg	$100.00
500 mg	$145.00

F3204

Glu-His-Ile-Pro-Ala

Fibrinogen-binding Peptide

$C_{25}H_{39}N_7O_8$ Mol Wt: 565.63

5 mg	$53.80

F3205

His-His-Leu-Gly-Gly-Ala-Lys-Gln-Ala-Gly-Asp-Val

Fibrinogen gamma-chain dodecapeptide

$C_{59}H_{80}N_{18}O_{16}$ Mol Wt: 1189.29

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

F3206 — **Fibrinolysis Inhibiting Factor**

Gly-Pro-Arg-Pro

$C_{18}H_{31}N\text{-}O_5$ Mol Wt: 425.49

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

F3208 — **Fibrinopeptide B, human**

pGlu-Gly-Val-Asn-Asp-Asn-Glu-Glu-Gly-Phe-Phe-Ser-Ala-Arg-OH

$C_{66}H_{93}N_{19}O_{25}$ Mol.Wt.: 1552.59

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

F3209 — **Fibronectin-Binding Protein**

H-Phe-Asn-Lys-His-Thr-Glu-Ile-Ile-Glu-Glu-Asp-Thr-Asn-Lys-Asp-Lys-Pro-Ser-Tyr-Gln-Phe-Gly-Gly-His-Asn-Ser-Val-Asp-Phe-Glu-Glu-Asp-Thr-Leu-Pro-Lys-Val-OH

$C_{190}H_{283}N_{49}O_{66}$ Mol.Wt.: 4309.66

Inhibits binding of fibronectin to bacterial cells.

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

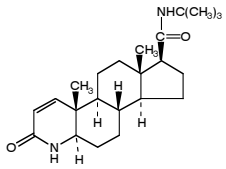
F3207 — **Fibronectin CS-1 Peptide**

Glu-Ile-Leu-Asp-Val-Pro-Ser-Thr

$C_{38}H_{64}N_8O_{15}$ Mol.Wt.: 872.97

1 mg	$48.00
2 mg	$81.60
5 mg	$144.00

F3354 — **Finasteride**



$C_{23}H_{36}N_2O_2$ Mol. Wt.: 372.54 [98319-26-7]

Finasteride is a synthetic 4-azasteroid. It is a specific inhibitor of the enzyme steroid 5-α-reductase which is responsible for the conversion of testosterone into the potent androgen 5α-dihydrotestosterone.

Peters DH, Sorkin EM. Drugs 46:1[illegible]-208 (1993).
Gormley GJ. Biomed Pharmacother 49:319-24 (1995).

100 mg	$115.40
500 mg	$422.70

FK506

See Tacrolimus T0008

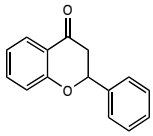
F4400 — **Flag Peptide**

H-Asp-Tyr-Lys-Asp-Asp-Asp-Asp-Lys-OH

$C_{41}H_{60}N_{10}O_{20}$ Mol.Wt.: 1012.99

0.5 mg	$18.00
1 mg	$30.30
2.5 mg	$53.80

F4501 — **Flavanone**



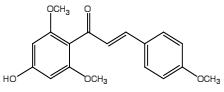
$C_{15}H_{12}O_2$ Mol. Wt.: 224.25 [487-26-3]

Natural flavonoid from plants. Found to inhibit tumor cells in culture. Its oxime derivative induces apoptosis.

Kuntz S, Wenzel U, Daniel H. Eur J Nutr. 38:133-42 (1999).

10 g	$33.80
25 g	$76.20

F4502 — **Flavokawain A** (See page 18 for more information)

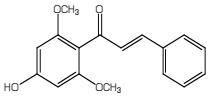


$C_{18}H_{18}O_5$ Mol. Wt.: 314.33

A minor component of kava extract.

5 mg	$99.50
10 mg	$153.70

F4503 — **Flavokawain B** (See page 18 for more information)

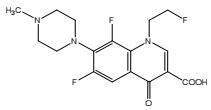


$C_{17}H_{16}O_4$ Mol. Wt.: 284.31

A minor component of kava extract.

5 mg	$99.50
10 mg	$153.70

F4518 — **Fleroxacin**



$C_{17}H_{18}F_3N_3O_3$ Mol. Wt.: 369.34 [79660-72-3]

An antibacterial agent with antiproliferative effects.

Ebisuno S, Nishikawa T, Kohjimoto Y et al. Urol Int. 62:150-4 (1999).

5 g	$92.40
10 g	$147.90
25 g	$308.00

F4420 — **Boc-F-L-F-L-F**

Boc-Phe-Leu-Phe-Leu-Phe-OH

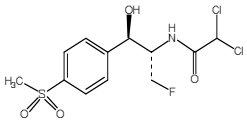
$C_{44}H_{59}N_5O_8$ Mol.Wt.: 785.99

A fluorescent N-Formyl-peptide receptor antagonist.

Johansson B, Wymann MP, Holmgren-Peterson K, Magnusson KE. J Cell Biol. 121:1281-1289 (1993).

5 mg **$64.00**
10 mg **$108.80**
25 mg **$192.00**

F4556 — **Florfenicol**



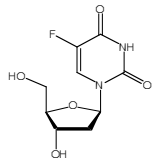
$C_{12}H_{14}Cl_2FNO_4S$ Mol. Wt.: 358.21 [73231-34-2]

A potent broad spectrum antimicrobial agent.

Priebe S, Schwarz S. Antimicrob Agents Chemother. 47:2703-5 (2003).

1 g **$43.20**
5 g **$123.20**
10 g **$184.80**

F4557 — **Floxuridine**



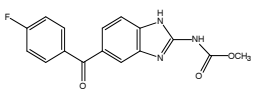
$C_9H_{11}FN_2O_5$ Mol. Wt.: 246.19 [50-91-9]

Antitumor agent used in chemotherapy of colon cancer.

Bilchik AJ, Wood TF, Chawla SP, Rose DM et al. Clin Colorectal Cancer 1:36-42 (2001).

500 mg **$119.30**
1 g **$196.60**

F4679 — **Flubendazole**



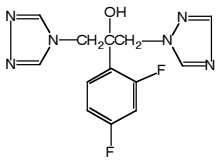
$C_{16}H_{12}FN_3O_3$ Mol. Wt.: 313.28 [31430-15-6]

A potent broad spectrum anthelmintic.

William S, Guirguis F, Nessim NG. Arzneimittelforschung. 53:532-7 (2003).

10 g **$55.50**
25 g **$120.80**
100 g **$369.60**

F4682 — **Fluconazole**



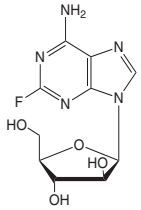
$C_{13}H_{12}F_2N_6O$ Mol. Wt.: 306.27 [86386-73-4]]

A triazole broad-spectrum antifungal agent. Effective against *Candida spp*., cryptococcus neoformans and dermatophytes.

Vincent-Ballereau FN, Patey ON, Lafaix C. Pharm Weekbl Sci. 13:45-57 (1991).
Martin MV. J Antimicrob Chemother. 44:429-37 (1999).

500 mg **$36.90**
1 g **$58.40**
5 g **$223.00**

F4781 — **Fludarabine**



2-Fluoroadenine-9-b-D-arabinofuranoside

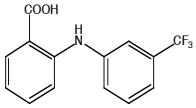
$C_{10}H_{12}FN_5O_4$ Mol. Wt. 285.23 [21679-14-1]

An adenosine analogue that resists deamination. This analogue shows effective antileukemic activity.

Casper ES, Mittelman A, Kelson D, Young CW. Cancer Chemother Pharmacol. 15:233-235 (1985).
Warrell RP Jr, Berman E. J Clin Oncol. 4:74-79 (1986).

5 mg **$50.00**
10 mg **$100.00**
25 mg **$185.00**

F4483 — **Flufenamic acid** (See page 11 for more information)



$C_{14}H_{10}F_3NO_2$ Mol. Wt.: 281.23 [530-78-9]

A NSAID found to be a reversible gap junction blocker.

Harks, EG., de Roos, AD., Peters, PH., et al. J. Pharm. Exptal Ther. 298:1033-1041 (2001).

10 g **$16.30**
50 g **$54.30**

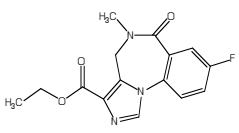
F4580 — **FluM1 A2 (58-66)**

Gly-Ile-Leu-Gly-Phe-Val-Phe-Thr-Leu

$C_{49}H_{75}N_9O_{11}$ Mol.Wt.: 966.2

1 mg **$35.20**
2 mg **$59.20**
5 mg **$105.60**

F4681 — **Flumazenil**



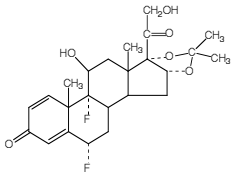
$C_{15}H_{14}FN_3O_3$ Mol. Wt.: 303.29 [78755-81-4]

A benzodiazepine antagonist.

Jung HY, Sohn YH, Mason A et al. Clin Neurophysiol.115:325-9 (2004).

25 mg **$61.60**
100 mg **$246.40**

F4582



Fluocinolone Acetonide

$C_{24}H_{30}F_2O_6$ Mol. Wt.: 452.49 [67-73-2]

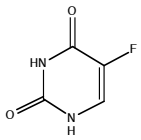
A synthetic glucocorticoid with anti-inflammatory and anti-carcinogenesis properties. It inhibits tumor promotion in mouse skin when applied with a promoting agent at the early stages of promotion. It was also found to inhibit induction of early growth response-1 (Egr-1) gene in SENECAR mice and phospholipid peroxidation in CD1 mice which were exposed to 12-O-tetradecanoyl phorbol-13-acetate (TPA) treatment.

Digiovanni J, kruszewski FH, Chenicek KJ. Carcinogenesis. 9:1445-50 (1988).
Riggs PK, Rho O, Digiovanni J. Mol Carcinog. 27:247-51 (2000).
Beckman JK, Bagheri F, Ji C, Blair IA, Marnett LJ. Carcinogenesis. 15:2937-44 (1994).

25 mg	$20.10
100 mg	$52.50
250 mg	$104.50
1 g	$289.00

F4480

RT



5-Fluorouracil

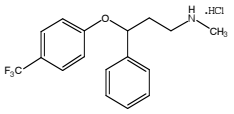
$C_4H_3FN_2O_2$ Mol.Wt.: 130.08 m.p.: 280-282°C [51-21-8]

A pyrimidine antimetabolite. Prevents the biosynthesis of thymidine during DNA synthesis.

Ananthan S, In "Cancer Chemotherapeutic Agents" Foye WO, Ed., ACS Professional Ref. pp.49-54, (1995).

1 g	$18.40
5 g	$64.60

F4780



Fluoxetine hydrochloride

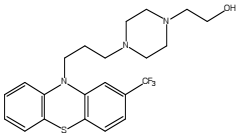
$C_{17}H_{18}F_3NO.HCl$ Mol. Wt.: 345.79 [59333-67-4]

A specific serotonin uptake inhibitor. It was found to exert inhibitory or stimulating effects on T-lymphocyte proliferation depending on the concentration.

Wong DT et al. Life Sci. 15:471 (1974).
Edgar VA, Genaro AM, Cremaschi G, Sterin-Borda L. Cell Signalling 10:721-726 (1998).

1 g	$34.00
5 g	$135.60

F4584



Fluphenazine

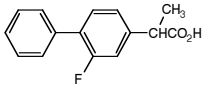
$C_{22}H_{26}F_3N_3OS$ Mol. Wt.: 437.52 [69-23-8]

A neuroleptic drug that is a dopamine receptor antagonist. It also acts as an antimutagen, which may be explained by its ability to reduce the level of free radicals.

Gasiorowski K, Brokos B, Szyba K et al. Mutagenesis. 16:31-8 (2001).
Nasello AG, Gidali D, Felicio LF. Pharmacol Biochem Behav. 75:895-901 (2003).

1 g	$47.10
5 g	$95.20
25 g	$392.00

F4481



Flurbiprofen (See page 23 for more information)

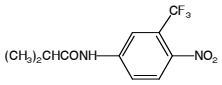
$C_{15}H_{13}FO_2$ Mol.Wt.: 244.26 m.p. 114-117°C [5104-49-4]

A non-steroidal anti-inflammatory agent with potential for colon cancer chemoprevention.

Wechter WJ, Kantoci D, Murray ED, et al. Cancer Res.,57:4316-4324 (1997)

1 g	$26.90
5 g	$97.30
25 g	$315.80

F4680



Flutamide

$C_{11}H_{11}F_3N_2O_3$ Mol. Wt.: 276.22 [13311-84-7]

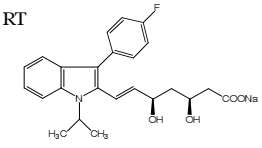
An anti-androgen with chemopreventive properties against bladder and prostate carcinogenesis. It inhibits the expression of transforming growth factor beta-1 (TGF-beta1) which is regulated by testosterone. It is also used to treat prostate cancer.

Imad S, Akaza H, Ami y, Koiso K, Ideyama Y, Takenaka T. Eur Urol. 31:360-4 (1997).
Xie B, Tsao SW, Wong YC, Breast Cancer Res Treat. 58:227-39 (1999).
Fossa SD, Slee PH, Brausi M et al. J Clin Oncol. 19 :62-71 (2001).

1 g	$23.20
5 g	$76.90

F4482

RT



Fluvastatin sodium (See page 26 for more information)

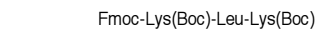
$C_{24}H_{25}FNNaO_4$ Mol. Wt.: 433.45

An anticholesterol agent. It is a HMG-CoA reductase inhibitor and antioxidant.

Sumi D, Hayashi T,Thakur NK. Atherosclerosis. 155:347-57 (2001).
Yamamoto A, Ichihara K, Hoshi K. J Pharm Pharmacol. 53:227-32 (2001).
Obata T, Ebihara A, Yamanaka Y. Biochim Biophys Acta. 1536:55-63 (2001).

10 mg	$58.60
50 mg	$219.60
100 mg	$384.30

F4856



Fmoc-Lys(Boc)-Leu-Lys(Boc)

$C_{26}H_{35}N_5O_7S$ Mol Wt: 809.9

1 g	$880.00

F4859 — **F-M-R-F** — **5 mg $32.00**; **10 mg $54.40**; **25 mg $96.00**

H-Phe-Met-Arg-Phe-OH

$C_{29}H_{41}N_7O_5S$ Mol.Wt.: 599.76

F4857 — **FMRF amide** — **1 mg $48.00**

Phe-Met-Arg-Phe-NH_2

$C_{29}H_{42}N_8O_4S$ Mol.Wt.: 598.76

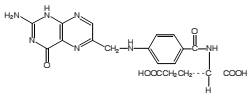
Molluscan Cardioexcitatory Peptide

F4858 — **FMRF-like peptide from Snail** — **1 mg $80.00**

pGlu-Asp-Pro-Phe-Leu-Arg-Phe-NH_2

$C_{44}H_{62}N_{11}O_{10}$ Mol.Wt.: 904.03

F5745 — **Folic Acid** — **10 g $19.40**; **50 g $80.40**

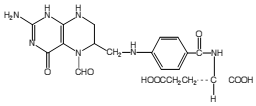


$C_{19}H_{19}N_7O_6$ Mol. Wt.: 441.40 [59-30-3]

Folate is an important cofactor in the transfer of one-carbon moieties and plays a major role in the formation of S-adenosyl methionine, the universal methyl donor, as well as in the synthesis and repair of DNA and RNA. Studies show that folate supplementation supressess colorectal carcinogenesis and reduces the risk of pancreatic and breast cancer.

Choi SW, Mason JB. J Nutr. 130:129-32 (2000).
Song J, Sohn KJ, Medline A, Ash C, Gallinger S, Kim YI. Cancer Res. 60:3191-9 (2000).
Kim YI. Nutr. Rev. 57:314-21 (1999).

F5846 — **Folinic Acid Calcium Salt (Leucovorin)** — **25 mg $22.60**; **100 mg $62.40**; **250 mg $204.30**; **1 g $391.00**



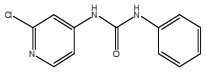
$C_{20}H_{23}N_7O_7$ Mol. Wt.: 473.44 [1492-18-8]

The active form of the B complex vitamin, Folate. Leucovorin is used as an antidote to cancer treatment drugs which have an adverse effect on folic acid levels, or in combination with chemotherapy.

Kuwa K, Sakamoto S, Sassa S et al. Anticancer Res. 19:513-42 (1999).
Petak I, Tillman DM, Houghton JA. Clin Cancer Res. 6:4432-41 (2000).

See Calcium Folinate, Pentahydrate

F5766 — **Forchlorfenuron (KT-30)** — **500 mg $53.80**; **1 g $87.40**; **5 g $336.00**

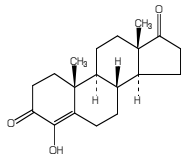


$C_{12}H_{10}ClN_3O$ Mol. Wt.: 247.68 [68157-60-8]

It is a cytokinin that promotes cell division and cell differentiation. It is used as a plant growth regulator that improves fruit size and yield.

Shudo K. Yakugaku Zasshi. 114:577-88 (1994).
Li C, Bangerth F. J Plant Physiol. 160:1059-63 (2003).

F5769 — **Formestane** — **100 mg $130.60**; **500 mg $438.10**

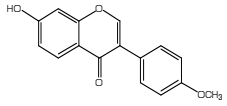


$C_{19}H_{26}O_3$ Mol. Wt.: 302.41 [566-48-3]

A steroidal aromatase inhibitor used in the treatment of postmenopausal breast cancer. It is a potential cancer chemopreventive agent for breast cancer.

Wiseman LR, Goa KL. Drugs Aging 9:292-306 (1996).
Kelloff GJ, Lubet RA, Lieberman R. Cancer Epidemiol Biomarkers Prev. 7:65-78 (1998).

F5770 — **Formononetin** — **100 mg $61.10**; **500 mg $183.10**; **1 g $284.60**

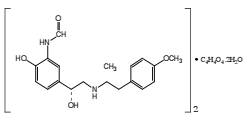


$C_{16}H_{12}O_4$ Mol. Wt.: 268.26 [485-72-3]

Natural isoflavone having estrogenic activity. It binds to hER alpha and slightly induces transcription with hER beta. It was found to inhibit lecithin peroxidation induced by superoxide anion generation by xanthine-xanthine oxidase.

Morito K, Aomori t, Hirose T et al. Biol Pharmaceutical Bull. 25:48-52 (2002).
Toda S, Shiratake Y. Phytother Res. 13:163-165 (1999).

F5868 Formoterol Fumarate



$(C_{19}H_{24}N_2O_4)_2C_4H_4O_4 2H_2O$ Mol. Wt.:840.91 [43229-80-7]

Long-acting beta2-adrenergic agent that induces apoptosis through an adrenoreceptor- and cAMP-independent, Ca^{2+}-dependent mechanism. Antiasthmatic.

Mamani-Matsuda M, Moynet D, Molimard M et al. Br J Haematol. 124:141-50 (2004).
Tashkin DP, Cooper CB. Chest.125:249-59 (2004).

10 mg	$86.30
50 mg	$369.60

F5869 N-Formyl -Met-Ala-Ser

For-Met-Ala-Ser-OH

$C_{12}H_{21}N_3O_6S$ Mol.Wt.: 335.38

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

F5870 N-Formyl-Met-Leu-Phe

For-Met-Leu-Phe-OH

$C_{21}H_{31}N_3O_5S$ Mol.Wt.: 437.6

A bacterial chemotactic peptide.

Anton P, O'Connell J, O'Connell D et al. Gut. 42:374-379 (1998).

5 mg	$25.60
10 mg	$43.20
25 mg	$76.80

F5871 N-Formyl-Met-Leu-Phe-Lys

For-Met-Leu-Phe-Lys-OH

$C_{27}H_{43}N_3O_6S$ Mol.Wt.: 565.74

5 mg	$25.60
10 mg	$43.20
25 mg	$76.80

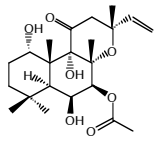
F5872 N-Formyl-Nle-Leu-Phe-Nle-Tyr-Lys

For-Nle-Leu-Phe-Nle-Tyr-Lys-OH

$C_{43}H_{65}O_7N_9$ Mol.Wt.: 824.04

5 mg	$51.20
10 mg	$86.40
25 mg	$153.60

F5668 Forskolin



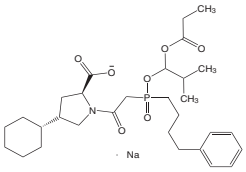
$C_{22}H_{34}O_7$ Mol. Wt.: 410.50 [66575-29-9]

Activator of adenylate cyclase.

Laurenza A et al. Trends Pharm Sci. 10:442-7 (1989).
Barber R, Goka TJ. J Cyclic Nucleotide Protein Phos. Res. 10:23-9 (1985).

1 mg	$32.40
5 mg	$99.70
10 mg	$153.70

F5773 Fosinopril sodium



$C_{30}H_{45}NO_7P$ Na Mol. Wt. 585.64 [88889-14-9]

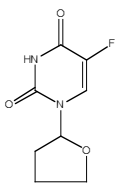
An angiotensin-converting enzyme inhibitor shown to protect the organs in sinoaortic-denervated rats.

Duchin KL, Waclawski AP, Tu JI et al. J Clin Pharmacol. 31:58-64 (1991).
Tao X, Liu GL. Yao Xue Xue Bao. 38:743-747 (2003).

25 mg	$35.00
100 mg	$120.00
250 mg	$240.00

F7657 Ftorafur

RT



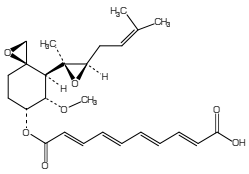
5-Fluoro-1-(tetrahydro-2-furyl)uracil, tegafur
$C_8H_9FN_2O_3$ Mol. Wt.: 200.17 m.p. 167-169°C [17902-23-7]

A clinically used antitumor agent related to 5-fluorouracil. Often used in combination with other antineoplastic drugs.

Zhuk R. Adv Exp Med Biol. 431:677-80 (1998).
Ron IG, Lotan A, Inbar MJ, Chaitchik S. Anticancer Drugs. 7:649-54 (1996).

250 mg	$41.60
1 g	$111.70

F8048 — **Fumagillin** — 1 mg $78.00; 5 mg $320.00



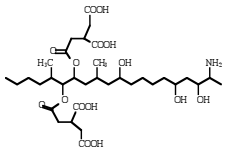
Amebacilin, fugillin, fumadil B

$C_{26}H_{34}O_7$ Mol. Wt.: 458.54 [23110-15-8]

Antibiotic produced by *Aspergillus fumigatus*. It is an antiprotozoal. Commonly used to control nosema apis in honey bees. It was found to have antineoplastic activity. It is an inhibitor of angiogenesis.

Stepiel H, Grochal M, Zielinski KW. Journal of Endocrinology. 150:99-106 (1996).
Rodriguez-Nieto S, Medina MA, Quesada AR. Anticancer Res. 21:3457-3460 (2001).

F8149 — **Fumonisin B1** — 1 mg $112.00; 5 mg $504.00



$C_{34}H_{59}NO_{15}$, F.W. 721.8 [116355-83-0]

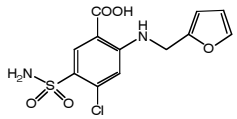
Mycotoxin from Fusarium moniliforme. Induces apoptosis in rat and monkey kidney cells.

Wang W, Jones C, Ciacci-Zanella J et al. Proc. Natl Acad Sci. USA. 93:3461-5 (1996).
Tolleson WH, Dooley KL, Sheldon WG. Adv. Exp Med Biol. 392:237-50 (1996).

F8150 — **Fumonisin B2** — 1 mg $210.00; 5 mg $876.00

$C_{34}H_{59}NO_{14}$, F.W. 705.8, [116355-84-1]

F8270 — **Furosemide** — 5 g $30.80; 10 g $51.80; 25 g $98.60



$C_{12}H_{11}ClN_2O_5S$ Mol. Wt.: 330.74 [54-31-9]

A potent diuretic; antihypertensive. Found to have anti-inflammatory effect through inhibition of cytokines and tumor necrosis factor-alpha.

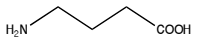
Prandota J. Am J Ther. 9:317-28 (2002).
Cavaliere F, Masieri S. Curr Drug Targets. 3:197-201 (2002).

G0000 — **G250.A2** — 1 mg $35.20; 2 mg $59.20; 5 mg $105.60

His-Leu-Ser-Thr-Ala-Phe-Ala-Arg-Val

$C_{45}H_{72}N_{14}O_{12}$ Mol.Wt.: 1001.16

G0048 — **GABA, Gamma-amino butyric acid** — 10 g $14.70; 25 g $22.00; 100 g $36.70



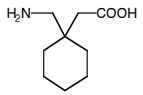
γ-Amino-n-butyric acid

$C_4H_9NO_2$ Mol. Wt.: 103.12 [56-12-2]

The major inhibitory neurotransmitter in the mammalian central nervous system.

Chebib M, Johnston GA. Clin Exp Pharmacol Physiol 26:937-40 (1999).

G0106 — **Gabapentin** — 10 mg $55.50; 50 mg $221.80; 250 mg $800.80



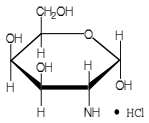
Neurontin

$C_9H_{17}NO_2$ Mol. Wt.: 171.24 [60142-96-3]

An antiepileptic agent that is chemically related to γ-aminobutyric acid (GABA).

Goa KL, Sorkin EM. Drugs. 46:409-27 (1993).

G0144 — **Galactosamine hydrochloride** — 500 mg $36.70; 1 g $46.10; 5 g $219.00



$C_6H_{14}ClNO_5$ Mol. Wt.: 215.63

An aminosugar isolated from chondroitin sulfate.

It is an inducer of apoptosis in hepatocytes.

Leist M, Gantner F, Jilg S, Wendel A. J Immunol. 154:1307-16 (1995).
Itokazu Y, Segawa Y, Inou N, Omata T. Biol Pharm Bull. 22:127-30 (1999).

G0146 — **Galanin, human** — 1 mg $320.00

Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-His-Ala-Val-Gly-Asn-His-Arg-Ser-Phe-Ser-Asp-Lys-Asn-Gly-Leu-Thr-Ser

$C_{139}H_{210}N_{42}O_{43}$ Mol.Wt.:3157.44

Galanin is a neuropeptide found to be associated with Alzheimer's disease.

Counts SE, Perez SE, Ginsber SD et al. Mol Interv. 3:137-56 (2003).

G0147 — Galanin, porcine

Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-His-Ala-Ile-Asp-Asn-His-Arg-Ser-Phe-His-Asp-Lys-Tyr-Gly-Leu-Ala-NH_2

$C_{146}H_{213}N_{43}O_{40}$ Mol.Wt.:3210.55 [88813-36-9]

1 mg $320.00

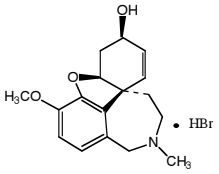
G0148 — Galanin, rat

Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-His-Ala-Ile-Asp-Asn-His-Arg-Ser-Phe-Ser-Asp-Lys-His-Gly-Leu-Thr-NH_2

$C_{141}H_{211}N_{43}O_{41}$ Mol.Wt.:3164.48

1 mg $358.40

G0246 — Galanthamine Hydrobromide



$C_{17}H_{21}NO_3$.HBr Mol. Wt.: 368.27 [1953-04-4]

A cholinesterase inhibitor used in the treatment of Alzheimer's disease. It potentiates nicotine-evolved increases in intracellular Ca^{2+} and [3H]noradrenaline release.

Sweeney JE, Puttfarcken PS, Coyle JT. Pharmacol Biochem Behav. 34:129-37 (1989).
Lilienfeld S. CNS Drug Rev. 8:159-76 (2002).
Dajas-Bailador FA, Heimala K, Wonnacott S. Mol Pharmacol. 64:1217-26 (2003).

5 mg $24.70
25 mg $67.80
100 mg $234.10

G0044 — Galantide

H-Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH_2

$C_{104}H_{151}N_{25}O_{26}S$ Mol.Wt.: 2199.58

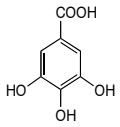
Acts as a reversible antagonist to the neuropeptide galanin.

Bartfai T, Bedecs K, Land T et al. Proc Natl Acad Sci U S A. 88:10961-10965 (1991).
Lindskog S, Ahren B, Land T, et al. Eur J Pharmacol. 210:183-188 (1992).

0.5 mg $121.60
1 mg $206.40
2.5 mg $364.80

G0145 — Gallic acid

RT



3,4,5-Trihydroxybenzoic acid [149-91-7]

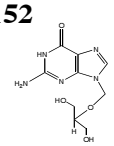
$C_7H_6O_5$ Mol. Wt.: 170.12

Induces apoptosis in human lung cancer cells. It is cytotoxic to PC14 AND MKN45 human cancer cell lines.

Ohno Y, Fukuda K, Takamura G, Toyota M. Anticancer Drugs.10:845-51 (1999).
Lee IR, Yang MY. Arch Pharm Res. 17:476-9 (1994).

10 g $18.10
100 g $27.00
500 g $69.30

G0152 — Ganciclovir



$C_9H_{13}N_5O_4$ Mol. Wt.: 255.23

Nucleoside analog used to disrupt DNA replication.

Matthews T, Boehmw R. Rev. Infect Dis 10 Suppl 3:S490-4 (1988).

50 mg $104.00
100 mg $192.00

G0175 — Gastric Inhibitory Peptide (GIP), human

H-Tyr-Ala-Glu-Gly-Thr-Phe-Ile-Ser-Asp-Tyr-Ser-Ile-Ala-Met-Asp-Lys-Ile-His-Gln-Gln-Asp-Phe-Val-Asn-Trp-Leu-Leu-Ala-Gln-Lys-Gly-Lys-Lys-Asn-Asp-Trp-Lys-His-Asn-Ile-Thr-Gln-OH

$C_{226}H_{338}N_{60}O_{66}S$ Mol.Wt.: 4983.64

0.5 mg $121.60
1 mg $206.40
2.5 mg $364.80

G0180 — Gastrin I, human

pGlu-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Met-Asp-Phe-NH_2

$C_{130}H_{204}N_{38}O_{31}S_2$ Mol Wt: 2098.22

A growth factor for established tumors that stimulates the growth of gastric mucosa.

Watson SA, Morris TM, Varro A et al. Gut. 45:812-817 (1999).
Konda Y, Kamimura H, Yokota H et al. Am J Physiol. 277:G773-G784 (1999).

1 mg $121.60
2 mg $206.40
5 mg $364.80

G0178 — Gastrin, chicken

H-Phe-Leu-Pro-His-Val-Phe-Ala-Glu-Leu-Ser-Asp-Arg-Lys-Gly-Phe-Val-Gln-Gly-Asn-Gly-Ala-Val-Glu-Ala-Leu-His-Asp-Phe-Tyr-Pro-Asp-Trp-Met-Asp-Phe-NH_2

$C_{190}H_{265}N_{47}O_{51}S_1$ Mol.Wt.: 4055.58

0.5 mg $211.20
1 mg $358.40
2.5 mg $633.60

G0179 — Gastrin-1, rat

pGlu-Arg-Pro-Pro-Met-Glu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Met-Asp-Phe-NH_2

$C_{94}H_{128}N_{22}O_{31}S_2$ Mol.Wt.: 2126.32

0.5 mg $121.60
1 mg $206.40
2.5 mg $364.80

G0181

Gastrin Releasing Peptide, human

1 mg $240.00

Val-Pro-Leu-Pro-Ala-Gly-Gly-Gly-Thr-Val-Leu-Thr-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-Trp-Ala-Val-Gly-His-Leu-Met-NH_2

$C_{130}H_{204}N_{38}O_{31}S_2$ Mol Wt: 2859.40

GRP regulates tumor proliferation and metastasis in a number of gastrointestinal cancers.

Levine L, Licci JA 3rd, Townsend CM Jr et al. J Am Coll Surg. 196:898-904 (2003).

G0182

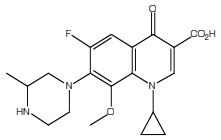
Gastrin Releasing Peptide, porcine

1 mg $240.00

Ala-Pro-Val-Ser-Val-Gly-Gly-Gly-Thr-Val-Leu-Ala-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-Trp-Ala-Val-Gly-His-Leu-Met-NH_2

$C_{126}H_{198}N_{38}O_{31}S_2$ Mol Wt: 2805.40

G0278



Gatifloxacin (See page 13 for more information)

500 mg $58.40

1 g $89.20

5 g $272.20

$C_{19}H_{22}FN_3O_4$ Mol. Wt.: 375.39 [112811-59-3]

A fluoroquinolone that has an 8-methoxy group, which contributes to its selectivity as an antibacterial agent.

Fukuda H, Kishii R. Takei M, Hosaka M. Antimicrob Agents Chemother. 45:1645-53 (2001).

G0096

G-A-Y

5 mg $38.40

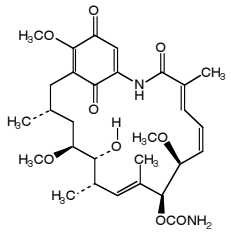
10 mg $65.60

25 mg $115.20

H-Gly-Ala-Tyr-OH

$C_{14}H_{19}N_3O_5$ Mol.Wt.: 309.18

G1646



Geldanamycin

100 µg $25.00

5 x 100 µg $98.00

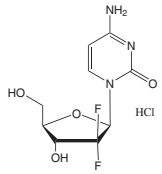
1 mg $140.00

$C_{29}H_{40}N_2O_9$ Mol. Wt.: 560.64 [30562-34-6]

A benzoquinoid ansamycin antibiotic having antitumor activities. It suppresses DNA replication by inhibiting c-myc gene expression in lymphoblastoma L5178Y cells. It inhibits tyrosine kinases and induces increased p53 protein involved in cell-cycle arrests of human ovarian tumor cells. It inhibits the 90 kDa heat shock protein that regulates cell signal transduction, telomerase activity, and induces apoptosis.

Yamaki H, Iguchi-Ariga SM, Ariga H. J Antibiot (Tokyo). 42:604-10 (1989).
McIlwrath AJ, Brunton VG, Brown R. Cancer Chemother Pharmacol. 37:423-8 (1996).
Villa R, Folini M, Porta CD et al. Carcinogenesis. 24:851-9 (2003).
Kim S, Kang J, Hu W. Int J Cancer. 103:352-9 (2003).

G1745



Gemcitabine Hydrochloride

25 mg $98.00

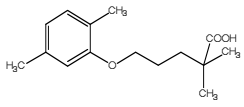
100 mg $250.00

$C_9H_{12}ClF_2N_3O_4$ Mol. Wt. 299.66 [122111-03-9]

A deoxycytidine-analogue antimetabolite that has demonstrated activity against non-small cell lung cancer, pancreatic cancer, ovarian cancer, and breast cancer.

Hui YF, Reitz J. Am J Health Syst Pharm. 54:162-170 (1997).

G1749



Gemfibrozil

5 g $40.70

25 g $135.60

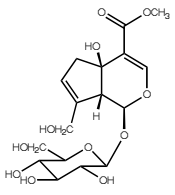
2,2-Dimethyl-5-(2,5-xylyoxy) valeric acid

$C_{15}H_{22}O_3$ Mol. Wt.: 250.33 [25812-30-0]

A hyperlipidemic agent that elevates plasma HDL and lowers triglycerides and LDL by stabilizing apoA-I mRNA transcripts. It was found to inhibit inducible nitric oxide synthase by inhibiting the activation of nuclear factor-kappaB, activator protein-1 and CCAAT/enhancer-binding proein beta.

Goto D, Okimoto T, Ono M et al. Arter. Throm Vas Biol. 17:2707-1712 (1997).
Pahan K, Jana M, Liu X et al. J Biol Chem. 277:45984-45991 (2002).

G1650



Geniposide

10 mg $78.70

25 mg $169.50

100 mg $542.10

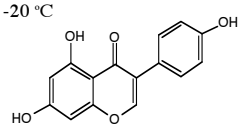
$C_{17}H_{24}O_{10}$ Mol. Wt.: 388.37

Natural product isolated from the fruit of Gardenia. It was found to induce increased activity of phase II detoxifying enzymes, inhibit tumor promotion, and induce apoptosis in rat C6 glioma cells.

Wang CJ, Wang SW, Lin JK. Cancer Letters. 60:95-102 (1991).
Lee MJ, Hsu JD, Wang CJ. Anticancer Res. 15:411-416 (1995).
Chang YC, Tseng TH, Lee MJ. Chemico-Biol Interactions. 141: 243-257 (2002).

G1652

-20 °C



Genistein (See page 13 for more information)

$C_{15}H_{10}O_5$ Mol. Wt.: 270.2 [446-72-0]

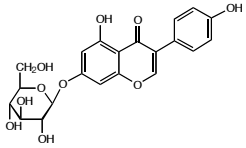
An isoflavone with anticancer, antiproliferative, and chemopreventive effects.

It induces cell differentiation and inhibits metabolic activation of benzo[a]pyrene.

Chae Y-H, Ho DK, Cassady JM et al. Chem. Biol. Int. 82:181-193 (1992).
Jing Y, Waxman S. Anticancer Res. 15:1147-1152 (1995).

100 mg	$47.00
500 mg	$169.80
1 g	$270.90

G1653



Genistin

$C_{21}H_{20}O_{10}$ Mol. Wt.: 432.38 [529-59-9]

Glucoside of Genistein exhibiting cytotoxic effects in vitro. Genistin is an inhibitor of protein tyrosine kinase and DNA toposomerase.

Shaoquan *et. al.* J of Nutri. 129: 1291-1297 (1999).

1 mg	$35.00
5 mg	$120.00

G1658

Gentamycin sulfate

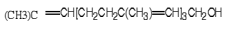
[1405-41-0]

Antibiotic from fermentation.

Black J et al. Antimicrob. Ag. Chemother. 138-137 (1963).

500 mg	$29.40
1 g	$44.00
5 g	$183.10
10 g	$292.80

G1869



Geranylgeraniol

$C_{20}H_{34}O$ FW 290.5 [24034-73-9]

A polyprenyl alcohol found to induce apoptosis in various human tumor cell lines.

Ohizumi H, Masuda Y, Yoda M et al. Abticancer Res. 17:1051-7 (1997).
Yaguchi M, Miyazawa K, Katagiri T et al. Leukemia 11:779-87 (1997).

25 mg	$75.00
100 mg	$214.50

G2368

H-Gly-Phe-Arg-OH

G-F-R

$C_{17}H_{26}N_6O_4$ Mol.Wt.: 378.4

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

G2868

Gly-Ser-Ser(n-octanoyl)-Phe-Leu-Ser-Pro-Glu-His-Gln-Arg-Val-Gln-Gln-Arg-Lys-Glu-Ser-Lys-Lys-Pro-Pro-Ala-Lys-Leu-Gln-Pro-Arg

Ghrelin, human

$C_{149}H_{249}N_{47}O_{42}$ Mol Wt: 3370.9

A gastric peptide hormone that regulates growth hormone secretion. It has been shown to exert MAPK-mediated proliferogenic and antiapoptotic effects in cultured human adrenal zona glomerulosa cells.

Mazzocchi G, Neri G, Rucinski M et al. Peptides. 25:1269-77 (2004).

1 mg	$224.00
5 mg	$768.00

G2869

Gly-Ser-Ser(n-octanoyl)-Phe-Leu-Ser-Pro-Glu-His-Gln-Lys-Ala-Gln-Gln-Arg-Lys-Glu-Ser-Lys-Lys-Pro-Pro-Ala-Lys-Leu-Gln-Pro- Arg

Ghrelin, rat

$C_{147}H_{245}N_{45}O_{42}$ Mol Wt: 3314.8

1 mg	$224.00
5 mg	$768.00

G2870

H-Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu-NH_2

GHRF (1-44), human

$C_{215}H_{358}N_{72}O_{66}S_1$ Mol.Wt.: 5039.7 [83930-13-6]

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

G2874

H-His-Ala-Asp-Ala-Ile-Phe-Thr-Ser-Ser-Tyr-Arg-Arg-Ile-Leu-Gly-Gln-Leu-Tyr-Ala-Arg-Lys-Leu-Leu-His-Glu-Ile-Met-Asn-Arg-Gln-Gln-Gly-Glu-Arg-Asn-Gln-Glu-Gln-Arg-Ser-Arg-Phe-Asn-OH

GHRF, rat

$C_{225}H_{361}N_{77}O_{66}S$ Mol.Wt.: 5232.93

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

G2871

H-Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Asn-Arg-Gln-Gln-Gly-Glu-Arg-Asn-Gln-Glu-Gln-Gly-Ala-Lys-Val-Arg-Leu-NH_2

GHRF, bovine

$C_{220}H_{366}N_{72}O_{66}S_1$ Mol.Wt.: 5107.88

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

G2873

GHRF, ovine

H-Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Ile-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Asn-Arg-Gln-Gln-Gly-Glu-Arg-Asn-Gln-Glu-Gln-Gly-Ala-Lys-Val-Arg-Leu-NH_2

$C_{221}H_{368}N_{72}O_{66}S_1$ Mol.Wt.: 5121.9

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

G2872

GHRF, mouse

H-His-Val-Asp-Ala-Ile-Phe-Thr-Thr-Asn-Tyr-Arg-Lys-Leu-Leu-Ser-Gln-Leu-Tyr-Ala-Arg-Lys-Val-Ile-Gln-Asp-Ile-Met-Asn-Lys-Gln-Gly-Glu-Arg-Ile-Gln-Glu-Gln-Arg-Ala-Arg-Leu-Ser-OH

$C_{220}H_{365}N_{69}O_{64}S_1$ Mol.Wt.: 5032.85

0.5 mg	$211.20
1 mg	$358.40
2.5 mg	$633.60

G2968

GHRP-2

H-D-Ala-D-2-Nal-Ala-Trp-D-Phe-Lys-NH_2

$C_{45}H_{54}O_6N_9$ Mol.Wt.: 818.0

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

G2969

GHRP-6

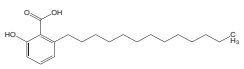
H-His-D-Trp-Ala-Trp-D-Phe-Lys-NH_2

$C_{46}H_{56}N_{12}O_6$ Mol.Wt.: 873.04

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

G3352

Ginkgolic acid (13:0)



$C_{20}H_{32}O_3$ Mol. Wt. 320.47

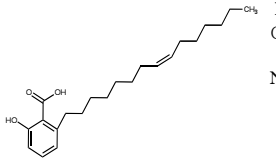
Isolated from ginkgo sarcotestas, Ginkgolic acid inhibits growth of tumor cells and normal cells in vitro.

Yang X, Qian Z, Chen J et al. Zhong Yao Cai. 27:40-42 (2004).

1 mg	$350.00
5 mg	$800.00

G3353

Ginkgolic acid (15:1)



Romanicardic acid

$C_{22}H_{34}O_3$ Mol. Wt.: 346.50

Natural product isolated from ginkgo biloba.

1 mg	$150.00
5 mg	$500.00

G3351

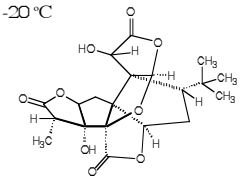
Ginkgolic acids Mixture

5 mg	$100.00
25 mg	$380.00

G3354

Ginkgolide A

-20 °C



$C_{20}H_{24}O_9$ Mol. Wt.: 408.40 [15291-75-5]

One of a group of cage molecules isolated from the leaves of the Ginkgo biloba tree. A highly active platelet-activating factor (PAF) antagonist. A potential therapeutic agent in a variety of immunological and inflammatory disorders.

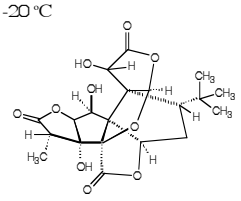
Braquet P, Esanu A, Buisine E et al. Medicinal Res. Reviews 1:295-355 (1991).
Wada K, Sasaki K, Miura K et al. Biol. Pharm. Bull. 16:210-212 (1993).

10 mg	$32.20
25 mg	$72.00
50 mg	$104.00

G3355

Ginkgolide B

-20 °C



$C_{20}H_{24}O_{10}$ Mol. Wt.: 424.40 [15291-77-7]

One of a group of cage molecules isolated from the leaves of the Ginkgo biloba tree. A highly active platelet-activating factor (PAF) antagonist. A potential therapeutic agent in a variety of immunological and inflammatory disorders.

Braquet P, Esanu A, Buisine E et al. Medicinal Res. Reviews. 11:295-355 (1991).
Brochet B, Guinot P, Orgozo JM et al. Psychiatry. 58:360-362 (1995).
Cheng D, Chen W. Chin. Med. J. 109:881-884 (1996).

10 mg	$56.20
25 mg	$131.30
50 mg	$239.80

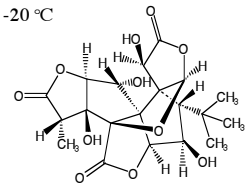
G3356 **Ginkgolide AB** **25 mg $36.10**

-20 °C A mixture of Ginkgolide A and Ginkgolide B. **50 mg $67.40**

Braquet P, Esanu A, Buisine E et al. Medicinal Res. Reviews 11:295-355 (1991).

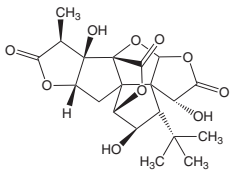
G3357 **Ginkgolide C** **10 mg $108.50**

-20 °C $C_{20}H_{24}O_{11}$ Mol. Wt.: 440.40 **25 mg $237.30**



Natural product from Ginkgo Biloba. **50 mg $406.60**

G3359 **Ginkgolide J** **1 mg $150.00**



$C_{20}H_{24}O_{10}$ Mol. Wt. 424.40 [107438-79-9] **5 mg $550.00**

Found in Ginkgo biloba, Ginkgolide J was found to reduce apoptotic damage in cultured chick embryonic neurons.

Ahlemeyer B, Krieglstein J. Pharmacopsychiatry. 36 Suppl 1:S8-14 (2003).

G3358 **Ginkgolides** **100 mg $76.80**

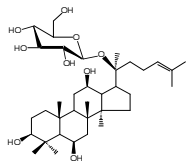
-20 °C Mixture of Ginkgolides A, B and C. **500 mg $239.80**

1 g $319.80

Ginsenosides (See page 15 for more information)

Ginsenosides are active ingredients isolated from the oriental herb, ginseng. They are steroidal saponins. Many ginsenosides have been found to have anticancer properties against tumor cell lines and tumor growth. Others have been shown to have CNS effects ranging from protecting neurons from ischemic damage to preventing scopolamine-induced memory deficits. The following is a complete list of ginsenosides related compounds.

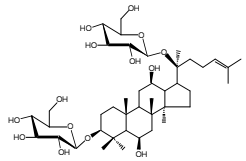
G3460 **Ginsenoside F1** **1 mg $54.30**



$C_{36}H_{62}O_9$ Mol. Wt.: 638.87 **5 mg $135.60**

10 mg $237.30

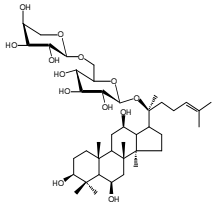
G3461 **Ginsenoside F2** **1 mg $54.30**



$C_{42}H_{72}O_{14}$ Mol. Wt.: 801.01 **5 mg $135.60**

10 mg $237.30

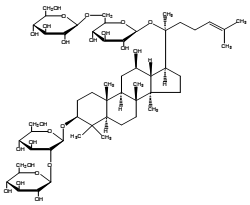
G3462 **Ginsenoside F3** **1 mg $54.30**



$C_{41}H_{70}O_{13}$ Mol. Wt.: 770.99 **5 mg $135.60**

10 mg $237.30

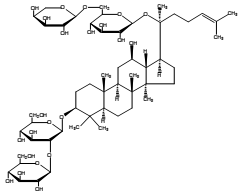
G3454 **Ginsenoside Rb1**



$C_{54}H_{92}O_{23}$ Mol. Wt.: 1109.29

5 mg	$92.20
10 mg	$156.00
25 mg	$305.00

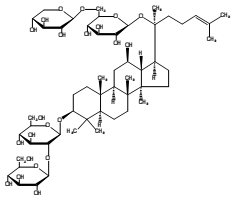
G3553 **Ginsenoside Rb2**



$C_{53}H_{90}O_{22}$ Mol. Wt.: 1079.27

5 mg	$169.50
10 mg	$291.50
25 mg	$582.80

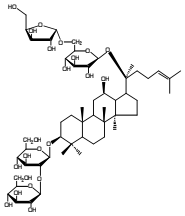
G3554 **Ginsenoside Rb3**



$C_{53}H_{90}O_{22}$ Mol. Wt.: 1079.27

5 mg	$104.80
10 mg	$178.70
25 mg	$357.30

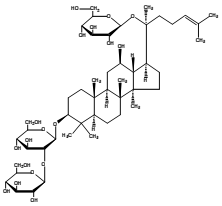
G3455 **Ginsenoside Rc**



$C_{53}H_{90}O_{22}$ Mol. Wt.: 1079.27

1 mg	$54.30
5 mg	$135.60
10 mg	$237.30

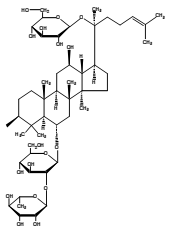
G3456 **Ginsenoside Rd**



$C_{48}H_{82}O_{18}$ Mol. Wt.: 947.15

1 mg	$54.30
5 mg	$135.60
10 mg	$237.30

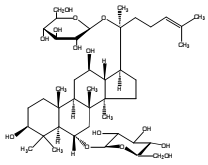
G3457 **Ginsenoside Re**



$C_{49}H_{84}O_{17}$ Mol. Wt.: 945.18

1 mg	$54.30
5 mg	$135.60
10 mg	$237.30

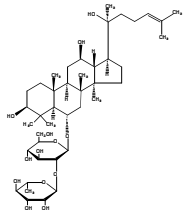
G3458 **Ginsenoside Rg1**



$C_{42}H_{72}O_{14}$ Mol. Wt.: 801.01

5 mg	$92.20
10 mg	$156.00
25 mg	$305.00

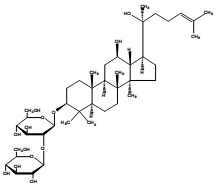
G3459 **Ginsenoside Rg2**



$C_{42}H_{72}O_{13}$ Mol. Wt.: 785.01

1 mg	$54.30
5 mg	$135.60
10 mg	$237.30

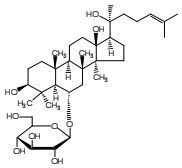
G3556 **Ginsenoside Rg3**



$C_{42}H_{72}O_{13}$ Mol. Wt.: 785.01

5 mg	$97.60
10 mg	$169.50
25 mg	$338.80

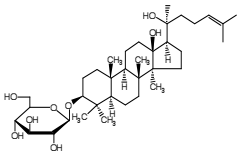
G3557 **Ginsenoside Rh1**



$C_{36}H_{62}O_9$ Mol. Wt.: 638.87

5 mg	$115.30
10 mg	$196.60
25 mg	$393.10

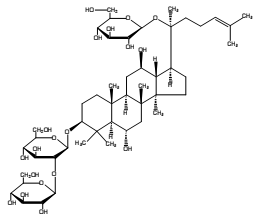
G3453 **Ginsenoside Rh2**



$C_{36}H_{62}O_8.H_2O$ Mol. Wt.: 640.89

1 mg	$47.50
5 mg	$115.30
10 mg	$196.60
25 mg	$393.10

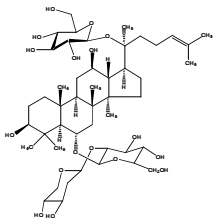
G3463 **Ginsenoside X**



$C_{48}H_{82}O_{19}$ Mol. Wt.: 963.15

1 mg	$65.10
5 mg	$169.50
10 mg	$284.60

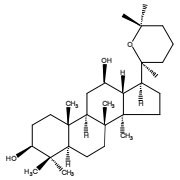
N5778 **Notoginsenoside R1**



$C_{47}H_{80}O_{17}$ Mol. Wt.: 917.13

5 mg	$94.90
10 mg	$162.70
25 mg	$318.60

P0253 **Panaxadiol**

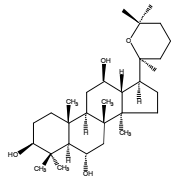


$C_{30}H_{52}O_3$ Mol. Wt.: 460.73

5 mg	$97.60
10 mg	$169.50
25 mg	$338.80

P0254

Panaxatriol

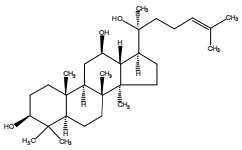


$C_{30}H_{52}O_4$ Mol. Wt.: 476.73

5 mg	$97.60
10 mg	$169.50
25 mg	$338.80

P6957

Protopanaxadiol

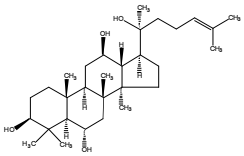


$C_{30}H_{52}O_3$ Mol. Wt.: 460.73

5 mg	$108.50
10 mg	$189.80
25 mg	$372.80

P6958

Protopanaxatriol

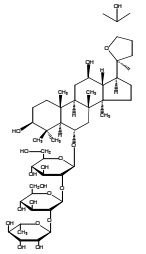


$C_{30}H_{52}O_4$ Mol. Wt.: 476.73

5 mg	$108.50
10 mg	$189.80
25 mg	$372.80

P7318

Pseudoginsenoside F11

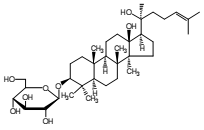


$C_{48}H_{82}O_{19}$ Mol. Wt.: 963.15

5 mg	$115.30
10 mg	$196.60
25 mg	$393.10

G3453

Ginsenoside Rh2



$C_{36}H_{62}O_8.H_2O$ Mol. Wt.: 640.89

Is a plant glycoside with a dammarane skeloton resembling a steroid skeleton. It has anti-proliferation, differentiation and chemopreventive effects in certain cancer cell types. It was found to induce apoptosis in rat glioma C6Bu-1 cells, human neuroblastoma SK-N-BE 2 cells and human ovarian cancer cell lines.

1 mg	$47.50
5 mg	$115.30
10 mg	$196.60
25 mg	$393.10

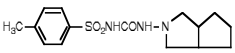
Oh M, Choi YH, Choi S, Chung H et al. Int J Oncol. Int 14:869-75 (1999).
Kim Ys, Jin Sh, Lee YH et al. Arch Parm Res. 22:448-53 (1999).
Kim YS, jin SH, Lee YH et al. Arch Pharm Res. 23:518-24 (2000).
Nakata H, Kikuchi Y, Tode T et al. Jpn J Cancer Res. 89:733-40 (1998).

Ginsenoside X

(See ginsenosides)

G4532

Gliclazide



$C_{15}H_{21}N_3O_3S$ Mol. Wt.: 323.41

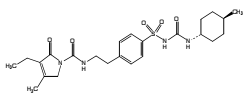
Inhibits monocyte adhesion in type 2 diabetes and increases free radical scavenging.

1 g	$24.70
5 g	$69.00
10 g	$104.80

Holmes B, Heel R, Brogden RN et al. Drugs 27:301-27 (1984).
O'Brien RC, Luo M, Balazs N, Mercuri J. J Diabetes Complications. 14:201-6 (2000).

G4535

Glimepiride



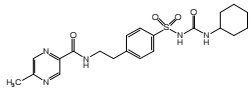
$C_{24}H_{34}N_4O_5S$ Mol. Wt.: 490.62 [93479-97-1]

A sulfonylurea hypoglycemic agent acts with the lowest ratio of insulin release to glucose release when compared with other sulfonylureas. It increases cardiac glucose uptake by enhancing protein expression of glucose transports -1 and -4 independent of insulin responsiveness.

500 mg	$30.80
1 g	$49.30
5 g	$203.30

Bahr M, von Holtey M, Muller G, Eckel. J. Endocrinology. 136:2547-53 (1995).
Schiekofer S, Rudofsky G Jr, Andrassy M et al. Diabetes Obes Metab. 5:251-61 (2003).

G4634



Glipizide

$C_{21}H_{27}N_5O_4S$ Mol. Wt.: 445.54 [29094-61-9]

An oral hypoglycemic agent that enhances insulin secretion by inhibiting its metabolic clearance. It blocks ATP-dependent K^+ channels in pancreatic b cells and brain GABA containing neurons resulting in insulin release.

Barzilai N, Groop PH, Groop, DeFronzo RA. Acta Diabetol. 32:273-8 (1995).
Brogden RN, Heel RC, Pakes GE et al. Drugs. 18:329-53 (1979).
Lamensdorf I, He L, Nechushtan A et al. Eur J Pharmacol. 388:147-54 (2000).

500 mg	$46.90
1 g	$86.30
5 g	$369.60

G4480

His-Ser-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Lys-Tyr-Leu-Asp-Ser-Arg-Arg-Ala-Gln-Asp-Phe-Val-Gln-Trp-Leu-Met-Asn-Thr

Glucagon, human

$C_{153}H_{225}N_{43}O_{49}S$ Mol Wt: 3482.78

An essential hormone that increases cAMP in hepatocytes, shown to reduce iNOS expression.

Harbrecht BG, Perpetua M, Fulmer M et al. Shock. 22:157-62 (2004).

1 mg	$264.00

G4479

H-Ala-Gln-Asp-Phe-Val-Gln-Trp-Leu-Met-Asn-Thr-OH

Glucagon (19-29), human

$C_{61}H_{89}N_{15}O_{18}S$ Mol.Wt.: 1352.54

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

G4481

H-His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH_2

Glucagon-Like Peptide I (7-36), amide, human

$C_{149}H_{229}N_{40}O_{45}$ Mol.Wt.: 3297.7

Effector in the hormonal control of insulin secretion.

Bell GI, Sanchez-Pescador R, Laybourn PJ, Najarian RC. Nature. 304:368-371 (1983).

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

G4482

H-His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-Gly-OH

Glucagon-Like Peptide I (7-37); GLP-1 (7-37)

$C_{151}H_{226}N_{40}O_{46}$ Mol.Wt.: 3337.73

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

G4483

H-His-Ala-Asp-Gly-Ser-Phe-Ser-Asp-Glu-Met-Asn-Thr-Ile-Leu-Asp-Asn-Leu-Ala-Ala-Arg-Asp-Phe-Ile-Asn-Trp-Leu-Ile-Gln-Thr-Lys-Ile-Thr-Asp-Arg-OH

Glucagon-Like Peptide II, human

$C_{171}H_{266}N_{48}O_{56}S$ Mol.Wt.: 3922.38

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

G4484

H-His-Ala-Asp-Gly-Ser-Phe-Ser-Asp-Glu-Met-Asn-Thr-Ile-Leu-Asp-Asn-Leu-Ala-Thr-Arg-Asp-Phe-Ile-Asn-Trp-Leu-Ile-Gln-Thr-Lys-Ile-Thr-Asp-OH

Glucagon-Like Peptide II, rat

$C_{166}H_{256}N_{44}O_{56}S$ Mol.Wt.: 3796.22

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

G4485

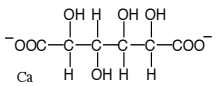
H-His-Ala-Asp-Gly-Ser-Phe-Ser-Asp-Glu-Met-Asn-Thr-Ile-Leu-Asp-Asn-Leu-Ala-Thr-Arg-Asp-Phe-Ile-Asn-Trp-Leu-Ile-Gln-Thr-Lys-Ile-Thr-Asp-OH

[Ala19] Glucagon-Like Peptide II, rat

$C_{165}H_{254}N_{44}O_{55}S$ Mol.Wt.: 3766.2

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

G4518



Glucaric acid, calcium salt

D-saccharic acid, calcium salt.

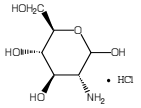
$C_6H_8O_8Ca.{}_4H_2O$. F.W 320.3 [5793-89-5]

It is a nontoxic, natural compound. One of its derivatives 1,4-GL increases detoxification of carcinogens and tumor promoters/ progressors by inhibiting β-glucuronidase and preventing hydrolysis of their glucuronides.

Walaszek Z, Szemraj J, Narog M et al. Cancer Detect Prev. 21:178-90 (1997).
Abou-Issa H, Moeschberger M, el-Masry W et al. Anticancer Res. 15:805-10 (1995).

25 g	$42.00
100 g	$120.00

G4580 Glucosamine hydrochloride



$C_6H_{13}NO_5 \cdot HCl$ Mol. Wt.: 215.6 [66-84-2]

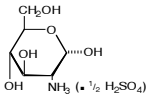
Hydrochloride salt of glucosamine, an effective treatment for osteoarthritis pain.

Lu F, Guo H. Wei Sheng Yan Jiu. 32:594-7 (2003).

25 g	$12.40
100 g	$24.70
500 g	$96.10

G4581 Glucosamine sulfate

RT



$C_6H_{13}NO_5 \cdot 1/2\ H_2SO_4$, F.W.228.2 [29031-19-4]

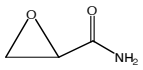
An antiarthritic agent isolated from chitin.

Setnikar I, Pacini MA, Revel L. Arzneimittelforschung. 41:542-545 (1991).

100 g	$30.00
500 g	$88.00
1 kg	$151.90

G4596 Glycidamide

-20 °C



$C_3H_5NO_2$ Mol. Wt.: 87.08

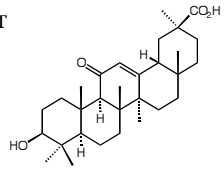
An epoxide metabolite of acrylamide. It is neurotoxic and carcinogenic.

Costa LG, Deng H, Callema CJ, Bergmark E. Toxicology 98:151-161 (1995).

10 mg	$88.20
25 mg	$142.40
100 mg	$440.50

G4597 18 β-Glycyrrhetinic Acid

RT



Enoxolone

$C_{30}H_{46}O_4$ Mol. Wt.: 470.68 m.p. 325-328°C [471-53-4]

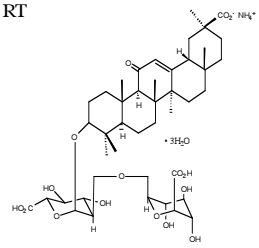
The aglycone of the triterpenoid Glyccyrrhizic acid, with potent antitumor promoting activity.

Kelloff GJ, Boone CW, Crowell JA et al. Cancer Epidemiol. Biomarkers Prev. 3:85-98 (1994).

5 g	$51.90
10 g	$86.70
25 g	$173.40

G4598 Glycyrrhizic acid, ammonium salt, trihydrate

RT



Glycyrrhizin

$C_{42}H_{65}NO_{16} \cdot 3H_2O$ Mol. Wt.: 894.03 m.p. 209-211°C [53956-04-0]

A triterpenoid saponin with antiproliferative activity. Found to inhibit arylamine-N-acetyltransferase in Klebsiella pneumoniae.

Lo HH, Yen YS, Hsieh SE, Chung JG. J. Appl. Toxicol. 17:385-390 (1997).

10 g	$23.10
25 g	$45.30

G5752 Gonadorelin Acetate

Glp-His-Tyr-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-NH_2

$C_{55}H_{75}N_{17}O_{13}$ Mol.Wt.: 1182.3 [71447-49-9]

An LHRH agonist. Diagnosis of the hypothalamic-pituitary-gonadal axis function and cryptorchism. Use in reproduction medicine and ovarian follicular cysts (veterinary medicine).

Please inquire

G5772 Goserelin Acetate

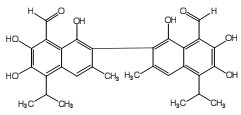
Pyr-His-Trp-Ser-Tyr-D-Ser(tBu)-Leu-Arg-Pro-AzaGly-NH_2

$C_{59}H_{84}N_{18}O_{14}$ Mol.Wt.: 1269.4 [145781-92-6]

Goserelin acetate is a potent LHRH agonist. For the treatment of advanced hormone-dependent breast cancer, advanced hormone-dependent prostate cancer, endometriosis and uterus myoma. Use in reproduction medicine.

Please inquire

G5874 Gossypol



$C_{30}H_{30}O_8$ Mol. Wt.: 518.55 [303-45-7]

A potential male anti-fertility agent from cotton that exhibits a wide spectrum of toxicity. It was found to have cytotoxic effects on human cancer cell lines. It is a potent telomerase inhibitor.

Nadakavukaren MJ, Sorensen RH, Tone JN. Cell Tissue Res. 204:293-6 (1979).
Sakesena SK, Salmonsen R, Lau IF, Chang MC. Contraception. 24:203-14 (1981).
Tuszynski GP, Cossu G. Cancer Res. 44:768-71 (1984).
Mego M. Bratisl Lek Listy. 103:378-81 (2002).

25 mg	$29.60
100 mg	$80.10
250 mg	$160.20

G6000 — **gp38**

H-Arg-Val-Thr-Ala-Ile-Glu-Lys-Tyr-Leu-Gln-Asp-Gln-Ala-Arg-Leu-Asn-Ser-Trp-Gly-Cys-Ala-Phe-Arg-Gln-Val-Cys-OH (Disulfide bridge Cys20-Cys26)

$C_{133}H_{209}N_{41}O_{38}S_2$ Mol.Wt.: 3054.53

1 mg	$211.20
2 mg	$358.40
5 mg	$633.60

G6368 — **G-P-R**

H-Gly-Pro-Arg-OH

$C_{13}H_{24}N_6O_4$ Mol.Wt.: 328.18

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

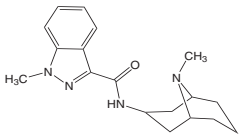
G6400 — **G-Q**

H-Gly-Gln-OH

$C_7H_{13}N_3O_4$ Mol.Wt.: 203.2

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

G6802 — **Granisetron**



$C_{18}H_{24}N_4O$ Mol Wt: 312.20 [109889-09-0]

This compound has been used to successfully treat post operative nausea.

Fujii Y, Clin Drug Investig. 26(8):427-37.(2006)
Rubenstein EB, Slusher BS, Rojas C, Navari RM. Cancer J; 12(5):341-7 (2006)

25 mg	$35.00
100 mg	$100.00
500 mg	$400.00

G6803 — **Granuliberin R**

H-Phe-Gly-Phe-Leu-Pro-Ile-Tyr-Arg-Arg-Pro-Ala-Ser-NH_2

$C_{69}H_{103}N_{19}O_{14}$ Mol.Wt.: 1422.71

A histamine-releasing peptide originally isolated from the skin of *Rana rugosa* that induces mast cell degranulation.

Kozakiewicz M, Godlewski A. Cell Mol Biol Lett. 8:727-734 (2003).
Lechago J, Crawford BG, Walsh JH. Neuroscience. 12:329-337 (1984).

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

G6817 — **Green tea polyphenols**

Extracts of green tea. Inhibitors of chemical carcinogenesis.

Wang Z Y, Khan WA, Bickers D, Mukhtar H. Carcinogenesis. 10:411-5 (1989).
Yamane T, Hagiwar, N, Tateishi M et al. Jpn. J. Cancer Res. 82:1336-39 (1991).

10 g	$56.20
20 g	$96.00
100 g	$359.70

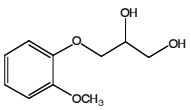
G6856 — **Growth Hormone Releasing Factor, human**

Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu-NH_2

$C_{215}H_{358}N_{72}O_{66}S$ Mol Wt: 5039.70

1 mg	$412.20

G8101 — **Guaifenesin**



$C_{10}H_{14}O_4$ Mol. Wt.: 198.22 [93-14-1]

An expectorant reported to have muscle relaxant and sedative activity. It is often used as anesthetic animal surgery.

Muir WW, Skarda RT, Sheehan W. Am J Vet Res. 39:1274-8 (1978).
Dicpinigaitis PV, Gayle YE. Chest. 124:2178-81 (2003).

25 g	$16.10
100 g	$43.20
500 g	$123.20

G8103 — **Guanylin, human**

H-Pro-Gly-Thr-Cys-Glu-Ile-Cys-Ala-Tyr-Ala-Ala-Cys-Thr-Gly-Cys-OH (Cys4-Cys12, Cys7-Cys15)

$C_{58}H_{87}N_{15}O_{21}S_4$ Mol.Wt.: 1458.68

An endogenous activator of intestinal guanylate cyclase.

Wiegand RC, Kato J, Currie MG. Biochem Biophys Res Commun. 185:812-817(1992).

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

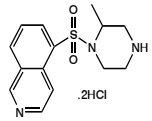
G8104 — **Guanylin, rat, mouse**

H-Pro-Gly-Thr-Cys-Glu-Ile-Cys-Ala-Tyr-Ala-Ala-Cys-Thr-Gly-Cys-OH (Cys4-Cys12, Cys7-Cys15)

$C_{60}H_{90}N_{16}O_{22}S_4$ Mol.Wt.: 1515.74

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

H0001



H7/(-)-1-(5-Isoquinolinesulfonyl)-2-methylpiperazine, Di-HCl salt

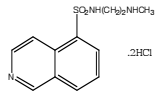
$C_{14}H_{17}N_3O_2S.2HCl$ Mol. Wt.: 364.40 [108930-17-2]

Inhibitor of PKC, cAMP-dependent kinase, and cGMP-dependent kinase.

Kawamoto S, Hidaka H. Biochem Biophys Res Comm. 125:258-64 (1984).

10 mg $82.10
25 mg $143.40

H0002



H8/ N-[2-(Methylamino)ethyl]-5-isoquinolinesulfonamide, Di-HCl Salt}

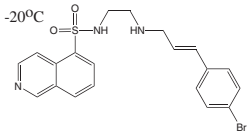
$C_{13}H_{15}N_3O_2S$. 2HCl Mol. Wt.: 338.20 [113276-94-1]

A potent inhibitor of PKA and cAMP.

Jung CS, Lee SJ, Paik SS et al. Neuroscience Lett. 282:53-6 (2000).
Rosado E, Schwartz Z, Sylvia VL et al. Biochim Biophys Acta. 1590:1-15 (2002).

5 mg $44.80
25 mg $128.80

H0003



H89/ (N-[2-[P-Bromocinnamylamino]-ethyl)-5-isoquinolinesulfonmide)

$C_{20}H_{20}BrN_3O_2S$ Mol. Wt.: 446.36 [127243-85-0]

Selective potent inhibitor of CAMP-dependent protein kinase (PKA).

Murol M, Suzuki T. Cell Signal. 5:289 (1993).

1 mg $39.20
5 mg $98.60

H0100

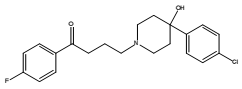
H-Tyr-Pro-Tyr-Asp-Val-Pro-Asp-Tyr-Ala-OH

HA Peptide

$C_{53}H_{67}N_9O_{17}$ Mol.Wt.: 1102.18

1 mg $64.00
2 mg $108.80
5 mg $192.00

H0142



Haloperidol

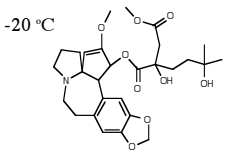
$C_{21}H_{23}ClFNO_2$ Mol. Wt.: 375.86 [52-86-8]

A typical antipsychotic, that has been shown to alter GABA transporter expression in rats. It has also been shown to induce apoptosis of neurons in the striatum and substantia nigra of rat.

Mitchell IJ, Cooper AC, Griffiths MR et al. Neuroscience. 109:89-99 (2002).
Zink M, Schmitt A, May B et al. Pharmacopsychiatry. 37:171-4 (2004).

5 g $53.80
10 g $95.20
25 g $212.80

H0169



Harringtonine

$C_{28}H_{37}NO_9$ Mol. Wt.: 531.59 [26833-85-2]

Alkaloid isolated from Cephalotaxus. Antitumor agent.

Power RG. Phytochemistry. 11:1467-1472 (1972).

5 mg $68.30
10 mg $117.80
25 mg $233.60

H0207

H-Thr-Pro-Pro-Ala-Tyr-Arg-Pro-Pro-Asn-Ala-Pro-Ile-Leu-OH

HBV core protein (128-140)

$C_{66}H_{103}N_{17}O_{17}$ Mol.Wt.: 1406.64

0.5 mg $38.40
1 mg $65.60
2.5 mg $115.20

H1643

H-His-Ser-Asp-Ala-Ile-Phe-Thr-Glu-Glu-Tyr-Ser-Lys-Leu-Leu-Ala-Lys-Leu-Ala-Leu-Gln-Lys-Tyr-Leu-Ala-Ser-Ile-Leu-Gly-Ser-Arg-Thr-Ser-Pro-Pro-Pro-NH_2

Helodermin

$C_{176}H_{283}N_{45}O_{51}$ Mol.Wt.: 3845.49

A VIP/secretin-like peptide that was originally isolated from Gila monster venom.

Bjartell A, Persson P, Absood A et al. Regul Pept. 26:27-34 (1989).

0.5 mg $121.60
1 mg $206.40
2.5 mg $364.80

H1644

His-Ser-Asp-Ala-Ile-Phe-Thr-Gln-Gln-Tyr-Ser-Lys-Leu-Leu-Ala-Lys-Leu-Ala-Leu-Gln-Lys-Tyr-Leu-Ala-Ser-Ile-Leu-Gly-Ser-Arg-Thr-Ser-Pro-Pro-Pro-NH_2

Helodormin

$C_{176}H_{285}N_{47}O_{49}$ Mol Wt: 3843.47

1 mg $368.00

H1645

H-His-Ser-Asp-Ala-Thr-Phe-Thr-Ala-Glu-Tyr-Ser-Lys-Leu-Leu-Ala-Lys-Leu-Ala-Leu-Gln-Lys-Tyr-Leu-Glu-Ser-Ile-Leu-Gly-Ser-Ser-Thr-Ser-Pro-Arg-Pro-Pro-Ser-Ser-OH

Helospectin I

$C_{183}H_{293}N_{47}O_{59}$ Mol.Wt.: 4095.66

1 mg $300.80
2 mg $512.00
5 mg $902.40

H1646 — Helospectin II

H-His-Ser-Asp-Ala-Thr-Phe-Thr-Ala-Glu-Tyr-Ser-Lys-Leu-Leu-Ala-Lys-Leu-Ala-Leu-Gln-Lys-Tyr-Leu-Glu-Ser-Ile-Leu-Gly-Ser-Ser-Thr-Ser-Pro-Arg-Pro-Pro-Ser-OH

$C_{180}H_{288}N_{46}O_{57}$ Mol.Wt.: 4008.58

1 mg	$300.80
2 mg	$512.00
5 mg	$902.40

H1648 — Hemorphin-7

Tyr-Pro-Trp-Thr-Gln-Arg-Phe

$C_{48}H_{64}N_{12}O_{11}$ Mol Wt: 997.12

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

H1657 — Heparin-Binding Peptide

H-Trp-Gln-Pro-Pro-Arg-Ala-Arg-Ile-OH

$C_{47}H_{74}N_{16}O_{10}$ Mol.Wt.: 1023.22

0.5 mg	$38.40
1 mg	$65.60
2.5 mg	$115.20

H1658 — Heparin Sodium

[9041-08-1]

Derived from intestinal mucosa. Anticogulant heparin enhances blood coagulation and fibrinolysis during hemodialysis with prostacyclin.

Kandrotas RJ. Clin Pharmacokinet 22: 359-74 (1992).
Hirsh J, Heparin N. Engl J. Med. 324:1565-74 (1991).

1 g	$58.40

H1661 — Hepatitis B Virus core protein (128-140)

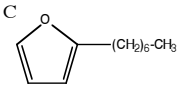
Thr-Pro-Pro-Ala-Tyr-Arg-Pro-Pro-Asn-Ala-Pro-Ile-Leu

HBV Core protein (128-140)
$C_{66}H_{103}N_{17}O_{17}$ Mol Wt:1406.64

1 mg	$125.50

H1660 — 2-n-Heptylfuran

+4 ° C



$C_{11}H_{18}O$ Mol.Wt.: 166.27 b.p.96-97 °C/30mm [3777-71-7]

Inhibitor of BP-induced lung and forestomach tumorigenesis in mice.

Lam LK et al. Nutr. Cancer. 17:19-26 (1992).

10 g	$88.20
20 g	$161.40

H1662 — HER2/neu (654-662) GP2

Ile-Ile-Ser-Ala-Val-Val-Gly-Ile-Leu

$C_{42}H_{77}N_9O_{11}$ Mol Wt: 884.12

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

H1663 — HER2/neu (869-877)

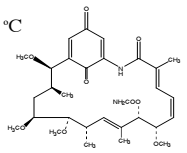
Leu-Leu-Asp-Ile-Asp-Glu-Thr-Glu-Tyr

$C_{49}H_{75}N_9O_{20}$ Mol.Wt.: 1110.19

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

H1669 — Herbimycin A

-20 °C



$C_{30}H_{42}N_2O_9$ F.W 574.7 [70563-58-5]

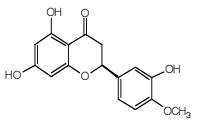
Tyrosine kinase inhibitor; cell permeable, inhibits platelet derived growth factor induced phospholipase D activation.

Satoh T et al. J. Biolchem. 267:2537 (1992).

100 µg	$201.10

H1672 — Hesperetin

RT



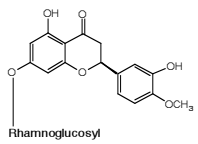
$C_{16}H_{14}O_6$ Mol.Wt.: 302.3 [41001-90-5]

The aglycone of Hesperidin.

1 g	$18.40
5 g	$57.40
10 g	$91.60

H1673 — Hesperidin

RT



$C_{28}H_{34}O_{15}$ Mol.Wt.: 610.6 [520-26-3]

A flavonoid which has been found to be a potent chemopreventive agent in oral, colon, and urinary bladder carcinogenesis in animal models.

Tanaka T, Makita H, Ohnishi M et al. Cancer Res. 57:246-252 (1997)
Tanaka T, Makita H, Kawabata K et al. Carcinogenesis. 18:957-965 (1997).
Yang M, Tanaka T, Hirose Y et al. Int. J. Cancer. 73:719-724 (1997).

25 g	$14.90
100 g	$36.20

H1794 — Hexamethonium bromide hydrate

$[-(CH_2)_3N(CH_3)_3Br]_2.H_2O$

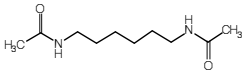
$C_{12}H_{30}Br_2N_2.xH_2O$ Mol. Wt. 362.20 [55-97-0]

A nicotinic acetyl choline receptor antagonist. It induces apoptosis and inhibits the stimulatory effect of nicotine on endothelial cell DNA synthesis and proliferation. It is also effective in preventing organophosphate intoxication.

Vallablanca AC, J appl Physiol. 84:2089-98 (1998).
Maneckjee R, Minna JD. Cell Growth Differ. 5:1033-40 (1994).
Sanchez-Fortun S, Sanz F, Barahona MV. Arch Environ Contam Toxicol. 31:391-8 (1996).

10 g	$24.60
25 g	$43.20
100 g	$126.00

H1892 — Hexamethylene Biscetamide



$C_{10}H_{20}N_2O_2$ Mol. Wt.: 200.28 [3073-59-4]

Prototype of hybrid polar inducers of apoptosis of various transformed cells.

Marks PA, Richon VM, Breslow R, Rifkind RA. C R Acad Sci III 322:161-5 (1999).

25 g	$30.80
50 g	$49.20

H1893 — Hexarelin

His-D-2-Me-Trp-Ala-Trp-D-Phe-Lys-NH_2

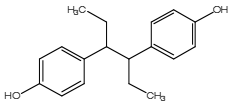
$C_{4}H_{58}N_{12}O_6$ Mol Wt: 88~.0 [140~03-51-1]

A growth hormone secretagogue that has been shown to inhibit apoptosis in several models. It is suggested that the inhibitory activity could be explained by its cardioprotective effect.

Pang JJ, Xu RK, Xu XB et al. Am J Physiol Heart Circ Physiol. 286:H1063-9 (2004).
Filigheddu N, Fubini A, Baldanzi G et al. Endocrine. 14:113-9 (2001).

1 mg	$86.00
5 mg	$358.40
50 mg	$1,792.00

H1894 — Hexestrol



$C_{18}H_{22}O_2$ Mol. Wt.: 270.37 [84-16-2]

A carcinogenic synthetic estrogen that inhibits microtubule polymerization and the formation of ribbon structures. It is an inhibitor of lipid peroxidation.

Sato et al. J. Biochem. 101:124~-1252 (198~).
Wiseman H, Halliwell B. FEBS Lett. 332:159-63 (1993).
Liehr JG, Ballatore AM, Dague BB. Chem Biol Interact. 55:15~-~6 (1985).

1 g	$37.00
5 g	$110.90

H3272 — His Tag

His-His-His-His-His-His

$C_{36}H_{42}N_{18}O_6$ Mol Wt: 822.85

5 mg	$192.00

H3273 — Histatin 5

H-Asp-Ser-His-Ala-Lys-Arg-His-His-Gly-Tyr-Lys-Arg-Lys-Phe-His-Glu-Lys-His-His-Ser-His-Arg-Gly-Tyr-OH

$C_{133}H_{195}N_{51}O_{33}$ Mol.Wt.: 3036.36

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

H3277 — Histrelin Acetate

Pyr-His-Trp-Ser-Tyr-D-His(Bzl)-Leu-Arg-Pro-NHEt

$C_{66}H_{86}N_{18}O_{12}$ Mol.Wt.: 1323.52 [76712-82-8]

Histrelin acetate is a potent LHRH agonist. For the treatment of central precocious puberty.

Please inquire

H3274 — HIV p17 Gag (77-85)

Ser-Leu-Tyr-Asn-Thr-Val-Ala-Thr-Leu

$C_{44}H_{-2}N_{10}O_{15}$ Mol Wt: 981.1

1 mg	$80.00
2 mg	$136.00
5 mg	$240.00

H3275 — HIV Integrase Protein Inhibitor(1)

His-Cys-Lys-Phe-Trp-Trp

$C_{46}H_{55}N_{11}O-S$ Mol Wt: 906.1

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

H3276 — HIV Protease Substrate

Ac-Ala-Arg-Val-Leu-Ala-Glu-Ala-NH_2

$C_{33}H_{59}N_{11}O_{10}$ Mol Wt: ~69.9

1 mg	$96.00

H3278

H-Ile-Leu-Lys-Glu-Pro-Val-His-Gly-Val-OH

HIV RT (pol) A2.1 peptide

$C_{46}H_{78}N_{12}O_{12}$ Mol.Wt.: 991.21

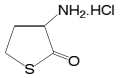
1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

HMG (Human Menopausal Gonadotropins)

See Menotropins

H5748

RT



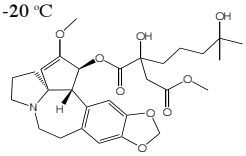
DL-Homocysteine thiolactone hydrochloride

$C_4H_7NOS.HCl$ Mol.Wt.: 153.63 m.p. 201-202°C [6038-19-3]

50 g	$42.30
100 g	$58.40

H5750

-20 °C



Homoharringtonin

$C_{29}H_{39}NO_9$ Mol.Wt.: 545.62 [26833-87-4]

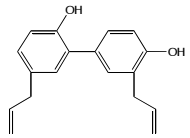
Homoharringtonin is an alkaloid isolated from *Cephalotaxus hainanensis*. It has been found to have antitumor activities.

Corbett TH, Griswold DP, Roberts BJ et al. Cancer. 40:2660-2680 (1977).
Powell RG, Rogovin SP, Smith CR. Ind. Eng. Chem. Prod. Res. Dev. 13:129-132 (1974).

1 mg	$31.60
5 mg	$124.10
10 mg	$200.30

H5654

4 °C



Honokiol

$C_{18}H_{18}O_2$ Mol. Wt.: 266.33

A phenolic compound isolated from Magnolia officinalis. It has many interesting biological activities. It inhibits leukotriene synthesis, protects rat heart mitochondria and liver from peroxidative injury, has anxiolytic and antiarrhythmic effects. It also possesses antimicrobial and antifungal activity. It was found to induce apoptosis in human squamous lung cancer CH27 cells.

Yang SE, Hsieh MT, Tsai TH, Hsu SL. Biochem Pharm. 63:1641-1651 (2002).
Hamasaki Y, Muro E, Miyanji S et al. Int. Arch Allergy Immun. 110:278-281 (1996).
Lo YC, Teng CM, Chen CF Et al. Biochem Pharm. 47:549-553 (1994).
Kuribara H, Stavinoha WB, Maruyama Y. J Pharm Pharm. 50:819-826 (1998).

10 mg	$65.10
25 mg	$138.30
100 mg	$441.90

H2876

Trp-Gly

H-Trp-Gly-OH

$C_{13}H_{13}N_3O_2$ Mol Wt: 261.28

1 mg	$112.00

H8048

Thr-Asp-Thr-Ser-His-His-Asp-Gln-Asp-His-Pro-Thr-Phe-Asn

Human Follicular Gonadotropin Releasing Peptide

(Hf-GRP)

$C_{68}H_{94}N_{22}O_{27}$ Mol Wt: 1651.6

1 mg	$125.50

H2980

Met-Ala-Pro-Arg-Gly-Phe-Ser-Cys-Leu-Leu-Leu-Leu-Thr-Ser-Glu-Ile-Asp-Leu-Pro-Val-Lys-Arg-Arg-Ala

Humanin, human

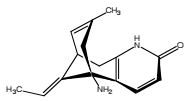
$C_{119}H_{204}N_{34}O_{32}S_2$ Mol.Wt.:2687.28

Inhibits neuronal cell death caused by Swedish mutant (K595N/M596L-APP.).

Hashimoto Y, Ito Y, Niikura T et al. Biochem Biophys Res Commun. 283:460-468 (2001).

0.5 mg	$121.60
1 mg	$208.00
2.5 mg	$364.80

H8162



Huperzine A (See page 16 for more information)

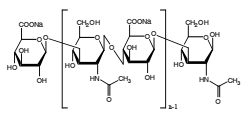
$C_{15}H_{18}N_2O$ Mol. Wt.: 242.32 [102518-79-6]

Natural product from *Lycopodium serratum Thunb*. It is a potent acetylcholinesterase inhibitor with neuroprotective properties that are of interest in the treatment of Alzheimer's disease. It has been shown to inhibit staurosporine-induced apoptosis.

Zhang HY, Tang XC. Neurosci Lett. 340:91-4 (2003).
Wang LS, Zhou J, Shao XM et al. Zhonghua Er Ke Za Zhi. 41:42-5 (2003).
Zhang HY, Yan H, Tang XC. Neuosci Lett. 360:21-4 (2004).

1 mg	$72.80
5 mg	$280.00

H9801



Hyaluronic Acid Sodium salt

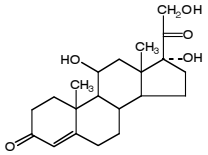
From Streptococcus

Hyaluronic acid is a major non-protein glycosnaine glycan component of extracellular matrix in mammalian cells.

Meyer K, Palmer JW. J. Biol. Chem. 107:629 (1934).

100 mg	$30.80
500 mg	$92.40
1 g	$154.00

H9611



Hydrocortisone

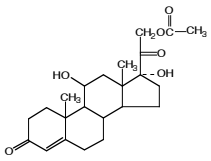
$C_{21}H_{30}O_5$ Mol. Wt.: 362.46 [50-23-7]

An anti-inflammatory steroid, found to increase apoptotic events when used in combination with mifepristine in human LNcap prostate cancer cells. It inhibits angiogenesis by abolishing VEGF expression. It is also known to inhibit superoxide generation.

El, Etreby MF, Liang Y, Lewis RW. Prostate. 43:31-42 (2000).
Nauck M, Karakiulakis G, Perruchoud AP et al. Eur J Pharmacol. 341:309-15 (1998).
Okada Y, Okada M. J Nutr Sci Vitaminol (Tokyo). 46:1-6, (2000).

5 g	$53.90
10 g	$92.20
25 g	$184.50

H9612



Hydrocortisone 21-acetate

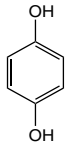
$C_{23}H_{32}O_6$ Mol. Wt.: 404.50 [50-03-3]

A corticosteroid with anti-inflammatory properties. It may stimulate superoxide dismutase production and may release antioxidants.

Gavan N, Maibach H. Skin Pharmacol. 10:309-13 (1997).
Michniak BB, Chapman JM, Seyda KL. J Pharm Sci. 82:214-9 (1993).

1 g	$24.70
5 g	$92.40
10 g	$154.00

H9618



Hydroquinone

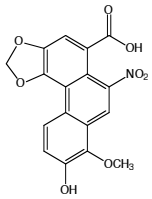
$C_6H_6O_2$ Mol. Wt.: 110.11 [123-31-9]

Topical hydroquinone is used in the treatment of a number of skin conditions. Found to reduce the viable cell number of oral tumor cell.

Ozluer SM, Muir J, Australas J. Dermatol. 4:255-6 (2000).
Terasaka H, Takayama F, Satoh K, Fujisawa S, Sakagami H. Anticancer Res. 20:3357-62 (2000).

50 g	$20.80

H9620



7-Hydroxyaristolochic acid A (See page 4 for more information)

$C_{17}H_{11}NO_8$ Mol. Wt.: 357.27

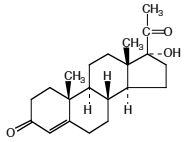
See aristolochic acid A.

1 mg	$95.10
5 mg	$366.00
10 mg	$512.30

20-Hydroxyecdysone

See ecdysterone

H9615



17α-Hydroxyprogesterone

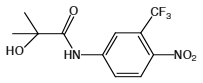
$C_{21}H_{30}O_3$ Mol. Wt.: 330.46 [68-96-2]

An antiestrogen used to treat advanced endometrial cancer and breast cancer.

Reifenstein EC, Cancer. 27:485-502 (1971).
Pasqualini JR, Paris J, Sitruk-Ware R et al. J Steroid Biochem Mol Biol. 65:225-35 (1998).

1 g	$17.10
5 g	$53.90
10 g	$92.20

H9718



2-Hydroxy-flutamide

$C_{11}H_{11}F_3N_2O_4$ Mol. Wt.: 292.21 [52806-53-8]

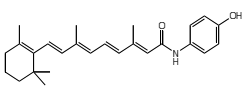
Metabolite of flutamide found to inhibit the proliferation of estradiol-induced growth of MCF-7 breast cancer cells.

Shet MS, McPhaul M, Fisher CW et al. Drug Metab Dispos. 25:1298-303 (1997).
Di Monaco M, Brignardello E, Leonardi L et al. J Cancer Res Clin Oncol. 121:710-4 (1995).

10 mg	$95.10
25 mg	$183.10
100 mg	$658.70

H9613

-20 °C



N-(4-Hydroxyphenyl) retinamide

Fenretinide, 4-HPR

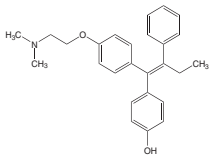
$C_{26}H_{33}NO_2$, M.W. 391.55, m.p. 173-175°C, [65646-68-6]

A synthetic analog of vitamin A without the observed liver toxicity. Cancer chemopreventive agent. Induces apoptosis in human cancer cell lines.

Moon RC, Thompson HJ, Becci PJ et al. Cancer Res. 39:1339-1346 (1979).
Kalemkerian GP, Slusher R, Ramalingam S. J Natl Cancer Inst. 87:1674-80 (1995).

1 mg	$59.20
5 mg	$115.90
10 mg	$215.60

H9711



(*Z*)-4-Hydroxytamoxifen

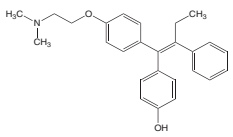
$C_{26}H_{29}NO_2$ Mol. Wt.: 387.51 [68047-06-3]

An active metabolite of (*Z*)-tamoxifen which exhibits higher potency as estrogen agonist. It binds to estrogen receptors with 8-fold higher affinity than tamoxifen.

Kupfer D et al Cancer Res. 54:3140 (1994).
Lubczyk V, Bachmann H, Gust R J. Med. Chem. 45:5358 (2002).

5 mg	$61.50
10 mg	$102.50
25 mg	$213.20

H9712



(*E*)-4-Hydroxytamoxifen

$C_{26}H_{29}NO_2$ Mol. Wt.: 387.51 [174592-47-3]

Less active isomer of (*Z*)-4-hydroxytamoxifen.

Robertson DW, Katzenellenbogen JA, Long DJ, Rorke EA, Katzenellenbogen BS J. Steroid Boichem. 16:1 (1982).

5 mg	$79.80
10 mg	$133.00
25 mg	$277.10

H9716

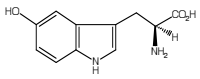
(*E*, *Z*)-4-Hydroxytamoxifen

$C_{26}H_{29}NO_2$ Mol. Wt.: 387.51

Mixture of *cis*- and *trans*-isomers of 4-hydroxytamoxifen.

5 mg	$25.20
10 mg	$41.90
25 mg	$87.30

H9714



5-Hydroxy-L-tryptophan

L-5-HTP

$C_{11}H_{12}N_2O_3.H_20$ Mol. Wt.: 238.24 [314062-44-7]

250 mg	$16.30
1 g	$27.20
5 g	$74.60
25 g	$284.60

H9715

4 °C

Hydroxyurea

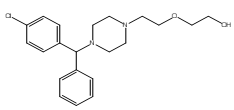
$CH_4N_2O_2$ Mol. Wt. 76.06

Anticancer agent.

Argiris A, Haraf DJ, Kies MS, Vokes EE. Oncologist. 8:350-60 (2003).
Halsey C, Roberts IA. Haematol.121:200 (2003).

5 g	$72.00
10 g	$104.00
50 g	$399.60

H9717



Hydroxyzine Dihydrochloride

$C_{21}H_{27}ClN_2O_2$ .2HCl Mol. Wt.: 447.83 [2192-20-3]

A piperazine compound. It is a heterocyclic histamine-1 receptor antagonist that is also known to block mast cells.

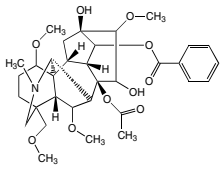
Gerber JG, Skoglund ML, Nies AS. Agents Actions. 12:259-62 (1982).
Dimitriadou V, Pang X, Theoharides TC. Int J Immunopharmacol. 22:673-84 (2000).

5 g	$31.40
10 g	$50.40

Hyoscine Butyl Bromide

Scopolamine N-Butyl Bromide

H9759



Hypaconitine (See page 3 for more information)

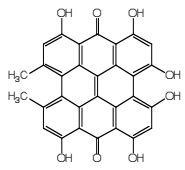
$C_{33}H_{45}NO_{10}$ Mol. Wt.: 615.71 [6900-87-4]

A diterpene alkaloid isolated from *Aconiti Carmichaeli Praeparata* that is a neuromuscular blocker.

Shim SH, Kim JS, Kang SS et al. Arch Pharm Res. 26:709-15 (2003).
Muroi M, Kimura I, Kimura M. Neuropharmacology. 29:567-72 (1990).

10 mg	$78.40
25 mg	$145.60
100 mg	$448.00

H9861



Hypericin

$C_{30}H_{16}O_8$ Mol. Wt.: 504.44 [548-04-9]

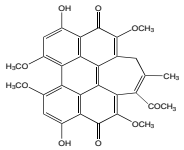
Natural product from *Hypericum perforatum* (St. John's wort). It is an inhibitor of PKC.

It has antiviral and anticancer activities and induces photosensitized apoptosis.

Couldwell WT, Gopalakrishna R, Hinton DR et al. Neurosurgery. 35:705-9 (1994).
Weller M, Trepel M, Grimmel C, et al. Neurol Res. 19:459-70 (1997).
Lavie G, Kaplinsky C, Toren A et al. Br J Cancer. 79:423-32 (1999).

1 mg	$118.00
5 mg	$400.00

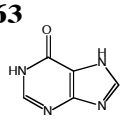
H9662 **Hypocrellin B** (See page 16 for more information)



$C_{30}H_{24}O_9$ Mol. Wt.: 528.51

10 mg $115.40
25 mg $215.30
100 mg $538.00

H9763 **Hypoxanthine**



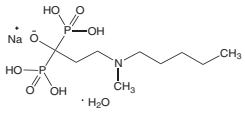
$C_5H_4N_4O$ Mol. Wt.: 136.11 [68-94-0]

A marker for energy perturbation in hypoxia/ischemia and uric acid production.

Marklund N, Ostman B, Nalmo L et al. Acta Neurochir (Wien). 142:1135-41 (2000).

5 g $16.70
25 g $48.10
100 g $154.00

I0502 **Ibandronate** (See page 5 for more information)



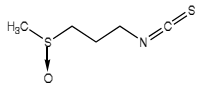
$C_9H_{22}NNaO_7P_2 \cdot H_2O$ Mol. Wt.: 359.21

A third generation bisphosphonate used as bone resorptive inhibitor. Found to enhance the antitumor activity of taxol and docetaxol in bone metastasis.

Dooley M, Balfour JA. Drugs. 57:101-8 (1999).
Magnetto S, Boissier S, Delmas PD, Clezardin P. Int J Cancer. 83:263-9 (1999).

50 mg $138.40
100 mg $258.30

I0416 **Iberin**

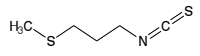


$C_5H_9NOS_2$, F.W. 163.26, [505-44-2]

Homolog of sulforaphane.

10 mg $81.60
25 mg $192.20
50 mg $307.50
100 mg $538.00

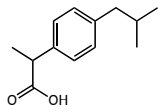
I0418 **Iberverin**



$C_5H_9NS_2$, F.W. 147.26, [505-79-3]

25 mg $65.20
50 mg $113.10
100 mg $193.40
500 mg $654.20

I0481 **Ibuprofen** (See page 23 for more information)



$C_{13}H_{18}O_2$, F.W. 206.28, [15687-27-1]

Non-steroidal anti-inflammatory agent. It has undergone clinical trials as a chemopreventive agent.

Kelloff GJ, Boone CW, Crowell JA, et al. Cancer Epidemiol. Biomarkers Prev. 3:85-98 (1994).

1 g $25.10
5 g $93.60
10 g $171.60

I0482 **S(+) Ibuprofen**

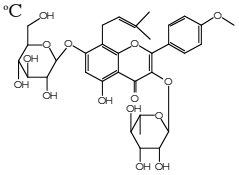
Dexibuprofen

The optically active form of Ibuprofen.

1 g $34.00
5 g $122.00
25 g $338.80

I0901 **Icariin** (see page 17 for more information)

4 °C



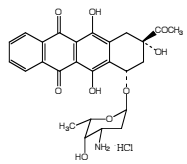
$C_{33}H_{40}O_{15}$ Mol. Wt.: 676.66

A flavonol glycoside isolated from Epimedium that has antihepatotoxic activity. It was found to induce differentiatioin of HL-60 cells.

Lee MK, Choi YJ, Sung SH. Planta Medica 61:523-526 (1995).
Zhao Y, Cui Z, Zhang L. Chinese J Oncol.19:53-55 (1997).

100 mg $67.80
500 mg $250.80
1 g $406.60

I1400 **Idarubicin Hydrochloride**



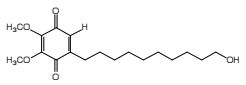
$C_{26}H_{27}NO_9 \cdot HCl$ Mol. Wt.: 533.96 [57852-57-0]

It is a derivative of daunorubicin that has high antitumor activity against leukemia and breast cancer. It induces apoptosis.

Ganzina F, Pacciarini MA, Di Pietro N. Invest New Drugs. 4:85-105 (1986).
Tsuruo T, Oh-Hara T, Sudo Y, Naito M. Anticancer Res. 13:357-61 (1993).
Belaud-Rotureau MA, Durrieu F, Labroille G et al. Leukemia. 14:1266-75 (2000).

1 mg $81.40
5 mg $325.30

I1418 Idebenone



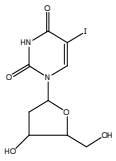
$C_{18}H_{28}O_5$ Mol. Wt.: 324.41 [58186-27-9]

Idebenone, a coenzyme Q analogue, is an antioxidant that prevents stroke and renal vascular lesions in hypertensive rats. Its protective effects involve the redox cycling between its hydroquinone and quinone forms.

Mordente A, Martorana GE, Minotti G, Giardina B. Chem Res Toxicol. 11:54-63 (1998).
Nagaoka A, Shino A, Kakihana M, Iwatsuka H. Jpn J Pharmacol. 36:291-9 (1984).

10 mg	$43.20
25 mg	$74.00
100 mg	$258.80

I1257 Idoxuridine



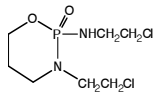
5-Iodo-2'-deoxyuridine
$C_9H_{11}IN_2O_5$, F.W. 354.10, m.p. 164-166°C (dec.) [54-42-2]

A cytotoxic, anti-viral thymidine analog.

Pressacco J, Hedley DW, Erlichman C. Cancer Res. 54:3772-3778 (1994).

500 mg	$30.80
1 g	$49.00

I2056 Ifosfamide (See page 17 for more information)



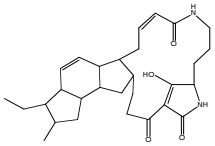
$C_8H_{17}Cl_2N_2O_2P$ Mol. Wt.: 275.11

Cytostatic Agent

Ritter S, Schroder HJ. Medizinische Welt. 28:1395-1400 (1977).
Zalupski M, Baker LH. J Natl Cancer Inst. 80:556-566 (1988).

25 mg	$72.00
50 mg	$120.00

I4000 Ikarugamycin



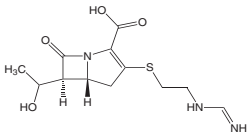
$C_{29}H_{40}N_2O_4$ Mol. Wt.: 480.64

An antiprotozoal antibiotic found to inhibit cholesteryl ester accumulation in macrophage. Shown to be an efficient inhibitor of clathrin-coated pits-dependent endocytosis.

Jomon K, Kuroda Y, Ajisaka M, Sakai H. J Antibiot (Tokyo). 25:271-80 (1972).
Hasumi K, Shinohara C, Naganuma S, Endo A. Eur J Biochem. 205:841-6 (1992).
Luo T, Fredericksen BL, Hasumi K et al. I Virol. 75:2488-92 (2001).

0.5 mg	$123.00
1 mg	$223.00
5 mg	$922.00

I4934 Imipenem



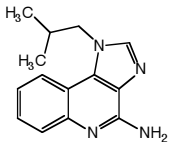
$C_{12}H_{17}N_3O_4S$ Mol Wt: 299.349 [64221-86-9]

Imipenem is a potent third generation cephalosporin often used as a post operative anti-biotic. It has recently shown promise in fighting increasingly more resistant strains of staphylococcus aureus.

Morimoto Y, Sugiura T, Tatebayashi S, Kirita T. Spec Care Dentist. 26:209-13 (2006).

25 mg	$60.00
100 mg	$175.00
500 mg	$500.00

I5034 Imiquimod



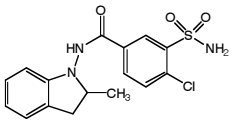
$C_{14}H_{16}N_4$ Mol. Wt.: 240.30 [99011-02-6]

An immune response modifier that induces α-interferon in numerous species including human. It inhibits colon and lung tumors in mice and has antiviral activity against HSV-2 infection. Its antitumor activity is related to the induction of apoptosis.

Sidky YA, Borden EC, Weeks CE et al. Cancer Res. 52:3528-33 (1992).
Bernstein DI, Harrison CJ. Antimicrob Agents Chemotgher. 33:1511-5 (1989).
Gibson SJ, Lindh JM, Riter TR et al. Cell Immunol. 218:74-86 (2002).
Schon M, Bong AB, Drewniok C et al. J Natl Cancer Inst. 95:1138-49 (2003).

100 mg	$55.50
500 mg	$104.80
1 g	$184.80
5 g	$646.80

I5414 Indapamide



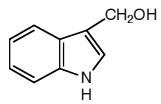
$C_{16}H_{16}ClN_3O_3S$ Mol. Wt.: 365.84 [26807-65-8]

An antihypertensive agent that reduces intracellular calcium levels, maintains magnesium ion but reduces phosphate ions involved in arterial rigidity and many other functions.

Campbell DB, Brackman F. Am J Cardiol. 65:11H-27H (1990).

250 mg	$34.50
1 g	$46.90
5 g	$154.00

I5213 Indole-3-carbinol (See page 17 for more information)



3-Indolemethanol
C_9H_9NO Mol. Wt.:147.18 m.p.96-98°C [700-06-1]

A component of cruciferus vegetables. Found to be effective against chemically induced carcinogenesis.

Grubbs CJ, Steele VE, Casebolt T et al. Anticancer Res. 15:709-716 (1995).

5 g	$50.00
25 g	$204.40

I5215

H-Ile-Leu-Pro-Trp-Lys-Trp-Pro-Trp-Trp-Pro-Trp-Arg-Arg-NH_2

Indolicidin

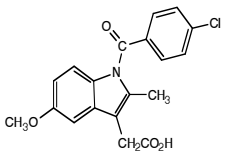
$C_{100}H_{132}N_{26}O_{13}$ Mol. Wt.: 1906.33

An antimicrobial peptide containing multiple tryptophan residues.

Selsted ME, Novotny MJ, Morris WL et al. J Biol Chem. 267:4292-4295 (1992).

0.5 mg	$96.00
1 mg	$163.20
2.5 mg	$288.00

I5315



Indomethacin

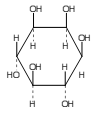
$C_{19}H_{16}ClNO_4$ Mol. Wt.: 357.79 [53-86-1]

A non-steroidal anti-inflammatory agent which inhibits the activity of cyclooxygenase and the induction of ornithine decarboxylase. It has cancer chemopreventive activity and induces apoptosis.

Verma AK, Ashendel CL, Boutwell RK. Cancer Res. 40:308-315 (1980).
Grubbs CJ, Juliana MM, Eto I et al Anticancer Res. 13:33-6 (1993).
Tanaka T, Suzui M, Kojima T et al. Cancer Detection Prev. 19:418-25 (1995).
Zhou XM, Wong BC, Fan XM et al. Carcinogenesis. 22:1393-7 (2001).

5 g	$24.70
10 g	$43.20
25 g	$74.00
100 g	$166.40

I5357



Inositol

$C_6H_{12}O_6$ FW 180.16 [87-89-8]

Is an essentially non toxic compound largely formed by the dephosphorylation of inositol hexaphosphate (IP6, Phytate) within the gastrointestinal tract in humans and animals. It reduces chemically induced lung tumor formation in experimental animals when administered after carcinogen treatment. It also suppresses liver carcinogenesis in male C3H/He mice.

Wattenberg LW, Anticancer Res. 19:3659-61 (1999).
Hecht SS, Kenney PM, Wang M et al. Cancer Lett.137:123-30 (1999).
Nishino H, Murakoshi M et al. Anticancer Res. 19:3663-64 (1999).

100 g	$30.80
500 g	$119.20

Inositol hexaphosphate

See Phytic acid

I5476

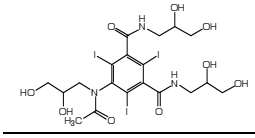
H-Thr-Ser-Leu-Pro-Val-Gln-Asp-Ser-Ser-Ser-Val-Pro-OH

Interleukin-6 Receptor (partial)

$C_{51}H_{85}N_{13}O_{21}$ Mol. Wt.: 1216.32

0.5 mg	$64.00
1 mg	$108.80
2.5 mg	$192.00

I5830



Iohexol

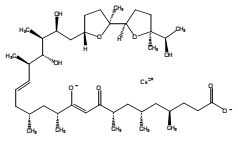
$C_{19}H_{26}I_3N_3O_9$ Mol. Wt.: 821.14 [66108-95-0]

A non-ionic contrast agent.

Wieslander JB, Stjernquist U. Acta Radiol Suppl. 370:73-7 (1987).

1 g	$37.00
5 g	$157.70
25 g	$616.00

I5753



Ionomycin (Calcium Salt)

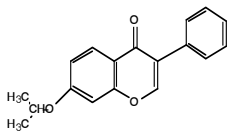
$C_{41}H_{70}O_9^{2-}Ca$ Mol. Wt.: 747.1 [56092-82-1]

A calcium ionophore known for its antipoliferative effects. It inhibits growth of human bladder cancer cells with alteration of Bcl-2 and Bax expression levels. An apoptosis inducer.

Miyake H, Hara I, Yamanaka K, Arakawa S, Kamidono S. J Urology. 162:916-21 (1999).
Aagaard-Tillery KM, Jelinek DF. J Immunology. 155:3297-107 (1995).

1 mg	$20.00
5 mg	$60.00

I6068



Ipriflavone

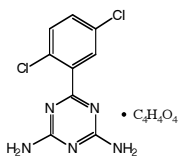
$C_{18}H_{16}O_3$ Mol. Wt.: 280.32

A synthetic phytoestrogen used as preventative in bone loss. Shown to enhance calcium transport.

Arjmandi BN, Khalil DA, Hollis BW. Calc Tiss Int. 67:225-9 (2000).
Glazier MG, Bowman MA. Arch Int Med. 161:1161-72 (2001).

1 g	$69.30
5 g	$284.40
10 g	$458.00

I7074



Irsogladine Maleate

$C_9H_7Cl_2N_5 \cdot C_4H_4O_4$ Mol. Wt.:372.17 [84504-69-8]

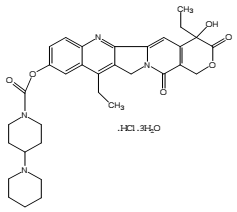
An anti-gastric ulcer agent that facilitates gap-junctional intercellular communication through M1 muscarininc acetylcholine receptor binding. It is a potent inhibitor of angiogenesis and protects MNNG-induced gastric carcinogenesis in rats.

Ueda F, Ban K, Ishima T. J Pharmacol Exp Ther. 274:815-9 (1995).
Sato Y, Morimoto A, Kiue A et al. FEBS Lett. 322:155-8 (1993).
Ren CJ, Ueda F, Roses DF et al. J Surg Res. 77:126-31 (1998).
Sugie S, Okamoto K, Watanabe T et al. Toxicology. 166:53-61 (2001).

100 mg	$49.30
500 mg	$154.00
1 g	$246.40

I6933 Irinotecan (See page 8 for more information)

RT



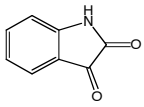
$C_{33}H_{38}N_4O_6.HCl.3H_2O$ Mol. Wt.: 677.20 [136572-09-3]

A member of the camptothecin drug family, and an inhibitor of the nuclear enzyme topoisomerase I which is involved in cellular DNA replication and transcription. During replication Topoisomerase I mediates the relaxation of super coiled DNA, and its inhibition results in breakage replication of the DNA chain and likely induces apoptosis. Irinotecan is therefore an attractive target for anticancer drug development. Currently it is used for the treatment of small cell lung cancer and advanced colorectal cancer.

5 mg	$138.40
10 mg	$245.90
25 mg	$384.30

Kellner U, Rudolph P, Parwaresch R. Onkologie. 23:424-430 (2000).
Kalemkerian GP, Worden FP. Expert Opin Investing Drugs. 9:565-79 (2000).
Saltz LB. Curr Oncol Rep. 1:155-160 (1999).

I7302 Isatin



Indole-2,3-dione

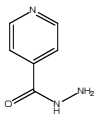
$C_8H_5NO_2$ Mol. Wt.: 147.13 [91-56-5]

An endogenous monoamine oxidase inhibitor that is involved in stress and anxiety. It is an inhibitor of alkaline phosphatase, nitric oxide (NO)-stimulated soluble guanylate cyclase, and other enzymes.

100 g	$55.50
500 g	$246.40

Hamaue N. Yakugaku Zasshi. 120:352-62 (2000).
Singh B, Kumar P, Bansal RC et al. Enzyme. 23:22-8 (1978).
Medvedev A, Bussygyna O, Pyatakova N et al. Biochem Pharmacol. 63:763-6 (2002).

I7341 Isoniazid



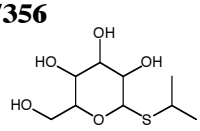
$C_6H_7N_3O$ Mol. Wt.: 137.14 [54-85-3]

A front-line antituberculosis agent. It generates nitric oxide when activated by KatG, and has been shown to be a strong inhibitor of DPH metabolism.

5 g	$11.20
50 g	$13.50
100 g	$20.20

Timmins GS, Master S, Rusnak F et al. J Bacteriol. 186:5427-31 (2004).
Kutt H. Epilepsia. 16:393-402 (1975).

I7356 Isopropyl Thiogalactoside



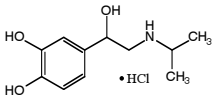
$C_9H_{18}O_5S$ Mol. Wt.: 238.30 [367-93-1]

An inhibitor of lac repressor, can modulate demethylation of the lac operator DNA sites.

1 g	$32.40
5 g	$129.20
10 g	$223.70

Iping GL, Thomas JT, Qinglin Ou, Chih-Lin Hsieh. MCB. 20:2343-2349 (2000).

I7259 Isoproterenol Hydrochloride



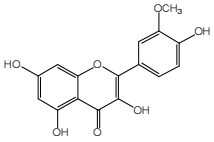
Isoprenaline HCl

$C_{11}H_{17}NO_3.HCl$ Mol. Wt.: 247.72 [51-30-9]

A β-adrenergic agonist.

5 g	$30.80
25 g	$92.40
100 g	$277.20

I7357 Isorhamnetin



$C_{16}H_{12}O_7$ Mol. Wt.: 316.26 m.p. 305 °C (dec.)

A metabolite of quercetin. One of many flavonoids found in red wine. It inhibits xanthine oxidase, which is implicated in oxidative damage to cells. Has anti-tumor promoting activity.

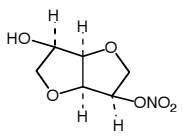
1 mg	$207.50
5 mg	$538.00

Burns J. Gardner PT, O'Neil J et al. J. Agric. Food Chem. 48:220-230 (2000).
Nagao A, Seki M, Kobayashi H. Biosci. Biotechnol. Biochem. 63:1787-1790 (1999).
Ito H, Miyake M, Nishitani E et al. Cancer Lett. 143:5-13 (1999)

Isoquinolinesulfonyl-2-methylpiperazine

See H7

I7360 Isosorbide Mononitrate



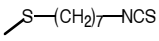
$C_6H_9NO_6$ Mol. Wt.: 191.14 [16051-77-7]

A coronary vasodilator that does not require hepatic biotransformation.

5 g	$55.50
10 g	$92.40
25 g	$184.80

Hayes PC, Westaby D, Williams R. Gut. 29:752-5 (1988).

I7746 — **1-Isothiocyanato-7-(methylsulfenyl)-heptane**



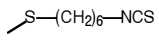
7-Methylsulfenylheptyl isothiocyanate

$C_9H_{17}NS_2$ Mol. Wt.: 203.37

An analogue of erucin.

10 mg	$53.90
25 mg	$115.40
50 mg	$196.80

I7447 — **1-Isothiocyanato-6-(methylsulfenyl)-hexane**



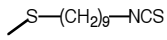
6-Methylsulfenylhexyl isothiocyanate

$C_8H_{15}NS_2$ Mol. Wt.: 189.34

An analogue of erucin.

25 mg	$69.30
50 mg	$115.40
100 mg	$192.20

I7558 — **1-Isothiocyanato-9-(methylsulfenyl)-nonane**



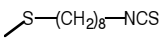
9-Methylsulfenylnonyl isothiocyanate

$C_{11}H_{21}NS_2$ Mol. Wt.: 231.42

A synthetic analogue of erucin.

25 mg	$69.30
50 mg	$115.40
100 mg	$192.20

I7359 — **1-Isothiocyanato-8-(methylsulfenyl)-octane**



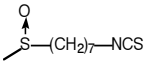
8-Methylsulfenyloctyl isothiocyanate

$C_{10}H_{19}NS_2$ Mol. Wt.: 217.40

An analogue of Erucin.

25 mg	$69.30
50 mg	$115.40
100 mg	$192.20

I7456 — **1-Isothiocyanato-7-(methylsulfinyl)-heptane**



7-Methylsulfinylheptyl isothiocyanate

$C_9H_{17}NOS_2$ Mol. Wt.: 219.37

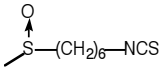
A synthetic compound that is present in watercress.

Found to be a potent inducer of phase II enzymes

Peter R, Kathy F, Wary W, Richard M. Carcinogenesis. 21:1983-1988 (2000).

10 mg	$81.60
25 mg	$192.20
50 mg	$307.50
100 mg	$538.00

I7457 — **1-Isothiocyanato-6-(methylsulfinyl)-hexane**

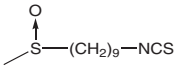


$C_8H_{15}NOS_2$ Mol. Wt.: 205.34

6-Methylsulfinylhexyl isothiocyante is a synthetic analogue of sulforaphane.

25 mg	$97.30
50 mg	$161.80
100 mg	$291.20

I7458 — **1-Isothiocyanato-9-(methylsulfinyl)-nonane**



9-Methylsulfinylnonnyl isothiocyanate

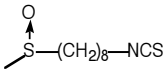
$C_{11}H_{21}NOS_2$ Mol. Wt.: 247.42

A synthetic analouge of well known

phase II inducer sulforaphane.

25 mg	$97.30
50 mg	$161.80
100 mg	$291.20

I7459 — **1-Isothiocyanato-8-(methylsulfinyl)-octane**



8-Methylsulfinyloctyl isothiocyanate

$C_{10}H_{19}NOS_2$ Mol. Wt.: 233.40

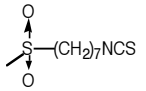
A synthetic compound that is present in watercress. Found

to be a potent inducer of Phase II enzymes.

Peter R, Kathy F, Gary W, Richard M. Carcinogenesis. 21:1983-1988 (2000).

25 mg	$97.30
50 mg	$161.80
100 mg	$291.20

I7556 — **1-Isothiocyanato-7-(methylsulfonyl)-heptane**



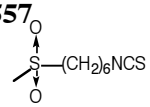
7-Methylsulfonylheptyl isothiocyanate

$C_9H_{17}NO_2S_2$ Mol. Wt.: 235.37

An analogue of erysolin.

10 mg	$53.90
25 mg	$115.40
50 mg	$196.80

I7557 — **1-Isothiocyanato-6-(methylsulfonyl)-hexane**



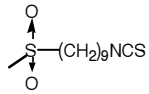
6-Methylsulfonylhexyl isothiocyanate

$C_8H_{15}NO_2S_2$ Mol. Wt.: 221.34

An analogue of erysolin.

25 mg	$89.20
50 mg	$159.90
100 mg	$273.70

I7658



1-Isothicyanato-9-(methylsulfonyl)-nonane

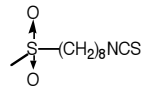
9-Methylsulfonylnonyl isothiocyanate

$C_{11}H_{21}NO_2S_2$ Mol. Wt.: 263.42

A synthetic analogue of erysolin.

25 mg	$89.20
50 mg	$159.90
100 mg	$273.70

I7659



1-Isothicyanato-8-(methylsulfonyl)-octane

8-Methylsulfonyloctyl isothiocyanate

$C_{10}H_{19}NO_2S_2$ Mol. Wt.: 249.40

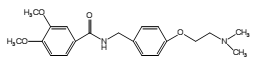
An analogue of Erysolin.

25 mg	$89.20
50 mg	$159.90
100 mg	$273.70

Isotretinoin

See 13-*cis*-retinoic acid

I7757



Itopride Hydrochloride

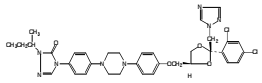
$C_{20}H_{26}N_2O_4.HCl$ Mol. Wt.: 394.88 [122892-31-3]

A gastroprokinetic benzamide derviative that inhibits acetylcholinesterase reversibly.

Iwanaga Y, Kimura T, Miyashita N et al. Jpn J Pharmacol. 66:317-22 (1994).

1 g	$55.50
5 g	$228.00
25 g	$800.80

I7870



Itraconazole

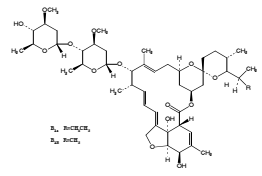
$C_{35}H_{38}Cl_2N_8O_4$ Mol. Wt.: 705.63 [84625-61-6]

A triazole antifungal agent.

Bailey EM, Krakovsky DJ, Rybak MJ. Pharmacother. 10:146-53 (1990).

50 mg	$29.40
100 mg	$51.30
250 mg	$102.50
1 g	$307.50

I8618



Ivermectin

B_{1a} $C_{48}H_{74}O_{14}$ Mol. Wt.: 875.09

B_{1b} $C_{47}H_{72}O_{14}$ Mol. Wt.: 861.06

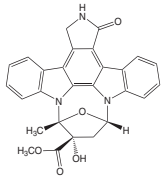
An anthelmintic found to be a competitive inhibitor of specific [3H]-GABA binding site in nematodes. It activates the glycine receptor chloride channel.

Ros-Moreno RM, Moreno-Guzman MJ, Jimenez-Gonzalez A et al. Parasitol Res. 85:320-3 (1999).

Shan Q, Haddrill JL, Lynch JW. J Biol Chem. 276:12556-64 (2001).

1 g	$37.00
5 g	$154.00

K0021



K252a (See page 18 for more information)

$C_{27}H_{21}N_3O_5$ Mol Wt: 467.479 [99533-80-9]

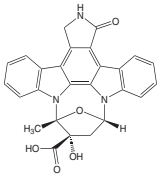
A potent protein kinase inhibitor that has shown promise fighting Met-driven proliferation of gastric carcinoma cells.

Alessandro M, Silvia M, Paolo A, Emma T, Carola P, Oncogene, 21(32): 4885-4893 (2002).

Tapley P, Lamballe F, Barbacid M. Oncogene. 7(2):371-81 (1992).

100 µg	$76.00
1 mg	$400.00

K0022



K252 b (See page 18 for more information)

$C_{26}H_{16}N_3O_5$ Mol Wt: 453.13

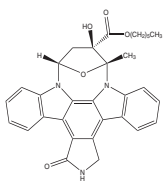
An ectoprotein kinase inhibitor that could have profound implications on the treatment of prostate cancer.

Ellen M-C, Kita T, Shih W, Dipaola R, Chin K Clinical Cancer Research. 6: 2309-2317 (2000).

Teshima *et. al*. Journal of immunology, 159(2): 964-969 (1997).

100 µg	$76.00
1 mg	$568.00

K7600



KT5720 (See page 18 for more information)

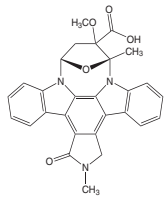
$C_{32}H_{31}N_3O_5$ Mol Wt: 537.23

A Protein Kinase a inhibitor that has been shown to reduce enzyme activity in INF- alpha thereby creating a potential pathway to treat tumors.

Naviglio *et. al*. J Interferon Cytokine Res. 27(2):1 (2007)

100 µg	$100.00
1 mg	$750.00

K7602



KT5823 (See page 18 for more information)

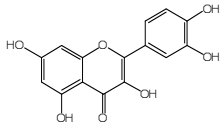
$C_{28}H_{23}N_3O_5$ Mol Wt: 481.16

A K252 derivitive.

100 µg	$100.00
1 mg	$750.00

K0117

-20 °C



Kaempferol, 95 %

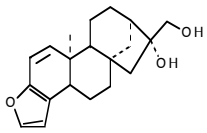
$C_{15}H_{10}O_7$ Mol. Wt.: 302.24 [520-18-3] m.p. 276-8 °C

Kaempferol is a flavonoid present in various natural sources including red wines and the leaves of gingko biloba. Kaempferol was found to inhibit COX-2 expression in colon cancer cells. It is cytotoxic to human leukemic cell lines. Its cytotoxicity and chemopreventive activities may be attributed to its ability to induce apoptosis.

Burns J, Gardner PT, O'Neil J et al. J. Agric. Food Chem. 48:220-230 (2000).
Watson DG, Oliveira EJ, J. Chromatogr. B. Biomed. Sci. Appl. 723:203-210 (1999).
Mutoh M, Takahashi M, Fukuda K et al. Carcinogenesis. 21:959-963 (2000).
Dimas K, Demetzos C, Mitaku S et al. Pharmacol Res. 41:85-88 (2000).
Wang IK, Lin-Shiau SY, Lin JK. Eur. J. Cancer. 35:1517-1525 (1999).

1 mg	$30.80
5 mg	$123.00
10 mg	$153.70

K0030



Kahweol (See page 7 for more information)

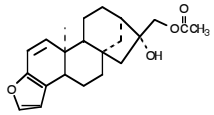
$C_{20}H_{26}O_3$, F.W. 314.19, m.p. 143-144ºC, [6894-43-5]

Natural product isolated from the unsaponifiable fraction of petroleum ether extract of coffee beans. It is an inducer of the detoxifying enzyme, glutathione S-transferase.

Bengis RO, Anderson RJ. J. Biol. Chem. 47:99-113 (1932).
Slotta KH, Neisser K. Ber. 71:1991-1994 (1938).
Lam LKT, Sparnins VL, Wattenberg LW. Cancer Res. 42:1193-1198 (1982).

10 mg	$84.00
25 mg	$139.30
100 mg	$310.50
500 mg	$1,070.40

K0031



Kahweol acetate

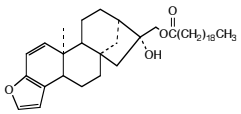
$C_{22}H_{28}O_4$, F.W. 356.47, m.p. 133.5-136ºC, [81760-4706]

Inducer of glutathione S-transferase.

Lam LKT, Sparnins VL, Wattenberg LW. J. Med. Chem. 30:1399-1403 (1987).

10 mg	$89.20
25 mg	$145.80
100 mg	$321.30
500 mg	$1,102.60

K0034

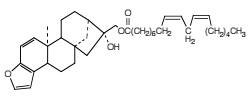


Kahweol eicosanate

$C_{40}H_{64}O_4$, F.W. 608.93 [108214-32-0]

10 mg	$111.30
25 mg	$183.80
100 mg	$465.60

K0036

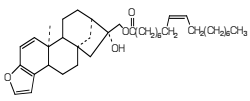


Kahweol linoleate

$C_{38}H_{56}O_4$, F.W. 576.85 [108214-29-5]

10 mg	$108.70
25 mg	$179.10
100 mg	$457.10

K0038

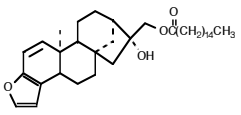


Kahweol oleate

$C_{38}H_{58}O_4$, F.W. 578.86 [108214-30-8]

10 mg	$112.80
25 mg	$192.00
100 mg	$474.00

K0032



Kahweol palmitate

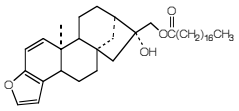
$C_{36}H_{56}O_4$, F.W. 552.42, m.p. 32ºC, [81760-45-4]

Naturally occurring ester present in green coffee beans that inhibits mammary tumor formation.

Lam LKT, Sparnins VL, Wattenberg LW. Cancer Res. 42:1193-1198 (1982).

10 mg	$85.80
25 mg	$145.80
100 mg	$321.30
500 mg	$1,102.60

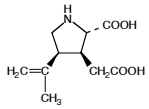
K0040 — **Kahweol stearate**



$C_{38}H_{60}O_4$, F.W. 580.88 [108214-31-9]

10 mg	$104.80
25 mg	$169.60
100 mg	$435.60

K0133 — **Kainic Acid**



$C_{10}H_{15}NO_4$ Mol. Wt.: 213.23 [487-79-6]

Kainic acid induces partial reversible damage to progressive neurogeneration.

Sun H, Hashino E, Ding DL, Salvi RJ. J Comp Neurol 430:172-181 (2001).

10 mg	$169.10
25 mg	$407.50
100 mg	$1,513.80

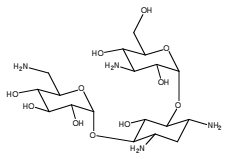
K0144 — **Kallikrein Inhibitor**

Ac-Pro-Phe-Arg-Ser-Val-Gln-NH_2

$C_{35}H_{55}N_{11}O_9$ Mol.Wt.: 773.9

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

K0053 — **Kanamycin A**



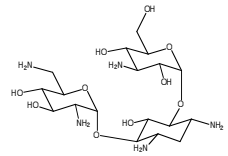
$C_{18}H_{36}N_4O_{11}$ Mol. Wt.: 484.50 [59-01-8]

Kanamycins are aminoglycoside antibacterials. Kanamycin A has been shown to be more potent than metronidazole and clarithromycin against Helicobacter pylori.

Irie Y, Tateda K, Matsumoto T et al. J Antimicrob Chemother. 40:235-40 (1997).
Kwon M, Chun SM, Jeong S et al. Mol Cells. 11:303-11 (2001).

1 g	$20.20
5 g	$56.00
25 g	$207.20

K0054 — **Kanamycin B**



$C_{18}H_{37}N_5O_{10}$ Mol. Wt.: 483.51 [4696-76-8]

100 mg	$28.00
250 mg	$50.40
1 g	$140.00

K0172 — **Kassinin**

Ac-Pro-Phe-Arg-Ser-Val-Gln-NH_2

$C_{59}H_{95}N_{15}O_{18}S$ Mol Wt: 1334.6

A tachykinin peptide of the skin of the African frog *Kassina senegalensis*.

Perfumi M, de Caro G, Panocka I et al. Pharamacol Res Commun. 20 Suppl 5:67-70 (1988).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

K0276 — **Katacalcin**

H-Asp-Met-Ser-Ser-Asp-Leu-Glu-Arg-Asp-His-Arg-Pro-His-Val-Ser-Met-Pro-Gln-Asn-Ala-Asn-OH

$C_{97}H_{154}N_{34}O_{36}S_2$ Mol.Wt.: 2436.64

A calcium-lowering hormone that may be a useful marker for the detection of medullary thyroid carcinoma.

Ali-Rachedi A, Varndell IM, Facer P et al. J Clin Endocrinol Metab. 57:680-682 (1983).
Takami H, Shikata J, Horie H et al. J Surg Oncol. 44:205-207 (1990).

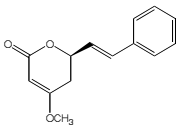
0.5 mg	$83.20
1 mg	$140.80
2.5 mg	$249.60

K0282 — **Kavalactones Mixture**

100 μg each of 13 kava compounds/ mL acetonitrile

1 ml	$392.00

K0088 — **Kawain** (See page 18 for more information)



$C_{14}H_{14}O_3$ Mol. Wt.: 230.26 [500-64-1]

A major component of kava kava extract, has antinociceptive activity.

Jamieson DD, Duffield PH. Clin Exp Pharm Physiol 16:496-507 (1990).

5 mg	$99.50
10 mg	$153.70

K1650 — **Kemptide**

H-Leu-Arg-Arg-Ala-Ser-Leu-Gly-OH

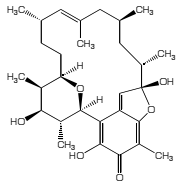
$C_{32}H_{61}N_{13}O_9$ Mol.Wt.: 771.92

A synthetic heptapeptide substrate for kinases that maintains cell membrane intactness when added to cultured cells.

Foxwell BM, Band HA, Long J et al. Br J Cancer. 57:489-493 (1988).
Kubler D, Pyerin W, Bill O et al. J Biol Chem. 264:14549-14555 (1989).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

K1653



Kendomycin

(-)-TAN 2162

$C_{29}H_{42}O_6$ Mol. Wt.: 486.64 [59785-91-0]

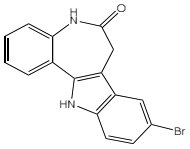
A potent endothelin receptor antagonist isolated from *Streptomyces violaceruber*.

It is an antiosteoporotic with antibacterial and cytotoxic activity.

Zeeck A, Bode HB. J Chem Soc Perkin Trans. 323 (2000).

100 µg $148.20
500 µg $592.80

K1655



Kenpaullone

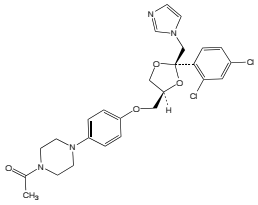
$C_{16}H_{11}BrN_2O$ Mol. Wt.: 327.18

A potent inhibitor of CDK1/cyclin B, that also inhibits CDK2/cyclin A, CDK2/cycline E, and CDK5/p25. It acts by competitive inhibition of ATP binding.

Zaharevitz DW, Gussio R, Leost M et al. Cancer Res. 59:2566-9 (1999).
Cole A, Frame S, Cohen P. Biochem J. 377:249-55 (2004).

1 mg $98.80
5 mg $444.60

K1676



Ketoconazole

$C_{26}H_{28}Cl_2N_4O_4$ Mol.Wt.: 531.43 m.p. 146°C [65277-42-1]

An inhibitor of cytochrome P-450 in steroid biosynthesis. Antineoplastic, antimetastatic, antipsoriatic. Inhibits lipoxygenase and thromboxane synthase activities.

Lelcuk S, Huval WV, Valeri CR et al. J. Trauma 24:393-396 (1984).
Tucker WFG, MacNeil S. Br. Med. J. 293:882 (1986).
Nardone PA, Slotman GJ, Vezeridis MP. J. Surg. Res. 44:425-429 (1988).
Van Wauwe JP, Janssen PAJ. J. Med. Chem. 32:2231-2239 (1989).

5 g $51.60
25 g $169.50

K1674

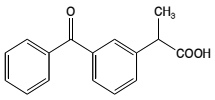
Met-Arg-Phe-Phe-Val

Ketolide resistance Peptide MRFFV

$C_{34}H_{50}N_8O_6S$ Mol Wt: 698.9

1 mg $32.00
5 mg $120.00

K1677



Ketoprofen (See page 23 for more information)

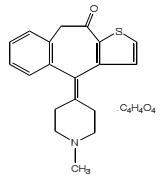
$C_{16}H_{14}O_3$ Mol.Wt.: 254.28 m.p. 93-96°C [22071-15-4]

A non-steroidal anti-inflammatory agent with significant chemopreventive activity in colon and urinary bladder carcinogenesis.

Reddy BS, Tokumo K, Kulkarni N et al. Carcinogenesis. 13:1019-1023 (1992).
Rao KV. Detrisai CJ, Steele,VE et al. Carcinogenesis. 17:1435-1438 (1996).

5 g $49.20
25 g $138.80
100 g $307.90

K1776



Ketotifen Fumarate

$C_{19}H_{19}NOS \cdot CH_4H_4O_4$ Mol. Wt.: 425.5 [34580-14-8]

Inhibits spontaneous motor activity and amphetamine hypermotility while inducing L-DOPA motor stimulation in mice and rats. Anti-asmatic activity and mast cell stabilizer.

Martin U. Roemer D. Monographs in Allergy. 12:145-149 (1977).
Wuethrich B. Radielovic P. Debelic M. Intl J Clinl Pharmacol Biopharm. 16:424-9 (1978).

500 mg $40.10
1 g $72.00

K2412

H-Lys-Gly-Asp-Ser-OH

K-G-D-S

$C_{15}H_{27}N_5O_8$ Mol.Wt.: 405.41

1 mg $32.00
2 mg $54.40
5 mg $96.00

K3352

H-Ile-Ala-Arg-Arg-His-Pro-Tyr-Phe-Leu-OH

Kinetensin

$C_{56}H_{85}N_1$-O_{11} Mol.Wt.: 1172.4

Increases vascular permeability and induces histamine release in rat peritoneal mast cells.

Sydbom A, Ware J, Mogard MH. Agents Actions. 27:68-71 (1989).

1 mg $32.00
2 mg $54.40
5 mg $96.00

K4401

H-Leu-Pro-Pro-Val-Ala-Ala-Ser-Ser-Leu-Arg-Asn-Asp-OH

KL-1

$C_{53}H_{90}N_{16}O_{18}$ Mol.Wt.: 1239.4

1 mg $64.00
2 mg $108.80
5 mg $192.00

K6864 — **K-R-Q-H-P-G**

H-Lys-Arg-Gln-His-Pro-Gly-OH

$C_{30}H_{51}N_{13}O_8$ Mol.Wt.: 721.82

0.5 mg	$25.60
1 mg	$43.20
2.5 mg	$76.80

K9858 — **Kyotorphin**

H-Tyr-Arg-OH

$C_{15}H_{23}N_5O_4$ Mol.Wt.: 337.4

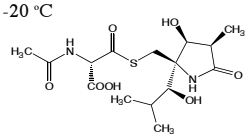
An analgesic neuropeptide that inhibits peptide uptake.

5 mg	$64.00
10 mg	$108.80
25 mg	$192.00

Hussain I, Zanic-Grubisic T, Kudo Y, Boyd CA. FEBS Lett. 508:350-354 (2001).
Hazato T, Kase R, Ueda H et al. Biochem Int. 12:379-383 (1986).

L0107 — **Lactacystin**

-20 °C



$C_{15}H_{24}N_2O_5S$ Mol.Wt.: 376.4 [133343-34-7]

Proteasome inhibitor, induces apoptosis and inhibits angiogenesis.

200 µg	$328.20

Tomoda H, Omura S. Yakugaku Zasshi 120:935-49 (2000).
Wagenknecht B et al. J Neurochem 75:2288-97 (2000).
Kumeda SI et al. Anticancer Res 19:3961-8 (1999).

L0109 — **Lactalbumin**

2-8 °C

[9013-90-5]

A non soluble denatured protein fraction from milk. Found to have antiproliferative activity which is useful in the prevention of colon cancer and breast cancer.

1 lb	$15.10
5 lb	$53.10

Ganjam LS, Thornton WH Jr, Marshall RT, MacDonald RS. J Dairy Sci. 80:2325-9 (1997).
Biffi A, Coradini D, Larsen R et al. Nutr Cancer. 28:93-9 (1997).

L0209 — **Lactoferrin (Bovine)**

2-8 °C

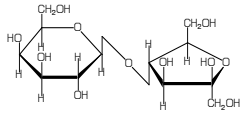
Protein contents 96-98%

An antimicrobial peptide, which has significant antimicrobial activity against Helicobacter species. It has antifungal activity.

10 mg	$26.00
50 mg	$109.20
100 mg	$196.20

Dial EJ, Hall LR, Serna H, Romero JJ et al. Dig Dis Sci. 43:2750-6 (1998).
Wakabayashi H, Uchida K, Yamauchi K et al. J Antimicrob Chemother. 46:595-602 (2000).

L0211 — **Lactulose**



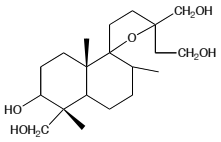
$C_{12}H_{22}O_{11}$ Mol. Wt.: 342.30 [4618-18-2]

A keto analogue of lactose. In humans, lactulose reduced dehydroxylation of chenodeoxycholic acid to the potentially toxic secondary bile acid lithocholic by over 90%. It is also a substrate for preferential growth of Bifidobacterium longum, a bacterium which has been shown to afford protection against colon tumorigenesis.

10 g	$30.80
25 g	$48.30

Hennigan TW, Sian M, Matthews J, Allen-Mersh TG. Surg Oncol. 4:31-4 (1995).
Owen RW. Scand J Gasteroenterol. 222:76-82 (1977).
Challa A, Rao DR, Chawan CB, Shackel Ford L. Carcinogenesis. 18:517-21 (1997).

L0226 — **Lagochiline**



$C_{20}H_{36}O_5$ Mol. Wt.: 356.50

A diterpene from the Turkestan Mint plant. It has hemostatic, hypotensive, and sedative effects.

25 mg	$61.60
100 mg	$203.30

Schultes RE. Science. 163:245-54 (1969).

L0248 — **Laminin peptide YIGSR** (See Page 18 for more information)

Laminin fragment 929-933

1 mg	$34.50
5 mg	$110.90

L0249 — **Laminin peptide YIGSR-NH2** (See Page 18 for more information)

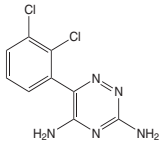
1 mg	$39.50
5 mg	$147.90

L0250 — **Laminin peptide SIKVAV** (See Page 18 for more information)

1 mg	$43.20
5 mg	$154.00

L0251 **Laminin peptide CDPGYIGSR** (See Page 18 for more information) — **1 mg $80.10**; **5 mg $308.00**

L0349 **Lamotrigine** — **25 mg $45.00**; **100 mg $145.00**; **500 mg $450.00**

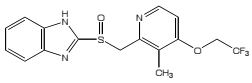


$C_9H_7C_{12}N_5$ Mol Wt: 255.01 [84057-84-1]

An anti-convulsant drug used to treat siezures, neuropathic pain and epilepsy.

Backonja MM, Neurology. 59 (5 Suppl 2):S14-7 (2002).
Karceski S, Morrell MJ, Carpenter D. Epilepsy Behav. Suppl 1:S1-64; quiz S65-7 (2005).

L0254 **Lansoprazole** (See page 25 for more information) — **250 mg $28.00**; **1 g $78.40**

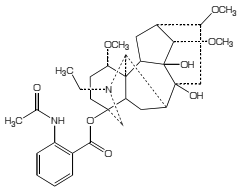


$C_{16}H_{14}F_3N_3O_2S$ Mol. Wt.: 369.36 [103577-45-3]

A proton pump inhibitor. It inhibits $H^+/K(^+)$ ATPase, resulting in potent and long-lasting inhibition of gastric acid secretion. It has also shown antibacterial activity against H. pylori.

Iwahi T, Satoh H, Nakao M et al. Antimicrob Agents Chemother. 35:490-6 (1991).
Nagaya H, Satoh H. Nippon Rinsho. 50:26-32 (1992).
Li XQ, Andersson TB, Ahlstrom M et al. Drug Metab Dispos. 32:821-7 (2004).

L0060 **Lappaconitine** (See page 3 for more information) — **25 mg $67.80**; **100 mg $203.30**; **500 mg $677.60**

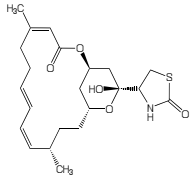


$C_{32}H_{44}N_2O_8$ Mol. Wt.: 584.70 [32854-75-4]

An alkaloid isolated from the root of *Aconltitum sinomantanum* Nakai has strong analgesic activity that does not involve the opioid receptor. It was shown to have class-I antiarrhythmic action and irreversibly blocks cloned human heart (hH1) channels by binding to the site 2 receptor.

Ono, M, Satoh T. Res Comm. Chem Path Pharm. 63:13-25 (1989).
Heubach JF, Schule A. Planta Medica 64:22-26 (1998).
Wright SN. Mol Pharm. 59:183-192 (2001).

L0076 **Latrunculin A** (See page 21 for more information) — **1 mg $205.10**

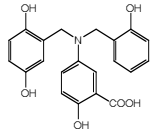


$C_{22}H_{31}NO_5S$ Mol.Wt.: 421.55 [76343-93-6]

It is an actin-binding marine toxin that distrupts microfilament-mediated processes. It inhibits actin polymerisation in vitro and in vivo.

Coue, M.; Brenner, S.L.; Spector, I.; Korn E.D. FEBS letters. 213: 316-318 (1987).
Morton, W. M.; Ayscough, K.R.; McLaughlin, P.J. Nature Cell Biol. 2: 376-378 (2000).
Spector, I.; Shochet, N.R.; Kashman, Y.; Groweiss, A. Science 214: 493-495 (1983).
Yarmola, E.G.; Somasundaram, T.; Boring, T.A.; Spector, I.; Bubb, M.R. J.Biol.Chem. 275: 28120-28127 (2000).

L0284 **Lavendustin A** — **1 mg $128.80**; **5 mg $453.80**



$C_{21}H_{19}NO_6$ Mol. Wt.: 381.38 [125697-92-9]

Protein tyrosine kinase inhibitor. Suppresses VEGF-induced angiogenesis.

Onoda T, Iinuma H, Sasaki Y et al. J Nat Prod. 52:1252-7 (1989).
Hu DE, Fan TP. Brit J Pharmacol. 114:262-8 (1995).

L1628 **Ac-LEHD-PNA** — **1 mg $41.60**; **2 mg $70.40**; **5 mg $123.20**

Ac-Leu-Glu-His-Asp-pNA

$C_{29}H_{38}N_8O_{11}$ Mol.Wt.:674.7

L1660 **Leptin (22-56), human** — **1 mg $376.40**

Val-Pro-Ile-Gln-Lys-Val-Gln-Asp-Asp-Thr-Lys-Thr-Leu-Ile-Lys-Thr-Ile-Val-Thr-Arg-Ile-Asn-Asp-Ile-Ser-His-Thr-Gln-Ser-Val-Ser-Ser-Lys-Gln-Lys

OBGRP(22-56), human

$C_{171}H_{288}N_{50}O_{56}$ Mol Wt: 3950.6

L1661 **Leptin (116-130), mouse** — **0.5 mg $96.00**; **1 mg $163.20**; **2.5 mg $288.00**

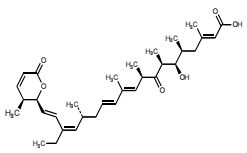
H-Ser-Cys-Ser-Leu-Pro-Gln-Thr-Ser-Gly-Leu-Gln-Lys-Pro-Glu-Ser-OH

$C_{64}H_{107}N_{18}O_{25}S_1$ Mol.Wt.: 1560.74

Significantly reduces weight gain by injected female C57BL/6J ob/ob mice.

Grasso P, Leinung MC, Ingher SP, Lee DW. Endocrinology. 138:1413-1418 (1997).

L1761



Leptomycin B

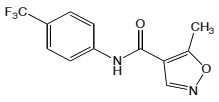
$C_{33}H_{48}O_6$ Mol. Wt.: 540.73 [87081-35-4]

An antifungal antibiotic, found to be a potent antitumor agent. It is suggested that the antitumor effect is related to cytochrome c release, activation of caspases, and selective down-regulation of Mc1-1 and XIAP. Leptomycin B has also been found to inactivate the export receptor CRM1.

Sasaki H, Yoshida M, Beppu T. Radiat Res. 129:163-70 (1992).
Jang BC, Paik JH, Jeong HY et al. Biochem Pharmacol. 68:263-74 (2004).
Meissner T, Krause E, Vinkemeier U. FEBS Lett. 576:27-30 (2004).

1 µg	$91.90
5 µg	$324.80

L1817



Leflunomide

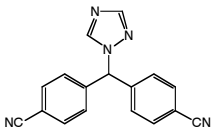
$C_{12}H_9F_3N_2O_2$ Mol. Wt.: 270.2 [175706-12-6]

An immunomodulator, inhibits tyrosine phosphorylation and pyrimidine nucleotide synthesis.

Xu X, Shen J, Mall JW et al. Biochem Pharmacol. 58:1405-13 (1999).
Manna SK, Mukhopadhyay A, Aggarwal BB. J Immunol. 165:5962-9 (2000).

100 mg	$43.20
500 mg	$153.70
1 g	$269.10

L1878



Letrozole

$C_{17}H_{11}N_5$ Mol. Wt.: 285.30 [112809-51-5]

A non-steroidal antiaromatase used in the treatment of advanced breast cancer and chemoprevention.

Ingle JN. Oncology (Huntingt). 15:28-34 (2001).
Bhatnagar AS, Hausler A, Schieweck K et al. J Steroid Biochem Mol Biol. 37:1021-7 (1990).
Brodie AM. J Steroid Biochem Mol Biol. 49:281-7 (1994).

25 mg	$55.50
50 mg	$92.40
100 mg	$154.00

L1980

H-Asp-Pro-Ala-Phe-Asn-Ser-Trp-Gly-NH_2

Leucokinin I

$C_{41}H_{52}N_{11}O_{12}$ Mol.Wt.: 891.93

A neuropeptide that was originally isolated from the cockroach Leucophaea maderae.

Lee BH, Kang H, Kwon D et al. Tissue Cell. 30:74-85 (1998).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

L1981

H-Gly-Ala-Ser-Phe-Tyr-Ser-Trp-Gly-NH_2

Leucokinin VIII

$C_{42}H_{52}N_{10}O_{11}$ Mol.Wt.: 872.94

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

L1983

pGlu-Asp-Val-Asp-His-Val-Phe-Leu-Arg-Phe-NH_2

Leucomyosuppressin (lms)

$C_{59}H_{84}N_{16}O_{15}$ Mol.Wt.: 1257.44

An insect myoinhibitory neuropeptide that has been shown to inhibit contraction of both visceral and skeletal muscles of insects and may also be associated with feeding and digestion.

Fuse M, Bendena WG, Donly BC et al. J Comp Neurol. 395:328-341 (1998).
Meola SM, Wright MS, Holman GM, Thompson JM. J Med Entomol. 28:712-718 (1991).

0.5 mg	$25.60
1 mg	$43.20
2.5 mg	$76.80

Leucovorin Calcium

See calcium folinate, pentahydrate

L1881

0 °C

5-OxoPro-His-Trp-Ser-Tyr-D-H_5C_2HN-Pro-Arg-Leu-Leu

Leuprolide Acetate Salt

$C_{59}H_{84}N_{16}O_{12}$ Mol.Wt.: 1209.4 [74381-53-6]

A gonadotropin inhibitor that decreases testosterone levels in men and estrogen levels in women. Implantable leuprolide delivery system provides suppression of testosterone in patients with advanced prostate cancer. In experimental animals it was found to inhibit chemically induced mammary tumor formation as effectively as surgical ophorectomy.

Fowler JE, Gottesman JE, Reid CF et al. J Urol. 164:730-4 (2000).
Jett EA, Lerner Mr, Light foot SA et al. Breast Cancer Res Treat. 58:131-6 (1999).

1 mg	$51.60
5 mg	$178.90

L1882

pGlu-His-Trp-Ser-Tyr-D-Leu-Leu-Arg-Pro-NHEt

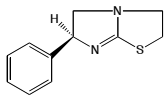
Leuprorelin Acetate

$C_{59}H_{84}N_{16}O_{12}$ Mol.Wt.: 1209.43 [53714-56-0]

Leuprorelin acetate is a potent LHRH agonist. Used for the treatment of advanced hormone-dependent prostate cancer, endometriosis, advanced hormone-dependent breast cancer and central precocious puberty.

Please inquire

L1682 Levamisole Hydrochloride



$C_{11}H_{12}N_2S.HCl$ Mol. Wt.: 240.76 [16595-80-5]

An anti-neoplastic, immuno-modulating agent that is used as an adjuvant in colon cancer therapy. It selectively induces apoptosis and growth arrest in cultured human micro-and macro vascular endothelial cells. In experimental animals, levamisole reduces both the number and size of tumors in the colon and buccal pouch.

Artwohl M, Holzenbein T, Wagner et al. BR J Pharmacol. 131:1577-1583 (2000).
Suzuki H, Yamamoto J, Iwata Y et al. Jpn J Surg. 16:152-5 (1986).
Eisenberg E, Shakilar G. Oral Surg Oral Pathol. 43:562-71 (1997).

5 g	$27.60
10 g	$46.10

L1735 Levitide

pGlu-Gly-Met-Ile-Gly-Thr-Leu-Thr-Ser-Lys-Arg-Ile-Lys-Gln-NH_2

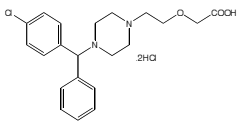
$C_{66}H_{119}N_{21}O_{19}S$ Mol.Wt.: 1542.88

Originally isolated from skin secretions of the South African frog Xenopus laevis.

Poulter L, Terry AS, Williams DH et al. J Biol Chem. 263:3279-3283 (1988).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

L1780 Levocetirizine Dihydrochloride



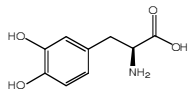
$C_{21}H_{25}ClN_2O_3$ .2HCl Mol. Wt.: 461.81 [83881-52-1]

The active R-enantiomer of cetirizine. It is a selective H1 receptor antagonist with potential anti-inflammatory effects.

Thomson L, Blaylock MG, Sexton DW et al. Clin Exp Allergy. 32:1187-92 (2002).
Day JH, Eliis AK, Rafeiro E. Med Actual. 40:415-21 (2004).

1 g	$28.00
5 g	$58.30
25 g	$224.00

L1782 Levodopa



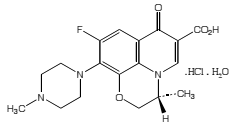
$C_9H_{11}NO_4$ Mol. Wt.: 197.19 [59-92-7]

The natural form of DOPA used in the treatment of Parkinson's disease.

Morris JG. Clin Exp Neurol. 15:24-50 (1978).

1 g	$24.70
5 g	$46.90
10 g	$74.00

L1786 Levofloxacin Hydrochloride (See page 13 for more information)



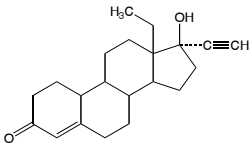
$C_{18}H_{20}FN_3O_4 \cdot HCl \cdot H_2O$ Mol. Wt.: 415.84

It is the optical S-(-) isomer of the fluoroquinolone antibacterial, ofloxacin. It has twice the potency of ofloxacin.

Davis R, Bryson HM. Drugs 47:677-700 (1994).

500 mg	$43.20
1 g	$69.30
5 g	$284.40

L1684 Levonorgestrel



D(-)Norgestrel

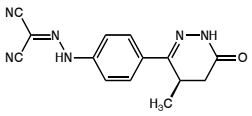
$C_{21}H_{28}O_2$ Mol.Wt.: 312.45 m.p. 235-237°C [797-63-7]

A synthetic progestin that binds to progesterone and androgen receptors but not the estrogen receptor. It induces apoptosis in ovarian epithelium cells.

Lemus AE, Vilchis F, Damsky R. J Steroid Biochem Mol Biol. 41:881-90 (1992).
Rodriguez GC, Walmer DK, Cline M et al. J Soc Gynecol Investig. 5:271-6 (1998).

100 mg	$32.20
500 mg	$135.90
1 g	$263.80

L1884 Levosimendan (See page 19 for more information)



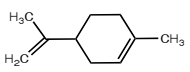
$C_{14}H_{12}N_6O$ Mol. Wt.: 280.28 [141505-33-1]

A Ca(2+) sensitizer that increases contractile force of the myocardium by enhancing the sensitivity of myofilaments to calcium without increasing intracellular calcium concentration. It has been shown to reduce circulating proinflammatory cytokine interleukin-6 and soluble apoptosis mediators.

Udvary E, Papp JG, Vegh A. Br J Pharmacol. 114:656-61 (1995).
Parissis JT, Adamopoulos S, Antoniades C et al. Am J Cardiol. 93:1309-12 (2004).
Eriksson O, Pollesello P, Haikala H. J Cardiovasc Pharmacol. 44:316-21 (2004).

100 mg	$58.30
250 mg	$106.40
1 g	$336.00

L3250 D-Limonene



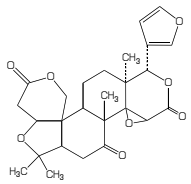
$C_{10}H_{16}$ Mol.Wt.:136.23 [5989-27-5]

A monoterpene found to prevent mammary cancer by inducing hepatic glutathione-S-transferase and uridine diphosphoglucuronosyl transferase. It inhibits isoprenylation of small G-proteins.

Elegbede JA, Maltzman TH, Elson CE, Gould MN. Carcinogenesis. 14:1221-1223 (1993).
Gould MN. Environ Health Perspect. 105:977-979 (1997).

500 ml $32.50

L3550



Limonin (See page 19 for more information)

Evodine

$C_{26}H_{30}O_{80}$ Mol.Wt.: 470.52 m.p. 298-300°C [1180-71-8]

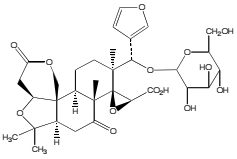
Natural product isolated from grapefruit seed. It is one of the bitter principles of citrus.

It was found to inhibit chemically induced carcinogenesis. It also possesses antifeedant properties.

Rouseff RL, J Agric. Food Chem. 30:504-507 (1982).
Maier VP, Hasegawa S. Bennett RD et al. Protect Ecol. 6:91(1984).

50 mg	$48.80
100 mg	$84.50
500 mg	$278.00

L3551



Limonin Glucoside

Limonin 17 β-D-glucopyranoside

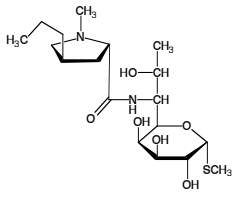
$C_{32}H_{42}O_{14}$ Mol. Wt.: 650.67

Natural product present in grape fruit and orange juices. Found to inhibit chemical carcinogenesis.

Miller EG, Gonzales-Sanders AP, Couvillon AM et al. Nutr Cancer 17:1-7 (1992).

1 mg	$76.90
5 mg	$269.10

L3454



Lincomycin Hydrochloride

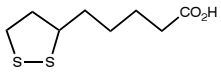
$C_{18}H_{34}N_2O_6S.HCl.H_2O$ Mol. Wt.: 443.00 [7179-49-9]

A macrolide antibiotic that is bacterostatic against staphylococcus aureus. It inhibits protein synthesis by first binding to the ribosome in competition with aminoacyl-tRNA. Subsequent interference continues to affect the binding of the isomerized ribosome-aminoacyl-tRNA complex.

Heman-Ackah SM. J Pharm Sci. 64:1621-6 (1975).
Kallia-Raftopoulos S, Kalpaxis DL, Coutsogeorgopoulos C. Arch Biochem Biophys. 298:332-9 (1992).

1 g	$29.60
5 g	$123.20
25 g	$468.20

L3561



D,L-α-Lipoic acid

D,L-Thioctic acid

$C_8H_{14}O_2S_2$ Mol.Wt.: 206.32 m.p. 58-62°C [1077-28-7]

An antioxidant, inhibits protein oxidative modification of human low density lipoprotein.

Matsugo, Yan LJ, Konishi T et al. Biochem Biophys Res Commun. 243:819-824 (1997).

1 g	$16.10
5 g	$46.90
25 g	$199.50

L3362

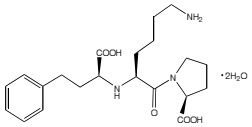
Tyr-Gly-Gly-Phe

β -Lipotropin (61-64)

$C_{22}H_{26}N_4O_6$ Mol.Wt.: 442.48

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

L3374



Lisinopril (See page 19 for more information)

$C_{21}H_{31}N_3O_5.2H_2O$ Mol. Wt.: 441.52 [83915-83-7]

An angiotensin-converting enzyme inhibitor. It blocks AT1a-receptor signaling which may inhibit angiogenesis, growth and metastasis of tumors.

Goa KL, Balfour JA, Zuanetti G. Drugs 52:564-588 (1996).
Fujita M, Hayashi I, Yamashina S. Biochem Biophys Res Comm. 294:441-447 (2002).

100 mg	$27.20
1 g	$61.10
5 g	$223.70

L3577

pGlu-Gln-Trp-Ala-Val-Gly-His-Phe-Met-NH_2

Litorin

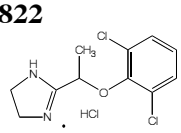
$C_{51}H_{68}N_{14}O_{11}S$ Mol.Wt.: 1085.28

A bombesin-like neuropeptide that may be involved in the physiological regulation of thermal homeostasis.

Esakov AI, Ashmarin IP, Serova ON et al. Biomed Sci. 1:610-612 (1990).
Tartara A, Bo P, Savoldi F. Peptides. 3:125-127 (1982).

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

L5822



Lofexidine Hydrochloride

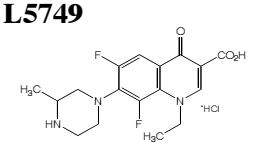
$C_{11}H_{12}Cl_2N_2O$ Mol. Wt.: 259.60 [21498-08-8]

It is an α2-adrenergic agonist useful in the management of opioid drawer.

Timmermans PB, van Kemenade JE, Harms YM et al. Arch Int Pharmacodyn Ther. 261:23-35 (1983).
Brown AS, Fleming PM. J Psychopharmacol. 12:93-6 (1998).

1 g	$43.20
5 g	$184.80
25 g	$677.60

L5749



Lomefloxacin Hydrochloride (See page 13 for more information)

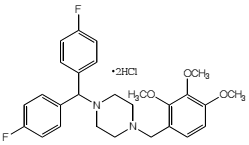
$C_{17}H_{19}F_2N_3O_3.HCl$ Mol. Wt.: 387.81 [98079-52-8]

A fluoroquinolone antibiotic that inhibis DNA gyrase.

Piddock LJ, Hall MC, Wise R. Antimicrob Agents Chemother. 34:1088-93 (1990).

1 g	$20.80
5 g	$73.70
10 g	$115.40

L5751



Lomerizine Hydrochloride

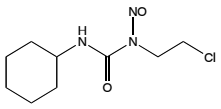
C_2-$H_{30}F_2N_2O_3$•2HCl Mol. Wt.: 541.4¯ [1014¯¯-54-¯]

A Ca^{2+} channel blocker used as an anti-migraine agent.

Hara H, Shimazawa M, Hashimoto M, Sukamoto T. Nippon Yakurigaku Zasshi. 112:138P-142P (1998).

500 mg	$61.60
1 g	$98.60
5 g	$425.10

L5648



Lomustine

CCNU

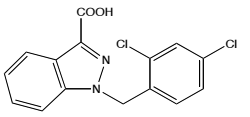
$C_9H_{16}ClN_3O_2$ Mol.Wt.: 233.7

Posseses antitumor activity similar to carmustine.

Marshall ES, Holdaway KM, Shaw JH et al. Oncol Res 5:301-9 (1993).

50 mg	$40.10
100 mg	$72.00
500 mg	$287.80

L5658



Lonidamine

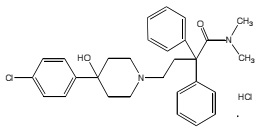
$C_{15}H_{10}Cl_2N_2O_2$ Mol. Wt.: 321.16 [50264-69-2]

A mitochondria-targeting antitumor agent. It has been shown to induce apoptosis in certain cells, and potentiate cisplatin and paclitaxel activity.

Orlandi L, Zaffaroni N, Bearzatto A et al. Int J Cancer. 78:377-84 (1998).
De Lena M, Lorusso V, Latorre A et al. Eur J Cancer. 37:364-8 (2001).
Miyato Y, Ando K. J Radiat Res (Tokyo). 45:189-94 (2004).

5 mg	$44.80
25 mg	$201.60
100 mg	$560.00

L5660



Loperamide Hydrochloride (See page 19 for more information)

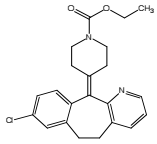
$C_{29}H_{33}ClN_2O_2$•HCl Mol. Wt.: 513.51 [34552-83-5]

A mu-opioid agonist that is an antidiarrhoeal drug which inhibits intestinal motility and secretion. It has been shown to suppress the calcium-influx in dorsal root ganglion neurons.

Hagiwara K, Nakagawasai O, Murata A et al. Neurosci Res. 46:493-7 (2003).
Klaren PH, Giesberts AN, Chapman J et al. J Pharm Pharmacol. 52:679-86 (2000).

5 g	$61.60
25 g	$246.40

L5767



Loratadine

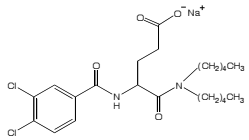
$C_{22}H_{23}ClN_2O_2$ Mol. Wt.: 382.88 [79794-75-5]

A non sedative antihistamine, inhibits histamine-induced activities of IL-6 and IL-8 secretion in endothelial cells.

Roman IJ, Danzig MR. Clin Rev Allergy. 11:89-110 (1993).
Molet S, Gosset P, Lassalle P et al. Clin Exp Allergy. 27:1167-74 (1997).

500 mg	$30.80
1 g	$46.90
5 g	$184.80

L5769



Lorglumide Sodium

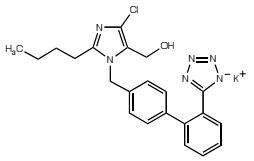
$C_{22}H_{31}Cl_2N_2O_4Na$ Mol. Wt.: 481.39 [97964-56-2]

A specific cholecytokinin receptor antagonist. It inhibits the effects of cholecytokinin on pancreatic growth and the development of pancreatic lesions and chemically induced carcinogenesis of the pancreas in rats.

Meijers M, Appel MJ et al. Carcinogenesis. 13:1525-8 (1992).
Watanapa P, Flaks B, Oztas Het al. J Cancer. 67:663-7 (1993).
Sperti C, Militello C et al. J Surg Oncol. 57:11-6 (1994).

25 mg	$67.80
100 mg	$244.90

L5873



Losartan Potassium

$C_{22}H_{22}ClKN_6O$ Mol. Wt.: 461.01 [124750-99-8]

An angiotensin II subtype I (AT1) receptor antagonist used for the treatment of hypertension. It inhibits platelet activity by suppressing thrombin-induced calcium transients and thromboxane release.

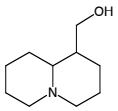
McIntyre M, Caffe SE, Michalak RA, Reid JL. Pharmacol Ther 74:181-94 (1997).
Schwemmer M, Sommer O, Bassenge E. Cardiovasc Drugs Ther. 15:301-7 (2001).

1 g	$24.70
5 g	$80.10
25 g	$258.80

Lovastatin

See Mevinolin

L8262 — **Lupinine** — 25 mg $43.20; 100 mg $141.70



$C_{10}H_{19}NO$ Mol. Wt.: 169.26 [486-70-4]

An alkaloid isolate from *Anabisis aphylla* can reduce the effect of ethanol anesthesia.

Mirzaev S. Farmakol Toksikol. 41:52-5 (1978).

L8276 — **Luteinizing Hormone Releasing Hormone** — 1 mg $32.00; 2 mg $54.40; 5 mg $96.00

pGlu-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-NH_2

LHRH

$C_{55}H_{76}N_{17}O_{13}$ Mol Wt: 1182.3 [9034-40-6]

A decapeptide found to inhibit ovulation in the rat.

Rivier JE, Vale WW. Life Sci. 23:869-876 (1978).

L8277 — **[Gln8] LH-RH, chicken** — 1 mg $32.00; 2 mg $54.40; 5 mg $96.00

pGlu-His-Trp-Ser-Tyr-Gly-Leu-Gln-Pro-Gly-NH_2

$C_{54}H_{71}N_{15}O_{14}$ Mol.Wt.: 1154.28

L8278 — **LH-RH, salmon** — 1 mg $32.00; 2 mg $54.40; 5 mg $96.00

pGlu-His-Trp-Ser-Tyr-Gly-Trp-Leu-Pro-Gly-NH_2

$C_{60}H_{73}N_{15}O_{13}$ Mol.Wt.: 1212.36

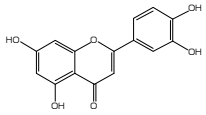
L2876 — **Luteinizing Hormone Releasing Hormone-III, Lamprey** — 1 mg $32.00; 2 mg $54.40; 5 mg $96.00

pGlu-His-Trp-Ser-His-Asp-Trp-Lys-Pro-Gly-NH_2

LHRH-III, lamprey

$C_{59}H_{75}N_{18}O_{14}$ Mol. Wt.: 1259.4

L8377 — **Luteolin** — 100 mg $49.30; 500 mg $154.00; 1 g $215.60

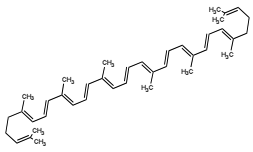


$C_{15}H_{10}O_6$ Mol. Wt.: 286.24 [491-70-3]

A flavonoid isolated from the fruit of *Vitex rotundifolia*. It is an apoptosis inducer with anti-proliferative effects.

Molnar J, Beladi I, Domonkos K et al. Neoplasma 28:11-8 (1981).
Yee SB, Lee JH, Chung HY et al. Arch Pharm Res. 26:151-6 (2003).

L9609 — **Lycopene** (See page 20 for more information) — 1 mg $115.10; 5 mg $382.80

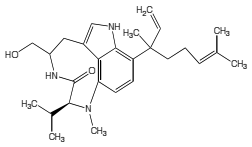


$C_{40}H_{56}$ Mol.Wt. 536.87 m.p. 172-173°C [502-65-8]

A carotenoid present in ripe fruits, particularly tomatoes. It is an antioxidant that appears to have cancer chemopreventive properties, and helps AIDS patients.

Rousseau EJ, Davison AJ, Dunn B. Free Radic Biol Med. 13: 407-433 (1992).
Khachik F, Beecher GR, Smith JC Jr. J Cell Biochem Suppl. 22:236-246 (1995).
Periquet BA, Jammes NM et al. AIDS. 9:887-893 (1995).

L9752 — **Lyngbyatoxin** — 500 µg $1,383.20



$C_{27}H_{39}N_3O_2$ Mol. Wt.: 437.62 [70497-14-2]

A tumor promoter isolated from the marine blue-green algae *Lyngbua majuscula*.

It activates protein kinase C.

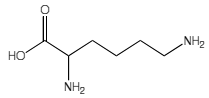
Fujiki H, Suganuma M, Hakii H et al. J Cancer Res Clin Oncol. 108:174-6 (1984).
Basu A, Kozikowski AP, Sato K, Lazo JS. Cancer Res. 51:2511-4 (1991).

L9875 — **Lys(Boc)-Leu-Lys(Boc)-Obzl** — 1 g $800.00

Lys(Boc)-Leu-Lys(Boc)-OBzl

$C_{35}H_{59}N_5O_8$ Mol Wt: 667.9

L9874



L-(+)Lysine Monohydrate

$C_6H_{14}N_2O_2 \cdot XH_2O$ Mol.Wt.:146.19 [39665-12-8]

5 g	$23.20
25 g	$46.10
100 g	$150.60

L9880

C[Cys-Tyr-Phe-Gln-Asn-Cys]-Pro-Lys-Gly-NH_2

Lysipressin Acetate

$C_{46}H_{65}N_{13}O_{12}S_2$ Mol.Wt.: 1056.22 [50-57-7]

Please inquire

M0035

H-Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg-NH_2

M35

$C_{107}H_{153}N_{27}O_{26}$ Mol.Wt.: 2233.58

A chimeric peptide that acts as a Galanin receptor antagonist which evokes the acetylcholine in rats

Ogren SO, Pramanik A, Land T, Lang U. Eur J Pharmacol 242(1) 59-64 (1993)

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

M0040

H-Gly-Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-Gly-Pro-Pro-Pro-Ala-Leu-Ala-Leu-Ala-NH_2

M40

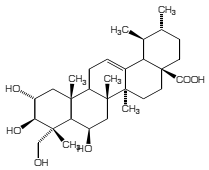
$C_{94}H_{145}N_{23}O_{24}$ Mol.Wt.: 1981.34

A galanin receptor antagonist.

Crawley JN, Robinson JK, Langel U, Bartfai T. Brain Research; 600(2): 268-272 (1993).

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

M0114



Madecassic acid

$C_{30}H_{48}O_6$ Mol. Wt.: 504.70 [18449-41-7]

One of the three triterpenes isolated from *Centella asiatica*. Its wound healing property has been attributed to its abbility to stimulate collagen synthesis.

Maquart FX, Bellon G, Gillery P et al. Conn Tiss Res. 24:107-120 (1990).
Bonte F, Dumas M, Chaudagne C, Meybeck A. Plant Med. 60:133-135 (1994).

500 mg	$78.70
1 g	$120.70
5 g	$474.40

M0124

H-Gly-Ile-Gly-Lys-Phe-Leu-His-Ser-Ala-Gly-Lys-Phe-Gly-Lys-Ala-Phe-Val-Gly-Glu-Ile-Met-Lys-Ser-OH

Magainin 1

$C_{112}H_{177}N_{29}O_{28}S$ Mol.Wt.: 2409.9

An anti-microbial peptide shown to be active against many types of bacteria and protozoa.

Matsuzaki K, Harada M, Handa T, Funakoshi S, Fujii N, Yajima H, Miyajima K Biochim Biophys Acta 981(1); 130-4 (1989)
Zasloff M, Martin B, Chen HC. PNAS 85(3) 910-913 (1988)

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

M0126

H-Gly-Ile-Gly-Lys-Phe-Leu-His-Ser-Ala-Lys-Lys-Phe-Gly-Lys-Ala-Phe-Val-Gly-Glu-Ile-Met-Asn-Ser-OH

Magainin 2

$C_{114}H_{180}N_{30}O_{29}S$ Mol.Wt.: 2466.95

An anti-microbial peptide that permeabilizes cell membranes.

Matsuzaki k, Sugishita K, Ishibe N, Uzha M, Nakata S, Miyajima K, Epand R. Biochemistry 37(34) 11856-11863 (1998).

0.5 mg	$38.40
1 mg	$65.60
2.5 mg	$115.20

M0224

Phe-Leu-Trp-Gly-Pro-Arg-Ala-Leu-Val

MAGE-3 Antigen (271-279), human

$C_{53}H_{79}N_{13}O_{10}$ Mol.Wt.: 1058.3

A human antigen that has been recognized to code for Melinoma and has also shown great promise for specific immunotherapy.

Gaglaou B *et. al.* J Experimental Medicine 179: 921-930 (1994).

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

M0115

Magic Red™ Caspases 3 & 7 Assay Kit (See page 30 for more information)

$MR-(DEVD)_2$

25 Tests	$155.70
100 Tests	$368.50

M0116

Magic Red™ Cathepsin B Assay Kit (See page 30 for more information)

$MR-(RR)_2$

25 Tests	$133.30
100 Tests	$334.90

M0117

Magic Red™ Cathepsin K Assay Kit (See page 30 for more information)

$MR-(LR)_2$

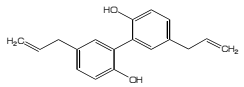
25 Tests	$133.30
100 Tests	$334.90

M0118 **Magic Red™ Cathepsin L Assay Kit** (See page 30 for more information)

MR-$(FR)_2$

25 Tests $133.30
100 Tests $334.90

M0125 **Magnolol** (See page 20 for more information)



$C_{18}H_{18}O_2$ Mol. Wt.: 266.33 [528-43-8]

Natural product isolated from the cortex of *Magnolia officinalis*, has been found to possess many interesting biological activities. It has anti-allergic and anti-asthmatic activity, anti-inflammatory and neuroprotective effects, anti-proliferative and activating apoptosis in cancer cells.

Lee MM, Huang HM, Hsieh, MT. Chinese J Physiology. 43:61-67 (2000).
Lin SY, Liu JD, Chang HC et al. J Cell Biochem. 84:532-544 (2002).
Lin SY, Chang YT, Liu JD et al. Mol Carcinogenesis. 32:73-83 (2001).
Wu Sn, Chen CC, Li HF et al. Thorax 57:67-74 (2002).

10 mg $65.10
25 mg $138.30
100 mg $441.90

M0144 **Malantide**

H-Arg-Thr-Lys-Arg-Ser-Gly-Ser-Val-Tyr-Glu-Pro-Leu-Lys-Ile-OH

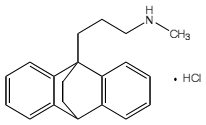
$C_{72}H_{124}N_{22}O_{21}$ Mol.Wt.: 1633.93

A cAMP synthetic peptide that performs protein kinase activity.

Murray KJ, England PJ, Lynham J, Mills D, Schmitz-peifer L, Reeves ML. Biochem 267(3):703-708 (1990).

1 mg $32.00
2 mg $54.40
5 mg $96.00

M0262 **Maprotiline Hydrochloride**



$C_{20}H_{23}N.HCl$ Mol. Wt.: 313.87 [10347-81-6]

An antidepressant works as a selective noradrenaline reuptake inhibitor. It decreases binding to 5HT2A receptors with no effect on benzodiazepine binding sites.

Pinder RM et al. Drugs 13:321 (1977).

1 g $44.40
5 g $141.70

M0272 **Mas7**

H-Ile-Asn-Leu-Lys-Ala-Leu-Ala-Ala-Leu-Ala-Lys-Ala-Leu-Leu-NH_2

$C_{67}H_{124}N_{18}O_{15}$ Mol.Wt.: 1421.85

1 mg $32.00
2 mg $54.40
5 mg $96.00

M0273 **Mas8**

H-Ile-Asn-Leu-Lys-Ala-Leu-Ala-Ala-Leu-Ala-Lys-Arg-Leu-Leu-NH_2

$C_{70}H_{131}N_{21}O_{15}$ Mol.Wt.: 1506.96

0.5 mg $32.00
1 mg $54.40
2.5 mg $96.00

M0275 **Mas17**

H-Ile-Asn-Leu-Lys-Ala-Lys-Ala-Ala-Leu-Ala-Lys-Lys-Leu-Leu-NH_2

$C_{70}H_{132}N_{20}O_{15}$ Mol.Wt.: 1493.96

1 mg $32.00
2 mg $54.40
5 mg $96.00

M0276 **Mast Cell Degranulating Peptide**

H-Ile-Lys-Cys-Asn-Cys-Lys-Arg-His-Val-Ile-Lys-Pro-His-Ile-Cys-Arg-Lys-Ile-Cys-Gly-Lys-Asn-NH_2 (Cys_3-Cys_{15}, Cys_5-Cys_{19})

$C_{110}H_{188}N_{40}O_{24}S_4$ Mol.Wt.: 2583.27

A highly potent convulsant polypeptide from the Mamba snake.

Stansfeld CE, Marsh SJ, Parcej DN, Brown DA. Neuroscience 23(3) 893-902 (1987)

0.5 mg $160.00
1 mg $272.00
2.5 mg $480.00

M0172 **Mastoparan**

Ile-Asn-Leu-Lys-Ala-Leu-Ala-Ala-Leu-Ala-Lys-Lys-Ile-Leu-NH_2

$C_{70}H_{131}N_{19}O_{15}$ Mol Wt: 1478.9 [72093-21-1]

A tetradecapeptide from wasp venom that activates G(i) and mast cells, in addition to inhibiting Ca^{2+}-ATPase. It has also been shown to induce apoptosis in cultured cerebellar granule neurons.

Chahdi A, Choi WS, Kim YM et al. J Biol Chem. 278:12039-45 (2003).
Longland CL, Mezna M, Michelangeli F. J Biol Chem. 274 :14799-805 (1999).
Lin SZ, Yan GM, Koch KE et al. Brain Res. 771:184-95 (1997).

1 mg $144.00

M0173 **Mastoparan X**

H-Ile-Asn-Trp-Lys-Gly-Ile-Ala-Ala-Met-Ala-Lys-Lys-Leu-Leu-NH_2

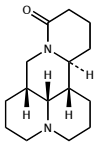
$C_{73}H_{126}N_{20}O_{15}S$ Mol.Wt.: 1556.01

A peptidic toxin known to induce transbilayer movement of ions.

Matsuzaki K, Yoneyama S, Murase O, Miyajima K. Biochemistry 35(25); 8450-8456 (1996)

1 mg $38.40
2 mg $65.60
5 mg $115.20

M0278



Matrine (See page 21 for more information)

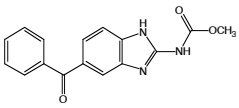
$C_{15}H_{24}N_2O$ Mol. Wt.: 248.36 [519-02-8]

An alkaloid. It has antiulcerogenic activity against stress ulcer in rat. It depresses both glutamate-induced responses and neurally evoked excitatory junctional potentials.

Ishida M, Shinozaki H. Br J Pharmacol. 82:523-31 (1984).
Yamazaki M, Arai A. J Pharmacobiodyn. 8:513-7 (1985).

100 mg	$92.40
500 mg	$338.80
1 g	$523.60

M1605



Mebendazol

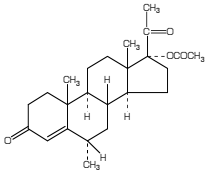
$C_{16}H_{13}N_3O_3$ Mol. Wt.: 295.29 [31431-39-7]

An anthelmintic drug.

Apt W. Rev Med Chil. 118:1021-7 (1990).

5 g	$24.70
25 g	$44.40

M1613



Medroxyprogesterone 17-Acetate

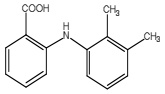
$C_{24}H_{34}O_4$ Mol. Wt.: 386.52 [71-58-9]

An angiostatic steroid, found to inhibit vascularization, collagenolysis, tumor growth and plasmin generation.

Blei F, Wilson EL, Mignatti P, Rifkin DB. J Cellu Physio. 155:568-78 (1993).

500 mg	$27.60
1 g	$46.10
5 g	$177.00

M1622



Mefenamic acid

$C_{15}H_{15}NO_2$ Mol. Wt.: 241.29 [61-68-7]

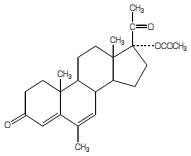
A NSAID that has antiproliferative activity against human colon cancer cells.

Hixson LJ, Alberts DS, Krutzsch M et al. Cancer Epidem. Bio Prev. 3:433-438 (1994).

10 g	$20.40
50 g	$40.70
100 g	$76.00

M1626

RT



Megestrol Acetate

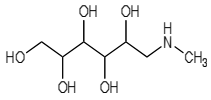
$C_{24}H_{32}O_4$ Mol. Wt.: 384.51 [595-33-5]

Orally active progestogen used in the treatment of advanced breast cancer.

Sbrams JS, Gutheil J, Aisner J. Oncology. 49 Suppl 2:12-7 (1992).
Sedlacek SM. Semin Oncol. 15:3-13 (1988).

250 mg	$32.20
1 g	$88.00
5 g	$303.80

M1826



Meglumine

N-Methyl-D-glucamine

$C_7H_{17}NO_5$ Mol Wt.195.20 [6284-40-8]

An antiprotozoal (leischmaniasis) agent.

Chapman WL Jr, Hanson WL, Alving CR et al. Am J Vet Res. 45:1028-30 (1984).

100 g	$34.50
500 g	$104.80
1 kg	$197.20

M1646

Asp-Phe-Asp-Met-Leu-Arg-Cys-Met-Leu-Gly-Arg-Val-Tyr-Arg-Pro-Cys-Trp-Gln-Val (Cys_7-Cys_{16})

Melanin Concentrating Hormone, human, mouse, rat

MCH, human, mouse, rat

$C_{105}H_{160}N_{30}O_{26}S_4$ Mol Wt: 2386.8

An orexigenic neuropeptide. It has been found to increase circulating adrenocorticotropic hormone, hippocampal nitric oxide and cGMP levels.

Kennedy AR, Todd JF, Dhillo WS et al. J Neuroendocrinol. 15:268-72 (2003).
Varas M, Perez M, Monzon ME et al. Peptides. 23:2213-21 (2002).

0.5 mg	$112.00
1 mg	$190.40
2.5 mg	$336.00

M1647

Asp-Thr-Met-Arg-Cys-Met-Val-Gly-Arg-Val-Tyr-Arg-Pro-Cys-Trp-Glu-Val (Cys_5-Cys_{14})

Melanin Concentrating Hormone, salmon

MCH, salmon

$C_{89}H_{137}N_{27}O_{24}S_4$ Mol Wt: 2097.9

0.5 mg	$112.00
1 mg	$190.40
2.5 mg	$336.00

M7528

Ac-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2

α-Melanocyte stimulating hormone

$C_{77}H_{109}N_{21}O_{19}S$ Mol Wt: 1664.9 [581-05-5]

An endogenous peptide that exerts an anti-inflammatory action by inhibtion of nitric oxide synthase-2.

Gupta AK, Diaz RA, Higham S et al. Kidney International. 57:2239-2248 (2000).

1 mg	$107.60

M7529

Ala-Glu-Lys-Lys-Asp-Glu-Gly-Pro-Tyr-Arg-Met-Glu-His-Phe-Arg-Trp-Gly-Ser-Pro-Pro-Lys-Asp

α-Melanocyte stimulating hormone, human

$C_{118}H_{174}N_{34}O_{33}S$ Mol Wt: 2660.9 [1~908-5~-5]

The key ligand acting on melanocortin-4 receptors that play a part in the sensation of hunger.

Harrold JA, Widdowson PS, Williams G. Peptides. 24:397-405 (2003).

1 mg $197.20

M7530

Ac-Ser-Tyr-Ser-Nle-Glu-His-D-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2

[Nle4, D-Phe7] α-Melanocyte stimulating hormone

NDP-MSH, Melanotan I

$C_{78}H_{111}N_{21}O_{19}$ Mol Wt: 1646.9

5 mg $89.60
25 mg $358.40

M7531

Tyr-Val-Met-Gly-His-Phe-Arg-Trp-Asp-Arg-Phe-NH_2

γ1-Melanocyte stimulating hormone

$C_{72}H_{99}N_{21}O_{14}S$ Mol Wt: 1512.8

1 mg $107.60

M7532

Tyr-Val-Met-Gly-His-Phe-Arg-Trp-Asp-Arg-Phe-Gly-Arg-Arg-Asn-Gly-Ser-Ser-Ser-Ser-Gly-Val-Gly-Gly-Ala-Ala-Gln

γ3-Melanocyte stimulating hormone

$C_{126}H_{188}N_{44}O_{37}S$ Mol Wt: 2943.2

1 mg $242.00

M1649

Ala-Ala-Gly-Ile-Gly-Ile-Leu-Thr-Val

Melanoma-associated antigen peptide MART-1(27-35), human

$C_{43}H_{76}N_{9}O_{11}$ Mol Wt: 814.0

1 mg $64.00
2 mg $108.80
5 mg $192.00

M1648

H-Tyr-Pro-Ser-Lys-Pro-Asp-Asn-Pro-Gly-Glu-Asp-Ala-Pro-Ala-Glu-Asp-Met-Ala-Lys-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr-NH_2

Melanostatin, frog

$C_{189}H_{285}N_{53}O_{57}S_1$ Mol.Wt.: 4243.76

An alpha melanocyte stimulating horomone isolated from frogs brains.

Valentijin JA, Vaudry H, Kloas W, Cazin L. J Physiol 11~5: 185-195 (1994).

0.5 mg $160.00
1 mg $272.00
2.5 mg $480.00

M1650

Ac-Nle-Asp-His-D-Phe-Arg-Trp-Lys-NH_2
(Lactam bridge Asp2-Lys7)

Melanotan II

MT-II

$C_{50}H_{69}N_{15}O_{9}$ Mol Wt: 1024.2 [121062-08-6]

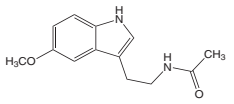
A non selective melanocortin receptor agonist. It has been shown to increase insulin sensitivity and exert neuroprotective effects in rat.

Banno R, Arima H, Sato I et al. Peptides. 25:1279-86 (2004).
Ter Laak MP, Brakkee JH, Adan RA et al. Eur J Pharmacol. 462:179-83 (2003).

5 mg $96.00
10 mg $163.20
25 mg $288.00

M1745

RT



Melatonin

N-acetyl-5-methoxytryptamine

$C_{13}H_{16}N_2O_2$ Mol.Wt.: 232.27 m.p. 116-118°C [73-31-4]

A hormone of the pineal gland, has antiproliferative and chemopreventive activity. It induces apoptosis.

Eck-Enriquez K, Kiefer TL, Spriggs LL, Hill SM. Breast Cancer Res Treat. 61:229-39 (2000).
Teplitzky SR, Kiefer TL, Cheng Q et al. Cancer Lett. 168:155-63 (2001).
Kothari A, Borges A, Kothari L. Eur J Cancer Prev. 4:497~500 (1995).

1 g $55.30
5 g $228.00
10 g $407.50

M1744

Gly-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-Thr-Thr-Gly-Leu-Pro-Ala-Leu-Ile-Ser-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-NH_2

Melittin

Mellitin

$C_{131}H_{229}N_{39}O_{31}$ Mol Wt: 2846.5 [20449-79-0]

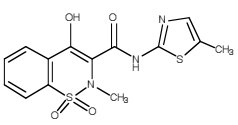
A bee venom peptide that has been shown to inhibit viral infection development.

Lazarev VN, Stipkovits L, Biro J et al. Microbes Infect. 6:536-541 (2004).

0.5 mg $121.60
1 mg $206.40
2.5 mg $364.80

M1644

RT



Meloxicam (See page 23 for more information)

Metacam

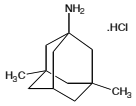
$C_{14}H_{13}N_3O_4S_2$ Mol.Wt.: 351.41 [71125-38-7]

A non-steroidal anti-inflammatory agent with high inhibitory action against the inducible form of cyclo-oxygenase (COX-2). Found to inhibit the growth of colorectal cancer cells *in vitro*.

Noble S, Balfour JA. Drugs. 51:424-430 (1996).
Goldman AP, Williams CS, Sheng H et al. Carcinogenesis 19:2195-2199 (1998).

100 mg $63.30
500 mg $188.70
1 g $316.60

M1749 — **Memantine hydrochloride** (See page 21 for more information) — 25 mg $40.70; 100 mg $115.30



$C_{12}H_{21}N.HCl$ Mol. Wt.: 215.77 [41100-52-1]

A non-competitive N-methyl-D-aspartate receptor antagonist.

Rammes G, Rupprecht R, Ferrari U et al. Neurosci. Letters. 306:81-84 (2001).

M1752 — **Men 10376** — 0.5 mg $32.00; 1 mg $54.40; 2.5 mg $96.00

H-Asp-Tyr-D-Trp-Val-D-Trp-DTrp-Lys-NH_2

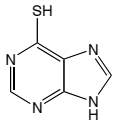
$C_{57}H_{68}N_{12}O_{10}$ Mol.Wt.: 1081.25

An NK2 antagonist.

Ma QP, Woolf CJ. J Physiol 486: 769-777 (1995).

M1669 — **6-Mercaptopurine Monohydrate** — 5 g $59.40; 25 g $222.70

RT



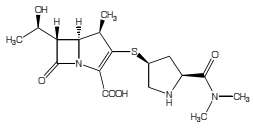
6-Purinethiol

$C_5H_4N_4S{\cdot}H_2O$ Mol.Wt.: 170.20 m.p. 313-314ºC [6112-76-1]

An anti-inflammatory agent that has antitumor activity.

Kela U, Vijayvargiya R. Biochem J. 193:799-803 (1981).
Bokkerink JP, Stet EH, De Abreu RA et al. Biochem Pharmacol. 45:1455-63 (1993).

M1770 — **Meropenem** — 25 mg $44.80; 100 mg $134.40; 500 mg $504.00



$C_{17}H_{25}N_3O_5S$ Mol. Wt.: 383.46 [96036-03-2]

An antibiotic, effective against a wide range of bacteria, that has a low toxicity profile and no central nervous system toxicity.

Cottagnoud P. Cell Mol Life Sci. 59:1928-33 (2002).
Kayser FH, Morenzoni G, Strassle A et al. J Antimicrob Chemother. 24 Suppl A:101-12 (1989).

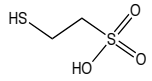
Mesalamine

Mesalazine

See 5-Aminosalicylic acid

M1774 — **MESNA (2-Mercaptoethanesulfonic Acid)** — 5 g $36.80; 10 g $64.00; 25 g $135.90

RT

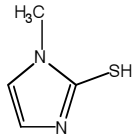


$C_2H_6O_3S_2$ Mol. Wt.: 142.20 [3375-50-6]

A uroprotective agent used in combination with cancer chemotherapeutic drugs to decrease urotoxicity. It was found to have antitumor activity against several cell lines. In addition, it is used as an antimucolytic agent.

Brock N. Recent Results Cancer Res. 74:270-8 (1980).
Blomgren H, Hallstrom M, Hillgren H. Methods Find Exp Clin Pharmacol. 12:691-7 (1990).
Tekeres M, Horvath A, Bardosi L, Kenyeres P. Clin Ther. 4:56-60 (1981).

M1976 — **Methimazole** — 10 g $24.50; 25 g $38.00



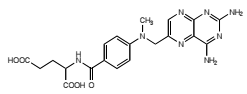
$C_4H_6N_2S$ Mol.Wt.: 114.17 [60-56-0]

Antithyroid compound used to treat Graves' hyperthyroidism. It was found to have antioxidant property. It inhibits activation of the IFN-g-induced Janus kinase (JAK)/STAT signaling pathway in FRTL-5 thyroid cells, which may account for its immunomodulatory effects.

Kim H, Lee TH, Hwang YS et al. Mol. Pharm. 60:972-980 (2001).

M1676 — **Methotrexate** — 10 mg $22.60; 50 mg $39.50; 100 mg $72.40; 500 mg $415.70

-20 ºC

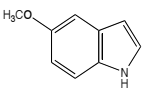


$C_{20}H_{22}N_{08}O_5$ Mol.Wt.: 454.44 [59-05-2]

Antiinflammatory drug also used as antineoplastic agent. Inhibits dihydrofolate reductase.

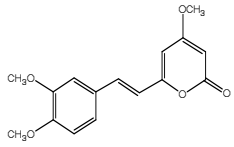
Eckardt, JR Anticancer Drugs. 7 Suppl 2:41-6 (1996).
Fleisher M. Ther Drug Monit. 15:521-6 (1993).

M1680 — **5-Methoxyindole** — 1 g $52.50; 5 g $207.50



C_9H_9NO Mol. Wt.: 147.17 [1006-94-6]

M1677 **11-Methoxyyangonin** — 5 mg $99.50; 10 mg $153.70

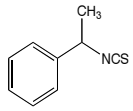


$C_{16}H_{16}O_5$ Mol. Wt.: 288.30

A component of kava kava extract.

M1776 **α-Methylbenzyl isothiocyanate** — 5 g $56.20; 10 g $96.00

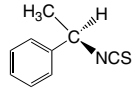
+4 °C



C_9H_9NS Mol. Wt. 163.24 [32393-32-1]

M1777 **R (-) α-Methylbenzyl isothiocyanate (D)** — 1 g $32.20; 5 g $128.00; 10 g $217.30

+4 °C



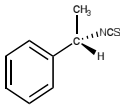
C_9H_9NS Mol. Wt. 163.24 $[\alpha]_D^{20}$ -21.16 (neat) [247744-9]

Chiral agent. Used for the derivatization and separation of enantiomers.

Gal J, Sedman AJ. J Chromatography. 314:275-282 (1984).
Gal J, Desai DM, Meyer-Lehnert S. Chirality. 2:43-51 (1990).

M1778 **S (+) α-Methylbenzyl isothiocyanate (L)** — 1 g $31.30; 5 g $124.70; 10 g $207.90

+4 °C

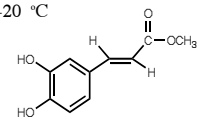


C_9H_9NS Mol. Wt. 163.24 $[\alpha]_D^{20}$ +28.14 (neat)

Chiral derivatizing agent.

M1560 **Methyl Caffeate** — 50 mg $47.80; 100 mg $74.60; 500 mg $247.80

-20 °C



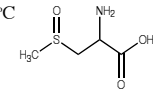
$C_{10}H_{10}O_4$ Mol.Wt.: 194.19 m.p. 163-165°C [3843-74-1]

Inhibitor of ornithine decarboxylase and protein tyrosine kinase.

Rao V, Desai, D, Kaul B et al. Chem Biol Interactions. 84:277-290 (1992).

M1565 **S-Methyl-L-Cysteine-S-oxide** — 100 mg $50.00; 250 mg $100.00; 1 g $300.00

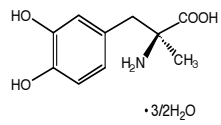
-20 °C



$C_4H_9NO_3S$ Mol. Wt.: 151.19 [6853-87-8]

An analogue of alliin.

M1779 **Methyldopa Sesquihydrate** — 1 g $24.70; 5 g $49.30; 10 g $80.10

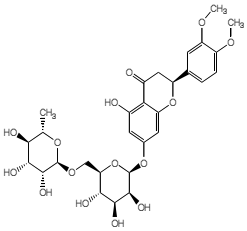


$C_{10}H_{13}NO_4 \cdot 3/2H_2O$ Mol. Wt.: 238.24 [41372-08-1]

An adrenergic inhibiting agent is used in antihypertensive treatment.

Frohlich ED. Arch Intern Med. 140:954-9 (1980).

M1780 **Methylhesperidin** — 5 g $30.80; 25 g $98.60

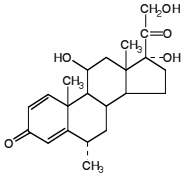


$C_{29}H_{36}O_{15}$ Mol.Wt.: 624.59 [11013-97-1]

A vasodilating agent.

Kikuchi K. Hirata M. Imai Y. Aramaki Y. Jpn J Pharmacol. 16:224-5 (1966).
Chen QM, Feng GH, Chung Kuo, Yao Li. Hsueh Pao. 8:344-8 (1987).

M1877 **Methylprednisolone** — 100 mg $43.20; 500 mg $130.60; 1 g $223.00

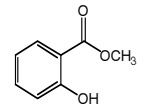


$C_{22}H_{30}O_5$ Mol. Wt.: 374.47 [83-43-2]

Apoptosis inducer, used in the treatment of lupus nephritis. Found to inhibit human small cell lung cancer cell growth.

Wang J, Lia H, Chen X, Chung Hua et al. Chinese Journal of Internal Medicine. 36:79-82 (1997).
Yamaguchi S, Ohsaki Y, Nishigaki Y et al. Int J Oncol. 15:1185-90 (1999).

M1979 — **Methyl Salicylate**



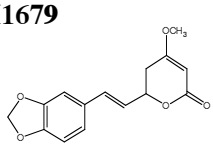
$C_8H_8O_3$ Mol. Wt.: 152.15 [119-36-8]

An anticoagulant in acts by interruption of the vitamin K1-epoxide cycle.

Park BK, Leck JB. J Pharm Pharmacol. 33:25-8 (1981).

250 mL	$22.20
500 mL	$37.00
1 L	$61.60

M1679 — **Methysticin**



$C_{15}H_{14}O_5$ Mol. Wt.: 274.27 [495-85-2]

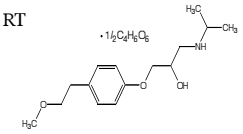
One of the main components in kava kava extract. It has anxiolytic effect and neuroprotective property.

Smith KK, Dharmaratne HR, Feltenstein MW. Psychopharmacologia. 155:86-90 (2001).
Backhauss C, Krieglstein J. Eur J Pharmacol. 215:265-9 (1992).

5 mg	$99.50
10 mg	$153.70

M1879 — **Metoprolol Tartrate**

RT



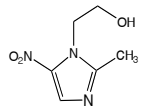
$(C_{15}H_{25}NO_3)_2 \cdot C_4H_6O_6$ Mol. Wt.: 684.82 [56392-17-7]

β1-Adrenergic blocker.

Prakash A, Markham A. Drugs. 60:647-678 (2000).

5 g	$30.80
25 g	$130.60

M1977 — **Metronidazole**



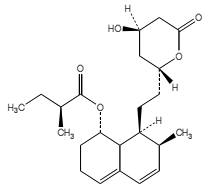
$C_6H_9N_3O_3$ Mol. Wt.: 171.15 [443-48-1]

A nitroimidazole antibiotic that has activity against protozoans and most Gram-negative and Gram-positive anaerobic bacteria. It is a potential radiosensitizer for cancer treatment.

Freeman CD, Klutman NE, Lamp KC. Drugs. 54:679-708 (1997).
Acharya DK. Indian J Med Sci. 48:111-6 (1994).

5 g	$23.20
25 g	$73.70
100 g	$192.20

M1685 — **Mevastatin**



$C_{23}H_{34}O_5$ Mol.Wt.: 390.51 m.p.152°C [73573-88-3]

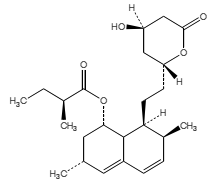
Antitumor agent. Inhibits isoprenoid biosynthesis and reduces plasma cholesterol levels by the inhibition of HMG-CoA reductase.

It arrests cells in the G1 phase.

Quesney-Huneeus V, Galick HA, Siperstein MD. J Biol Chem. 258:378-385 (1983).
Endo A, J. Lipid Res. 33:1569-1582 (1992).

10 mg	$83.50
50 mg	$199.50

M1687 — **Mevinolin** (For sodium salt-please inquire)



Lovastatin

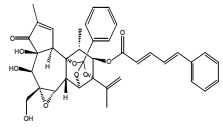
$C_{24}H_{36}O_5$ Mol. Wt.: 404.54 [75330-75-5]

Inhibitor of cholesterol biosynthesis rate controlling enzyme, HMG-CoA reductase.

Alberts AW, Chen J, Kuron G et al. Proc Natl Acad Sci. USA. 77:3957-3961 (1980).
Tobert JA, Bell GD, Birtwell J. et al. J Clin Investigation. 69:913-919 (1982).

50 mg	$72.00
100 mg	$124.70
500 mg	$447.60

M1699 — **Mezerein** (See page 21 for more information)



$C_{38}H_{38}O_{10}$ Mol. Wt.: 654.70 [34807-41-5]

A protein kinase C activator, second stage tumor promoter.

Slaga TJ et al. Proc Nat Acad Sci USA. 77:3659-3663 (1980).

1 mg	$97.60
5 mg	$338.80
10 mg	$609.90

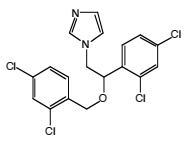
M2460 — **MGP-pNA**

Met-Gly-Pro-pNA

$C_{18}H_{25}N_5O_5S$ Mol Wt: 423.4

1 mg	$48.00
10 mg	$160.00

M3309 — **Miconazole**



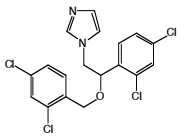
$C_{18}H_{14}Cl_4N_2O$ Mol. Wt.: 416.13 [22916-47-8]

An antifungal agent with good aromatase inhibitory activity, found to be an effective chemopreventive agent in a rat mammary cancer model.

Lubert RA, Steele VE, Etyo I et al. Int. J. Cancer 72:95-101 (1997).

1 g	$23.80
5 g	$82.70
25 g	$265.80

M3310



Miconazole Nitrate

$C_{18}H_{14}Cl_4N_2O.HNO_3$ Mol. Wt.: 479.15 [22832-87-7]

An antifungal agent, was found to inhibit platelet cyclooxygenase.

Ishikawa S, Manabe S, Wada O. Biochem Pharmacol. 35:1787-92 (1986).
Sweeny WT. Vet Med Small Anim Clin. 70:1438-40 (1975).

1 g	$23.20
5 g	$76.90
25 g	$245.90

M3219

H-Tyr-Pro-Leu-Gly-NH_2

MIF-1 Tyr

$C_{22}H_{33}N_5O_5$ Mol.Wt.: 447.54

A brain peptide that functions as an opiate antagonist in the reduction of contraction.

Zedina JE, Kastin AJ, Kersh D, Wyatt A. Life Sci. 51: 869-85 (1991).

5 mg	$128.00
10 mg	$217.60
25 mg	$384.00

M3220

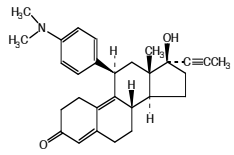
H-Tyr-Pro-Trp-Gly-NH_2

Tyr-W-MIF-1

$C_{27}H_{32}N_6O_5$ Mol.Wt.: 520.59

5 mg	$128.00
10 mg	$217.60
25 mg	$384.00

M3321



Mifepristone

RU486

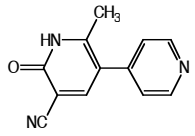
$C_{29}H_{35}NO_2$ Mol. Wt.: 429.59 [84371-65-3]

A glucocorticoid receptor antagonist. It is an effective late post-coital contraceptive and inhibitor of chemical carcinogenesis.

Ashok PW, Wagaarachchi PT, Flett GM, Templeton A. Hum Reprod. 16:72-75 (2001).
Rocereto TF, Saul HM, Aikins JA Jr. Paulson J. Gynecol Oncol. 77:429-32 (2000).
Kanradt MC, Mohideen N, Vaughan AT. ibid. 77:177-82 (2000).

100 mg	$46.10
500 mg	$153.70
1 g	$269.10

M3344



Milrinone

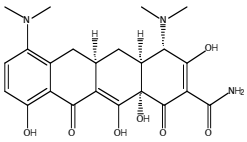
$C_{12}H_9N_3O$ Mol. Wt.: 211.22 [78415-72-2]

A selective phosphodiesterase 3 inhibitor known to effect left ventricular relaxation by inhibiting the breakdown of cAMP in association with an acceleration of sarcoplasmic reticulum Ca(2+)-ATP activity and Ca(2+) uptake. It inhibits platelet aggregation and induces disaggregation.

Alousi AA, Canter JM, Montenaro MJ et al. J Cardiovasc Pharmacol. 5:792-803 (1983).
Yano M, Kohno M, Ohkusa T et al. Am J Physiol-Heart Circ Physiol 279:H1898-H1905 (2000).
Kikura M, Kazama T, Ikeda T, Sato S. Platelets 11:446-458 (2000).

10 mg	$47.50
50 mg	$196.60
100 mg	$338.80

M3353



Minocycline Hydrochloride

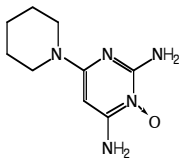
$C_{23}H_{27}N_3O_7 \cdot HCl$ Mol. Wt.: 493.94 [13614-98-7]

A tetracycline derivative with antimicrobial activity. It was found to inhibit inducible NO synthase expression and augment cyclooxygenase (COX)-2 expression and PGE2 production. Used to treat rheumatoid arthritis. It inhibits angiogenesis.

Patel RN, Attur MG, Dave MN et al. J Immunol. 163:3459-67 (1999).
Jackson CG, Williams HJ. Drugs. 56:337-44 (1998).
Gilbertson-Beadling S, Powers EA, Stamp-Cole M et al. Cancer Chemother Pharmacol. 36:418-24 (1995).

100 mg	$51.30
250 mg	$99.50
500 mg	$168.40

M3453



Minoxidil

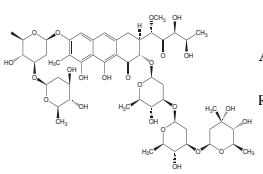
$C_9H_{15}N_5O$ Mol. Wt.: 209.25 [38304-91-5]

A vasodilator that has alpha 2-adrenoceptor agonist activity in addition to potassium-channel-opening activity. It was found also to have alopecia preventive property.

Meisheri KD, Cipkus LA, Taylor CJ. J Pharmacol Exp Ther. 245:751-60 (1988).
Sharma N, Mehta AA, Santani DD, Goyal RK. J Pharm Pharmacol. 49:935-7 (1997).
Hussein AM. Int J Dermatol. 34:470-3 (1995).

100 mg	$38.50
500 mg	$153.70
1 g	$230.50

M3476



Mithramycin (See page 22 for more information)

$C_{52}H_{76}O_{25}$ Mol Wt: 1084.47 [18378-89-7]

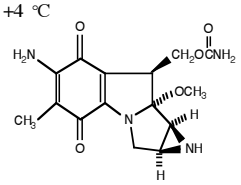
A drug used in chemotherapy that inhibits RNA and protein synthesis.

Ray R, Snyder R C, Thomas S, Koller C A, Miller D M J Clin Invest. 83: 2003–2007 (1989).

1 mg	$30.00
5 mg	$120.00
10 mg	$220.00

M3377 — **Mitomycin C**

+4 °C



$C_{15}H_{18}N_4O_5$ Mol.Wt.: 334.3 [50-07-7]

Antineoplastic agent. It inhibits DNA synthesis and induces apoptosis.

Tomasz M et al. Science. 235:1204 (1995)
Merlo GR et al. J. Cell Biol. 128:1185 (1995).

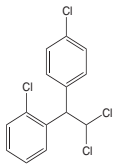
1 mg	$20.00
5 mg	$42.00
10 mg	$72.00

M3378 — **MitoPT**™ (See page 30 for more information)

Mitochondrial Membrane Permeability Transition Detection Kit

25 Tests	$189.30
100 Tests	$267.70

M3576 — **Mitotane** (See page 22 for more information)



$C_{14}H_{10}Cl_4$ Mol Wt: 317.95 [53-19-0]

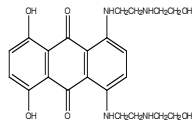
An adrenal cyto-toxic agent used to treat adrenocartical tumors.

Luton JP, Cerdas S, Billaud L *et. al*. New England Journal of Medicine 322:1195-1201 (1999).

100 mg	$30.00
500 mg	$75.00
1 g	$120.00

M3379 — **Mitoxantrone Dihydrochloride**

RT



$C_{22}H_{28}N_4O_6 \cdot 2HCl$ Mol.Wt.:517.41 [70476-82-3]

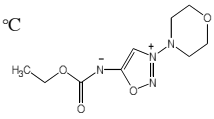
A cytostatic anthraquinone derivative. An antitumor agent that interacts with DNA by intercallation.

Faulds D, Balfour JA, Chrisp P, Langtry HD. Drugs 41:400 (1991).

50 mg	$80.00
100 mg	$135.90
500 mg	$519.50

M5746 — **Molsidomine**

0 °C



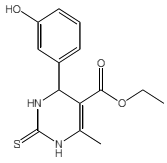
$C_9H_{14}N_4O_4$ Mol. Wt.: 242.23 [25717-80-0]

An orally active vasodilator that requires hepatic metabolism for activity.

Molla A et al. J. Virol. 67:4688 (1993).

500 mg	$38.50
1 g	$64.60

M5752 — **Monastrol**



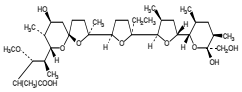
$C_{14}H_{16}N_2O_3S$ Mol. Wt.: 292.35 [254753-54-3]

A cell-permeable small molecule inhibitor of the mitotic kinesin Eg5. It arrests cells in mitosis with monoastral spindles.

Kapoor TM, Mayer TU, Coughlin ML et al. J Cell Biol. 150:975-88 (2000).
Leizerman I, Avunie-Masala R, Elkabets M et al. Cell Mol Life Sci. 61:2060-70 (2004).

1 mg	$102.00
5 mg	$298.00

M5753 — **Monensin Sodium Salt**



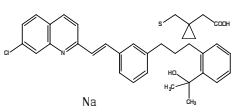
$C_{36}H_{62}O_{11}$ Mol. Wt.: 692.86 [22373-78-0]

A Na^+/H^+ exchanger found to induce apoptosis in HL-60 cells.

Zhu WH, Loh TT. Biochem Biophys Acta. 1269:122-8 (1995).

500 mg	$30.80
1 g	$53.90
5 g	$192.20

M5756 — **Montelukast Sodium**



$C_{35}H_{36}ClNO_3S \cdot Na$ Mol. Wt.: 608.17 [151767-02-1]

A cysteinyl leukotriene receptor antagonist with anti-inflammatory effects. In rat colitis it has been shown to increase prostaglandin E(2) production and decrease the cyclogenase-2 protein expression.

Holma R, Salmenpera P, Riutta A et al. Eur J Pharmacol. 429:309-18 (2001).
Schmitt-Grohe S, Eickmeier O, Schubert R et al. Ann Allergy Asthma Immunol. 89:599-605 (2002).

10 mg	$39.20
25 mg	$67.20
100 mg	$207.20

M5675 — **Motilin, canine**

H-Phe-Val-Pro-Ile-Phe-Thr-His-Ser-Glu-Leu-Gln-Lys-Ile-Arg-Glu-Lys-Glu-Arg-Asn-Lys-Gly-Gln-OH

$C_{120}H_{194}N_{36}O_{34}$ Mol.Wt.: 2685.1

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

M5776

Phe-Val-Pro-Ile-Phe-Thr-Tyr-Gly-Glu-Leu-Gln-Arg-Met-Gln-Glu-Lys-Glu-Arg-Asn-Lys-Gly-Gln

Motilin, porcine

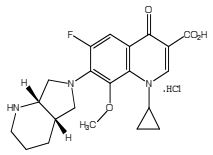
$C_{120}H_{188}N_{34}O_{35}S$ Mol Wt: 2699.1 [52906-92-0]

A peptide that plays a major role in the stimulation of smooth muscles in the gastrointestinal tract.

Kitazawa T, Taneike T, Ohga A. Peptides. 16:1243-1252 (1995).

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

M5794



Moxifloxacin Hydrochloride (See page 13 for more information)

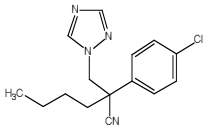
$C_{21}H_{24}FN_3O_4.HCl$ Mol. Wt.: 437.89 [186826-86-8]

An 8-methoxy-fluoroquinolone antibacterial agent.

Nightingale CH. Pharmacotherapy. 20:245-56 (2000).

100 mg	$82.90
500 mg	$315.20
1 g	$519.50

M9608



Myclobutanil

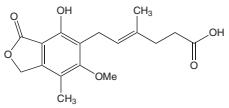
$C_{15}H_{17}ClN_4$ Mol. Wt.: 288.78 [88671-89-0]

A fungicide that inhibits ergosterol biosynthesis.

Quinn JA et al. Pestic. Sci. 17:357 (1986).

5 g	$27.20
10 g	$47.50
50 g	$169.50

M9710



Mycophenolic acid (See page 22 for more information)

$C_{17}H_{20}O_6$ Mol Wt. 320.34 [24280-93-1]

An immunosuppressive drug used to prevent organ rejection.

Ginzler EM, Dooley MA, Aranow C, Kim MY, et al. New England Journal of Medicine. 353: 2219-2229 (2005).

50 mg	$35.00
250 mg	$125.00

M9643

Ac-Ala-Ser-Gln-Lys-Arg-Pro-Ser-Gln-Arg-His-Gly-OH

Myelin Basic Protein (1-11), human

$C_{52}H_{88}N_{22}O_{17}$ Mol.Wt.: 1293.42

1 mg	$16.00
2 mg	$108.80
5 mg	$192.00

M9644

H-Tyr-Gly-Ser-Leu-Pro-Gln-Lys-Ser-Gln-Arg-Ser-Gln-Asp-Glu-Asn-OH

Myelin Basic Protein (87-99), guinea pig, human

$C_{74}H_{114}N_{20}O_{17}$ Mol Wt: 1555.8

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

M9646

H-Tyr-Gly-Ser-Leu-Pro-Gln-Lys-Ser-Gln-Arg-Ser-Gln-Asp-Glu-Asn-OH

Myelin Basic Protein (68-82), guinea pig

$C_{71}H_{113}N_{23}O_{28}$ Mol Wt: 1736.8

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

M9645

Met-Glu-Val-Gly-Trp-Tyr-Arg-Ser-Pro-Phe-Ser-Arg-Val-Val-His-Leu-Tyr-Arg-Asn-Gly-Lys

Myelin Oligodendrocyte Glycoprotein (35-55), rat

MOG (35-55)

$C_{118}H_{177}N_{35}O_{29}S$ Mol Wt: 2582.0

1 mg	$121.60
2 mg	$206.40
5 mg	$364.80

M9356

H-Pro-Met-Ser-Met-Leu-Arg-Leu-NH_2

Myomodulin

$C_{36}H_{67}N_{11}O_8S_2$ Mol.Wt.: 846.13

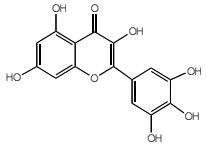
A neuropeptide that inhibits the electrophysiological effects of sensory neurons.

Critz SD, Baxter D. A. Byrne J.H. Journal of Neurophysiology 66: 1912-1926 (1991).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

M9367

RT



Myricetin

$C_{15}H_{10}O_8$ Mol.Wt.: 318.2 [529-44-2]

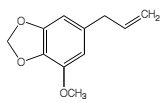
A common flavonol in plants, which inhibits the human P-form phenolsulfotransferase.

Eaton EA, Walle UK, Lewis AJ et al. Drug Metab Disp. 24:232-237 (1997).

10 mg	$26.60
25 mg	$44.30

M9368

-20 °C



Myristicin

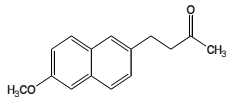
$C_{11}H_{12}O_3$ Mol. Wt.: 192.21 d. 1.1437 [607-91-0]

Natural product isolated from parsley oil. Inducer of glutathione S-transferase enzymes and inhibitor of chemical carcinogenesis.

Zheng G-q, Kenney PM, Lam LKT. J. Agri. Food Chem. 40:107-110 (1992).
Zheng G-q, Kenney PM. Zhang J, Lam LKT. Carcinogenesis. 13:1921-23 (1992).

100 mg	$74.00
500 mg	$246.40
1 g	$431.20

N0205



Nabumetone

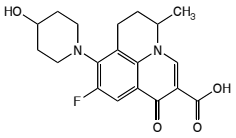
$C_{15}H_{16}O_2$ Mol. Wt.: 228.29 [42924-53-8]

A non-steroidal anti-inflammatory drug. Works by inhibiting cyclooxygenase, an enzyme responsible for making prostaglandins which are mediators of inflammation. It also has chemopreventive effect on chemically induced mammary carcinogenesis in rats.

Matsunga K, Yoshimi N, Yamada Y et al. Jpn J Cancer Res. 89:496-501 (1998).

5 g	$46.10
25 g	$150.60

N0114



Nadifloxacin

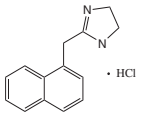
$C_{19}H_{21}FN_2O_4$ Mol. Wt.: 360.38 [124858-35-1]

A fluoroquinolone antibacterial agent. It was found to inhibit the generation of O^{2-} and OH radicals by neutrophils.

Ishikawa H, Tabusa F, Miyamoto H et al. Chem Pharm Bull 37:2103-2108 (1989).
Akamatsu H, Sasaki H, Kurokawa I et al. J Int. Med Res. 23:19-26 (1995).

25 mg	$47.50
100 mg	$128.80
500 mg	$508.30

N0262



Naphazoline Hydrochloride

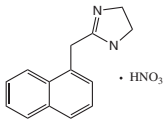
$C_{14}H_{14}N_2.HCl$ Mol. Wt.: 246.74 [835-31-4]

Naphazoline produces inotropic effects via α-adrenoceptor stimulation.

Endoh M, Schumann HJ. Naunyn Schmiedebergs Arch Pharmacol. 287:377-89 (1975).

25 g	$37.00
100 g	$129.40

N0263

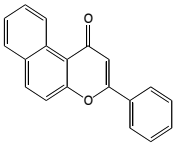


Naphazoline Nitrate

$C_{14}H_{14}N_2.HNO_3$ Mol. Wt.: 273.29 [5144-52-5]

10 g	$30.80
25 g	$67.80
100 g	$234.10

N0161



β-Naphthoflavone

5, 6 -Benzoflavone

$C_{19}H_{12}O_2$ Mol.Wt.: 272.3 [6051-87-2]

An inducer of cytochrome P450 enzyme system. Protects chemical-induced carcinogenesis by enhancing the detoxification of carcinogens.

Callander RD, Mackay JM, Clay P. Mutagenesis. 10:517-22 (1995).
Anderson LM, Seetharam S. Cancer Res. 45:6384-9 (1985).

1 g	$38.50
5 g	$133.90

N0160

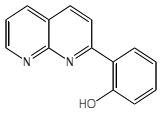
H-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-OH

NAP

$C_{36}H_{60}N_{10}O_{12}$ Mol.Wt.: 824.94

0.5 mg	$20.00
1 mg	$34.00
2.5 mg	$60.00

N0163



2-(1,8-Naphthyridin-2-ly)phenol

2-NP

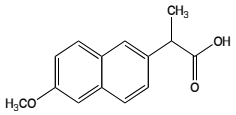
$C_{14}H_{10}N_2O$ Mol.Wt.: 222.24 [65182-56-1]

It was shown to enhance IFN-γability to inhibit the proliferation of human breast cancer and fibrosarcoma cells.

Lynch RA, Etchin J, Battle TE, Frank DA Cancer Res. 67: 1254-1261 (2007).

500 mg	$79.20
1 g	$132.00
5 g	$550.00

N0061



D-Naproxen (See page 23 for more information)

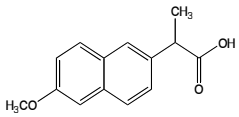
$C_{14}H_{14}O_3$ Mol.Wt.: 230.26 m.p. 155-158°C [22204-53-1] [α] 66.8°

A non-steroidal anti-inflammatory agent found to significantly inhibit NNK activation in lung tissues.

Bouchard L, Castonguay A. Drug Metab. Disp. 21: 293-298 (1993).

5 g	$35.20
25 g	$122.90
50 g	$224.50

N0062



D,L-Naproxen (See page 23 for more information)

$C_{14}H_{14}O_3$ Mol.Wt.: 230.26 m.p. 152-154°C [22204-53-1]

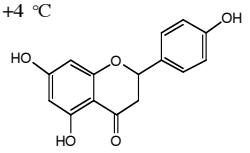
A non-steroidal anti-inflammatory agent found to significantly inhibit NNK activation in lung tissues.

Bouchard L, Castonguay A. Drug Metab. Disp. 21: 293-298 (1993).

10 g	$36.10
25 g	$80.90
100 g	$256.00

N0068 Naringenin

+4 °C



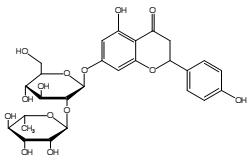
$C_{15}H_{12}O_5$ Mol.Wt.: 272.3 [480-41-1]

The aglycone of naringin, a dietary flavonoid found in grapefruit juice. An effective anti-oxidant and antimutagen.

Guengerich FP, Kim DH. Carcinogenesis. 11:2275-2279 (1990).
Calomme M, Pieters L, Vlietinck A, Berghe D. Planta Med. 62:222-226 (1996).

5 g	$48.90
10 g	$65.10
25 g	$142.40

N0069 Naringin (See page 22 for more information)



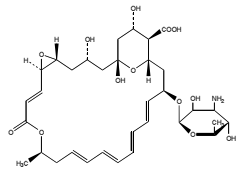
$C_{27}H_{32}O_{14}$ Mol. Wt.: 580.53 [10236-47-2]

A citrus bioflavonoid found to inhibit cytochrome P450 monooxygenase activity in mouse liver. It prevents toxin-induced cytoskeletal disruption and apoptotic liver cell death. In addition, it was found to have hypocholesterolemic effect by inhibiting HMG-CoA reductase and ACAT activities.

Ueng YF, Chang YL, Oda Y et al. Life Sci. 65:2591-2602 (1999).
Blankson H, Grotterod EM, Seglen PO. Cell Death Diff. 7:739-746 (2000).
Shin YW, Nok SH, Jeong TS et al. Int. J. Vit. Nutr. Res. 69:341-347 (1999).

25 g	$27.20
100 g	$81.40

N0075 Natamycin



Pimaricin

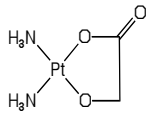
$C_{33}H_{47}NO_{13}$ Mol. Wt.: 665.73 [7681-93-8]

A polyene antifungal compound, shown to potentiate bleomycin activity against murine tumors.

Komiyama K, Umezawa I, Kuwano M et al. Gann. 74:602-6 (1983).
Brothers AM, Wyatt RD. Avian Dis. 44:490-7 (2000).

25 mg	$100.80
50 mg	$168.00
100 mg	$308.00

N0212 Nedaplatin



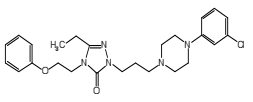
$C_2H_8N_2O_3Pt$ Mol. Wt. 303.18 [95734-82-0]

A platinum complex that has potent antineoplatic activity.

Yamada H, Uchida N, Maekawa R, Yoshioka T. Cancer Lett. 172:17-25 (2001).
Uchida N, Takeda Y, Kasai H. Anticancer Res. 18:3375-9 (1998).

10 mg	$115.40
25 mg	$258.30
50 mg	$461.00

N1822 Nefazodone Hydrochloride



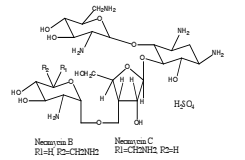
$C_{25}H_{32}ClN_5O_2 \cdot HCl$ Mol. Wt.: 506.48 [82752-99-6]

An antidepressant acts by modifying serotonin transmission. It also exhibits analgesic effect in mice.

Eison AS, Eison MS, Torrente JR et al. Psychopharmacol Bull. 26:311-5 (1990).
Pick CG, Paul D, Eison MS. Pasternak GW. Eur J Pharmacol. 211:375-81 (1992).
Owens MJ, Ieni JR, Knight DL et al. Life Sci. 57:PL373-80 (1995).

1 g	$34.50
5 g	$147.90
25 g	$517.50

N1755 Neomycin sulfate



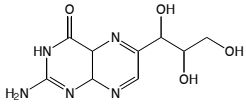
$C_{23}H_{46}N_6O_{13} \cdot 3H_2SO_4$ Mol. Wt.: 908.9 [1405-10-3]

Antibacterial produced by *Streptomyces fradiae*.

Taborsky I, Nezval J, Smekal E, Janisch R. J Hyg Epidemiol Microbiol Immunol. 11:359-67 (1967).
Macdonald RH, Beck M. Clin Exp Dermatol. 8:249-58 (1983).

1 g	$10.20
5 g	$13.30
10 g	$15.30
25 g	$30.80

N1656 Neopterin



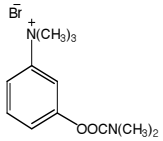
$C_9H_{11}N_5O_4$ Mol. Wt.: 253.21 [670-65-5]

A prognostic marker for the progression of immunodefeciency.

Prommegger R, Winder B, Murr C et al. Ann Thorac Surg. 70:1861-4 (2000).

10 mg	$34.20

N1757 Neostigmine Bromide



Prostigmine

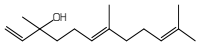
$C_{12}H_{19}BrN_2O_2$ Mol. Wt.: 303.20 [114-80-7]

An acetylcholine esterase inhibitor. It has protective effects against gastric carcinogenesis. It also may provide analgesia in patients with pain arising from neoplasia.

Tatsuta M, Iishi H, Baba M, Taniguchi H. Int J Cancer. 51:767-71 (1992).
Klamt JG, Dos Reis MP, Barbier neto J, Prado WA. Pain. 66:389-91 (1996).

250 mg	$17.70
1 g	$26.60

N1769 — **Nerolidol** — 5 g $18.50; 25 g $40.10



$C_{15}H_{26}O$ Mol. Wt.: 222.37 [7212-44-4]

It has inhibitory effects on carcinogenesis of the large bowel.

Warttenberg LW. Carcinogenesis. 12:151-2 (1991).

N1873 — **Nesiritide Acetate (BNP-32)** — Please inquire

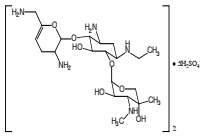
H-Ser-Pro-Lys-Met-Val-Gln-Gly-Ser-Gly-Cys-Phe-Gly-Arg-Lys-Met-Asp-Arg-Ile-Ser-Ser-Ser-Ser-Gly-Leu-Gly-Cys-Lys-Val-Leu-Arg-Arg-His-OH (Cys10-Cys26)

$C_{143}H_{244}N_{50}O_{42}S_4$ Mol.Wt.: 3464.1 [114471-18-0]

Nesiritide is a sterile, purified preparation of a new drug class, human B-type natriuretic peptide (hBNP), and is manufactured from E. coli using recombinant DNA technology.

Sun Z, Chen J, Yao H, Liu L, Wang J, Zhang J, Liu JN. Protein Expr Purif. 43:26-32 (2005).

N1976 — **Netilmicin Sulfate** — 5 mg $123.20; 10 mg $184.80; 25 mg $369.60



1-N-Ethylsisomicin

$(C_{21}H_{41}N_5O_7)_2.5H_2SO_4$ Mol. Wt.: 1441.56 [56391-57-2]

A aminoglycoside antibiotic. It is a semisynthetic derivative of gentamycin.

Scuderi AC, Paladino GM, Marino C et al. Cornea. 22:468-72 (2003).
Adelman RD, Conzelman G, Spangler W et al. Curr Probl Clin Biochem. 9:166-82 (1979).

N1977 — **Neurokinin A (4-10)** — 1 mg $44.80; 2 mg $76.16; 5 mg $134.40

H-Asp-Ser-Phe-Val-Gly-Leu-Met-NH_2

$C_{34}H_{54}N_8O_{10}S$ Mol.Wt.: 766.92

A selective NK1 receptor agonist against tachykinin receptors.

Teixeira RM, Santos AR, Ribeiro SJ, Calixto JB, Rae GA, DeLima TC. Eur J Pharmacology 311: 7-14 (1996).

N1978 — **Neurokinin B** — 1 mg $38.40; 2 mg $65.30; 5 mg $115.20

H-Asp-Ser-Phe-Val-Gly-Leu-Met-NH_2

$C_{55}H_{79}N_{13}O_{14}S_2$ Mol.Wt.: 1210.45

A peptide thought to be responsible for pre-eclampsia in women.

Page NM, Woods RJ, Gardiner SM, Lomthaisong K, Gladwell RT, Butlin DJ, Manyonda IT, Lowry PJ. Nature 405: 797-800 (2000).

N1979 — **Neuromedin** — 1 mg $25.60; 2 mg $43.60; 5 mg $76.80

H-Lys-Ile-Pro-Tyr-Ile-Leu-OH

$C_{38}H_{63}N_7O_8$ Mol.Wt.: 745.97

N1980 — **Neuromedin B, porcine** — 1 mg $51.20; 2 mg $87.10; 5 mg $153.60

Gly-Asn-Leu-Trp-Ala-Thr-Gly-His-Phe-Met-NH_2

$C_{52}H_{73}N_{15}O_{12}S$ Mol Wt: 1132.3 [87096-84-2]

Neuromedin B and C are bombesin-like peptides. They have various physiological effects, including regulation of exocrine and endocrine secretions, smooth muscle contraction, feeding, blood pressure, blood glucose, body temperature and cell growth.

Ohki-Hamazaki H. Prog Neurobiol. 62:297-312 (2000).

N1981 — **Neuromedin C, porcine GRP (18-27)** — 1 mg $80.00

Gly-Asn-Leu-Trp-Ala-Thr-Gly-His-Phe-Met-NH_2

$C_{50}H_{73}N_{17}O_{11}S$ Mol Wt: 1120.3 [81608-30-2]

N1982 — **Neuromedin U, rat** — 1 mg $108.80; 2 mg $185.00; 5 mg $326.40

H-Tyr-Lys-Val-Asn-Glu-Tyr-Gln-Gly-Pro-Val-Ala-Pro-Ser-Gly-Gly-Phe-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH_2

$C_{124}H_{180}N_{34}O_{31}$ Mol.Wt.: 2643.03

A neuropeptide which affects smooth muscle. It was first isolated from porcine spinal cord

Howard AD Et Al. Nature 406: 70-4 (2000).

N1984 — **Neuropeptide FF F-8-F-NH2** — 5 mg $120.00; 10 mg $204.80; 25 mg $360.00

Phe-Leu-Phe-Gln-Pro-Gln-Arg-Phe-NH_2

$C_{54}H_{76}N_{14}O_{102}$ Mol Wt: 1081.3 [99566-27-5]

N1985 — **Neuropeptide K, porcine**

Asp-Ala-Asp-Ser-Ser-Ile-Glu-Lys-Gln-Val-Ala-Leu-Leu-Lys-Ala-Leu-Tyr-Gly-His-Gly-Gln-Ile-Ser-His-Lys-Arg-His-Lys-Thr-Asp-Ser-Phe-Val-Gly-Leu-Met-NH_2

$C_{1-3}H_{284}N_{52}O_{32}S$ Mol Wt: 5980.6

Isolated from porcine spinal cord. It was shown to exert control over neural transmission.

Tatemoto K, Lundberg JM, Jornvall H, Mutt V. Biochem Biophys Res Commun 128: 947-53 (1985).

5 mg	$512.00
10 mg	$870.40
25 mg	$1,536.00

N1983 — **Neuropeptide Y (3-36), human** (See page 23 for more information)

H-Pro-Ala-Glu-Asp-Met-Ala-Arg-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr-NH_2

$C_{175}H_{269}N_{53}O_{54}S$ Mol.Wt.: 4011.48

A neuropeptide thought to be associated with food intake.

Batterham RL, Cowley MA, Small CJ, Herzog H, Cohen MA, Dakin CL, Wren AM, Brynes AE, Low MJ, Ghatei MA, Cone RD, Bloom SR. Nature 418: 650-4 (2002).

0.5 mg	$108.80
1 mg	$184.00
2.5 mg	$326.40

N1987 — **Neuropeptide Y (13-36), human** (See page 23 for more information)

H-Pro-Ala-Glu-Asp-Met-Ala-Arg-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr-NH_2

$C_{134}H_{207}N_{41}O_{36}S$ Mol.Wt.: 3000.46

0.5 mg	$97.60
1 mg	$163.20
2.5 mg	$288.00

N1986 — **Neuropeptide Y, human, rat** (See page 23 for more information)

Tyr-Pro-Ser-Lys-Pro-Asp-Asn-Pro-Gly-Glu-Asp-Ala-Pro-Ala-Glu-Asp-Met-Ala-Arg-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr-NH_2

$C_{189}H_{283}N_{55}O_{57}S$ Mol Wt: 4271.7

5 mg	$512.00
10 mg	$870.40
25 mg	$1,536.00

N1988 — **γ-Neuropeptide, rabbit**

H-Asp-Ala-Gly-His-Gly-Gln-Ile-Ser-His-Lys-Arg-His-Lys-Thr-Asp-Ser-Phe-Val-Gly-Leu-Met-NH_2

$C_{99}H_{158}N_{34}O_{29}S$ Mol.Wt.: 2320.64

When injected into the heart of a rabbit, a decrease in blood flow was induced.

Allen JM, Bircham PM, Edwards AV, Tatemoto K, Bloom SR. Regul Peptide 6: 247-53 (1983).

0.5 mg	$96.00
1 mg	$163.20
2.5 mg	$288.00

N1989 — **Neurotensin**

pGlu-Leu-Tyr-Glu-Asn-Lys-Pro-Arg-Arg-Pro-Tyr-Ile-Leu

$C_{78}H_{122}N_{21}O_{20}$ Mol Wt: 1672.9 [39379-15-2]

A gut regulatory peptide that exerts a wide range of biological actions on gastrointestinal tissues.

It has been shown to potentiate the proliferative effects of insulin on IMR90 human fibroblasts.

Scarpa RC, Carraway RE, Cochrane DE. Peptides. 25:1159-69 (2004).
Assimakopoulos SF, Vagianos CE, Zervoudakis G et al. Regul Pept. 120:185-93 (2004).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

N1990 — **[Gln4] Neurotensin**

pGlu-Leu-Tyr-Gln-Asn-Lys-Pro-Arg-Arg-Pro-Tyr-Ile-Leu-OH

$C_{78}H_{122}N_{22}O_{19}$ Mol.Wt.: 1671.9

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

N1991 — **[D-Trp11] Neurotensin**

pGlu-Leu-Tyr-Glu-Asn-Lys-Pro-Arg-Arg-Pro-D-Trp-Ile-Leu-OH

$C_{80}H_{122}N_{22}O_{19}$ Mol.Wt.: 1696

5 mg	$96.00
10 mg	$163.20
25 mg	$288.00

N1992 — **Neurotensin (1-11)**

pGlu-Leu-Tyr-Glu-Asn-Lys-Pro-Arg-Arg-Pro-Tyr-OH

$C_{66}H_{99}N_{19}O_{18}$ Mol.Wt.: 1446.66

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

N1993 — **Neurotensin (9-13)**

H-Arg-Pro-Tyr-Ile-Leu-OH

$C_{32}H_{52}N_8O_7$ Mol.Wt.: 660.82

5 mg	$96.00
10 mg	$163.20
25 mg	$288.00

N1994 — **Neurotensin, frog**

H-pGlu-Ser-His-Ile-Ser-Lys-Ala-Arg-Arg-Pro-Tyr-Ile-Leu-NH_2

$C_{70}H_{115}N_{23}O_{17}$ Mol.Wt.: 1550.84

0.5 mg	$19.20
1 mg	$32.00
2.5 mg	$57.60

N1995

Neurotensin, guinea pig

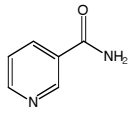
H-pGlu-Leu-Tyr-Glu-Asn-Lys-Ser-Arg-Arg-Pro-Tyr-Ile-Leu-OH

$C_{76}H_{119}N_{21}O_{21}$ Mol.Wt.: 1662.92

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

N3310

Nicotinamide



$C_6H_6N_2O$ Mol. Wt.: 122.12 [98-92-0]

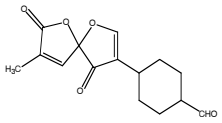
A naturally occurring vitamin that is a protease inhibitor. Topical nicotinamide has demonstrated preventive activity against photo carcinogenesis in mice by elevating skin nicotinamide-adenine dinucleotide (NAD) content. It also has protective effects against lung and pancreatic carcinogenesis.

Gensler HL, Williams T, Huang AC, Jacobson EL. Nutr Cancer. 34:36-41 (1999).
Nikonova TV, Draudin-Krylenko VA, Bukin Iu V, Turusov VS. Eksp Onkol. 10:17-9 (1998).
Pour PM, Lawson T. J Natl Cancer Inst. 73:767-70 (1984).

50 g	$46.10

N3213

Nidulal



$C_{15}H_{16}O_5$ Mol. Wt.: 276.28

A natural product isolated from *Nidula candida*. It induces differentaition of human HL-60 promyelocytic leukemia cells, and preferentially activates the transcription factor complex AP-1-mediated expression of secreted alkaline phosphatase in COS-7 cells.

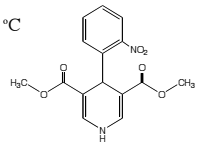
Erkel G, Necker U, Anke T et al. J Antibiot (Tokyo) 49:1189-95 (1996).

0.5 mg	$304.60

N3228

Nifedipine

2-8 °C



4-(2'nitrophenyl)-2,6-dimethyl-3,5-dicarbomethoxy-1,4-dihydropyridine

$C_{17}H_{18}N_2O_6$ FW 346.3 [21829-25-4]

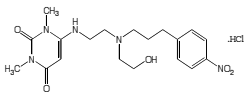
Ca^{+2} channel blocker, induces apoptosis in human glioblastoma cells.

Miller RJ. Science. 235:46 (1987).

1 g	$30.80
5 g	$80.00
25 g	$230.50

N3422

Nifekalant Hydrochloride



$C_{19}H_{27}N_5O_5 \cdot HCl$ Mol Wt.:441.91 [130656-51-8]

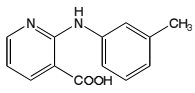
A class III antiarrhythmic drug. It has been shown to be effective against ventricular tachyarrhythmias by inhibiting HERG channels in a voltage-dependent and frequency-dependent manner.

Kushida S, Ogura T, Komuro I et al. Eur J Pharmacol. 457:19-27 (2002).
Shiga T, Matsuda N, Fuda Y et al. J Cardiol. 39:159-64 (2002).

10 mg	$80.10
25 mg	$154.00

N3322

Niflumic acid



$C_{13}H_9F_3N_2O_2$ Mol. Wt.: 282.22 [4394-00-7]

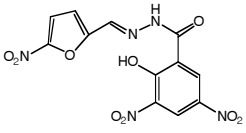
A NSAID, found to be a potent anion channel blocker.

White MM, Aylwin M. Mol. Pharm. 37:720-724 (1990).

10 g	$34.00
25 g	$61.10

N3520

Nifursol



Salfuride

$C_{40}H_{67}O_{11}Na$ Mol. Wt.: 747.0 [28643-80-3]

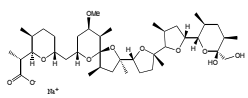
An antibiotic used as a feed additive.

Callait MP, Granier C, Chauve C et al. Poult Sci. 81:1122-7 (2002).
Kowalski P, Oledzka I, Lamparczyk H. J Pharm Biomed Anal. 32:937-47 (2003).

25 g	$55.50
100 g	$154.00

N3225

Nigericin



$C_{40}H_{67}O_{11}Na$ Mol. Wt.: 747.0 [28380-24-1]

A potassium ionophore, found to induce cell death and promote the maturation and release of IL-1beta in lipopolysaccharide primed monocytes and macrophages. It also enhances rapamycin action.

Fang A, Wong GK, Demain AL. J Antibiot (Tokyo). 53:158-62 (2000).
Hentze H, Lin XY, Choi MS et al. Cell Death Differ. 10:956-68 (2003).

1 mg	$20.00
5 mg	$48.70
10 mg	$91.00

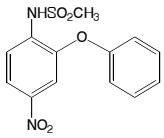
N3230 **Nigrin b** (See page 22 for more information) — 1 mg $230.50

-20 °C

Nigrin b is a two chain type 2 ribosome-inactivating protein isolated from elder bark (Sambucus nigra L.). It inhibits protein synthesis by inactivation of mammalian ribosomes but not plant nor E. coli ribosomes.

Girbes T et al. Plant Mol. Biol. 22, 1181 (1993).
Batelli MG et al. Arch. Toxicol. 71, 360 (1997).
Olsnes S et al. J.Biol. Chem. 249, 803 (1993).

N3450 **Nimesulide** — 5 g $38.50; 10 g $69.30; 25 g $138.40

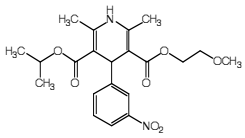


$C_{13}H_{12}N_2O_5S$ Mol. Wt.: 308.31 [51803-78-2]

Inhibits prostaglandin synthetase (COX-2 inhibitor), and has anti-inflammatory activity. It induces apoptosis and inhibits carcinogenesis.

Huskisson EC. Clin Exp Rheumatol. 19:S21-5 (2001).
Kitayama W, Denda A, Okajima E. Carcinogenesis. 20:2305-10 (1999).
Hida T, Kozaki K, Muramatsu H. Clin Cancer Res. 6:2006-11 (2000).
Nakatsugi S, Ohta T, Kawamori T. Jpn J Cancer Res. 91:886-92 (2000).

N3448 **Nimodipine** — 500 mg $49.30; 1 g $86.30; 5 g $308.00

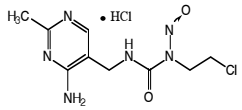


$C_{21}H_{26}N_2O_7$ Mol. Wt.: 418.44 [66085-59-4]

A calcium channel antagonist.

Gupta MC, Garg SK, Das BP, Bhargava VK. Indian J Physiol Pharmacol. 47:347-51 (2003).

N3452 **Nimustine Hydrochloride** — 100 mg $34.00; 500 mg $74.60; 1 g $101.70



1-(4-amino-2-methyl-5-pyrimidinyl)-methyl-3-(2-chloroethyl)-3-nitrosourea, ACNU

$C_9H_{13}ClN_6O_2 \cdot HCl$ Mol. Wt.:309.16 [55661-38-6]

DNA cross-linker used to treat malignant glioma.

Kono K, Takahashi JA, Ueba T. J. Neuro-Oncol. 56:101-108 (2002).

9-Nitro-20(S)-camptothecin

See Camptothecin, 9-nitro-20(S)

N3278 **7-Nitroindazole** — 500 mg $55.50; 1 g $74.00; 5 g $246.40

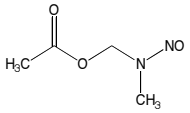
$C_7H_5N_3O_2$ Mol. Wt.: 163.13 [2942-42-9]

A neuronal nitric oxide synthase (nNOS) inhibitor. It enhances amphetamine-evoked release, and kainic acid induced cholinergic neurotoxicity in the rat striatum.

Guevara BH, Cespedes GC, Cubeddu LX. Cell Mol Neurobiol. 22:827-34 (2002).
Nowak P, Brus R, Oswiecimska J et al. J Physiol Pharmacol. 53:251-63 (2002).

N3276 **Nitroso(acetoxymethyl)methylamine** — 10 mg $75.00; 50 mg $224.90; 100 mg $396.00

-20 °C

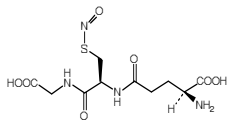


$C_4H_8N_2O_3$ Mol.Wt.: 132.12 [56856-83-8]

Stable derivative of dimethylnitrosoamine metabolite, a potent carcinogen.

Frank N, Janzowski C, Wiessler M. Biochem. Pharm. 29:383-7 (1980).
Rice JSR, Wenk JM, Roller ML, Keefer LK. J. Nalt. Cancer Inst. 58:1531-35 (1977).

N3378 **S-Nitrosoglutathione** — 5 mg $50.10; 10 mg $84.60; 25 mg $113.40

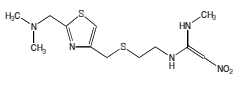


$C_{10}H_{16}N_4O_7S$ Mol. Wt.: 336.32 [57564-91-7]

An antioxidant that annihilates free radicals and promotes neuro protection via its c-GMP independent nitrosylation actions. It is also reported that S-nitrosoglutathione induces apoptosis in human adenocarcinoma cells in the presence of Cu and Ni ions.

Chiueh CC, Rauhala P. Free Radic Res. 31:641-50 (1999)
Ho Y S, Liu H L, Duh J S et al. Molecular Carcinogenesis. 26:201-11 (1999).

N3496 **Nizatidine** — 5 g $33.60; 10 g $56.00



$C_{12}H_{21}N_5O_2S_2$ Mol. Wt.: 331.46 [76963-41-2]

A H2-receptor antagonist, found to be a potent inhibitor of gastric acid secretion.

Lin TM, Evans DC, Warrick MW et al. J Pharmacol Exp Ther. 239:406-10 (1986).
Abdel-Rahman SM, Johnson FK, Connor JD et al. J Pediatr Gastroenterol Nutr. 38:442-51 (2004).

N5210

Nociceptin — 1 mg $161.30

Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Leu-Ala-Asn-Gln

Orphanin FQ

$C_{79}H_{129}N_{27}O_{22}$ Mol.Wt.: 1809.1 [170713-75-4]

The endogenous ligand for the opioid-receptor-like receptor 1. It mediates essential functions in the central and peripheral nervous systems.

Li N, Wei SY, Yu LC et al. Brain Res. 1025:67-74 (2004).

N5211

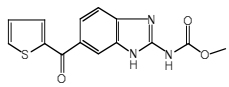
Nocistatin — 0.5 mg $192.00; 1 mg $326.40; 2.5 mg $576.00

H-Glu-Gln-Lys-Gln-Leu-Gln-OH

$C_{32}H_{56}N_{10}O_{12}$ Mol.Wt.: 772.86

N5409

Nocodazole — 10 mg $95.00; 50 mg $350.00



$C_{14}H_{11}N_3O_3S$ Mol. Wt.: 301.32 [31430-18-9]

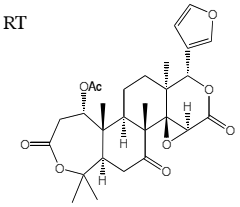
Microtubule inhibitor.

Karbowski M, Spodnik JH, Teranishi Ma et al. J Cell Sci. 114:281-291 (2001).
Samson F, Donoso JA, Heller-Bettinger I et al. J Pharmacol Exp Ther. 208:411-7 (1979).

N5550

Nomilin (See page 13 for more information) — 25 mg $75.10; 100 mg $187.30; 500 mg $655.70

RT



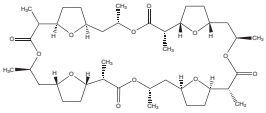
$C_{28}H_{34}O_9$ Mol. Wt.: 514.3 m.p. 257-261°C [1063-77-0]

Nomilin is a natural product isolated from grapefruit seed. It is an inducer of Phase II detoxifying enzymes and inhibitor of chemcially induced carcinogenesis.

Maier V P, Hasegawa S, Bennett, R. D, Echols L.C. In: Citrus Nutrition and Quality, ed. by S. Nagy and J. A. Attaway, ACS Symposium Series 143, ACS, Washington, D.C. pp 63-81 (1980).
Lam LKT, Hasegawa S. Nutr. Cancer. 12:43-47 (1989).
Miller EG, Fanous R, Rivera-Hidalgo F et al. Carcinogenesis. 10:1535-1537 (1989).

N5652

Nonactin — 1 mg $20.00; 5 mg $40.00; 10 mg $72.00



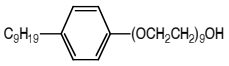
$C_{40}H_{64}O_{12}$ Mol Wt: 736.934 [6833-84-7]

A selective ionophore used in the determination of ammonium ions.

Karakus E, Pekyardimci S, Kilic E. Artif Cells Blood Substit Immobil Biotechnol. 34:523-34 (2006).

N5655

Nonoxynol, n=9 — 50 g $30.80; 100 g $53.90



$C_{33}H_{60}O_{10}$ Mol. Wt.: 616.82 [26027-38-3]

Polyoxynol nonylpheyl ether, a surfactant used as a vaginal contraceptive and condom luricant.

Van damme L. AIDS Read. 10:552-4. (2000).
Sonnenschein C, Soto AM. J Steroid Biochem Mol Biol. 65:143-50 (1998).

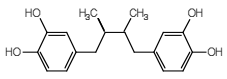
Noradrenaline

See Norepinephrine

N5669

Nordihydroguaiaretic acid — 500 mg $51.80; 1 g $88.80; 5 g $332.70

RT



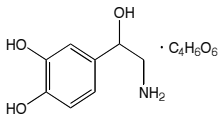
$C_{18}H_{22}O_4$ Mol.Wt.: 302.36 [500-38-9]

A naturally ocurring antioxidant and potent lipoxygenase inhibitor with antipromoter activity.

Nakadate T, Yamamoto S, Iseki H et al. Gann. 73:841-843 (1982).

N5766

Norepinephrine bitartrate — 500 mg $69.30; 1 g $107.60

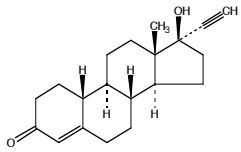


$C_8H_{11}NO_3.C_4H_6O_6$ Mol.Wt.: 319.26 [69815-49-2]

Norepinephrine activates protein kinases Erk1/2. It is cytotoxic to human promyelocytic leukemic HL-60 cells.

Lindquist JM, Fredriksson JM, Rehnmark S et al. J Biol Chem. 275:22670-7 (2000).
Kawase M, Motohashi N, Kurihara T et al. Anticancer Res. 18:1069-74 (1998).

N5767 — **Norethindrone**



Norethisterone

$C_{20}H_{26}O_2$ Mol. Wt.: 298.42 [68-22-4]

A synthetic progestin that possesses antiestrogenic effects. It is progestational in low dose and antiestrogenic in high dose. It has also been shown to cause a time-dependent loss of cytochrome P-450 when incubated in vitro with rat liver microsomal fractions and NADPH-generating systems.

White IN, Muller-Eberhard U. Biochem J. 166:57-64 (1997).
Tamaya T, Ishihara S, Motoyama T et al. Nippon Naibunpi Gakkai Zasshi. 51:1033-42 (1975).

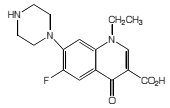
250 mg	$39.50
1 g	$64.10
5 g	$246.40

Norethisterone

See Norethindrone

N5768 — **Norfloxacin** (See page 13 for more information)

RT

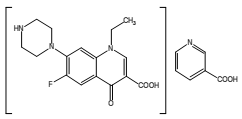


$C_{16}H_{18}FN_3O_3$ Mol.Wt.: 319.33 m.p. 227-228^{0}C [70458-96-7]

A fluorosquinolone antibacterial.

10 g	$56.20
50 g	$199.70

N5769 — **Norfloxacin Nicotinate**



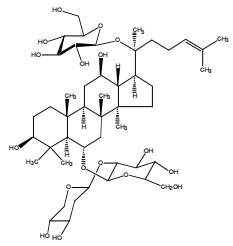
$C_{16}H_{18}FN_3O_3C_6H_5NO_2$ Mol. Wt.: 442.44 [118803-81-9]

10 g	$55.50
50 g	$197.20

Norgestrel

See Levonorgestrel

N5778 — **Notoginsenoside R1**



$C_{47}H_{80}O_{17}$ Mol. Wt.: 917.13 [80418-24-2]

Active ingredient isolated from Panax notoginseng. It induces tissue-type plasminogen activator synthesis in cultured human umbilical vein endothelial cells

Zhang W, Wojta J, Binder BR. Arterio Throm. 14:1040-1046 (1994).

5 mg	$94.90
10 mg	$162.70
25 mg	$318.60

N6020 — **NPF**

H-Lys-Arg-Ser-Tyr(PO_3H_2)-Glu-Glu-His-Ile-Pro-OH

$C_{51}H_{80}N_{15}O_{19}P$ Mol.Wt.: 768.79

1 mg	$102.40
2 mg	$172.80
5 mg	$307.20

N6076 — **N(p-Tosyl)-GPR-pNA**

N(p-Tosyl)-Gly-Pro-Arg-pNA

$C_{26}H_{34}N_8O_7S$ Mol Wt: 602.0

100 mg	$536.00

N7604 — **NTB (Naltriben)**

H-D-Phe-Cys-Tyr-D-Trp-Orn-Thr-Pen-Thr-NH_2(Cys_2-Pen_7)

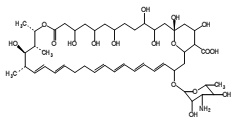
$C_{50}H_{65}N_{11}O_{11}S_2$ Mol.Wt.: 1060.29

An opoid antagonist that has been shown to suppress alcohol intake in rats.

Krishnan-Sarin S, Portoghese PS, Li TK, Frohlich JC. Pharmcol Biochem Behav 52: 153-9 (1995).

0.5 mg	$70.40
1 mg	$118.40
2.5 mg	$211.20

N9874 — **Nystatin**



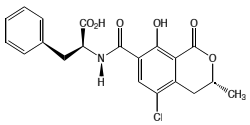
$C_{47}H_{75}NO_{17}$ Mol. Wt.: 926.09 [1400-61-9]

An antifungal drug.

Patton LL, Bonito AJ, Shugars DA. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 92:170-9 (2001).

500 KU	$12.50
1 MU	$14.70
5 MU	$36.70

O0829 — **Ochratoxin A** — 1 mg $52.00; 5 mg $226.00



$C_{20}H_{18}ClNO_6$ Mol.Wt.: 403.81 m.p.169°C [303-47-9]

A toxic fungal metabolite and carcinogen. Inhibits phosphorylase and mitochondrial respiration in rat liver.

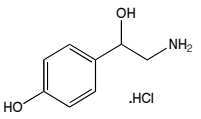
Applegate KL, Chipley JR. Adv. Appl. Microbiol.16:97-109 (1973).
Meisner H, Chan S. Biochemistry. 13:2795-2800 (1974).

O0978 — **Octaneuropeptide** — 1 mg $107.60

Arg-Pro-Gly-Leu-Leu-Asp-Leu-Lys

$C_{41}H_{74}N_{12}O_{11}$ Mol. Wt.: 911.1

O0977 — **Octopamine HCl** — 1 g $26.90; 5 g $56.00; 25 g $224.00



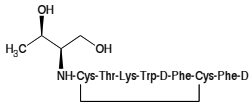
$C_8H_{11}NO_2.HCl$ Mol. Wt.: 189.64 [770-05-8]

Octopamine is a neuromodulator that occurs naturally in nervous tissues in many species of animals.

Goaillard JM, Schulz DJ, Kilman VL et al. J Neurosci. 24:7063-73 (2004).
Roeder T, Seifert M, Kahler C et al. Arch Insect Biochem Physiol. 54:1-13 (2003).

O1078 — **Octreotide Acetate** — 1 mg $196.00; 5 x 1 mg $761.60

Sandostatin

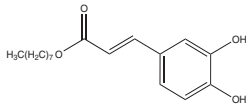


$C_{49}H_{66}N_{10}O_{10}S_2 \cdot 2C_2H_4O_2$ Mol.Wt.: 1139.36 [79517-01-4]

Somatostatin analogue with antiproliferative effect. It is able to inhibit angiogenesis induced by hepatocellular carcinoma in vivo, and Akt/PKB and telomerase activity of SGC7901 cells.

Stockmann F, Creutzfeldt WZ. Gastroenterol. 26:665-75 (1988).
Jia WD, Ku GL, Sun HC et al. Hepatobiliary Pancreat Dis Int. 2:404-9 (2003).
Gao S, Yu BP, Li Y et al. World J Gastroenterol. 9:2362-5 (2003).

O1176 — **n-Octyl Caffeate** (See page 7 for more information) — 5 mg $25.00; 25 mg $100.00



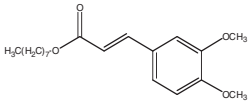
Caffeic acid n-octyl ester, 3,4-dihydroxycinnamic acid n-octyl ester.

$C_{17}H_{24}O_4$ Mol. Wt.: 292.37

Antioxidant and supressor of iNOS. Induces apoptosis in human leukemia U937 cells.

Etzenhouser B et al. Bioorg. Med. Chem. 9:199 (2001).
Hsiao G et al. Biochem. Pharmacol. 65:1383 (2003).
Ujibe M et al. Biol. Pharm. Bull. 28:2338 (2005).

O1177 — **n-Octyl-3,4-Dimethylcaffeate** (See page 7 for more information) — 5 mg $20.00; 25 mg $80.00

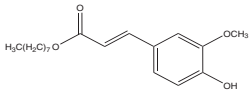


3,4-Dimethylcaffeic acid n-octyl ester; 3,4-dimethoxycinnamic acid n-octyl ester

$C_{19}H_{28}O_4$ Mol. Wt.: 320.42

Derivative of n-octyl-caffeate.

O1178 — **n-Octyl-3-methylcaffeate** (See page 7 for more information) — 5 mg $25.00; 25 mg $100.00

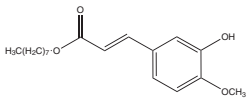


3-Methylcaffeic acid n-octyl ester; 4-Hydroxy-3-methoxycinnamic acid n-octyl ester

$C_{18}H_{26}O_4$ Mol. Wt.: 306.40

Derivative of n-octyl-caffeate.

O1179 — **n-Octyl-4-methylcaffeate** (See page 7 for more information) — 5 mg $100.00; 25 mg $400.00



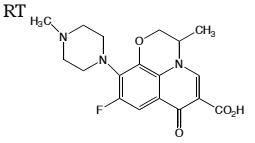
4-Methylcaffeic acid n-octyl ester; 3-Hydroxy-4-methoxycinnamic acid n-octyl ester

$C_{18}H_{26}O_4$ Mol. Wt.: 306.40

Derivative of n-octyl-caffeate.

O2144 — **Ofloxacin** — 5 g $47.30; 10 g $80.00; 50 g $316.60

RT

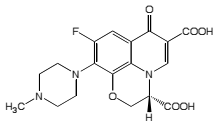


$C_{18}H_{20}FN_3O_4$ Mol.Wt.: 361.37 m.p. 250-257°C [82419-36-1]

A broad spectrum, fluorinated antibacterial quinolone.

Siebert G et al. Eur. J. Clin. Microbiol. 2:548 (1983).

O2146

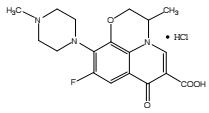


R-(+)-Ofloxacin Hemihydrate

The optically active form of ofloxacin.

1 mg	$80.10
5 mg	$351.20
10 mg	$616.00

O2145

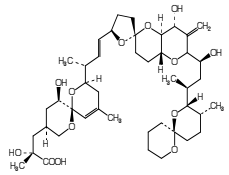


Ofloxacin Hydrochloride (See page 13 for more information)

$C_{18}H_{20}FN_3O_4.HCl$ Mol. Wt.: 397.94

5 g	$40.70
10 g	$61.10
50 g	$244.00

O4101



Okadaic Acid

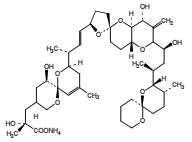
$C_{44}H_{68}O_{13}$ Mol. Wt.: 805.00 [78111-17-8]

Non-phorbol type tumor promoter. It is also a potent inhibitor of protein phosphatases in numerous cell types.

Suganuma M et al. Proc. Natl. Acad. Sci. USA 85:1768-1771 (1988).
Cohen P et al. Trends Biochem. Sci. 15: 98-102 (1990).

25 µg	$84.90
50 µg	$155.40
100 µg	$266.50
1 mg	$1,746.50

O4102



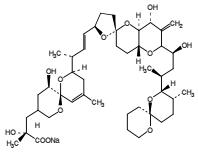
Okadaic Acid Ammonium Salt

$C_{44}H_{67}O_{13}.NH_4$ Mol.Wt. 822.04 [155716-06-6]

Ammonium salt form of okadaic acid, with somewhat greater stability after it is put into organic solvents.

25 µg	$79.00
100 µg	$248.90
1 mg	$1,921.10

O4104



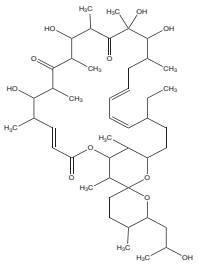
Okadaic Acid Sodium Salt

$C_{44}H_{67}O_{13}.Na$ Mol.Wt. 827.0

Sodium salt form of okadaic acid, with somewhat greater stability after it is put into organic solvents.

25 µg	$84.90
100 µg	$248.90
1 mg	$1,921.10

O4533



Oligomycin

$C_{45}H_{73}O_{11}$ Mol. Wt.: 791.06 [1404-19-9]

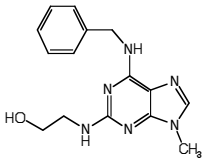
A mixture of oligomycins A, B and C. Has antibiotic properties.

Inhibits membrane bound mitochondrial ATPase and phosphoryl group transfer.

Nagamune H et al. Biochim. Biophys. Acta 1141:231-237 (1993).

1 mg	$20.00
5 mg	$52.00
10 mg	$102.00

O4556



Olomoucine

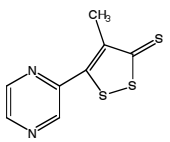
$C_{15}H_{18}N_6O$ Mol. Wt.: 298.34 [101622-51-0]

Potent selective and competitive inhibitor of cyclin-dependent kinases.

Vesely J et al. Eur J Biochem. 224:771-86 (1994).

5 mg	$96.80
25 mg	$421.60
100 mg	$1,150.60

O4578



Oltipraz

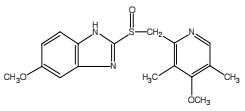
$C_8H_6N_2S_3$ Mol. Wt.: 226.34 [64224-21-1]

An antischistosomiasis drug found to inhibit carcinogenesis. It is effective against several chemically induced tumor models. Its mechanism of action is believed to be the induction of phase II detoxifying enzymes resulting in diminished carcinogen-DNA binding.

Bueding E, Dolan P, Leroy JP. Res Commun Chem Pathol Pharmacol. 37:293-303 (1982).
Wattenberg LW, Bueding E. Carcinogenesis. 7:1379-81 (1986).
Kensler T, Styczynski P, Groopman J et al. J Cell Biochem Suppl. 16I:167-72 (1992).

500 mg	$139.20
1 g	$219.60
5 g	$848.90

O4917 — **Omeprazole** (See page 25 for more information)



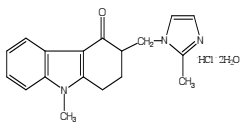
$C_{17}H_{19}N_3O_3S$ Mol. Wt.: 345.42 [73590-58-6]

A proton pump inhibitor.

Faiss S, Scherubl H, Riecken EO, Wiedenmann B. Recent Results Cancer Res. 142:193-207 (1996).

1 g	$64.60
5 g	$230.50
10 g	$307.50

O5212 — **Ondansetron**



$C_{18}H_{20}ClN_3O \cdot 2H_2O$ Mol.Wt.: 365.86 [99614-01-4]

A serotonin-3 (5-HT3) receptor antagonists, used to prevent radiosurgery-induced nausea and vomiting and modulation of alcohol intoxiccation.

Seynaeve C, Verweij J, de Mulder PH. Anticancer Drugs. 2:343-55 (1991).
Swift RM, Davidson D, Whelihan W, Kuznetsov O. Biol Psychiatry. 40:514-21 (1996).

100 mg	$69.30
500 mg	$290.60

O6132 — **Opioid receptor antagonist Ac-RFMWMK-NH2**

Ac-Arg-Phe-Met-Trp-Met-Lys-NH_2

$C_{44}H_{66}N_{12}O_7S_2$ Mol Wt: 939.2

1 mg	$107.60

O7116 — **Orexin-B, human**

Arg-Ser-Gly-Pro-Pro-Gly-Leu-Gln-Gly-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Ala-Ser-Gly-Asn-His-Ala-Ala-Gly-Ile-Leu-Thr-Met-NH_2

Hypocretin-2

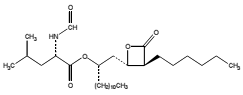
$C_{123}H_{212}N_{44}O_{35}S$ Mol Wt: 2899.4

A hypothalamic neuropeptide encoded by a single mRNA transcript that stimulates food intake.

Lee JH, Bang E, Chae KJ et al. Eur J Biochem. 266:831-9 (1999).

1 mg	$238.60

O6845 — **Orlistat**



(S)-2-formylamino-4-methyl-pentanoic acid (S)-1-[[(2S,3S)-3-hexyl-4-oxo-2-oxetanyl]methyl]-dodecyl ester

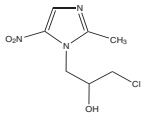
$C_{29}H_{53}NO_5$ Mol. Wt.: 495.73 [96829-58-2]

A novel inhibitor of fatty acid synthase used in the treatment of obesity. As a result of it's ability to halt fatty acid synthase, Orlistat halts tumor cell proliferation, induces tumor cell apoptosis, and inhibits the growth of PC-3 tumors in nude mice.

Drent ML, van der Veen EA. Obes Res. 3 Suppl 4:623-25 (1995).
Kridel SJ, Axelrod F, Rozenkrantz N et al. Cancer Res. 64:2070-5 (2004).

100 mg	$50.40
500 mg	$134.40
1 g	$224.00

O6953 — **Ornidazole**



Tiberal, Madelen

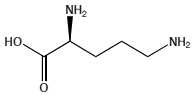
$C_7H_{10}ClN_3O_3$ Mol. Wt.: 219.63 [16773-42-5]

Used to treat some protozoan infections.

Khrianin AA, Reshetnikov OV Antibiot Khimioter. 51:18-21 (2006).

5 g	$38.00
50 g	$275.00

O7053 — **L-Ornithine Hydrochloride**



$C_5H_{12}N_2O_2.HCl$ Mol. Wt.: 168.62 [3184-13-2]

A nonprotein amino acid. It is used in the body in the biosynthesis of L-arginine, L-proline and polyamines.

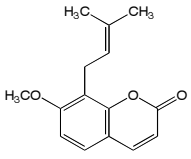
Barbul A. J Parenter Enteral Nutr. 10:227-238 (1986).
Wasaki K, Mano K, Ishihara M et al. Biochem Int. 14:971-976 (1987).

10 g	$14.80
25 g	$19.80
100 g	$46.90
1 kg	$289.60

Orphanin FQ

See nociceptin

O7377 — **Osthole**



$C_{15}H_{16}O_3$ Mol. Wt.: 244.29 [484-12-8]

A coumarin isolated from *Cnidium monnieri* (L.) Cusson. It is an antiplatelet agent that inhibits phosphoinositide breakdown. It also prevents anti-Fas antibody-induced hepatitis in mice by affecting the caspase-3-mediated apoptotic pathway.

Teng CM, Ko FN, Wang JP et al. J Pharm Pharmacol. 43:667-9 (1991).
Okamoto T, Kawasaki T, Hino O. Biochem Pharmacol. 65:677-81 (2003).

250 mg	$50.40
1 g	$140.00
5 g	$560.00

O8503 — OVA(323-339)

5 mg $457.00

Ile-Ser-Gln-Ala-Val-His-Ala-Ala-His-Ala-Glu-Ile-Asn-Glu-Ala-Gly-Arg

$C_{\sim 1}H_{120}N_{25}O_{25}$ Mol Wt: 1~~3.9

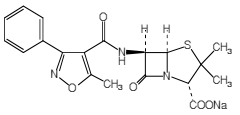
O8500 — Ovalbumin(257-264) antigen peptide

1 mg $107.60

Ser-Ile-Ile-Asn-Phe-Glu-Lys-Leu

$C_{45}H_{\sim 4}N_{10}O_{13}$ Mol Wt: 963.2

O9302 — Oxacillin Sodium Monohydrate



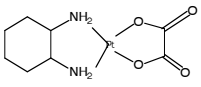
1 g $24.70
5 g $61.60
25 g $246.40

$C_{19}H_{18}N_3NaO_5S.H_2O$ Mol. Wt.: 441.44 [7240-38-2]

A member of the penicillin class of antibiotics.

Kirby WM, Rosenfeld LS, Brodie J. JAMA. 181:~39-44 (1962).

O9201 — Oxaliplatin



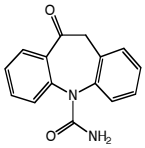
5 mg $69.30
25 mg $269.10
100 mg $845.30

$C_8H_{14}N_2O_4Pt$ Mol Wt. 397.29 [61825-94-3]

A novel platinum analogue which has wide spectrum anti-cancer activity. It is found to be more active against human melanoma cell lines, and has better biochemical, pharmacological and cytotoxic properties than cisplatin and carboplatin.

Cassidy J. Int J Clin Pract. 54:399-402 (2000).
Mohammed MQ, Retsas S. Anticancer Drugs. 11:859-63 (2000).

O9210 — Oxcarbazepine



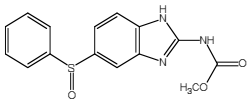
1 g $37.00
5 g $117.10
25 g $431.20

$C_{15}H_{12}N_2O_2$ Mol. Wt.: 252.27 [28721-07-5]

A second-generation antiepileptic drug. It inhibits CYP2C19 and induces CYP3A4 and CYP3A5 systems. Studies suggest that the anticonvulsant activity of oxcarbazepine is mediated via the blocking of neuronal ion channels.

Carrazana E, Mikoshiba I. J Pain Symptom Manage. 25:S31-5 (2003).
Bang L, Goa K. Paediatr Drugs. 5:55~~3 (2003).

O9322 — Oxfendazole



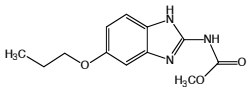
10 g $43.20
25 g $92.40
100 g $289.60

$C_{15}H_{13}N_3O_3S$ Mol. Wt.: 315.35 [53716-50-0]

An anthelmintic agent.

Corwin RM. Am J Vet Res. 38:465~ (19~~).

O9334 — Oxibendazole



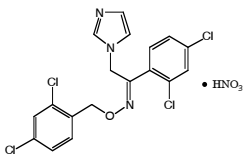
5 g $43.20
10 g $74.00
25 g $154.00

$C_{12}H_{15}N_3O_3$ Mol. Wt.: 249.27 [20559-55-1]

An anthelmintic agent. It has been shown to be effective in killing Trichinella spiralis in mice, and histotrophic larvea and adult parasites in calves.

Karunakaran CS, Denham DA. J Parasitol. 66:929-32 (1980).
Theodorides VJ, DiCuollo CJ, Nawalinski T et al. Am J Vet Res. 38:809-14 (19~~).

O9234 — Oxiconazole Nitrate



1 g $49.30
5 g $147.90
25 g $492.80

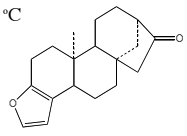
$C_{18}H_{14}Cl_4N_4O_4$ Mol. Wt.: 492.15 [64211-46-7]

An antifungal agent.

Polak A. Arzneimittelforschung. 32:1~-24 (1982).

O9256 — 16-Oxocafestol

-20 °C

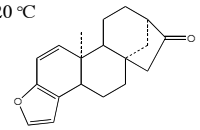


25 mg $107.00
50 mg $186.40
100 mg $321.30
500 mg $1,044.70

$C_{19}H_{24}O_2$ Mol.Wt.: 284.40 m.p. 168-172ºC [108664-99-8]

Synthetic derivative of cafestol.

O9257 -20 °C



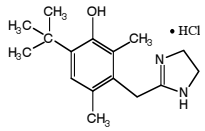
16-Oxokahweol

$C_{19}H_{22}O_2$ Mol.Wt.: 282.39 m.p. 180-183°C [108664-99-9]

Synthetic derivative of kahweol.

10 mg	$128.50
25 mg	$274.20
50 mg	$466.60
100 mg	$792.00

O9398



Oxymetazoline Hydrochloride

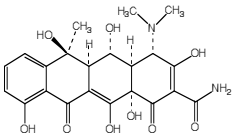
$C_{16}H_{24}N_2O.HCl$ Mol. Wt.: 296.84 [2315-02-8]

An α-adrenoceptor stimulant.

Sanders J, Miller DD, Patil PN. J Pharmacol Exp Ther. 195:362-71 (1975).

5 g	$74.00
25 g	$271.10

O9396



Oxytetracycline

$C_{22}H_{24}N_2O_9$ Mol. Wt.: 460.43 [79-57-2]

An antibiotic. It impairs mitochondrial protein synthesis resulting in proliferation arrest in s.c. and Zajdela tumor cells. Zajdela mitochondrial tumor cells cease dividing after a few generations, which is preceded by reduction of cytochrome c oxidase activity of the tumor cells.

van den Bogert C, Dontje BH, Wybenga JJ et al. Cancer Res. 41:1943-7 (1981).
Kroon AM, Dontje BH, Van den Bogert C. Cancer Res. 43:2247-51 (1983)

10 g	$14.80
50 g	$55.50
100 g	$103.50

O9397

Oxytetracycline Hydrochloride

$C_{22}H_{24}N_2O_9.HCl$ Mol. Wt.: 496.93 [2058-46-0]

10 g	$14.80
50 g	$55.50
100 g	$98.60

O9497

Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Leu-Gly-NH_2
(Disulfide bridge Cys1-Cys6)

Oxytocin

$C_{43}H_{66}N_{12}O_{12}S_2$ Mol. Wt.: 1007.2 [50-56-6]

Oxytocin has shown the ability to induce contractions and milk production in rats

Pederson C, Prange Ar. PNAS 76(12); 6661-6665 (1979)

5 mg	$107.60
25 mg	$414.40
100 mg	$1,400.00
1 g	$3,870.80

P0001

H-Gly-Ser-Phe-Leu-Val-Arg-Glu-Ser-OH

P1

$C_{39}H_{63}N_{11}O_{13}$ Mol.Wt.: 894.0

0.5 mg	$44.80
1 mg	$76.80
2.5 mg	$134.40

P0055

H-Leu-Pro-Gln-Ile-Glu-Asn-Val-Lys-Gly-Thr-Glu-Asp-OH

P55-TNFR

$C_{57}H_{95}N_{15}O_{22}$ Mol.Wt.: 1342.48

1 mg	$76.80
2 mg	$131.20
5 mg	$230.40

P0075

H-Ser-Met-Ala-Pro-Gly-Ala-Val-His-Leu-Pro-Gln-Pro-OH

P75-TNFR

$C_{53}H_{85}N_{15}O_{15}S_1$ Mol.Wt.: 1204.42

1 mg	$76.80
2 mg	$131.20
5 mg	$230.40

P0005

H-His-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr-Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Ala-Ala-Val-Leu-NH_2

PACAP (1-27), human, ovine, rat

$C_{142}H_{224}N_{40}O_{39}S_1$ Mol.Wt.: 3147.68

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

P0006

H-His-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr-Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Ala-Ala-Val-Leu-Gly-Lys-Arg-Tyr-Lys-Gln-Arg-Val-Lys-Asn-Lys-NH_2

PACAP (1-38), human, ovine, rat

$C_{203}H_{331}N_{63}O_{53}S_1$ Mol.Wt.: 4534.36

0.5 mg	$198.40
1 mg	$337.60
2.5 mg	$595.20

P0007

H-Phe-Thr-Asp-Ser-Tyr-Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Ala-Ala-Val-Leu-NH_2

PACAP (6-27), human, ovine, rat

$C_{203}H_{331}N_{63}O_{65}S$ Mol.Wt.:4534.4

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

P0008

His-Ser-Asp-Gly-Ile-Phe-Thr-Ap-Ser-Tyr-Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Ala-Ala-Val-Leu-Gly-Lys-Arg-Tyr-Lys-Gln-Arg-Val-Lys-Asn-Lys-NH_2

PACAP(6-38), human, ovine, rat

Pituitary adenylate cyclase activating peptide

$C_{203}H_{331}N_{63}O_{65}S$ Mol Wt: 4534.4 [137061-48-4]

A hypothalamic peptide that affects anterior pituitary cell function. It also plays a key role in the embryogenesis of brain, protection of brain nerve cells from ischemia-induced death, injuring and apoptosis.

Chepurnov SA, Chepurnova NE, Ponomarenko AA et al. Usp Fiziol Nauk. 30:3-20 (1999).
Arbogast LA, Voogt JL. Brain Res. 655:17-24 (1994).

0.5 mg	$185.60
1 mg	$315.20
2.5 mg	$556.80

P0009

H-His-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr-Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Ala-Ala-Val-Leu-Gly-Lys-Arg-Tyr-Lys-Gln-Arg-Ile-Lys-Asn-Lys-NH_2

PACAP 38, frog

$C_{204}H_{333}N_{63}O_{53}S$ Mol.Wt.: 4548.38

0.5 mg	$224.00
1 mg	$380.80
2.5 mg	$672.00

P0010

H-Asp-Val-Ala-His-Gly-Ile-Leu-Asn-Glu-Ala-Tyr-Arg-Lys-Val-Leu-Asp-Gln-Leu-Ser-Ala-Gly-Lys-His-Leu-Gln-Ser-Leu-Val-Ala-OH

PACAP-Related Peptide (PRP), human

$C_{139}H_{229}N_{41}O_{42}$ Mol.Wt.: 3146.62

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

P0011

H-Asp-Val-Ala-His-Glu-Ile-Leu-Asn-Glu-Ala-Tyr-Arg-Lys-Val-Leu-Asp-Gln-Leu-Ser-Ala-Arg-Lys-Tyr-Leu-Gln-Ser-Met-Val-Ala-OH

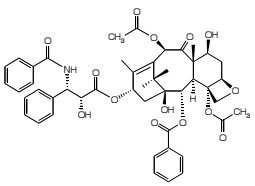
PACAP-Related Peptide (PRP), rat

$C_{148}H_{242}N_{42}O_{45}S_1$ Mol.Wt.: 3361.9

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

P0092

-20 °C



Paclitaxel, (Taxol), 99% (See Page 24 for more information)

$C_{47}H_{51}NO_{14}$ Mol.Wt.: 853.91 m.p. 213-216°C [33069-62-4]

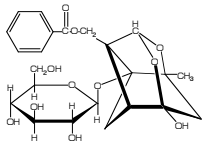
Natural diterpenoid isolated from the stem bark of the Pacific yew tree (Taxus brevifolia Nutt.). It promotes the assembly of stable microtubules and inhibits the disassembly process of microtubules to tubulin.

Wani MC, Taylor HL, Wall ME et al. J. Am. Chem. Soc. 93:2325 (1971).
Suffness M, Cordell G A. Antitumor Alkaloids. In: The Alkaloids. Chemistry and Pharmacology, Brossi, A. Ed.; Acad Pr: N Y, Vol. XXV, pp. 3-355 (1985).
Manfredi JJ, Horwitz SB. Pharmacol. Ther. 25:83 (1984).

1 mg	$20.00
5 mg	$35.00
25 mg	$80.00
100 mg	$180.00

P0218

0 °C



Paeoniflorin

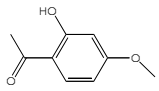
$C_{23}H_{28}O_{11}$ Mol. Wt.: 480.46 [23180-57-6]

Paeoniflorin is a glycoside isolated from the root of *Paeonia lactiflora*. It has been used as an anticonvulsant and has hypoglycemic effect. It reverses guanethidine-induced hypotension by activating the central adenosine A1 receptors in the brain.

Abel-Hafez AA, Meselgy MR, Nakamura N et al. Chem. Pharm. Bull (Tokyo). 46:1486-1487 (1998).
Hsu FL, Lai CW, Cheng JT. Planta Med. 63:323-325 (1997).
Cheng JT, Wang CJ, Hsu FL. Clin. Ecp. Pharmacol Physiol. 26:815-816 (1999).

1 mg	$61.50
5 mg	$223.00
10 mg	$325.70

P0219



Paeonol

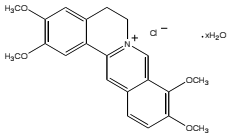
$C_9H_{10}O_3$ Mol. Wt.: 166.17 [552-41-0]

Active ingredient isolated from Paeonia suffruticosa Andr. Its pharmacologic functions include anti-inflammatory, antiaggregatory, and anti-ischemia reperfusion damage and anti-lipid peroxidation effects.

Harada M, Yamashita A, Aburada M. J Pharm Soc Japan 92:750-756 (1972).
Hirai A, Terano T, Hamazaki T et al. Throm Res. 31:29-40 (1983).
Zhang WG, Zhang ZS. Acta Pharm Sinica 29:145-148 (1994).

1 g	$24.50
5 g	$88.20

P0245



Palmatine Chloride Hydrate

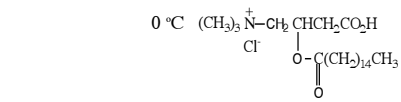
$C_{21}H_{22}NO_4 \cdot Cl \cdot xH2O$ Mol. Wt.: 387.86 [171869-95-7]

Palmatine is a protoberberine alkaloid isolated from medicinal herbs such as Coptis chinensis Franch. It is a selective toposomerase I and II poison. The sedative effect of palmatine is related to its ability to inhibit dopamine biosynthesis. Palmatine is a vasodilator that reduces [Ca2+].

Sanders MM, Liu AA, Li TK et al. Biochem. Pharmacol. 56:1157-1166 (1998).
Pilch DS, Yu C, Makhey D et al. Biochemistry. 36:12542-12553 (1997).
Shin JS, Kim EI, Kai M, Lee MK. Neurochem. Res. 25:363-368 (2000).
Hsieh MT, Su SH, Tsai HY et al. Jpn. J.Pharmacol. 61:1-5 (1993).
Chang YL, Usami S, Hsieh MT, Jiang MJ. Life Sci. 64:597-606 (1999).

1 g	$27.60
5 g	$69.30
10 g	$115.40

P0145



Palmitoyl-DL-carnitine Chloride

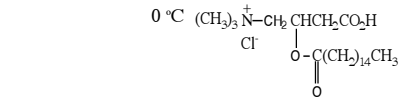
$C_{23}H_{45}NO_4 \cdot HCl$ Mol.Wt.: 436.1 [6865-14-1]

A specific protein kinase C inhibitor. It inhibits 12-O-tetra decanoyl-phorbol-13-acetate (TPA) enhanced transformation in BALB/3T3 cells.

Semba M, Ini N. Toxicol Lett. 51:7-12 (1990).

100 mg	$43.20
500 mg	$192.20

P0146



Palmitoyl-L-carnitine Chloride

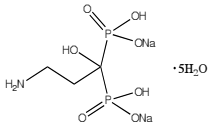
$C_{23}H_{45}NO_4 \cdot HCl$ Mol.Wt.: 436.1 [18877-64-0]

Protein kinase inhibitor.

Butler AP, Mar PK, McDonald FF, Ramsay RL. Exp Cell Res. 194:56-61 (1991).

5 mg	$66.90
10 mg	$116.90

P0049



Pamidronate Disodium (See page 5 for more information)

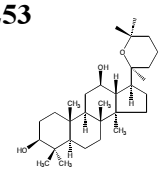
$C_3H_9NNa_2O_7P_2 \cdot 5H_2O$ Mol. Wt.: 279.03 [57248-88-1]

Calcium metabolism regulator.

Man Z, Otero AB, Rendo P et al. Lancet. 335:663 (1990).
Fitton A, McTavish D. Drugs. 41:289-318 (1991).

10 mg	$33.50
50 mg	$135.90
100 mg	$256.00

P0253



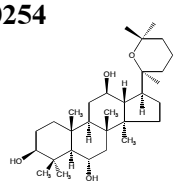
Panaxadiol

$C_{30}H_{52}O_3$ Mol. Wt.: 460.73

Sapogenin isolated from Panax ginseng.

5 mg	$97.60
10 mg	$169.50
25 mg	$338.80

P0254



Panaxatriol

$C_{30}H_{52}O_4$ Mol. Wt.: 476.73

Sapogenin isolated from Panax ginseng.

5 mg	$97.60
10 mg	$169.50
25 mg	$338.80

P0350

H-Gly-Pro-Ser-Gln-Pro-Thr-Tyr-Pro-Gly-Asp-Asp-Ala-Pro-Val-Glu-Asp-Leu-Ile-Arg-Phe-Tyr-Asp-Asn-Leu-Gln-Gln-Tyr-Leu-Asn-Val-Val-Thr-Arg-His-Arg-Tyr-NH_2

Pancreatic Polypeptide, avian

$C_{190}H_{283}N_{53}O_{58}$ Mol.Wt.: 4237.69

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

P0351

Ala-Pro-Leu-Glu-Pro-Met-Tyr-Pro-Gly-Asp-Tyr-Ala-Thr-His-Glu-Gln-Arg-Ala-Gln-Tyr-Glu-Thr-Gln-Leu-Arg-Arg-Tyr-Ile-Asn-Thr-Leu-Thr-Arg-Pro-Arg-Tyr-NH_2

Pancreatic Polypeptide, rat

$C_{195}H_{298}N_{58}O_{57}S$ Mol.Wt.:4398.9 [90419-12-8]

A gut hormone released from the pancreas in response to ingestion of food. It has been found to cause a sustained decrease in both appetite and food intake.

Batterham RL, Le Roux CW, Cohen MA et al. J Clin Endocrinol Metab. 88:3989-92 (2003).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

P0353

H-Ala-Pro-Leu-Glu-Pro-Val-Tyr-Pro-Gly-Asp-Asn-Ala-Thr-Pro-Glu-Gln-Met-Ala-Gln-Tyr-Ala-Ala-Asp-Leu-Arg-Arg-Tyr-Ile-Asn-Met-Leu-Thr-Arg-Pro-Arg-Tyr-NH_2

Pancreatic Polypeptide, human

$C_{185}H_{287}N_{53}O_{54}S_2$ Mol. Wt.: 4181.7 [75976-10-2]

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

P0352 — **Pancreastatin, porcine**

Gly-Trp-Pro-Gln-Ala-Pro-Ala-Met-Asp-Gly-Ala-Gly-Lys-Thr-Gly-Ala-Glu-Glu-Ala-Gln-Pro-Pro-Glu-Gly-Lys-Gly-Ala-Arg-Glu-His-Ser-Arg-Gln-Glu-Glu-Glu-Glu-Glu-Thr-Ala-Gly-Ala-Pro-Gln-Gly-Leu-Phe-Arg-Gly-NH_2

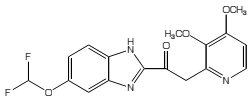
$C_{214}H_{330}N_{68}O_{76}S$ Mol Wt: 5103.4

A regulatory peptide with a general inhibitory effect on secretion. Inhibits DNA and protein synthesis by producing NO in HTC rat hepatoma cells, and modulates insulin signaling in rat.

Gonzalez-Yanes C, Sanchez-Margalet V. Diabetes. 49:1288-94 (2000).
Sanchez-Margalet V, Gonzalez-Yanes C, Najib S. J Hepatol. 35:80-5 (2001).

0.5 mg	$384.00
1 mg	$652.80
2.5 mg	$1,152.00

P0255 — **Pantoprazole** (See page 25 for more information)



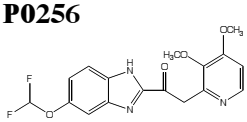
$C_{16}H_{15}F_2N_3O_4S$ Mol. Wt.: 383.37 [102625-70-7]

A proton pump inhibitor. Inhibits vesicular gastric H+/K(+)-ATPase under acid transporting conditions by accumulating in the acid space generated by the pump. It has an inhibitory effect on acid secretion.

Krusekopf S, Roots I, Hildebrandt AG et al. Xenobiotica. 33:107-18 (2003).
Shin JM, Besancon M, Simon A et al. Biochim Biophys Acta. 1148:223-33 (1993).

100 mg	$30.80
500 mg	$88.80
1 g	$147.90

P0256 — **Pantoprazole Sodium**



$C_{16}H_{15}F_2N_3NaO_4S$ Mol. Wt.: 405.36 [138786-67-1]

Antiulcerative.

1 g	$30.80
5 g	$104.80
25 g	$369.60

P0260 — **Papain Inhibitor**

H-Gly-Gly-Tyr-Arg-OH

$C_{19}H_{29}N_7O_6$ Mol.Wt.: 451.49

5 mg	$38.40
10 mg	$65.60
25 mg	$115.20

P0268 — **Parasin I**

H-Lys-Gly-Arg-Gly-Lys-Gln-Gly-Gly-Lys-Val-Arg-Ala-Lys-Ala-Lys-Thr-Arg-Ser-Ser-OH

$C_{82}H_{154}N_{34}O_{24}$ Mol.Wt.: 2000.36

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

P0269 — **Parathyroid Hormone (1-34), bovine**

Ala-Val-Ser-Glu-Ile-Gln-Phe-Met-His-Asn-Leu-Gly-Lys-His-Leu-Ser-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe

Teriparatide

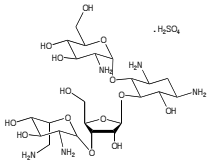
$C_{183}H_{288}N_{54}O_{50}S_2$ Mol Wt: 4108.7

A hormone shown to increase bone mass in a variety of animals and humans with osteoporosis.

Frolik CA, Black EC, Cain RL et al. Bone. 33:3?2-9 (2003).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

P0370 — **Paromomycin Sulphate**



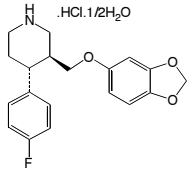
$C_{23}H_{45}N_5O_{14}.H_2SO_4$ Mol. Wt.: 713.71 [1263-89-4]

A aminoglycoside antibiotic.

Konno T, Takahashi T, Muto A et al. Nucleic Acids Res Suppl. (3):235-6 (2003).
Lando D, Cousin MA, Ojasoo T et al. Eur J Biochem. 66:597-605 (1976).

1 g	$44.80
5 g	$145.60
25 g	$492.80

P0297 — **Paroxetine Hydrochloride**



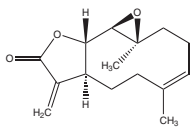
$C_{19}H_{20}FNO_3.HCl.1/2H_2O$ Mol. Wt.: 374.84 [110429-35-1]

A potent selective 5-hydroxytryptamine reuptake inhibitor used as a treament of major depression.

Johnson AM. Int. Clin. Psych. 6:Suppl 4:5-24 (1992).

100 mg	$103.10
500 mg	$379.50
1 g	$657.40

P0270 — **Parthenolide** (See page 25 for more information)



$C_{15}H_{20}O_3$ Mol. Wt.: 248.32 [20554-84-1]

Sesquiterpene lactone and active ingredient of feverfew. Anti-inflammatory agent. Induces apoptosis and cell necrosis. Suppresses NF-kappaB activity.

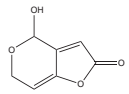
Pozarowski P et al Cytometry 54:118-124 (2003).
Wen J et al J. Biol. Chem. 277:38954-38964 (2002).

25 mg	$35.00
100 mg	$85.00
250 mg	$195.00

P0278 Patulin

Clavacin, clavatin, penicidin

$C_7H_6O_4$ Mol. Wt.: 154.12 [149-29-1]



Produced by a number of fungi species of Aspergillus and Penicillium.

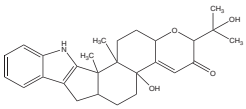
It has anti-bacterial, carcinogenic and mutagenic activities.

Birkinshaw M et. Al. Lancet 245:625 (1943).
Dickens Brit. Med. Bull. 20:96 (1964).

1 mg	$22.00
5 mg	$84.00
10 mg	$154.00

P0392 Paxilline

$C_{27}H_{33}NO_4$ Mol. Wt.: 435.56 [57186-25-1]



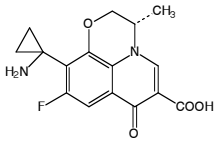
A tremorgenic indole alkaloid that selectively blocks high-conductance Ca^{2+}-activated K^+-channels.

Sanchez M et al Neuropharmacology 35:963 (1996).
Young C et al Curr. Genet. 33:368 (1998).

5 mg	$118.00
10 mg	$216.00

P0398 Pazufloxacin Mesylate

$C_{16}H_{15}FN_2O_4 \cdot CH_3SO_3H$ Mol. Wt.: 414.41 [163680-77-1]



A fluoroquinolone antimicrobial agent. It has a broad spectrum of activity and potent activity against gram-positive and gram-negative bacteria.

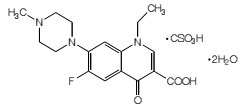
Fukuoka Y, Ikeda Y, Yamashiro Y et al. Antimicrob Agents Chemother. 37:384-92 (1993).
Muratani T, Inoue M, Mitsuhashi S. Antimicrob Agents Chemother. 36:2293-303 (1992).

500 mg	$110.90
1 g	$160.20
5 g	$591.40

P1622 Pefloxacine Mesylate

Pefloxacine Methansulfonate dihydrate

$C_{17}H_{20}FN_3O_3 \cdot CH_3SO_3H \cdot 2H_2O$ Mol. Wt.: 465.50 [149676-40-4]



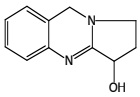
A fluoroquinolone antimicrobial agent. It was found to inhibit cell growth of normal hematopoietic progenitor cells and leukemic cell lines.

Kondo H, Sakamoto F, Kawakami K, Tsukamoto G. J Med Chem. 31:221-5 (1988).
Somekh E, Douer D, Shaked N, Rubinstein E. J Pharmacol Exp Ther. 248:415-8 (1989).

5 g	$30.80
25 g	$104.80
100 g	$154.00

P1625 Peganine

$C_{11}H_{12}N_2O$ Mol. Wt.: 188.23 [6159-55-3]



Peganine is an alkaloid isolated from Peganum harmala L. It has anti-cholinesterase activity.

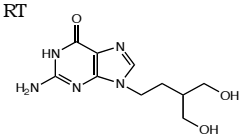
Tuliaganov N, Sadritdinov FS, Suleimanova GA. Farmakol Toksikol. 49:37-40 (1986).

10 mg	$110.90
25 mg	$219.30
100 mg	$640.70

P1754 Penciclovir

RT

$C_{10}H_{15}N_5O_3$ Mol. Wt.: 253.26 [39809-25-1]



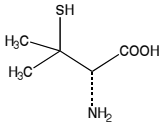
Nucleoside analog that blocks DNA replication.

Shaw T, Amor P, Civitico G, Boyd M, Locarnini S. Antimicrob Agents Chemother. 38:719-23 (1994).
Earnshaw DL, Bacon TH, Darlison SJ et al. Antimicrob Agents Chemother. 36:2747-57 (1992).

100 mg	$56.20
500 mg	$239.80
1 g	$359.70

P1753 Penicillamine

$C_5H_{11}NO_2S$ Mol. Wt.: 149.21 [52-67-5]



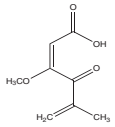
Exogenous NOS modulator, found to inhibit urease activity.

Chen JX, Berry LC, Tanner M, et al. J Cell Physiol.186:116-23 (2001).
Sissons CH, Yakub S. Oral Microbiol Immunol. 15:317-324 (2000).

1 g	$18.50
5 g	$61.50
25 g	$245.90

P1854 Penicillic acid

$C_8H_{10}O_4$ Mol. Wt.: 170.16 [90-65-3]



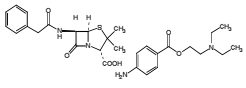
Anibiotic mycotoxin produced by various strains of Penicillium and Aspergillu. It has been found in corn and tabacco. Induces DNA single-strand breaks.

Keblys M, Bernhoft A, Hofer CC, Morrison E, Larsen HJ, Flaoyen A Mycopathologia 158:317-24 (2004)

5 mg	$36.00
10 mg	$64.00
50 mg	$268.00

P1852 Penicillin G procaine

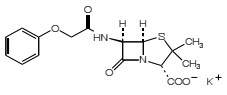
$C_{29}H_{38}N_4O_6S \cdot H_2O$ Mol. Wt.: 588.73 [6130-64-9]



Semisynthetic antibiotic.

10 g	$12.40
25 g	$17.30
100 g	$49.30

P1853



Penicillin V Potassium

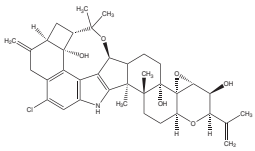
$C_{16}H_{17}KN_2O_5S$ Mol. Wt.: 388.48 [132-98-9]

A bactericidal against penicillin-susceptible microorganisms during the stage of active multiplication. It produces its effect by inhibiting biosynthesis of cell-wall mucopeptide.

Spitzer TQ. Harris BA. South Med J. 70:41-2 (1977).
Bolme P, Eriksson M. Acta Paediatr Scand. 65:253-6 (1976).

10 g	$14.80
25 g	$24.70
100 g	$61.60

P1952



Penitrem A

Tremortin A

$C_{37}H_{44}ClNO_6$ Mol. Wt.: 634.2014 [12627-35-9]

A tremorgenic indole alkaloid. Inhibits high-conductance Ca^{2+}-activated K^+ channels.

Knaus HG Biochemistry 33:5819-5828 (1994).

1 mg	$40.00
5 mg	$192.00

P1955

Boc-beta-Ala-Trp-Met-Asp-Phe-NH_2

Pentagastrin

$C_{37}H_{50}N_7O_9S_1$ Mol.Wt.: 768.79

1 mg	$70.40
2 mg	$120.00
5 mg	$211.20

P1764

H-Lys-Glu-Thr-Trp-Trp-Glu-Thr-Trp-Trp-Thr-Glu-Trp-Ser-Gln-Pro-Lys-Lys-Lys-Arg-Lys-Val-OH

Pep-1

$C_{37}H_{50}N_7O_9S_1$ Mol.Wt.: 768.79

0.5 mg	$76.80
1 mg	$131.20
2.5 mg	$230.40

P1765

H-Cys-Pro-Asp-Phe-Gly-His-Ile-Ala-Met-Glu-Leu-Ser-Val-Arg-Thr-Trp-Lys-Tyr-OH

Peptide Standard 1

$C_{98}H_{144}N_{25}O_{26}S_2$ Mol.Wt.: 2152.52

0.5 mg	$76.80
1 mg	$131.20
2.5 mg	$230.40

P1766

H-Cys-Pro-Asp-Phe-Gly-His-Ile-Ala-Met-Glu-Leu-Ser-Val-Arg-Thr-Trp-Lys-Tyr-OH

Peptide B, bovine

$C_{163}H_{239}N_{39}O_{53}S_2$ Mol.Wt.: 3657.08

0.5 mg	$102.40
1 mg	$174.40
2.5 mg	$307.20

P1767

H-Tyr-Gly-Gly-Phe-Met-Lys-Lys-Met-Asp-Glu-Leu-Tyr-Pro-Leu-Glu-Val-Glu-Glu-Glu-Ala-Asn-Gly-Gly-Glu-Val-Leu-Gly-Lys-Arg-Tyr-Gly-Gly-Phe-Met-OH

Peptide F, bovine

$C_{163}H_{239}N_{39}O_{53}S_2$ Mol.Wt.: 3657.08

1 mg	$211.20
2 mg	$358.40
5 mg	$633.60

P1760

Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr

Peptide T

$C_{35}H_{55}N_9O_{16}$ Mol Wt: 857.8 [106362-32-7]

A potent HIV cell entry inhibitor. Acts by blocking chemokine-5 receptors (CCR5).

Polianova MT, Ruscetti FW, Pert CB et al. Peptides. 24(7): 1093-1098 (2003).

1 mg	$56.00

P1763

Tyr-Pro-Ile-Lys-Pro-Glu-Ala-Pro-Gly-Glu-Asp-Ala-Ser-Pro-Glu-Glu-eu-Asn-Arg-Tyr-Tyr-Ala-Ser-Leu-Arg-His-Tyr-Leu-Asn-Leu-Val-Thr-Arg-Gln-Arg-Tyr-NH_2

Peptide YY, human

$C_{194}H_{295}N_{55}O_{57}$ Mol. Wt.: 4309.8 [118997-30-1]

An appetite inhibiting protein secreted by the intestine.

Butler MG, Bittel DC, Talebizadeh Z. J Ped Endocrinology. 17(9):1177-1184 (2002).

1 mg	$275.20
2 mg	$467.20
5 mg	$825.60

P1762

Tyr-Pro-Ala-Lys-Pro-Glu-Ala-Pro-Gly-Glu-Asp-Ala-Ser-Pro-Glu-Glu-Leu-Ser-Arg-Tyr-Tyr-Ala-Ser-Leu-Arg-His-Tyr-Leu-Asn-Leu-Val-Thr-Arg-Gln-Arg-Tyr-NH_2

Peptide YY, porcine

$C_{190}H_{288}N_{54}O_{57}$ Mol Wt: 4240.7 [81858-94-8]

1 mg	$275.20
2 mg	$467.20
5 mg	$825.60

P1768

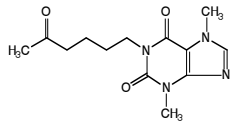
H-Ile-Lys-Pro-Glu-Ala-Pro-Gly-Glu-Asp-Ala-Ser-Pro-Glu-Glu-Leu-Asn-Arg-Tyr-Tyr-Ala-Ser-Leu-Arg-His-Tyr-Leu-Asn-Leu-Val-Thr-Arg-Gln-Arg-Tyr-NH_2

Peptide YY(3-36), PYY, human

$C_{180}H_{279}N_{53}O_{54}$ Mol.Wt.: 4049.55

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

P1755



Pentoxifylline

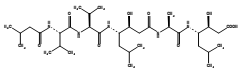
$C_{13}H_{18}N_4O_3$ Mol. Wt.: 278.31 [6493-05-6]

A vasodilator that has potential as radiation sensitizer. It is capable of stimulating drug induced apoptosis in leukemic cells.

Johnson FE, Harrison BR, McKirgan LW et al. Int J Oncol. 13:801-5 (1998).

10 g	$30.80
50 g	$115.40
100 g	$184.50

P1761



Pepstatin

$C_{34}H_{63}N_5O_9$ Mol. Wt.: 685.89 [26305-03-3]

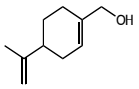
An inhibitor of acid proteases isolated from streptomyces. It has been shown to induce contractile effects on rat aorta rings.

Petrescu G, Costuleanu M, Slatineanu SM et al. Rev Med Chir Soc Med Nat Iasi. 106:741-5 (2002).
Guyene TT, Devaux C, Menard J et al. J Clin Endocrinol Metab. 43:1301-6 (1976).

5 mg	$33.60
25 mg	$100.80
100 mg	$336.00

P1770

RT



Perillyl Alcohol

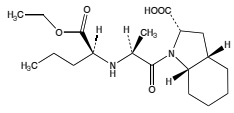
$C_{10}H_{16}O$ Mol.Wt.: 152.23 [536-59-4]

A monoterpene derived from Lavender, that induces apoptosis in colon tumor cells. Inhibits mammary cancer by inducing hepatocyte phase II enzymes, glutathione-S-transferase.

Reddy BS, Wang CX, Samaha H et al. Cancer Res. 57:420-425 (1997).
Gould MN. Environ Health Perspect. 105 (Suppl 4):977-979 (1997).

10 g	$46.50
50 g	$138.30

P1869



Perindopril (See page 24 for more information)

$C_{19}H_{32}N_2O_5$ Mol.Wt.:368.47 [82834-16-0]

A potent angiotensin converting enzyme inhibitor used for antihypertensive therapy.

Yamamoto Y, Oiwa K, Hayashi M, Ohara T, Muranishi M. Hypertens Res. 28:571-8 (2005).
Ajayi AA, Lees KR, Reid JL. Eur J Clin Pharmacol. 30: 177-82 (1986).

100 mg	$40.00
250 mg	$80.00
1 g	$235.00

P2445

Gly-Met-Ala-Ser-Lys-Ala-Gly-Ala-Ile-Ala-Gly-Lys-Ile-Ala-Lys-Val-Ala-Leu-Lys-Ala-Leu-NH_2

PGLa

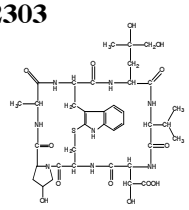
$C_{88}H_{162}N_{26}O_{22}S$ Mol. Wt.: 1968.5 [102068-15-5]

An antimicrobial peptide isolated from frog skin, which exerts its activity by permeabilizing bacterial membranes.

da Silva A Jr, Teschke O. Biochim Biophys Acta. 1643:95-103 (2003).
Wieprecht T, Apostolov O, Beyermann M et al. Biochemistry. 39:442-52 (2000).

1 mg	$208.00

P2303



Phallacidin

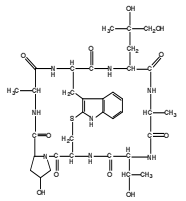
$C_{37}H_{50}N_8O_{13}S$ Mol. Wt.: 846.91 [26645-35-2]

A actin filament stabilizer isolated from *Amanita phalloides*. It differs from Phalloidin in that it contains a carboxy group for coupling reactions.

Papakonstanti EA, Stournaras C. Mol Biol Cell. 15:1273-86 (2004).
Sampson K, Pickett-Heaps JD. Protoplasma. 217:166-76 (2001).

1 mg	$207.20
5 mg	$834.40

P2304



Phalloidin

$C_{35}H_{48}N_8O_{11}S$ Mol. Wt.: 788.87 [17466-45-4]

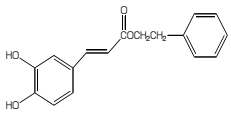
An actin filament stabilizer isolated from *Amanita phalloides*.

Dubin M, Maurice M, Feldmann G et al. Gastroenterology. 75:450-5 (1978).
Thamilselvan V, Basson MD. Gastroenterology. 126:8-18 (2004).

1 mg	$145.60
5 mg	$616.00

P2400

-20 °C



Phenethyl caffeate (See page 7 for more information)

Caffeic acid phenethyl ester, CAPE

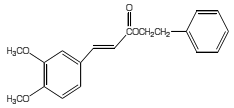
$C_{17}H_{16}O_4$ Mol. Wt.: 283.31 [104594-70-9]

Active ingredient of honeybee hive products, propolis. Cytotoxic agent against cancer cell lines. Inhibitor of ornithine decarboxylase and protein tyrosine kinase.

Grunberger D, Banerjee R, Eisinger K et al. Experientia 44:230-232 (1988).
Rao CV, Desai D, Kaul B, Amin S et al. Chem. Biol. Interactions 84:277-290 (1992).

50 mg	$45.90
100 mg	$72.60
500 mg	$238.30

P2410



Phenethyl dimethyl caffeate

$C_{19}H_{20}O_4$ Mol. Wt.: 312.37 m.p. 97-98ºC [14551-14-0]

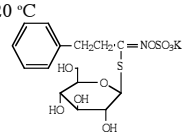
Inhibitor of ornithine decarboxylase and protein tyrosine kinase.

Rao CV, Desai D, Kaul B et al. Chem. Biol. Interactions 84:277-290 (1992).

50 mg	**$42.00**
100 mg	**$61.10**
500 mg	**$200.30**

P2502

-20 ºC



Phenethyl glucosinolate potassium salt, 97%

$C_{15}H_{19}NO_9S_2K$ Mol.Wt.: 460.55 [499-30-9]

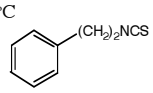
One of the numerous glucosinolates widely distributed in cruciferus vegetables.

Synthetic potassium salt of gluconasturtiin.

5 mg	**$117.40**
10 mg	**$214.20**
100 mg	**$1,391.30**

P2508

+4 ºC



Phenethyl isothiocyanate, 98%

2-Isothiocyanatoethylbenzene

C_9H_9NS, F.W.163.24, b.p.113 ºC/1mm,, [2257-09-2] d. 1.094

Inhibitor of NNK-induced lung tumorigenesis.

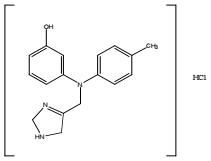
Jiao D, Smith TJ, Yang CS et al. Carcinogenesis. 11:2143-2147 (1997).

5 g	**$46.10**
10 g	**$84.60**
50 g	**$376.70**

Phenethyl isothiocyanate N-acetyl-L-cysteine conjugate

See N-acetyl-S-(N'-phenethylthiocarbamoyl)-L-cysteine

P2817



Phentolamine Hydrochloride

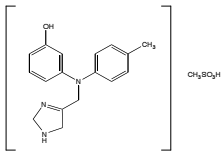
$C_{17}H_{19}N_3O$ .HCl Mol. Wt.: 317.81 [73-05-2]

α-Adrenergic blocker.

Meier R et al. Proc Soc Exp Biol Med 71:70 (1949).

50 mg	**$30.80**
100 mg	**$46.10**
500 mg	**$184.50**

P2818



Phentolamine mesylate

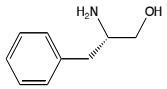
$C_{17}H_{19}N_3O\ CH_3SO_3H$ Mol. Wt.: 377.46 [65-28-1]

α-Adrenergic blocker. Used to treat male erectile dysfunction.

McMahon CG. Int J Impot Res. 8:233-6 (1996).

50 mg	**$30.80**
100 mg	**$46.10**
500 mg	**$184.50**

P2919



L-Phenylalaninol

(S)-(-)-2-Amino-3-phenyl-1-propanol

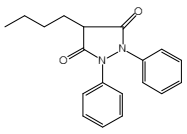
$C_9H_{13}NO$ Mol. Wt.: 151.21 [3182-95-4]

It inhibits ulcer formaiton by the reduction of gastric acid secretion.

Hashizume H, Miyamae T, Morikawa T, Hagiwara M. Chem Pharm Bull (Tokyo). 40:3113-4 (1992).

1 g	**$28.40**
5 g	**$120.80**
25 g	**$431.20**

P2810



Phenylbutazone

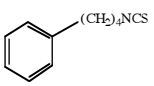
$C_{19}H_{20}N_2O_2$ Mol. Wt.: 308.37 [50-33-9]

A non steroidal anti-inflammatory drug (NSAID). Several lines of evidence suggest that NSAID may be effective in preventing colorectal cancer. Phenylbutazone lowers the incidence of pancreatic carcinoma in experimental animals treated with N-nitrosobis (2-oxopropyl) amine.

Hixson LJ, Alberts DS, Krutzsch et al. Cancer Epidemiol Biomarkers Prev. 3:433-8 (1994).
Takahashi M, Furukawa F, Toyoda K et al. Carcinogenesis. 11:393-5 (1990).

25 g	**$23.20**
100 g	**$61.50**

P2510



4-Phenylbutyl isothiocyanate (See page 18 for more information)

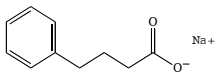
$C_{11}H_{13}NS$ Mol. Wt.: 191.308 [61499-10-3] d. 1.006

A synthetic phenyl alkyl isothiocyanate that has been found to induce Phase II detoxifying enzymes. It also inhibits chemically induced carcinogenesis.

Morse M A, Eklind K I, Amin SG et al. Carcinogenesis. 10:1757-1759 (1989).
Wilkinson JT, Morse .A et al. Carcinogenesis 16:1011-1015 (1995).

1 g	**$42.00**
5 g	**$160.90**
10 g	**$299.80**

P2815



Phenylbutyrate

4-Phenylbutyric acid sodium salt

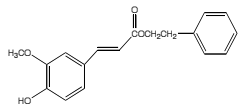
$C_{10}H_{11}O_2$ Mol. Wt.: 186.18 [1716-12-7]

An aromatic fatty acid that induces cytostasis, differentiation and apoptosis in primary myeloid leukemic cells, human prostate cancer cell lines and human colon carcinoma cells. It also has chemopreventive effects against chemically induced colon carcinogenesis in experimental animals.

Digiuseppe JA, Weng LJ, Yu KH et al. Leukemia. 13:1243-53 (1999).
Ng AY, BAles W, Veltri RW. Anls Quant Cyto Histol. 22:45-54 (2000).
Huang Y, Horvath CM, Waxman S. Cancer Res. 60:3200-6 (2000).
Wargovich MJ, Jimenez A, Mc kee K et al. Carcinogenesis. 21:1149-55 (2000).

1 g	$30.80
5 g	$100.10
25 g	$399.60

P1917



Phenylethyl 3-methylcaffeate (See page 7 for more information)

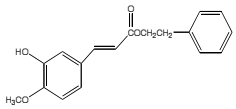
$C_{18}H_{18}O_4$ Mol.Wt.: 298.33 [71835-85-3]

It has chemopreventive property against chemically induced colon carcinogenesis, and enhances apoptosis in azoxymethane induced colon tumors.

Rao CV, Desai O, Rivenson A et al. Cancer Res. 55: 2310-5 1 (1995).
Samaha HS, Kelloff G J, Steele V et al. Cancer Res. 57:1301-5 (1997).

50 mg	$44.20
100 mg	$69.50
500 mg	$227.10

P2918

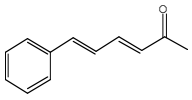


Phenylethyl 4-methylcaffeate

$C_{18}H_{18}O_4$ Mol.Wt.: 298.33

25 mg	$45.60
50 mg	$72.00
250 mg	$239.80

P2819



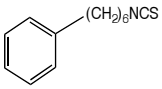
6-Phenyl-hexa-3,5-dien-2-one

$C_{12}H_{12}O$ Mol. Wt.: 172.22 [4173-44-8]

A minor component of kava kava extract.

5 mg	$143.40
10 mg	$245.90

P2922



Phenylhexyl isothiocyanate

$C_{13}H_{17}NS$ Mol. Wt.: 219.35 [133920-06-6]

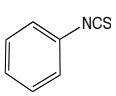
Chemopreventive agent in mouse lung. Found to enhance colon and esophageal tumorigenesis in the rat.

Morse MA, Eklind KI, Hecht SS. et al. Cancer Res. 51:1846-50 (1991).
Rao CV, Rivenson A, Simi B et al. Cancer Res. 55:4311-8 (1995).
Stoner GD, Siglin JC, Morse MA et al. Carcinogenesis. 16:2473-6 (1995).

100 mg	$73.20
250 mg	$146.40
500 mg	$219.60

P2513

+4 °C



Phenyl isothiocyanate

Phenyl mustard oil, PITC

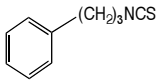
C_7H_5NS Mol.Wt.:135.19 b.p. 221°C [103-72-0] d. 1.130

Inhibitor of NNK-induced lung tumorigenesis.

Jiao D, Smith TJ, Yang CS et al. Carcinogenesis. 11:2143-2147 (1997).

50 g	$19.80
100 g	$32.30

P2515



3-Phenylpropyl isothiocyanate

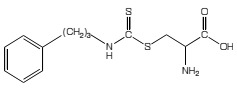
$C_{10}H_{11}NS$ Mol.Wt.: 177.27 [2627-27-2] d. 1.070

Synthetic phenyl isothiocyanate that has been found to induce Phase II detoxifying enzymes. It also inhibits chemically induced carcinogenesis.

Morse M A, Eklind K I, Amin SG et al. Carcinogenesis. 10:1757-1759 (1989).
Benson AM, Barretto PB. Cancer Res. 45:4219-4223 (1985).
Sparnins VL, Chuan J, Wattenberg LW. Cancer Res. 42:1205-1207 (1982).
Morse MA, Amin SG, Hecht SS, Chung FL. Cancer Res 49:2894-2897 (1989).
Wilkinson JT, Mors MA, Kresty LA, Stoner GD. Carcinogenesis. 16:1011-1015 (1995).

5 g	$124.40
10 g	$224.90

P2816



S-(N-3-Phenylpropylthiocarbamoyl)-L-cysteine

$C_{13}H_{18}N_2O_2S_2$ Mol.Wt.: 298.42 m.p. 202-208°C [137915-13-0]

(See page 10 for more information)

Cysteine conjugate of phenylpropyl isothiocyanate.

100 mg	$37.50
500 mg	$111.40
1 g	$197.10

P2832 — **PHI, porcine**

His-Ala-Asp-Gly-Val-Phe-Thr-Ser-Asp-Phe-Ser-Arg-Leu-Leu-Gly-Gln-Leu-Ser-Ala-Lys-Lys-Tyr-Leu-Glu-Ser-Leu-Ile-NH_2

$C_{136}H_{216}N_{36}O_{40}$ Mol. Wt.: 2995.4

Peptide hisitidine isoleucine has been shown to induce an anorexigenic response in rats.

It also plays a critical role in the generation of circadian oscillations.

1 mg	$250.90

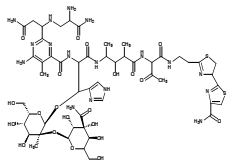
P2833 — **PHI, rat**

H-His-Ala-Asp-Gly-Val-Phe-Thr-Ser-Asp-Tyr-Ser-Arg-Leu-Leu-Gly-Gln-Ile-Ser-Ala-Lys-Lys-Tyr-Leu-Glu-Ser-Leu-Ile-NH_2

$C_{136}H_{216}N_{36}O_{41}$ Mol.Wt.: 3011.45

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

P2845 — **Phleomycin**



$C_{51}H_{75}N_{17}O_{21}S_2$ Mol Wt.: 1326.38 [11006-33-0]

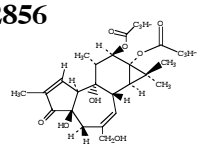
A glycopeptide antibiotic from the bleomycin family. It catalyzes double-strand breaks in DNA.

He CH, Masson JY, Ramotar D. Can J Microbiol. 42:1263-6 (1996).

Nakada D, Shimomura T, Matsumoto K et al. Nucleic Acids Res. 31:1715-24 (2003).

5 mg	$44.80
25 mg	$156.80
100 mg	$470.40

P2856 — **Phorbol-12,13-dibutyrate**



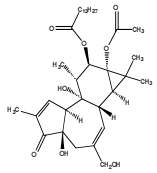
$C_{30}H_{46}O_8$ Mol. Wt.: 504.61 [37558-16-0]

PKC activator.

Less potent than TPA.

1 mg	$67.20
5 mg	$158.50

P2857 — **Phorbol-12-myristate-13-acetate**



12-Tetradecanoyl phorbol 13-acetate, TPA

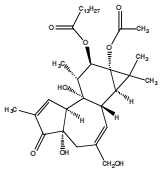
$C_{36}H_{56}O_8$ Mol. Wt.: 616.83 [16561-29-8]

A very potent promoter of carcinogenesis. Binds to and activates protein kinase C.

Blumberg PM. Crit. Rev. Toxicol. 8:153-197 (1980).

1 mg	$41.70
5 mg	$124.70

P2858 — **4-α-Phorbol-12-myristate-13-acetate**



$C_{36}H_{56}O_8$ Mol.Wt.: 616.83 [63597-44-4]

An inactive negative control for TPA.

Van Duuren BL, Tseng SS, Segal A et al. Cancer Res. 39:2644-2646 (1979).

1 mg	$83.50
5 mg	$332.60

P2859 — **Phosphate Acceptor Peptide**

H-Arg-Arg-Lys-Ala-Ser-Gly-Pro-Pro-Val-OH

$C_{41}H_{74}N_{16}O_{11}$ Mol.Wt.: 967.15

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

P2992 — **Phyllolitorin**

pGlu-Leu-Trp-Ala-Val-Gly-Ser-Phe-Met-NH_2

$C_{49}H_{69}N_{11}O_{11}S_1$ Mol.Wt.: 1020.24

0.5 mg	$38.40
1 mg	$65.60
2.5 mg	$115.20

P2993 — **Phyllomedusin**

pGlu-Asn-Pro-Asn-Arg-Phe-Ile-Gly-Leu-Met-NH_2

$C_{52}H_{82}N_{16}O_{13}S_1$ Mol.Wt.: 1171.41

1 mg	$70.40
2 mg	$120.00
5 mg	$211.20

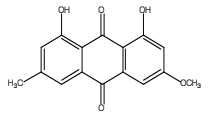
P2994 — **Physalaemin**

pGlu-Ala-Asp-Pro-Asn-Lys-Phe-Tyr-Gly-Leu-Met-NH_2

$C_{58}H_{84}N_{14}O_{16}S_1$ Mol.Wt.: 1265.48

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

P2995



Physcion

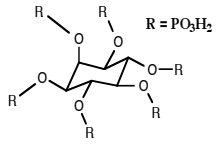
$C_{16}H_{12}O_5$ Mol. Wt.: 284.26 [521-61-9]

A anthraquinone isolated from *Rheum emodi* with antifungal and antitumor activity.

10 mg	$67.20
25 mg	$109.80
100 mg	$336.00

Agarwal SK, Singh SS, Verma S et al. J Ethnopharmacol. 72:43-6 (2000).
Kuo YC, Sun CM, Ou JC et al. Life Sci. 61:2335-44 (1997).

P2997



Phytic Acid, 40-50 wt% aqueous solution

Inositol hexaphosphate

$C_6H_{18}O_{24}P_6$ Mol. Wt.: 660.04 [83-86-3]

A constituent of wheat bran shown to have antineoplastic action in colon carcinogenesis. Inhibits cell proliferation and increases cell differentiation.

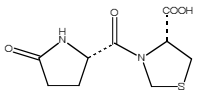
100 ml	$50.40
500 ml	$180.70

Sakamoto K, Venkatraman G, Shamsuddin AM. Carcinogenesis 14:1815-1819 (1993).

Piceid

See polydatin

P3313



Pidotimod

$C_9H_{12}N_2O_4S$ Mol. Wt.: 244.27 [121808-62-6]

A biological response modifier. It inhibits apoptosis induced by several agents, including genistein.

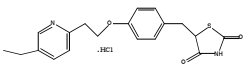
1 g	$67.20
5 g	$246.40
10 g	$431.20

Migliorati G, Nicoletti I, Riccardi C. Arzneimittelforschung. 44:1421-4 (1994).
Gourgiotis D, Padaopoulos NG, Bossios A et al. J Asthma. 41:285-7 (2004).

Pimaricin

See natamycin

P6954



Pioglitazone Hydrochloride

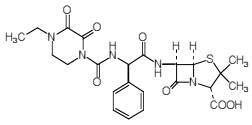
$C_{19}H_{20}N_2O_3S.HCl$ Mol. Wt.: 392.91 [112529-15-4]

Orally active antihyperglycemic agent effective as treatment of non-insulin-dependent diabetes mellitus. It inhibits cholesterol absorption and shows anti-inflammatory and anti-arterioscleortic effects.

100 mg	$74.00
500 mg	$246.40
1 g	$443.60

Ikeda H, Taketomi S, Sugiyama Y et al. Arzneimittel-Forschung 40:156-162 (1990).
Colca JR, Dailey CF, Palazuk BJ et al. Diabetes 40:1669-1674 (1991).
Ishibashi M, Egashira K, Hiasa K et al. Hypertension. 40:687-693 (2002).

P3462



Piperacillin

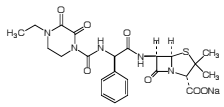
$C_{23}H_{27}N_5O_7S$ Mol. Wt.: 517.56 [61477-96-1]

A semisynthetic penicillin with broad spectrum of antimicrobial activity.

1 g	$37.00
5 g	$154.00
10 g	$271.10

Jones RN, Thornsberry C, Barry AL et al. J Antibiot (Tokyo). 30:1107-14 (1977).

P3463

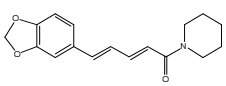


Piperacillin sodium

$C_{23}H_{26}N_5NaO_7S$ Mol. Wt.: 539.54 [59703-84-3]

1 g	$43.20
5 g	$172.50
10 g	$308.00

P3465



Piperine

$C_{17}H_{19}NO_3$ Mol. Wt.: 285.34 [94-62-2]

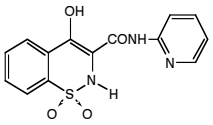
An alkaloid from black pepper. It shows chemopreventive, cytotoxic, anti-inflammatory, and antioxidant effects. It is suggested that piperine exerts its chemopreventive effect by modulating lipid peroxidation and augmenting antioxidant defense system.

1 g	$28.00
5 g	$117.60

Sunila ES, Kuttan G. J Ethnopharmacol. 90:339-46 (2004).
Selvendiran K, Senthilnathan P, Magesh V et al. Phytomedicine. 11:85-9 (2004).
Mittal R, Gupta RL. Methods Find Exp Clin Pharmacol. 22:271-4 (2000).

P3269 — **Piroxicam** (See page 7 for more information)

RT



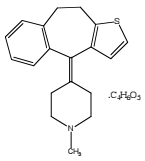
$C_{14}H_{11}N_3O_4S$, F.W. 317.32, m.p. 198-200°C, [36322-90-4]

A non-steroidal anti-inflammatory agent proven to be an effective chemopreventive in colon and urinary bladder carcinogenesis models.

Reddy BS. Prev.Med. 25:48-50 (1996).
Okajima E, Ozono S, Endo T et al. Jpn. J. Cancer Res. 88:543-552 (1997).

1 g	$31.50
5 g	$117.90
10 g	$209.70

P3597 — **Pizotyline malate**



Pizotifen malate

$C_{19}H_{21}NS \cdot C4H6O5$ Mol. Wt.: 429.54 [5189-11-7]

A serotonin receptor antagonist used as an antimigraine.

It has shown venoconstrictor activity in vivo.

Muller-Schweinitzer E. J Cardiovasc Pharmacol. 8:805-10 (1986).
Cleland PG, Barnes D, Elrington GM et al. Eur Neurol. 38:31-8 (1997).

1 g	$50.40
5 g	$184.80
10 g	$313.60

P4403 — **Plasminogen Activator Inhibitor 1 (PAI-1)**

H-Ala-Arg-Met-Ala-Pro-Glu-OH

$C_{27}H_{47}N_9O_9S$ Mol.Wt.: 673.79

0.5 mg	$32.00
1 mg	$54.40
2.5 mg	$96.00

P4560 — **PLP (139-151)**

His-Ser-Leu-Gly-Lys-Trp-Leu-Gly-His-Pro-Asp-Lys-Phe

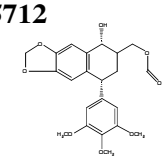
Proteolipid protein

$C_{72}H_{104}N_{20}O_{17}$ Mol Wt: 1521.7

1 mg	$96.00
5 mg	$368.00

P5712 — **Podophyllotoxin**

RT



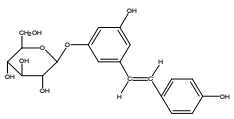
$C_{22}H_{22}O_8$, F.W. 414.41, m.p. 114-118°C [518-28-5]

An antineoplastic agent that inhibits microtubule assembly.

Roach MC et al. J. Biol. Chem. 260:3015 (1985).

50 mg	$24.10
100 mg	$40.10
500 mg	$167.90

P5845 — **Polydatin**



Resveratrol 3-β-mono-D-glucoside, Piceid

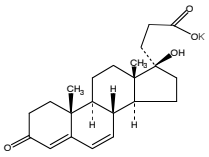
$C_{20}H_{22}O_8$ Mol. Wt.: 390.38 [65914-17-2]

A natural product from Polygonum cuspidatum, found to posses prophylactic and therapeutic effects. Polydatin has been shown to inhibit ICAM-1 expression in endothelial cells stimulated by lipopolysaccharide.

Zhao KS, Jin C, Huang X et al. Clin Hemorheol Microcirc. 29:211-7 (2003).
Shu SY, Wang XY, Ling ZY et al. Chin J Traumatol. 7:239-43 (2004).

250 mg	$50.40
1 g	$112.00

P5878 — **Potassium canrenoate**



Canrenoic acid potassium salt

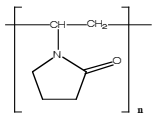
$C_{22}H_{29}KO_4$ Mol. Wt.: 396.56 [2181-04-6]

An aldosterone antagonist, antiarrhythmic and diuretic drug. It has been found to produce genotoxic effects in cultured rat and human cells.

Martelli A, Mattioli F, Carrozzino R et al. Mutagenesis.14:463-72 (1999).
Marchetti G, Vitolo E, Di Francesco GF et al. Arch Int Pharmacodyn Ther. 266:250-63 (1983).

1 g	$24.70
5 g	$61.60
25 g	$277.20

P5885 — **Povidone iodine**



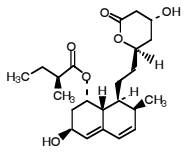
[25655-41-8]

A topical antiseptic.

Flynn J. Br J Community Nurs. 8:S36-42 (2003).

50 g	$30.80
100 g	$49.30

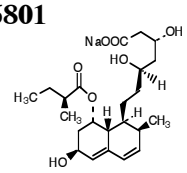
P6800 — **Pravastatin Lactone**



$C_{23}H_{34}O_6$ Mol. Wt.: 406.51

10 mg	$47.50
50 mg	$142.40
100 mg	$250.80

P6801



RT

Pravastatin Sodium (See page 26 for more information)

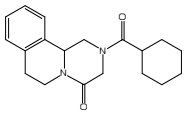
$C_{23}H_{35}NaO_7$ Mol. Wt.: 446.51

Biologically active metabolite of mevastatin, HMG-CoA reductase inhibitor.

Raasch RH. DICP. 25:388-394 (1991).
Egashira K, Hirooka Y, Kai H et al. Circulation. 89:2519-24 (1994).

10 mg	$32.20
50 mg	$131.30
100 mg	$247.80

P7103



Praziquantel

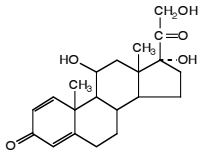
$C_{19}H_{24}N_2O_2$ Mol. Wt.: 312.41 [55268-74-1]

An anthelmintic that is highly effective against all Schistosoma species.

Pearson RD, Guerrant RL. Ann. Internal Med. 99:195-198 (1983).

1 g	$20.40
5 g	$47.50
25 g	$169.50

P6818



Prednisolone

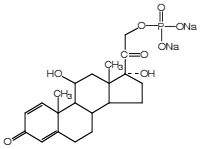
$C_{21}H_{28}O_5$ FW 360.4 [50-24-8]

A glucocorticoid with anti-inflammatory and immuno-suppressive activity in rabbits. It induces apoptosis in colon cancer cell lines and eosinophils. Research results show that predinisolone in combination with TNP-470 may be a very effective drug for angiosarcoma treatment.

Meng RD, El-Deiry WS. Exp Cell Res. 262: 154-169 (2001).
Fan GK, Itoh T, Imanaka Met al. J Allergy Clin Immunol.106: 551-8 (2000).
Ma G, Masuzawa M, Hamada Y et al. J Dermatol Scie. 24:126-33 (2000).

1 g	$19.40
5 g	$73.70
10 g	$141.40

P7012



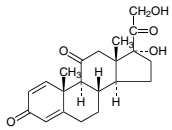
Prednisolone sodium phosphate

$C_{21}H_{27}Na_2O_8P$ Mol. Wt.: 484.39 [125-02-0]

Water soluble form of prednisolone.

5 g	$114.20
10 g	$190.20
25 g	$366.00

P7020



Prednisone

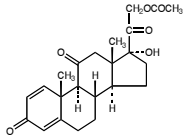
$C_{21}H_{26}O_5$ Mol. Wt.: 358.43 [53-03-2]

An anti-inflammatory adrenocortical steroid used to treat Crohn's disease. It reduces intestinal permeability, mucosal TNF-α production and levels of NF-kB expression.

Wild GE, Waschke KA, Bitton A, Thomson AB. Aliment Pharmacol Ther. 18:309-17 (2003).

1 g	$18.50
5 g	$67.80
25 g	$246.40

P7021

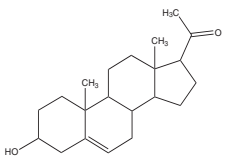


Prednisone Acetate

$C_{23}H_{28}O_6$ Mol. Wt.: 400.46 [125-10-0]

1 g	$22.20
5 g	$74.00
25 g	$258.80

P7023



Pregnenolone

5-Pregnen-3β-ol-20-one

$C_{21}H_{32}O_2$ Mol. Wt.: 316.48 [145-13-1]

An endogenous neurosteroid inhibits GABA-gated chloride currents by enhancing receptor desensitization. It modulates NMDA receptors resulting in delayed apoptotic retinal cell death. It stimulates prostate LNCaP cell proliferation through binding to the mutated androgen receptor.

Shen W, Mennerick S, Covey DF, Zorumski CF. J Neurosci. 20:3571-9 (2000).
Cascio C, Guarneri R, Russo D et al. J Neurochem. 74:2380-91(2000).
Grigoryev DN, Long BJ, Njar VC, Brodie AH. J Steroid Biochem Mol Biol. 75:1-10 (2000).

5 g	$24.70
25 g	$67.80
100 g	$258.80

P7022

Gly-Met-Ala-Ser-Lys-Ala-Gly-Ala-Ile-Ala-Gly-Lys-Ile-Ala-Lys-Val-Ala-Leu-Lys-Ala-Leu-NH_2

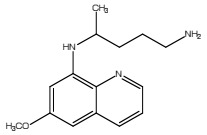
Pressinoic Acid

$C_{33}H_{42}N_8O_{10}S_2$ Mol.Wt.: 774.08

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

P7033

Primaquine phosphate



$C_{15}H_{21}N_3O.2H_3PO_4$ Mol. Wt.: 455.29 [63-45-6]

An antimalarial drug with genotoxicity (Ames test) and cardiotoxicity (inhibitor of cardiac Na+ current).

Chatterjee T, Muhkopadhyay A, Khan KA, Giri AK. Mutagenesis. 13:619-24 (1998).
Orta-Salazar G, Bouchard RA, Morales-Salgado F et al. Br J Pharmacol. 135 :751-63 (2002).

5 g	$30.80
10 g	$49.30
50 g	$166.40

P7034

Prion Peptide (106-126), human

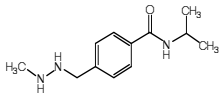
H-Lys-Thr-Asn-Met-Lys-His-Met-Ala-Gly-Ala-Ala-Ala-Ala-Gly-Ala-Val-Val-Gly-Gly-Leu-Gly-OH

$C_{80}H_{138}N_{26}O_{24}S_2$ Mol.Wt.: 1912.28 [148439-49-0]

1 mg	$76.80
2 mg	$134.40
5 mg	$195.20

P6858

Procarbazine Hydrochloride



$C_{12}H_{19}N_3O.HCl$ Mol. Wt.: 257.77 [366-70-1]

Antineoplastic agent.

Newell D, Gescher A, Harland S et al. Cancer Chemother Pharmacol. 19:91-102 (1987).

100 mg	$38.50
500 mg	$100.10
1 g	$169.10

P6859

Proctolin

H-Arg-Tyr-Leu-Pro-Thr-OH

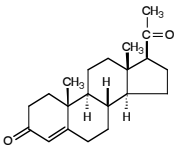
$C_{30}H_{48}N_8O_8$ Mol.Wt.: 648.77

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

P6854

Progesterone

RT



$C_{21}H_{30}O_2$ Mol.Wt.: 314.46 [57-83-0]

A steroid hormone secreted by the corpus luteum. Maintains pregnancy, prevents ovulation.

Sivaraman L, Medina D. J Mammary Gland Biol Neoplasia. 7:77-92 (2002).

5 g	$16.20
25 g	$67.40
100 g	$263.80

P6850

Prolactin-Releasing Peptide (1-31), human

Ser-Arg-Thr-His-Arg-His-Ser-Met-Glu-Ile-Arg-Thr-Pro-Asp-Ile-Asn-Pro-Ala-Trp-Tyr-Ala-Ser-Arg-Gly-Ile-Arg-Pro-Val-Gly-Arg-Phe-NH_2

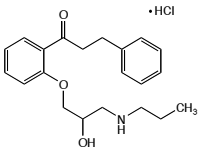
PrRP-31, human

$C_{160}H_{252}N_{56}O_{42}S$ Mol Wt: 3664.2

1 mg	$288.00

P6852

Propafenone Hydrochloride



$C_{21}H_{27}NO_3$ Mol. Wt.: 377.91 [34183-22-7]

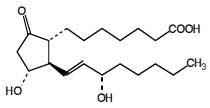
Antiarrhythmic agent that has little or no beta-blocking property. It appears to to inhibit Ca++ inward current.

Muller-Peltzer H, Greger G, Neugebauer G, Hollmann M. Eur J Clin Pharmacol. 25:831-3 (1983).
Harder DR, Belardinelli L. Experientia. 36:1082-3 (1980).

1 g	$22.00
5 g	$66.00

P6956

Prostaglandin E_1



PGE1

$C_{20}H_{34}O_5$ Mol. Wt.: 354.48 [745-65-3]

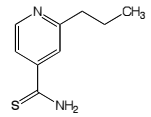
One of the primary prostaglandins, used as a vasodilator.

Weir EK, Reeves JT, Grover RF. Prostaglandins. 10:623-31 (1975).

1 mg	$81.40
5 mg	$246.40
10 mg	$363.50

P6959

Prothionamide



$C_9H_{12}N_2S$ Mol. Wt.: 180.27 [14222-60-7]

An antibacterial used against Mycobacterium tuberculosis.

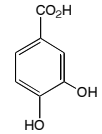
Urbanczik R. Chemotherapy. 26:276-81 (1980).

1 g	$43.20
5 g	$61.60
25 g	$221.80

P6857

Protocatechuic Acid

RT



3,4-Dihydroxybenzoic acid

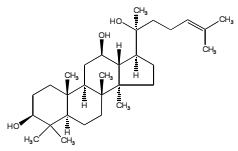
$C\text{-}H_5O_4$ Mol.Wt.: 154.12 m.p. 200-202°C [99-50-3]

A phenolic acid antioxidant present in fruits, vegetables and nuts. Found to be an efficacious chemopreventive agent in several carcinogenesis models.

Tanaka T, Kojima T, Kawamori T, Mori H. Cancer. 75:1433-1439 (1995).

25 g	$39.60
50 g	$72.00
100 g	$115.10

P6957



Protopanaxadiol

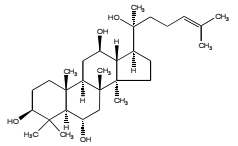
$C_{30}H_{52}O_4$ Mol. Wt.: 476.73 [7755-01-3]

Same type saponins enhance axonal and dendritic formation activity. It was shown to possess characteristic effects on the proliferation of human leukemia cells.

Popovich DG, Kitts DD. Arch Biochem Biophys. 406:1-8 (2002).
Tohda C, Matsumoto N, Zoo K, Meselhy MR, Komatsu K. Jpn J Pharmacol. 90:254-62 (2002).

5 mg	$108.50
10 mg	$189.80
25 mg	$372.80

P6958

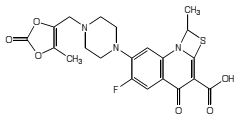


Protopanaxatriol

$C_{30}H_{52}O_4$ Mol. Wt.: 476.73 [34080-08-5]

5 mg	$108.50
10 mg	$189.80
25 mg	$372.80

P7082



Prulifloxacin (See page 13 for more information)

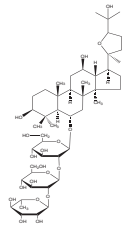
$C_{21}H_{20}FN_3O_6S$ Mol. Wt.: 461.46 [123447-62-1]

A quinoline carboxilic acid antibioterial prodrug with activities against a variety of Gram-positive and -negative bacteria. Shown to be an effective treatment for urinary tract and respiratory tract infections.

Matera MG. Pulm Pharmacol Ther. 19 (Suppl 1): 20-9 (2006).
Prats G, Rossi V, Salvatori E, Mirelis B. Expert Rev Anti Infect Ther. 4:27-41 (2006).

25 mg	$35.00
100 mg	$90.00
500 mg	$300.00

P7318



Pseudo ginsenoside F11

$C_{48}H_{82}O_{19}$ Mol. Wt.: 963.15

A componet of *Panax quinquefolium L.*

Antagonized the memory dysfunction induced by scopolamine.

Li Z, Guo YY, Wu CF, Li X, Wang JH. J Pharm Pharmacol. 51:435-40 (1999).

5 mg	$115.30
10 mg	$196.60
25 mg	$393.10

P7628

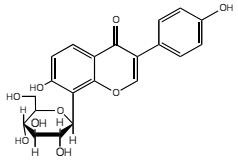
H-Ala-Val-Ser-Glu-His-Gln-Leu-Leu-His-Asp-Lys-Gly-Lys-Ser-Ile-Gln-Asp-Leu-Arg-Arg-Arg-Phe-Phe-Leu-His-His-Leu-Ile-Ala-Glu-Ile-His-Thr-Ala-OH

pTH-Related Protein (1-34) (human, rat)

$C_{180}H_{287}N_{57}O_{48}$ Mol.Wt.:4017.65 [112540-82-6]

0.5 mg	$144.00
1 mg	$244.80
2.5 mg	$432.00

P8117



Puerarin, 99%

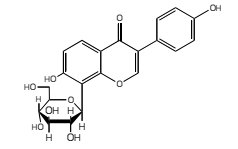
$C_{21}H_{20}O_9$ Mol. Wt.: 416.38 [3681-99-0]

A flavonoid derivative from the traditional oriental medicine, Ge-gen. Purarin has potential antioxidant activity and impairs CYP catalyzed drug metabolism. It's metabolite calycosin has cytotoxic activity.

Guerra MC, Speroni E, Broccoli M et al. Life Sci. 67: 2997-3006 (2000).
Kim DH, Yu Ku, Bae EA, Han M. J. Biol Pharm Bull. 21: 628-30 (1998).

5 mg	$82.90
10 mg	$138.40
25 mg	$307.50

P8118

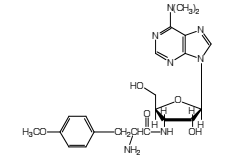


Puerarin, 96%

$C_{21}H_{20}O_9$ Mol. Wt.: 416.38 [3681-99-0]

100 mg	$47.50
500 mg	$101.70
1 g	$135.60

P8168



Puromycin

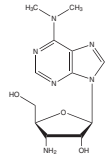
$C_{22}H_{29}N_7O_5$ Mol. Wt.: 471.51 [53-79-2]

Antibiotic substance produced by the soil actinomycete Streptomyces alboniger. Inhibitor of chemical carcinogenesis

Bonano E, Ruzittu M, Carla EC et al. Eur J Histochem. 44:237-46 (2000).
Huang P, Sandoval A, Van Den Neste E, Keating M J, Plunkett W. Leukemia. 14:1405-13 (2000).

10 mg	$21.70
25 mg	$46.10
100 mg	$156.80

P8167 — Puromycin aminonucleoside



Stylomycin aminonucleoside

$C_{22}H_{28}N_6O_5$ Mol. Wt.: 294.31 [58-60-6]

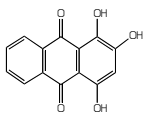
Puromycin derivative that has antibiotic and antineoplastic properties, can cause nephrosis.

Marshall CB, Pippin JW, Krofft RD, Shankland SJ Kidney Int. 70:1962-73 (2006).
Egashira Y, Nagaki S, Sanada H Int. J. Vitam. Nutr. Res. 76:28-33 (2006).

25 mg	$140.00
100 mg	$432.00

P8169 — Purpurin

RT



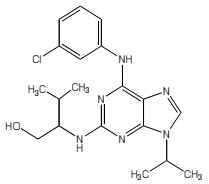
$C_{14}H_8O_5$, F.W. 256.21, m.p. 253-256°C, [81-54-9]

A xanthine oxidase inhibitor, which inhibits azoxymethane-induced aberrant crypt foci in the rat.

Wargovich MJ, Chen CD, Jimenez A et al. Cancer Epidemiol. Biomarkers Prev 5:355-360 (1996).
Sheu SY, Chiang HC. Anticancer Res. 17:3293-3297 (1997).

5 g	$24.40
25 g	$110.40

P8270 — Purvalanol A



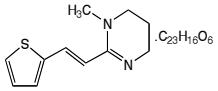
$C_{19}H_{25}ClN_6O$ Mol. Wt.: 388.89 [212844-53-6]

Arrests cell cycle progression and induces apoptosis by inhibition of cyclin-dependent kinases. Has shown antiviral and anticancer activity in several studies.

Wang L, Deng L, Wu K et al. Mol Cell Biochem. 237:137-153 (2002).
Villerbu N, Gaben AM, Redeuilh H et al. Int J Cancer. 97:761-769 (2002).
Kudoh A, Daikoku T, Sugaya Y. J Virol. 78:105-115 (2004).
Gray NS, Wodicka L, Thunnissen et al. Science. 281:533-538 (1998).

1 mg	$82.40
5 mg	$321.10

P9668 — Pyrantel Pamoate



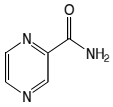
$C_{11}H_{14}N_2S.C_{23}H_{16}O_6$ Mol. Wt.: 594.69 [22204-24-6]

An anthelmintic.

Desowitz RS, Bell T, Williams J, Cardines R, Tamarua M. Am J Trop Med Hyg. 19:775-8 (1970).

5 g	$17.60
10 g	$29.40
50 g	$95.10

P9671 — Pyrazinamide



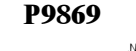
$C_5H_5N_3O$ Mol. Wt.: 123.11 [98-96-4]

An antibacterial used in tuberculosis therapy often in combination with rifampicin.

Zhang Y, Mitchison D. Int J Tuberc Lung Dis. 7:6-21 (2003).

10 g	$24.70
25 g	$39.50
100 g	$135.60

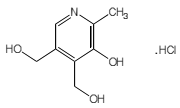
P6977 — Pyr-Gly-Arg-pNA



$C_{19}H_{26}N_8O_6$ Mol. Wt.: 462.5

1 mg	$48.00
10 mg	$160.00

P9869 — Pyridoxine Hydrochloride

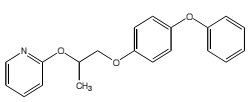


$C_8H_{12}ClNO_3$ Mol. Wt.: 205.64 [58-56-0]

A 4-methanol derivative of Vitamin B6.

25 g	$20.00
100 g	$60.00

P9767 — Pyriproxyfen



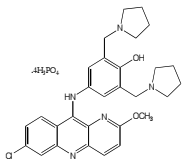
$C_{20}H_{19}NO_3$ Mol. Wt.: 321.37 [95737-68-1]

A larvicidal agent that mimics juvenile hormone. Shown to prevent maturation of many species of insect.

Abo-Elghar GE, El-Shiekh AE, El-Sayed FM el al. Pest Manag Sci. 60:95-102 (2004).
Estrada JG, Mulla MS. J Am Mosquito Control Assoc. 2:314-320 (1986).

5 g	$39.20
25 g	$112.00
100 g	$336.00

P9768 — Pyronaridine Tetraphosphate



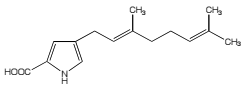
$C_{29}H_{32}ClN_5O_2.4H_3PO_4$ Mol. Wt.: 900.1 [76748-86-2]

A widely used antimalarial agent that has been found to significantly enhance the antitumor activity of doxorubicin against multidrug-resistant cancers K562/A02 and MCF-7/ADR.

Qi J, Wang S, Liu G et al. Biochem Bioph Res Comm. 319: 1124-1131 (2004).
Fu S, Bjorkman A, Wahlin B. Brit J Clin Pharmacol. 22: 93-96 (1986).

100 mg	$28.00
250 mg	$50.40
1 g	$140.00

P9770 **Pyrrolostatin** **100 µg $74.10**



$C_{15}H_{21}NO_2$ Mol. Wt.: 247.33 [144314-68-1] **1 mg $181.20**

Inhibits lipid peroxidation by scavenging free radicals.

Kato S, Shindo K, Kawai H et al. J Antibiotics. 46:892-899 (1993).

Q4370 **Q-K-R-P-S-Q-R-S-K-Y-L** **1 mg $38.40**

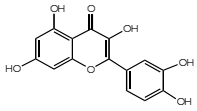
H-Gln-Lys-Arg-Pro-Ser-Gln-Arg-Ser-Lys-Tyr-Leu-OH

$C_{60}H_{103}N_{21}O_{17}$ Mol.Wt.: 1390.62 **2 mg $64.00**

5 mg $115.20

Q8016 **Quercetin Dihydrate** (See page 13 for more information) **25 g $29.70**

RT

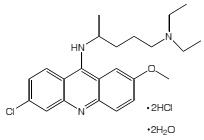


$C_{15}H_{10}O_7 \cdot 2H_2O$ Mol. Wt.: 338.26 [6151-25-3] **100 g $95.10**

A common flavonol, which inhibits lipoxygenase and ornithine decarboxylase induction.

Nakadate T, Aizu E, Yamamoto S, Kato R. Prostaglandins. 30:357-368 (1985).

Q8133 **Quinacrine Dihydrochloride Dihydrate** **10 g $28.60**

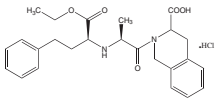


$C_{23}H_{30}ClN_3O \cdot 2HCl \cdot 2H_2O$ Mol. Wt.: 508.92 [6151-30-0] **25 g $55.90**

A phospholipase A2 inhibitor. Showed synergistic inhibition of of prostate cancer cells when used in combination with paclitaxel or lovastatin.

de Souza PL, Castillo M, Myers CE. Br J Cancer. 75:1593-600 (1997).

Q8134 **Quinapril Hydrochloride** **100 mg $34.00**



$C_{25}H_{30}N_2O_5 \cdot HCl$ Mol. Wt.: 474.99 [82586-55-8] **500 mg $101.70**

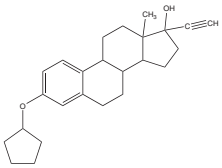
A firmly established and well tolerated angiotensin-converting enzyme inhibitor. **1 g $162.70**

It attenuates the myocardial infarction induced rise in cardiac cytokine expression.

Clinical trials show that quinapril prevents restenosis after coronary stenting in patients with angiotensin-coverting enzyme D allele.

Warnica JW, Gilst WV, Baillot R, Johnstone D, Block P et al. Can J Cardiol. 18:1191-200 (2002).
We GC, Siroi MG, QuR, Liu P, Roulea JL. Cardiovasc Drugs Ther. 16:29-36 (2002).
Culy CR, Jarvis B. Drugs. 62:339-85 (2002).

Q8135 **Quinestrol** **100 mg $36.00**



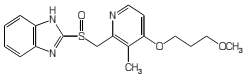
Eston, Estrovis, Plestrovis **250 mg $72.00**

$C_{25}H_{32}O_2$ Mol. Wt.: 364.52 [152-43-2] **1 g $200.00**

It is used in estrogen replacement therapy.

Mann V, Huber C, Kogianni G, Collins F, Noble B Bone. 40:674-684 (2006).

R0105 **Rabeprazole** (See page 25 for more information) **10 mg $95.20**

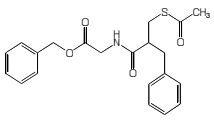


$C_{18}H_{21}N_3O_3S$ Mol. Wt.: 359.44 [117976-89-3] **25 mg $168.00**

A proton pump/ATP-ase inhibitor. **100 mg $537.60**

Furuta T, Shirai N, Sugimoto M et al. Pharmacogenomics. 5:181-202 (2004).

R0109 **Racecadotril** **100 mg $38.00**



$C_{21}H_{23}NO_4S$ Mol. Wt.: 385.48 [81110-73-8] **500 mg $108.50**

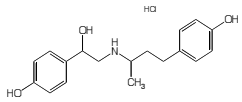
A potent enkephalinase inhibitor exhibits selective antisecretory activity. **1 g $183.10**

Primi MP, Bueno L, Baumer P et al. Ali. Pharm Ther. 13 suppl6:3-7 (1999).

Racemethorphan

See Dextromethorphan Hydrobromide

R0110 **Ractopamine** **1 g $45.00**

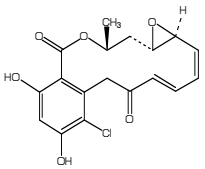


$C_{18}H_{23}NO_3$ Mol.Mol.: 301.38 [90274-24-1] **5 g $180.00**

An adrenergic beta-Agonistsagonist with effects of increasing muscle mass and decreasing body fat in rodents and lifestock.

Page *et. al*. Domest Anim Endocrinol. 26:23-31 (2004).

R0212



Radicicol

Monorden

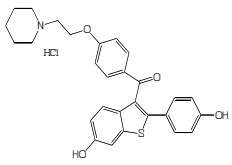
$C_{18}H_{17}ClO_6$ Mol. Wt.: 364.78 [12772-54-5]

Macrolactone antibiotic from several fungi. It has antifungal activity. It is a tyrosine kinase inhibitor, cell differentiation modulator, and has antiangiogenic activity.

Shimada et al. J. Antibiot. 48:824 (1995).
Pillay et al. Cell Growth Differ. 7:1487 (1996).
Oikawa et al. Eur J Pharmacol. 241:221 (1993).

1 mg	$73.20
5 mg	$292.80

R0243



Raloxifene Hydrochloride

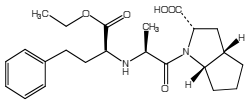
$C_{28}H_{27}NO_4S.HCl$ Mol. Wt.: 510.05 [82640-04-8]

A selective estrogen receptor modulator (SERM. It is effective for the prevention of postmenopausal osteoporosis. It has been found to have caner chemopreventive activity in laboratory animals and antiproliferative effecs in human breast cancer.

Anzano MA, Peer CW, Smith JM et al. J Natl Cancer Inst. 88:123-5 (1996).
Dowsett M, Bundred NJ, Decensi A et al. Cancer Epidemiol Biomarkers Prev. 10:961-6 (2001).
Seeman E. J Bone Miner Metab. 19:65-75 (2001).

250 mg	$66.00
500 mg	$102.50
1 g	$183.10

R0249



Ramipril

$C_{23}H_{32}N_2O_5$ Mol. Wt.: 416.51 [87333-19-5]

An angiotensin-converting enzyme (ACE) inhibitor.

Ramipril is a prodrug of the active metabolite ramiprilat which is formed upon absorption.

Warner GT, Perry CM. Am J Cardiovasc Drugs. 3:113-6 (2003).

500 mg	$61.60
1 g	$96.10
5 g	$369.60

R0250

pGlu-Val-Pro-Gln-Trp-Ala-Val-Gly-His-Phe-Met-NH_2

Ranatensin

$C_{61}H_{85}N_{16}O_{13}S$ Mol Wt: 1281.5 [29451-71-6]

A frog skin peptide that interferes with nociception by action on the D2 receptor.

Zhu HZ, Ji XQ, Wu SX et al. Chung Kuo Yao Li Hseuh Pao. 12(4):291-293 (1991).

1 mg	$38.40
2 mg	$64.00
5 mg	$115.20

R0251

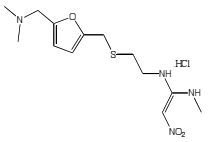
Ser-Asn-Thr-Ala-Leu-Arg-Arg-Tyr-Asn-Gln-Trp-Ala-Thr-Gly-His-Phe-Met-NH_2

Ranatensin R

$C_{90}H_{134}N_{30}O_{24}S$ Mol. Wt.: 2052.3 [70572-93-9]

1 mg	$144.00
2 mg	$244.80
5 mg	$432.00

R0253



Ranitidine hydrochloride

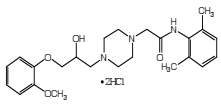
$C_{13}H_{23}ClN_4O_3S$ Mol. Wt.: 350.86 [66357-59-3]

A histamine H2-receptor antagonist used in the treatment of gastrointestinal lesions due to excessive gastric acid secretion.

Grant SM, Langtry HD, Brogden RN. Drugs. 37:801-70 (1989).
Boyd EJ, Wilson JA, Wormsley KG. J Clin Gastroenterol. 5 Suppl 1:133-41 (1983).

1 g	$22.00
5 g	$52.80

R0154



Ranolazine Dihydrochloride

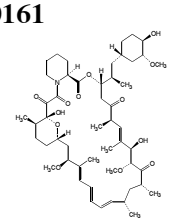
$C_{24}H_{33}N_3O_4.2HCl$ Mol. Wt.: 500.47 [95635-56-6]

A novel metabolic modulator and membrane stabilizer. It is an antiischaemic and antianginal agent. Shifts myocardial energy metabolism away from free fatty acids and toward glucose as the substrate for production of adenosine triphosphate.

Schofielf RS, Hill JA. Expert Opin Investig Drugs. 11:117-23 (2002).
McCormack JG, Barr RL, Wolff AA et al. Circulation. 93:135-42 (1996).
Lodge JP, Lam FT, Perry SL et al. Transplantation. 50:755-9 (1990).

100 mg	$98.60
500 mg	$369.60
1 g	$554.40

R0161



Rapamycin

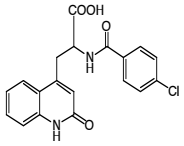
$C_{51}H_{79}NO_{13}$ Mol. Wt.: 914.17 [53123-88-9]

An antifungal antibiotic that has immunosuppressive activity. It blocks cytokine-mediated signal transduction pathways.

Singh K, Sun S. Vezina C. J Antibiot (Tokyo). 32:630-45 (1979).
Sehgal SN. Ther Drug Monit. 17:660-5 (1995).

1 mg	$81.40
10 mg	$213.90
25 mg	$468.40

R1806 **Rebamipide** — 1 g $30.80; 5 g $123.20; 25 g $431.20



$C_{19}H_{15}ClN_2O_4$ Mol. Wt.: 370.79 [90098-04-7]

An antiulcer agent that enhances mucosal resistance. It increases endogenous prostaglandin in gastric mucosa, and also scavenges oxygen-derived free radicals and inhibits their production.

Otsubo K. Morita S. Uchida M et al. Chem Pharm Bull. 39:2906-9 (1991).
Iinuma S. Naito Y. Yoshikawa T et al. Dig Dis Sci. 43:35S-39S (1998).

R2711 **Recombinant HCV-Core antigens** — 100 µg $184.80; 1 mg $431.20
(See page 30 for more information)

R2712 **Recombinant HCV-NS3 antigens** — 100 µg $184.80; 1 mg $431.20
(See page 30 for more information)

R2713 **Recombinant HCV-NS4 antigens** — 100 µg $184.80; 1 mg $431.20
(See page 30 for more information)

R2714 **Recombinant HCV-NS5 antigens** — 100 µg $184.80; 1 mg $431.20
(See page 30 for more information)

R2811 **Recombinant HIV-1 gp-41** — 100 µg $240.30; 1 mg $708.40
(See page 30 for more information)

R2812 **Recombinant HIV-1 gp-120** — 100 µg $240.30; 1 mg $708.40
(See page 30 for more information)

R2815 **Recombinant HIV-1"O"group consensus** — 100 µg $308.00; 1 mg $862.40
(See page 30 for more information)

R2816 **Recombinant HIV-2 gp36** — 100 µg $240.30; 1 mg $708.40
(See page 30 for more information)

R2710 **Recombinant Multi-epitope Chimeric HCV antigen (Core, NS3, NS4, NS5)** — 100 µg $184.80; 1 mg $431.20
(See page 30 for more information)

R2810 **Recombinant Multi-epitope Chimeric HIV antigen-1 (gp41, "O"IDR, gp36)** — 100 µg $363.50; 1 mg $1,078.00
(See page 30 for more information)

R3010 **Recombinant Tp-chimeric protein (TpN15, TpN17, TpN44.5, TpN47)** — 100 µg $221.80; 1 mg $646.80
(See page 30 for more information)

R3011 **Recombinant TpN 15 protein** — 100 µg $221.80; 1 mg $646.80
(See page 30 for more information)

R3012 — **Recombinant TpN 17 protein** — 100 µg $221.80; 1 mg $646.80

(See page 30 for more information)

R3013 — **Recombinant TpN 44.50 protein** — 100 µg $221.80; 1 mg $646.80

(See page 30 for more information)

R3014 — **Recombinant TpN 47 protein** — 100 µg $221.80; 1 mg $646.80

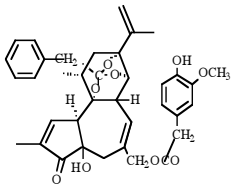
(See page 30 for more information)

R1752 — **Renin Inhibitor Peptide** — 5 mg $76.80; 10 mg $129.60; 25 mg $230.40

H-His-Pro-Phe-His-Leu-D-Leu-Val-Tyr-NH_2

$C_{52}H_{73}N_{13}O_9$ Mol.Wt.: 1024.24

R1774 — **Resiniferatoxin** — 1 mg $76.90; 5 mg $364.40; 10 mg $691.50



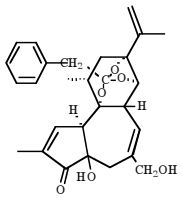
$C_{37}H_{40}O_9$, F.W. 628.73, [57444-62-9]

Natrual product isolated from *Euphorbia poisonii*. RTX is an irritant to skin and mucous membranes, but not a tumor promoter. It is an extremely potent capsaicin analog that stimulates, with subsequent desensitization of specific subpopulations, sensory receptors.

Hergenhahn M, Kusumoto S, Hecker EJ. Cancer Res. Clin.Oncol. 108:98-109 (1984).
Szallasi A, Blumber PM, Life Sci. 47:1399-1408 (1990).
Dray A, Biochem. Pharm. 44:611-615 (1992).

R1775 — **Resiniferonol-9,13,14-orthophenyl acetate** (ROPA) — 1 mg $72.00; 5 mg $288.40; 10 mg $557.60

-20 °C



$C_{28}H_{32}O_6$, F.W. 464.56, [57852-42-3]

ROPA is a hydrolysis product of resiniferatoxin.

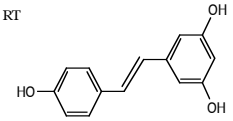
ROPA retains its strong skin irritant property.

It is used to reconstitute either resiniferatoxin or tinyatoxin.

Jang M, Cai L, Udeani GO et al. Science, 275:218-220 (1997).
Carbo N, Costelli P, Baccino FM, Lopez-Soriano FJ. Biochem Ciophys Res Commun. 254:739-43 (1999).
Gautam SC, Xu YX, Dumaguin M et al. Bone Marrow Transplant. 25:639-45 (2000).

R1776 — **Resveratrol** (See page 25 for more information) — 100 mg $57.40; 500 mg $241.20

RT

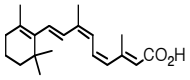


$C_{14}H_{12}O_3$, F.W. 228.24, [501-36-0]

An antioxidant found in grapes, shown to have significant chemopreventive activity.

Jang M, Cai L, Udeani GO et al. Science. 275:218-220 (1997).
Carbo N, Costelli P, Baccino FM, Lopez-Soriano FJ. Biochem Ciophys Res Commun. 254:739-43 (1999).
Gautam SC, Xu YX, Dumaguin M et al. Bone Marrow Transplant. 25:639-45 (2000).

R1777 — **9-cis-Retinoic acid** — 1 mg $40.10; 5 mg $133.10; 25 mg $532.20



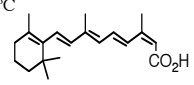
$C_{20}H_{28}O_2$, F.W. 300.44, m.p. 189-191°C, [5300-03-8]

A vitamin A analog that inhibits cell proliferation and induces cell differentiation.

Kelloff GJ, Crowell JA, Hawk ET et al. J. Cell. Biochem Suppl. 26:54-71 (1996).
Zheng Y, Kramer PM, Olson G et al. Carcinogenesis. 18:2119-2125 (1997).

R1779 — **13-cis-Retinoic acid** — 100 mg $47.50; 250 mg $90.30; 500 mg $158.10

-20 °C

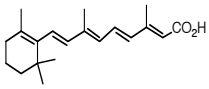


$C_{20}H_{28}O_2$ Mol. Wt.: 300.44 m.p. 174-175°C [4759-48-2]

A vitamin A analog that inhibits cell proliferation and induces cell differentiation.

Kelloff GJ, Crowell JA, Hawk ET et al. J. Cell. Biochem Suppl. 26:54-71 (1996).

R1780 — **trans-Retinoic acid** — 500 mg $39.20; 1 g $72.00; 5 g $319.20

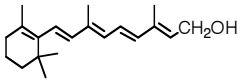


$C_{20}H_{28}O_2$ Mol. Wt.: 300.44 m.p. 180-181°C [302-79-4]

The active metabolite of vitamin A. A potential chemopreventive against skin, colon, and mammary tumors.

M Leid, Kastner P, Chambon P. Trends Biochem. Sci. 17:427-33 (1992).
Athar M, Agarwal R, Wang ZY et al. Carcinogenesis. 12:2325-9 (1991).
Stopera SA, Bird RP. Int. J. Cancer. 53:798-803 (1993).
Toma S, Isnardi L, Raffo P et al. Int. J. Cancer. 70:619-27 (1997).

R1876 — **all-trans-Retinol** — 100 mg $50.00; 250 mg $90.00; 500 mg $130.00



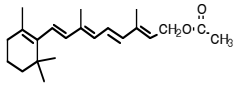
Vitamin A

$C_{20}H_{30}O$ Mol. Wt.: 286.45 m.p. 63-64°C [68-26-8]

Inhibits cell proliferation and induces cell differentiation.

Kelloff GJ, Boone CW, Crowell JA et al. Cancer Epidemiol. Biomarkers Prev. 3:85-98 (1994).

R1878 — **Retinyl acetate** — 5 g $41.60; 25 g $125.80; 100 g $363.20

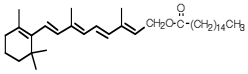


$C_{22}H_{32}O_2$ Mol. Wt.: 328.49 m.p. 57-58°C [127-47-9]

A vitamin A analog that inhibits cell proliferation and induces cell differentiation. A chemopreventive against rat mammary tumors.

Grubbs CJ, Eto I, Juliana MM et al. Anticancer Res. 10:661-666 (1990).

R1879 — **Retinyl palmitate** — 25 g $18.90; 100 g $51.50

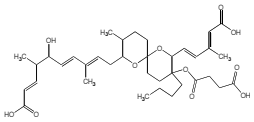


$C_{36}H_{60}O_2$ Mol. Wt.: 524.86 [79-81-2]

A vitamin A analog that inhibits cell proliferation and induces cell differentiation. Effective in lung cancer chemoprevention.

Pastorino U, Soresi E, Clerici, M et al. Acta Oncol. 27:773-782 (1988).

R1985 — **Reveromycin A** — 100 µg $207.20; 5 x 10 µg $840.00



$C_{36}H_{52}O_{11}$ Mol. Wt.: 660.79 [134615-37-5]

An inhibitor of eukaryotic cell growth. Shown to have a strong antitumor effect against human ovarian carcinoma BG-1.

Takahashi H, Yamashita Y, Takaoka H. Oncol Res. 9:7-11 (1997).
Osada H. Curr Med Chem. 10:727-732, (2003).

R2112 — **RFDS** — 5 mg $53.80

Arg-Phe-Asp-Ser

$C_{22}H_{33}N_7O_8$ Mol. Wt.: 523.5

R2353 — **R-F-NH2** — 5 mg $32.00; 10 mg $54.40; 25 mg $96.00

H-Arg-Phe-NH_2

$C_{15}H_{24}N_6O_2$ Mol.Wt.: 320.4

R2369 — **RFRP-1, human** — 0.5 mg $38.40; 1 mg $65.30; 2.5 mg $115.20

H-Met-Pro-His-Ser-Phe-Ala-Asn-Leu-Pro-Leu-Arg-Phe-NH_2

$C_{67}H_{101}N_{19}O_{14}S$ Mol.Wt.: 1428.73

R2512 — **RGD** — 5 mg $32.00; 10 mg $54.40; 25 mg $96.00

Arg-Gly-Asp

$C_{12}H_{22}N_6O_6$ Mol Wt: 346.3 [99896-85-2]

Antineoplastic agent.

R2510 — **RGD-4C** — 1 mg $115.20; 2 mg $195.20; 5 mg $345.60

Asp-Cys-Phe-Cys-Gly-OH (Cys_2-Cys_{10} , Cys_4-Cys_8)

$C_{42}H_{60}N_{14}O_{16}S_4$ Mol.Wt.: 1145.29

R2511 — **R-G-D-C** — 5 mg $32.00; 10 mg $54.40; 25 mg $96.00

H-Arg-Gly-Asp-Cys-OH

$C_{15}H_{26}N_7O_7S_1$ Mol.Wt.: 448.48

R2513 — **RGDS** — 5 mg $48.00

Arg-Gly-Asp-Ser

$C_{15}H_{27}N_7O_8$ Mol. Wt.: 433.4 [91037-65-9]

Platelet aggregation inhibitor.

R2514 — **RGDV** — 5 mg $32.00; 10 mg $54.40; 25 mg $96.00

Arg-Gly-Asp-Val

$C_{17}H_{31}N_7O_7$ Mol Wt: 445.5 [93674-99-8]

The 4-residue sequence found at the cell-adhesive region of the peptide vitronectin.

Lin HB, Garcia-Echeverria C, Asakura S et al. Biomaterials. 13:905-914 (1992).

R2516 — H-Arg-Gly-Glu-Ser-OH

R-G-E-S

$C_{16}H_{29}N_7O_8$ Mol.Wt.: 447.45

A tetrapeptide structurally similar to RGDS. RGDS is a synthetic peptide that represents the fibroblast binding site of fibronectin. RGES is often used in fibroblast binding experiments.

Pasula R, Wisniowski P, Martin WJ 2nd. Infect Immun. 70:1287-92 (2002).

0.5 mg	$25.60
1 mg	$43.60
2.5 mg	$76.80

R2599 — H-Arg-Gly-Tyr-Ser-Leu-Gly-OH

R-G-Y-S-L-G

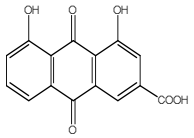
$C_{28}H_{45}N_9O_9$ Mol.Wt.: 651.73

A synthetic peptide that represents the active site of a protein kinase.

Pattanaik A, Gowda DC, Urry DW. Biochem Biophys Res Commun. 178:539-45 (1991).

1 mg	$38.40
2 mg	$65.30
5 mg	$115.20

R2917



Rhein

$C_{15}H_8O_6$ Mol. Wt.: 284.22 [478-43-3]

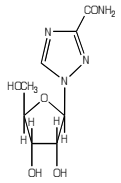
Induces apoptosis in cancer cell lines and inhibits transforming growth factor beta1 induced plasminogen activator inhibitor-1 in endothelial cells.

Zhu J, Liu Z, Huang H, Chen Z, Li L. Chin Med J (Engl).116:354-9 (2003).
Huang YH, Zhen YS. Yao Xue Xue Bao. 36:334-8 (2001).

100 mg	$74.00
500 mg	$326.50
1 g	$554.40

R3205

2-8 °C



Ribavirin

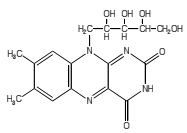
$C_8H_{12}N_4O_5$ Mol. Wt.: 244.2 [36791-4-5]

Synthetic broad-spectrum antiviral nucleoside found to have antitumor activity on L1210 leukemia in mice. It regulates signal transduction in human ovarian cancer cells.

Li W, Shen F, Weber G. Oncol Res. 11:243-7 (1999).
Jolley WB, Chu WT, Salter JM. Ann N Y Acad Sci. 284:585-90 (1977).

50 mg	$72.00
100 mg	$128.00
500 mg	$399.60

R3206



Riboflavin

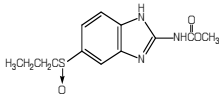
$C_{17}H_{20}N_4O_6$ Mol. Wt.: 376.4 [83-88-5]

Riboflavin deficiency causes formation of single strand breaks in nuclear DNA, increases carcinogen-DNA binding and decreases hepatic glutathione content. All of this can be reversed by riboflavin supplementation.

Webster RP, Gawde MD, Bhattacharya RK. Cancer Lett. 98:129-35 (1996).
Pangrekar J, Krishnaswamy K, Jagadeesan V. Food Chem Toxicol. 31:745-50 (1993).
Chiao CH, Chung Hua Chung Liu Tsa Chih.11:92-4 (1989).

25 g	$18.50
100 g	$44.20

R3310



Ricobendazole

Albendazole sulfoxide

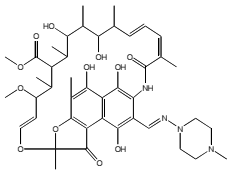
$C_{12}H_{15}N_3O_3S$ Mol. Wt.: 281.33 [54029-12-8]

Active metabolite of albendazole, an anthelmintic.

Castillo JA, Palomo-Canales J, Garcia JJ et al. Drug Dev Ind Pharm. 25:1241-8 (1999).

10 g	$39.50
25 g	$74.00
100 g	$215.60

R3220



Rifampin

Rifampicin

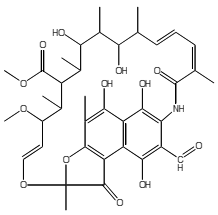
$C_{43}H_{58}N_4O_{12}$ Mol. Wt.: 822.94 [13292-46-1]

An antibacterial from 3-formyl rifamycin SV.

Maggi et al. Chemotherapia. 11:285 (1966).

1 g	$26.30
5 g	$87.90
25 g	$329.30

R3221



Rifamycin SV-3 formyl

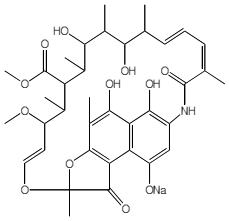
$C_{38}H_{47}NO_{13}$ Mol. Wt.: 725.78 [13292-22-3]

A derivative of rifamycins found to interact with biological membranes. It causes a change in permeability to K^+ and H^+ in the mitochondrial membrane.

Inouye B, Uchinomi Y, Wachi T, Utsumi K. J Antibiot (Tokyo). 30:494-9 (1977).

1 g	$44.00
5 g	$164.00
10 g	$296.50

R3222



Rifamycin SV-Sodium

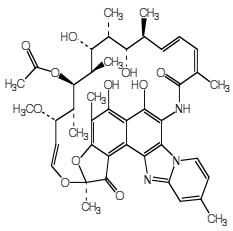
$C_{37}H_{46}NNaO_{12}$ Mol. Wt.: 719.75 [14897-39-3]

An antimicrobial agent, inhibits DNA polymerase.

Furesz S, Arioli V, Pallanza R. Antimicrob Agents Chemother. 5:770-7 (1965).
Frolova LY, Meldrays YA, Kochkina LL et al. Nucleic Acids Res. 4:523-38 (1977).

1 g	$29.40
5 g	$95.10

R3321



Rifaximin

$C_{43}H_{51}N_3O_{11}$ Mol. Wt.: 785.88 [80621-81-4]

A rifamycin derivative. It is a non-absorbable broad-spectrum antibiotic that possesses in vitro activity against a wide range of bacteria. It acts by inhibiting bacterial ribonucleic (RNA) synthesis.

Prasad ES, Wenman WM. Diagn Microbiol Infect Dis. 16:135-6 (1993).
Gillis JC, Brogden RN. Drugs. 49:467-84 (1995).

500 mg	$67.80
1 g	$98.60
5 g	$431.20

R3224

H-Gly-Gln-Pro-Arg-OH

Rigin

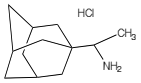
$C_{18}H_{32}N_8O_6$ Mol.Wt.: 456.51 [77727-17-4]

Tuftsin-like tetrapeptide that stimulates phagocytosis activity. Rigin demonstrates high stress-protective activity in neuroendocrine and immune systems in rats. It stimulates release of interleukin-1 and tumor necrosis factor from mouse peritoneal macrophages and from human monocytes.

Rocchi R, Biondi L, Filira F, Tzehoval E, Dagan S, Fridkin M.Int J Pept Protein Res. 37:161-6 (1991).
Klusha VE, Mutsenietse RK, Svirskis ShV, Zalitis GM, Liepa IR. Biull Eksp Biol Med. 104:186-7 (1987).

5 mg	$38.40
10 mg	$65.30
25 mg	$115.20

R3249



Rimantadine Hydrochloride

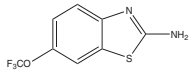
$C_{12}H_{21}N.HCl$ Mol. Wt.: 215.77 [1501-84-4]

Used for influenza A treatment and prevention.

Tominack RL, Hayden FG. Infect Dis Clin North Am. 1:459-78 (1987).

25 mg	$60.80
50 mg	$108.70

R3347



Riluzole

Rilutek

$C_8H_5F_3N_2OS$ Mol. Wt.: 234.1983 [1744-22-5]

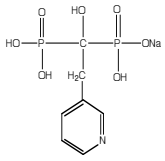
Has anticonvulsant activity and inhibits glutamate release. Has been used to treat amyotrophic lateral sclerosis.

Mantz, et al Anesthesiology 76:844 (1992).
van Kan HJ, Groeneveld GJ, Kalmijn S, Spieksma M, van den Berg LH, Guchelaar HJ Br. J. Clin. Pharmacol. 59:310-3 (2005).

25 mg	$40.00
250 mg	$300.00
500 mg	$480.00

R3373

RT



Risedronate sodium (See page 5 for more information)

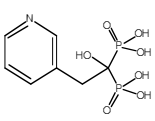
$C_7H_{10}NO_7P_2Na$ Mol.Wt.: 305.10 [1154326-72-1]

A pyridinyl biphosphonate. It inhibits osteoclast-mediated bone resorption.

Boiser S, Ferreras M, Peyruchaud O, Magnetto S. Cancer Res. 60:2949-54 (2000).
Goa KL, Balfour JA. Drugs Aging. 13:83-91 (1998).

100 mg	$86.00

R3374



Risedronic acid

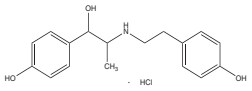
$C_7H_{11}NO_7P_2$ Mol. Wt.: 283.11 [105462-24-6]

A biophosphonate that displays potent inhibition of bone resorption. Shown to prevent bone metastases in rats.

Muhlbauer RC, Bauss F, Schenk R. J Bone Miner Res. 6:1003-1011 (1994).

100 mg	$78.40

R3477



Ritodrine

Ritodrina, Ritodrinium

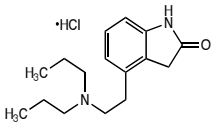
$C_{17}H_{21}NO_3 \cdot HCl$ Mol. Wt.: 323.81 [23239-51-2]

Adrenergic β_2-agonist that relaxes uterine muscle. It is used to stop premature labor.

Bassett JM, Symonds ME Am. J. Physiol. 275:R112-R119 (1998).

250 mg	$60.00
1 g	$185.00
5 g	$600.00

R5661



Ropinirole Hydrochloride

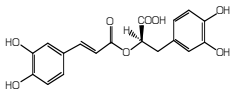
$C_{16}H_{24}N_2O \cdot HCl$ Mol. Wt.: 296.84 [91374-21-9]

A dopamine receptor agonist commonly used to treat Parkinson disease and restless legs sydrome.

Gallagher G Jr, Lavanchy PG, Webster CA et al. J Med Chem. 28:1533-1536 (1985).
Anonymous, Health News. 10:2 (2004).

25 mg	$44.80
100 mg	$95.20
500 mg	$392.00

R5874



Rosmarinic Acid

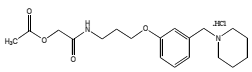
$C_{18}H_{16}O_8$ Mol. Wt.: 360.31 [20283-92-5]

Natural product isolated from rosemary, sweet basal and perilla. It has anti-inflammatory activity and inhibits the proliferation of murine mesangial cells.

Makino T, Ono T, Muso E et al. Nephrol Dial Transplant. 15:1140-5 (2000).
Englberger W, Hadding U, Etschenberg E et al. Int J Immunopharmacol. 10:729-37 (1988).

10 mg	$92.20
25 mg	$166.10
100 mg	$553.20

R5894



Roxatidine Acetate Hydrochloride

$C_{19}H_{28}N_2O_4 \cdot HCl$ Mol. Wt.: 384.90 [93793-83-0]

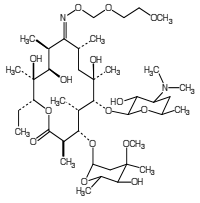
A histamine H2-receptor antagonist used in ulcer treatment.

Found to inhibit platelet function in vitro.

Brandstatter G, Marks IN, Lanza F et al. Clin Ther. 17:467-478 (1995).
Nakamura K, Kariyazono H, Shinkawa, T et al. Human Exptal Tox. 18: 487-492 (1999).

100 mg	$92.20
500 mg	$325.30
1 g	$515.00

R5992



Roxithromycin

$C_{41}H_{76}N_2O_{15}$ Mol. Wt.: 837.05 [80214-83-1]

An antibiotic with a wide antibacterial spectrum against oral pathogens and an immunomodulatory effect. It has also been shown to increase neutrophil apoptosis, reduce tumor size of B16BL6 melanoma, and inhibit pulmonary metastasis of B16BL6 cells.

Yatsunami J, Tsuruta N, Fukuno Y et al. Clin Exp Metastasis. 17:119-24 (1999).
Oyama T, Sakuta T, Matsushita K et al. J Periodontal. 71:1546-53 (2000).

1 g	$14.80
5 g	$49.30
10 g	$71.50

R6871

H-Arg-Arg-Leu-Ile-Glu-Asp-Ala-Glu-Tyr-Ala-Ala-Arg-Gly-OH

RR-SRC

$C_{64}H_{106}N_{22}O_{21}$ Mol.Wt.: 1519.7

A tyrosine kinase-specific substrate often used in experiments to determine Tyr kinase activity.

Shen SS, Kinsey WH, Lee SJ. Dev Growth Differ. 41: 345-55 (1999).

5 mg	$140.80
10 mg	$239.40
25 mg	$422.40

R6873

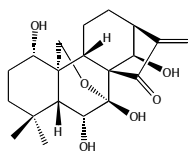
H-Arg-Ser-Arg-OH

R-S-R

$C_{15}H_{31}N_9O_5$ Mol.Wt.: 417.5

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

R8206



Rubescensin A

Oridonin

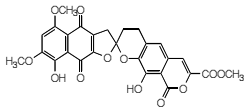
$C_{20}H_{28}O_6$ Mol. Wt.: 364.43 [28957-04-2]

A diterpene isolated from the leaves of Rabdosia rubescens Hora. It appears to have antitumor activity in cell culture studies.

Li XT, Lin C, Li PY. Chinese J Oncology. 8:184-186 (1986).
Fuji K, Node M, Sai M et al. Chem Pharmaceut Bull. 37:1472-1476 (1989).

25 mg	$54.30
100 mg	$162.70
500 mg	$542.10

R8207



β-Rubromycin

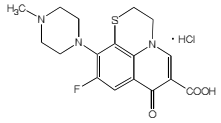
$C_{27}H_{20}O_{12}$ Mol. Wt.: 536.44 [27267-70-5]

A quinone antibiotic agent. Found to inhibit reverse transcrisptase from HIV-1 to a greater degree than it inhibits cellular DNA polymerase alpha.

Goldman ME, Salituro GS, Bowen JA et al. Mol Pharmacol. 38:20-25 (1990).

1 mg	$65.90
5 mg	$263.50

R8122



Rufloxacin Hydrochloride

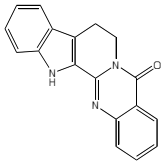
$C_{17}H_{18}FN_3O_3S.HCl$ Mol. Wt.: 399.87 [106017-08-7]

A fluoroquinolone antibacterial that shows photosensitizing properties toward biological substrates. It inhibits B-cell differentiation in human mononuclear cells.

Gollapudi S, Perumal V, Thadepalli H, J Antimicrob Chemother. 29:669-76 (1992).
Condorelli G. De Guidi G, Giuffrida S et al. Photochem Photobiol. 70:280-6 (1999).

25 mg	$43.20
100 mg	$147.90
500 mg	$597.60

R8178



Rutaecarpine

Rutecarpine

$C_{18}H_{13}N_3O$ Mol. Wt.: 287.32 [84-26-4]

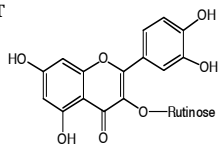
An alkaloid isolated from the chinese herb Evodia rutaecarpa. It has vasorelaxing effect and inhibits platelet aggregation and COX-2. It is a selective inhibitor of cytochrome P450 1A.

Chiou WF, Chou CJ, Liao JF et al. Europ J Pharm. 257:59-66 (1994).
Sheu JR, Hung WC, Lee YM, Yen MH. Europ J Pharm. 318:469-475 (1996).
Moon TC, Murakami M, Kudo I et al. Inflam Res. 48:621-625 (1999).
Ueng, Y.F., Jan, W.C., Lin, LC. et al Drug Metab. Disp. 30:349-353 (2002).

10 mg	$88.20
25 mg	$187.10
100 mg	$596.30

R8076

RT



Rutin Hydrate

$C_{27}H_{30}O_{16}$ Mol. Wt.: 610.52 [153-18-4]

A glycoside of quercetin. Inhibits the initiation and promotion stages of carcinogenesis, and enhances detoxification. An effective inhibitor of carcinogen-induced aberrant crypt foci in the rat colon.

Elangovan V, Sekar N, Govindasamy S. Cancer Lett. 87:107-113 (1994).
Wargovich MJ, Chen CD, Jimenez A et al. Cancer Epidimiol. Biomarkers Prev. 5:355-360 (1996).

50 g	$24.60
100 g	$42.90
500 g	$160.70

S0006

H-Arg-Arg-Leu-Ser-Ser-Leu-Arg-Ala-OH

S6-1

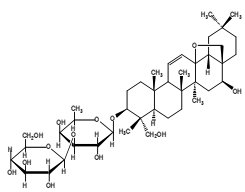
$C_{39}H_{75}N_{17}O_{11}$ Mol.Wt.: 958.14

A sythetic octapeptide that represents the phosphorylated region of the S6 protein.

Hecht LB, Straus DS. Endocrinology. 119: 470-80 (1986).

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

S0132



Saikosaponin A (See page 26 for more information)

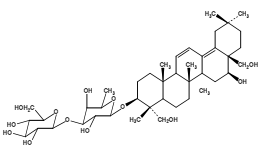
$C_{42}H_{68}O_{13}$ Mol. Wt.: 780.98 [20874-52-6] m.p. 225~32 °C

The saikosaponins have potent anti-inflammatory activity on mouse ear edema induced by the tumor promoter, phorbol myristate acetate. In cell culture studies, they have been found to induce differentiation without growth inhibition and apoptosis in B16 melanoma cells.

Zong Z, Fujikawa-Yamamoto K, Ota T et al. Cell Struct Funct. 23:265-272 (1998).
Bermejo BP, Abad Martinez MJ, Silvan Sen AM et al. Life Sci. 63:1147-1156 (1998).
Zong Z, Fujikawa-Yamamoto K, Tanino M et al. Biochem Biophys Res Commun. 219:480-485 (1996).
Ohtsuka M, Fukuda K, Yano H, Kohiro M. Jpn J Cancer Res. 86:1131-1135 (1995).
Qian L, Murakami T, Kimura Y et al. Pathol Int. 45:207-214 (1995).

1 mg	$168.40
5 mg	$658.70

S0032



Saikosaponin B1 (See page 26 for more information)

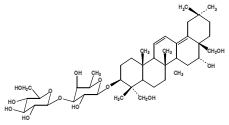
$C_{42}H_{68}O_{13}$ Mol. Wt.: 780.98 [58558-08-0]

Saidosaponin B1 induces PGE2 release in C6 rat glioma cells. In cultured fibroblasts saikosaponin B1 suppresses the blockage of signal transduction after binding of EGF resulting in growth stimulation.

Kyo R, Nakahata N, Kodama Y et al. Biol Pharm Bull. 22:1385-7 (1999).
Nishiyama T, Horii I, Nakayama Y et al. Matrix. 10:412-9 (1990).

1 mg	$61.60
5 mg	$228.00

S0033



Saikosaponin B2 (See page 26 for more information)

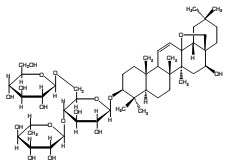
$C_{42}H_{68}O_{13}$ Mol. Wt.: 780.98

Saikosaponin B2 inhibits the proliferation of B16 melanoma cells in culture by induction of apoptosis. The inhibition is a result of G1 phase accumulation.

Zong Z, Fujikawa-Yamamoto K, Tanino M, et al. Biochem Biophys Res Commun. 219:480-5 (1996).

1 mg	$61.60
5 mg	$228.00

S0133



Saikosaponin C (See page 26 for more information)

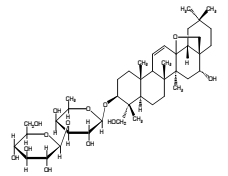
$C_{48}H_{78}O_{17}$ Mol. Wt.: 927.12 m.p. 202~10°C [20736-08-7]

Saikosaponin C was found to have inhibiting activity in hepatitis B virus DNA replicaiton.

Chiang LC, Ng LT, Liu LT et al. Planta Med. 69:705-9 (2003).

1 mg	$168.40
5 mg	$658.70

S0134



Saikosaponin D (See page 26 for more information)

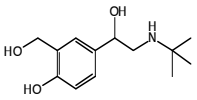
$C_{42}H_{68}O_{13}$ Mol. Wt.: 780.98 [20874-52-6] m.p.212~8°C

Saikosaponin D was found to stimulate corticotropin-releasing factor (CRF) gene expression and CRF release. It also increases adrenocorticotropin release.

Dobashi I, Tozawa F, Horiba N et al. Neurosci Lett. 197:235-238 (1995).

1 mg	$168.40
5 mg	$658.70

S0044



Salbutamol free base

Albuterol

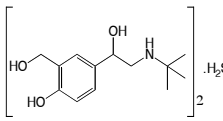
$C_{13}H_{21}NO_3$ Mol. Wt.: 239.31 [18559-94-9]

A beta-adrenoceptor agonist.

Church MK, Hiroi J. Br J Pharmacol. 90:421-9 (1987).

25 mg	$29.40
50 mg	$51.30
100 mg	$87.90
500 mg	$322.00

S0045



Salbutamol sulfate

Albuterol sulfate

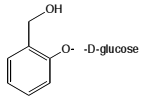
$(C_{13}H_{21}NO_3)_2 \cdot H_2SO_4$ Mol. Wt.: 576.7 [51022-70-9]

A beta-adrenoceptor agonist.

Church MK, Hiroi J. Br J Pharmacol. 90:421-9 (1987).

25 mg	$29.40
50 mg	$51.30
100 mg	$84.90
500 mg	$307.50

S0048



Salicin

$C_{13}H_{18}O_7$ Mol. Wt.: 286.28 [138-52-3]

An analgesic and antipyretic. Reported to have antileukemic activity.

Smith ID, Temple DM, Shearman RP. Prostaglandins. 10:41-57 (1975).
El-Shemy HA, Aboul-Enein AM, Aboul-Enein MI et al. J Biochem Mol Biol. 36: 387-389 (2003).

5 g	$22.40
25 g	$95.20

S0049

c[Cys-Ser-Asn-Leu-Ser-Thr-Cys]-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly-Thr-Pro-NH_2

Salmon Calcitonin Acetate

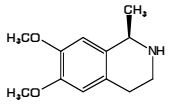
$C_{145}H_{240}N_{44}O_{48}S_2$ Mol.Wt.: 3431.9 [47931-85-1]

Salmon calcitonin acetate positively influences bone mass density due to its inhibiting effect on osteoclast activity. For the treatment of osteoporosis, paget's disease, hypercalcemia, reflex sympathetic dystrophy (algodistrophy or Sudeck's disease).

Kopaliani M. Georgian Med News. 121: 38-42 (2005).

Please inquire

S0046



Salsolidine

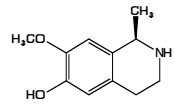
$C_{12}H_7NO_2$ Mol. Wt.: 207.27 [493-48-1]

A tetrahydroisoquinolone that is a steroselective competitive inhibitor of the enzyme monoamine oxidase. It is also a competitive inhibitor of catechol-O-methyltransferase.

Bembenek ME, Abell CW, Chrisey LA et al. J Med Chem. 33:147-52 (1990).
Dostert P, Strolin Benedetti M, Dordain G. J Neural Transm. 74:61-74 (1988).
Sanft K, Thomas H. Z Naturforsch [C]. 44:173-6 (1989).

25 mg	$37.00
100 mg	$104.80

S0047



Salsoline

$C_{11}H_{15}NO_2$ Mol. Wt.: 193.24 [101467-40-7]

Salsoline, a tetrahydroisoquinolone, is an active metabolite of dopamine. It inhibits cholinesterase activity.

Sallstrom Baum S, Hill R, Kiianmaa K, Rommelspacher H. Alcohol. 1:165-9 (1999).
Maizel EB, Rozengart EV, Khakimov IuP et al. Biokhimiia. 43:1150-6 (1978).

25 mg	$37.00
100 mg	$104.80

S0200

H-His-Met-Arg-Ser-Ala-Met-Ser-Gly-Leu-His-Leu-Val-Lys-Arg-Arg-OH

SAMs Peptide

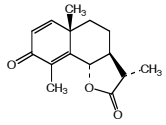
$C_{74}H_{131}N_{29}O_{18}S_2$ Mol.Wt.: 1779.18

A synthetic peptide often used to determine AMP-activated protein kinase activity.

Kishimoto A, Ogura T, Esumi H. Mol Biotechnol. 32: 17-21 (2006).

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

S0053



α-Santonin

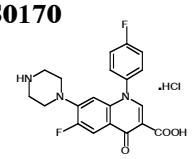
5 g	$20.40
10 g	$29.80
25 g	$67.80

$C_{15}H_{18}O_3$ Mol. Wt.: 246.30 [481-06-1]

An anthelmintic shown to have antiinflammatory, antipyretic and analgesic activity comparable to those of the NSAID, diclofenac sodium.

Al-Harbi MM, Qurreshi S, Ahmed MM et al. Japanese J Pharmacol. 64:135-139 (1994).

S0170



Sarafloxacin Hydrochloride

5 g	$59.20
10 g	$92.40
25 g	$184.80

$C_{20}H_{17}F_2N_3O_3.HCl$ Mol. Wt.: 421.83 [91296-87-6]

A fluoroquinolone antibacterial agent found to be effective against Mycobacterium tuberculosis.

Chu DT, Fernandes PB, Claiborne AK et al. J Med Chem. 28:1558-64 (1985).
Berlin OG, Young LS, Bruckner DA. J Antimicrob Chemother. 19:611-5 (1987).

S0171

H-Cys-Thr-Cys-Asn-Asp-Met-Thr-Asp-Glu-Glu-Cys-Leu-Asn-Phe-Cys-His-Gln-Asp-Val-Ile-Trp-OH
(Cys1-Cys15, Cys3-Cys11)

Sarafotoxin 6c

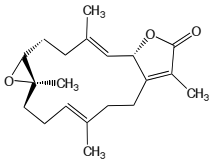
0.5 mg	$198.40
1 mg	$337.60
2.5 mg	$595.20

$C_{103}H_{147}N_{27}O_{37}S_5$ Mol.Wt.: 2515.8

A selective endothelin subtype B receptor agonist that induces muscle contractions.

Fellner SK, Arendshorst W. Am J Physiol Renal Physiol. 292: F175-84 (2007).

S0368



Sarcophine (See page 21 for more information)

10 mg	$125.30

$C_{20}H_{28}O_3$ Mol.Wt.: 316.43 [55038-27-2]

It is a cembranoid marine natural product that is reposted to possess cancer chemopreventive properties.

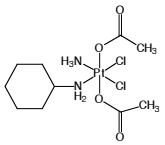
Sarcophine was found to be an effective inhibitor of JB6 cell transformation.

Sawant, S. S.; Youssef, D. T. A.; Reiland, J.; Ferniz, M.; Marchetti, D.; El Sayed, M. D. J. Nat. Prod. 69:1010-1013 (2006).
El Sayed, K. A.; Hamann, M. T.; Waddling, C. A.; Jensen, C.; Lee, S. K.; Dunstan, C. A.; Pezzuto, J. M. J. Org. Chem.63:7449-7455 (1998).
Katsuyama, I.; Fahmy, H.; Zjawiony, J. K.; Khalifa, S. I.; Kilada, R. W.; Konoshima, T.; Takasaki, M.; Tokuda, H. J. Nat. Prod. 65:1809-1814 (2002).
Sawant, S. S.; Sylvester, P. W.; Avery, M. A.; Desai, P.; Youssef, D. T. A.; El Sayed, K. A. J. Nat. Prod. 67:2017-2023 (2004).

2-epi-16-deoxysarcophine

See Deoxysarcophine, 2-epi-16-

S0278



Satraplatin

5 mg	$123.20
10 mg	$207.00
50 mg	$800.80

$C_{10}H_{22}Cl_2N_2O_4Pt$ Mol. Wt.: 500.28 [129580-63-8]

An orally active novel platinum IV anticancer agent. It shows promise against lung cancer and ovarian cancer.

Bengtson EM, Rigas JR. Drugs. 58 Suppl 3:57-69 (1999).
Piccart MJ, Lamb H. Vermorken JB. Ann Oncol. 12:1195-203 (2001).

S0381

pGlu-Gly-Pro-Pro-Ile-Ser-Ile-Asp-Leu-Ser-Leu-Glu-Leu-Leu-Arg-Lys-Met-Ile-Glu-Ile-Glu-Lys-Gln-Glu-Lys-Glu-Lys-Gln-Gln-Ala-Ala-Asn-Asn-Arg-Leu-Leu-Leu-Asp-Thr-Ile-NH_2

Sauvagine

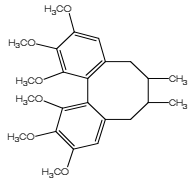
0.5 mg	$198.40
1 mg	$337.60
2.5 mg	$595.20

$C_{202}H_{347}N_{56}O_{63}S$ Mol. Wt.: 4599.4 [74434-59-6]

A frog skin peptide that has been shown to inhibit production of prolactin.

Falaschi P, D'Urso R, Negri L et al. Endicrinology. 111: 693-695 (1982).

S0830



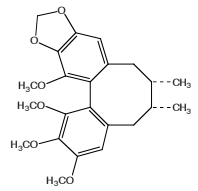
R(+) Schisandrin A (See page 26 for more information)

5 mg	$71.50
10 mg	$117.10

R(+) Schizandrin A; R(+) deoxyschisandrin A; R(+) deoxyschizandrin A

$C_{24}H_{32}O_6$ Mol. Wt.: 416.51 mp: 117-118 °C $[\alpha]_D$: +110° (c=1.15, $CHCl_3$) [61281-38-7]

S0831



S(-) Schisandrin B (See page 26 for more information)

5 mg	$71.50
10 mg	$117.10

S(-) Schizandrin B; S(-)-schisandrin; S(-) wuwei zi su; gomisin N

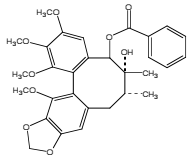
$C_{23}H_{28}O_6$ Mol. Wt.: 400.46 mp: 100-102 °C $[\alpha]_D$: -51° (c=0.15, $CHCl_3$) [61281-37-6]

Schisandrin B shows antioxidant activity which may be responsible for its hepatic protecting activity.

It also increases glutathione level and Dt-diaphorase enzyme activity.

Lee IS, Lee HK, Dat NT. Planta Med. 69:63-4 (2003).
Chen DF, Zhang SX, Xie L et al. Bioorg Med Chem. 5:1715-23 (1997).
Ip SP, Yiu HY, Ko KM. Mol Cell Biochem. 208:151-5 (2000).

S0930



Schisantherin A (See page 26 for more information)

Schizantherin A; Gomisin C; Wuweizi ester A

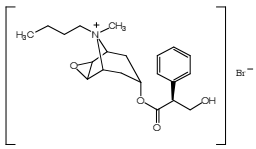
$C_{30}H_{32}O_9$ Mol. Wt.: 536.57 mp: 116-118°C $[\alpha]_D$: -190.9° (c=0.995, $CHCl_3$)

A lignan from *Schisandra chinensis*. It has shown a positive effect in lowering the serum glutamic-pyruvic transaminase level of patients suffering from chronic viral hepatitis.

Liu CS, Fang SD, Huang MF. Sci Sin. 21:483-502 (1978).

5 mg	$71.50
10 mg	$117.10

S1058



Scopolamine N-butylbromide

Hyoscine butylbromide

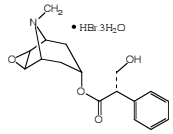
$C_{21}H_{30}BrNO_4$ Mol. Wt.: 440.38 [149-64-4]

An antispasmodic agent.

Ayre-Smith G. Acta Radiol Diagn (Stockh). 17:701-13 (1976).

1 g	$29.60
5 g	$76.40

S1059



Scopolamine Hydrobromide

$C_{17}H_{21}NO_4.HBr.3H_2O$ Mol. Wt.: 438.32 [114-49-8]

An anticholinergic agent.

De Souza H, Palermo-Neto J. Gen Pharmacol. 16:533-6 (1985).

1 g	$44.80
5 g	$145.60
25 g	$492.80

S1060

H-Ala-Arg-Pro-Gly-Tyr-Leu-Ala-Phe-Pro-Arg-Met-NH_2

SCPA

Small cardioactive peptide A

$C_{59}H_{92}N_{18}O_{12}S$ Mol.Wt.: 1277.57

A neuropeptide that modulates neuromuscular synapsis in Aplysia.

Fox LE, Lloyd PE. J Neurophysiol. 83:1567-79 (2000).

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

S1061

H-Met-Asn-Tyr-Leu-Ala-Phe-Pro-Arg-Met-NH_2

SCPB

Small cardioactive peptide B

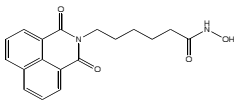
$C_{52}H_{80}N_{14}O_{11}S_2$ Mol.Wt.: 1141.43

An antagonistic inhibitor of cAMP-dependent Cl- current in sensory neurons of Aplysia via activation of protein kinase A.

Buttner N, Siegelbaum SA. J Neurophysiol. 90: 586-98 (2003).

1 mg	$38.40
2 mg	$65.60
5 mg	$115.20

S1069



Scriptaid

$C_{18}H_{18}N_2O_4$ Mol. Wt.: 326.35

An inhibitor of histone deacetylase found to decrease tumor growth. Shown to disrupt the intracellular protein aggregate transport associated with ALS.

Keen JC, Yan L, Mack KM et al. Breast Cancer Res Tr. 81:177-186 (2003).
Corcoran LJ, Mitchison TJ, Liu Q. Curr Biol. 14:488-492 (2004).

1 mg	$54.30
5 mg	$208.40

S1343

Ac-Ser-Asp-Lys-Pro-OH

Ac-S-D-K-P

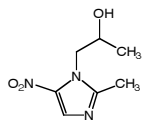
$C_{20}H_{33}N_5O_9$ Mol.Wt.: 487.51

A synthetic hemopeptide shown to inhibit hematopoietic proliferation in stem cells.

Dai G, Huang C, Li Y, Pi YH, Wang BH. Cell Biol Int. 30: 514-20 (2006).

5 mg	$76.80
10 mg	$131.20
25 mg	$230.40

S1810



Secnidazole

$C_7H_{11}N_3O_3$ Mol. Wt.: 185.18 [3366-95-8]

An antimicrobial used as amoebecide and trichomonacide.

Benazet F, Guillaume L. Bull Soc Pathol Exot Filiales. 69:309-19 (1976).
Gillis JC, Wiseman LR. Drugs. 51:621-38 (1996).

5 g	$37.00
10 g	$55.50
25 g	$92.40

S1604

H-His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg-Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH_2

Secretin Acetate

$C_{130}H_{220}N_{44}O_{41}$ Mol.Wt.: 3055.41 [10813-74-8]

Please inquire

S1605

His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg-Glu-Gly-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH_2

Secretin, human

$C_{130}H_{220}N_{44}O_{40}$ Mol. Wt.: 3039.4

Secretin is a polypeptide gastrointestinal hormone. It stimulates exocrine pancreatic secretion.

Chey WY, Chang TM. J Gastroenterol. 38:1025-35 (2003).
Konturek SJ, Thor P, Dembinski A et al. Gastroenterology. 68:1527-35 (1975).

1 mg **$121.60**
2 mg **$206.40**
5 mg **$364.80**

S1606

His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg-Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH_2

Secretin, porcine

$C_{130}H_{220}N_{44}O_{41}$ Mol. Wt.: 3055.4

5 mg **$364.80**
10 mg **$620.80**
25 mg **$1,094.40**

S1607

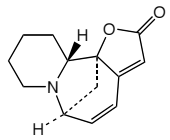
H-His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Gln-Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH_2

Secretin, rat

$C_{129}H_{216}N_{42}O_{42}$ Mol.Wt.: 3027.42

0.5 mg **$72.00**
1 mg **$121.60**
2.5 mg **$214.40**

S1609



Securinine

$C_{13}H_{15}NO_2$ Mol. Wt.: 217.26 [5610-40-2]

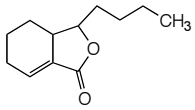
A γ-aminobutyric acid (GABA) receptor antagonist. Recently, it was found to induce apoptosis in human leukemia HL-60 cells.

Beutler JA, Karbon EW, Brubaker AN et al. Brain Res. 330:135-40 (1985).
Dong NZ, Gu ZL, Chou WH, Kwok CY. Chung Kuo Yao Li Hsueh Pao. 20:267-70 (1999).

500 mg **$71.50**
1 g **$104.80**

S1612

-20 °C



Sedanolide

(3-Butyl-3α,4,5,6-tetrahydro-1(3H)-isobenzofuranone)

$C_{12}H_{18}O_2$ Mol. Wt: 194.27 m.p. 30-31°C [6415-59-4]

Natural product isolated from celery seed oil. Inducer of glutathione S-transferase enzyme system. Inhibitor of chemically induced carcinogenesis.

Zheng G-q, Kenney, PM, Lam LKT. Nutr. Cancer. 19:77-86 (1993).

100 mg **$98.70**
500 mg **$321.30**
1 g **$567.40**

S1843

H-Cys-Gln-Lys-Leu-Asp-Lys-Ser-Phe-Ser-Met-Ile-Lys-OH

L-Selectin

$C_{62}H_{105}N_{16}O_{18}S_2$ Mol.Wt.: 1426.75

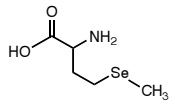
A glycoprotein receptor that mediates lymphocyte rolling in high endothlial venules.

Sperandio M, Frommhold D, Babushkina I and Ellies LG *et. al.* Eur J Immunol. 36: 3207-15 (2006).

1 mg **$112.70**
2 mg **$192.00**
5 mg **$338.00**

S1845

-20 °C



L-(+)-Selenomethionine (See page 26 for more information)

2-Amino-4-(methylseleno)butanoic acid

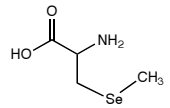
$C_5H_{11}NO_2Se$ Mol. Wt:196.11 m.p. 265°C [3211-76-5]

Inhibitor of 2-acetylaminofluorene-induced hepatocarcinogenesis.

Mukherjee B, Ghosh S, Chatterjee M. J Exp Ther Oncol. 14:209-217 (1996).

10 mg **$17.20**
25 mg **$35.40**
100 mg **$117.40**

S1848



Se-methylseleno-L-cysteine (See page 26 for more information)

2-Amino-3-methylselenyl propionic acid

$C_4H_9NO_2Se$ Mol. Wt:182.08 [26046-90-2]

Inhibitor of DMBA-induced mammary tumors.

Ip C, Ganther HE. Carcinogenesis. 7:1167-1170 (1992).

100 mg **$74.30**
250 mg **$148.60**

S1969

Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-NH_2

Sermorelin Acetate

$C_{149}H_{246}N_{44}O_{42}S$ Mol.Wt.: 3358.03 [86168-78-7]

Secretin stimulates the secretion of bicarbonate by the pancreas and inhibits the production of gastrin and acid production in the stomach. It also potentiates the release of digestive enzymes from the pancreas triggered by cholecystokinin. Diagnosis of pancreatic dysfunctionand the presence of a gastrinoma treating. For the treatment of autism-not yet approved applications.

Please inquire

S1970 — Serum Thymic Factor

pGlu-Ala-Lys-Ser-Gln-Gly-Gly-Ser-Asn-OH

$C_{33}H_{54}N_{12}O_{15}$ Mol.Wt.: 858.89

A thymic peptide hormone that induces the formation of E rosettes.

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

Incefy GS, Mertelsmann R, Yata K, Dardenne M, Bach JF, Good RA. Haematologia (Budap). 13: 203-11 (1980).

S2044 — S-F-L-L-R

H-Ser-Phe-Leu-Leu-Arg-OH

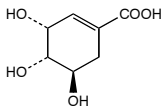
$C_{30}H_{50}N_8O_7$ Mol.Wt.: 634.78

A protease-activated receptor 1 agonist peptide that exhibits cell proliferation effects.

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

Hirota Y, Osuga Y, Hirata T and Yoshino O *et. al.* J Clin Endocrinol Metab. 90: 3673-9 (2005).

S3033 — Shikimic acid



$C_7H_{10}O_5$ Mol. Wt.: 174.15 [138-59-0]

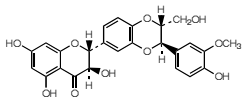
An antimicrobial agent with antagonistic effects. It inhibits rapamycin biosynthesis in Streptomyces hygroscopicus.

1 g	$55.50
5 g	$215.60

Ma Y, Xu QP, Sun JN et al. Chung Kuo Yao Li Hsueh Pao. 20:701-4 (1999).
Fang A, Demain AL. Folia Microbiol (Praha). 40:607-10 (1995).

S3343 — Silybin

0 °C



$C_{25}H_{22}O_{10}$ Mol. Wt.: 482.44 [22888-70-6]

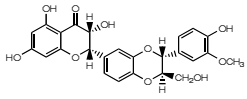
The major component of silymarin, a group of polyphenolic flavonoids derived from milk thistle (Silybum marianum) that has anti-inflammatory, cytoprotective and anti-carcinogenic effects . It is reported that Silybin has protective effect against skin cancer and inhibits mitogen-activated protein kinase.

500 mg	$23.20
1 g	$38.50
5 g	$153.70

Manna SK, Mukhopadhyay A, Van NT, Aggarwal BB. J Immunol. 163:6800-9 (1999).
Zi X, Agarwal R, Biochem Biophys Res Commun. 263:528-36 (1999).

S3345 — Silymarin

-20 °C



$C_{25}H_{22}O_{10}$ Mol. Wt.: 482.44 [65666-07-1]

Flavanoid antioxidant isolated from milk thistle that is effective chemopreventive agents.

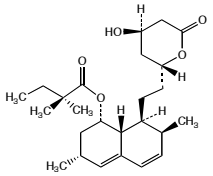
10 g	$21.70
50 g	$67.40

Steele VE, Kelloff GJ, Wilkinson BP, Arnold JT. Cancer Res. 50:2068-2074 (1990).
Zi X, Mukhtar H, Agarwal R. Biochem Biophys Res Commun. 239:334-9 (1997).

S3449 — Simvastatin (See page 26 for more information, for sodium salt - please inquire)

RT

Synvinolin



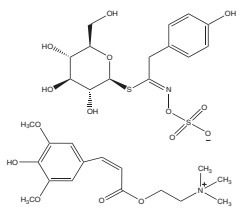
$C_{25}H_{38}O_5$ Mol. Wt.: 418.57 m.p. 135-138°C [79902-63-9]

A potent HMG-CoA reductase inhibitor and hypocholesterolemic agent. Inhibits cell proliferation of human glioma cells and of acute myeloid leukemia cells. Anti-carcinogenic during the promotion phase of radiation-induced mammary tumors.

50 mg	$104.00
100 mg	$156.70
500 mg	$655.50

Inano H, Suzuki K, Onoda M. Wakabayashi K Carcinogenesis. 18:1723-7 (1997).
Kikuchi T, Nagata Y, Abe T. J Neurooncol. 34:233-9 (1997).
Lishner M, Bar-Sef A, Elis A, Fabian I. J Investig Med. 49:319-24 (2001).
Mol, MJ et al. Lancet. 2:936 (1986).

S3452 — Sinalbin



$C_{30}H_{42}N_2O_{15}S_2$ Mol. Wt.: 34.79 [20196-67-2]

A glucoside found in the seeds of white mustard. Has anti-androgen and anti-inflammation acitities. Has been shown to inhibit mice prostatic hyperplasia.

5 mg	$50.00
10 mg	$78.00

Wu GX, Lin YX, Ou MR, Tan DF Zhongguo Zhong Yao Za Zhi 28:643-6 (2003).

S3351 — Sincalide (CCK-8)

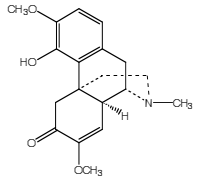
Asp-Tyr(SO_3H)-Met-Gly-Trp-Met-Asp-Phe-NH_2

$C_{49}H_{62}N_{10}O_{16}S_3$ Mol.Wt.: 1143.29 [25126-32-3]

Sincalide corresponds to the C-terminal octapeptide of cholecystokinin (CCK) which acts on receptors within the gallbladder wall causing it to contract.

Please inquire

S3353 — **Sinomenine**



$C_{19}H_{23}NO_4$ Mol. Wt.: 329.39 [115-53-7] m.p. 162 °C

Sinomenine is an alkaloid isolated from the Chinese medicinal plant *Sinomenium acutum*. It has immunomodulating and anti-inflammatory activities. Its anti-arthritic property is related to the antiproliferative effects on synovial fibroblasts and lymphocytes. Other antirheumatic mechanisms are attributed to its ability to decrease PGE2 and leukotriene C4 synthesis, and inhibit NO production.

Vieregge B, Resch K, Kaever V. Planta Med. 65:80-82 (1999).
Liu L, Buchner E, Beitze D et al. Int J Immunopharmacol. 18:529-43 (1996).
Candinas D, Mark W, Kaever V et al. Transplantation. 62:1855-1860 (1996).
Liu L, Resch K, Kaever V. Int J Immunopharmacol. 16:685-691 (1994).
Liu L. Riese J, Resch K, Kaever V. Arzneimittelforsching. 44:1223-1226 (1994).

10 g	$38.50
25 g	$130.60
50 g	$230.50

S3585 — **SIVmac239-1**

H-Met-Gly-Val-Arg-Asn-Ser-Val-Leu-Ser-Gly-Lys-Lys-Ala-Asp-Glu-OH

$C_{65}H_{115}N_{21}O_{23}S_1$ Mol.Wt.: 1590.83

A pathogenic molecular clone of simian immunodeficiency virus (SIV).

Luciw PA, Pratt-Lowe E, Shaw KE, Levy JA, Cheng-Mayer C. Proc Natl Acad Sci U S A. 92: 7490-4 (1995).

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

S3586 — **SIVmac239-2**

H-Asn-Ser-Val-Leu-Ser-Gly-Lys-Lys-Ala-Asp-Glu-Leu-Glu-Lys-Ile-OH

$C_{70}H_{123}N_{19}O_{25}$ Mol.Wt.: 1630.87

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

S5200 — **SNA 1**

-20 °C

SNA 1 is a four chain lectin isolated from the bark of the common elder. It is a ribosome-inactivating protein with low activity on mammalian ribosomes.

Broekaert WF et al. Biochem J. 221:163 (1984).
VanDamme EJM et al. Eur J Biochem. 235:128 (1996).

1 mg	$107.60

SB5776 — **Snake venom - Bothrops alternatus (urutu)**

Known for myotoxic activity. Bothroalternin isolated from the venom is a new thrombin inhibitor.

Arruda EZ, Silva NM, Moraes RA, Melo PA. Braz Jmed Biol Res. 35:723-726 (2002).
Castro HC, Dutra DL, Oliveira-Carvalho AL, Zingali RB. Toxicon 36:1903-12 (1998).

100 mg	$284.60

SB5778 — **Snake venom - Bothrops neuwiedi diporous**

100 mg	$149.10

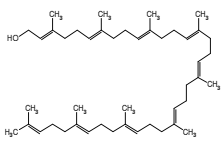
SC7056 — **Snake venom - Crotalus durissus terrificus**

A potent neurotoxin. Crotoxin (CT), a phospholipase A2 (PLA2) derived from the venom is a heterodimeric protein. PLA2 is found to have anti-proliferative activity.

Hawgood BJ. Toxicon 39:1277-82 (2001).
Donato NJ, Martin CA, Perez M, Newman RA, Vidal JC, Etcheverry M. Biochem Pharmacol. 51:1535-43 (1996).

100 mg	$74.60

S5746 — **Solanesol**



$C_{45}H_{74}O$ Mol. Wt.: 631.07 [13190-97-1]

A trisesquiterpene alcohol present in tobacco leaf. It is a possible precusor of polycyclic aromatic hydrocarbons.

Severson RF, Ellington JJ, Schlotzhauer PF et al. J Chromatogr. 139:269-82 (1977).

50 mg	$80.10
100 mg	$123.20
500 mg	$400.40

S5745 — **[Tyr1] Somatostatin**

H-Tyr-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys-OH
(Cys3-Cys14)

$C_{82}H_{108}N_{18}O_{20}S_2$ Mol.Wt.: 1730.01

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

S5747

H-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Tyr-Thr-Ser-Cys-OH
(Cys3-Cys14)

[Tyr11] Somatostatin

$C_{76}H_{102}N_{18}O_{20}S_2$ Mol.Wt.: 1651.91

1 mg	$57.60
2 mg	$97.60
5 mg	$172.80

S5748

Ala-Glu-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys

Somatostatin

$C_{79}H_{108}N_{18}O_{21}S_2$ Mol Wt: 1710.0

5 mg	$107.60
1 g	$3,870.80

S5749

Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Cys-Ser-Thr-Phe-Thr-Lys
(Cys3-Cys14, Phe7-Thr10)

Somatostatin-14

$C_{76}H_{104}N_{18}O_{19}S_2$ Mol. Wt. 1637.92 [38916-34-6]

5 mg	$76.80
10 mg	$131.20
25 mg	$230.40

Growth hormone-release inhibiting factor. It affects cell proliferation. Induces apoptosis in MCF-7 human breast cancer cells.

Patel YC. Front Neuroendocrinol. 20:157-98 (1999).
Hocker M. Wiedenmann B. Ital J Gastroenteril. 31 Suppl 2:S139-42 (1999).
Thangaraju M, Sharma K, Liu D et al. Cancer Res. 59:1649-54 (1999).

S5751

H-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-Arg-Lys-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys-OH
(Cys14-Cys25)

Somatostatin-25

$C_{127}H_{191}N_{37}O_{34}S_3$ Mol.Wt.: 2876.36

0.5 mg	$102.40
1 mg	$174.40
2.5 mg	$307.20

S5750

Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-Arg-Lys-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys
(Disulfide bridge Cys17-Cys28)

Somatostatin-28

$C_{137}H_{207}N_{41}O_{39}S_3$ Mol.Wt.: 340.4 [75037-27-3]

1 mg	$416.70

S5752

H-Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-OH

Somatostatin-28 (1-12)

$C_{49}H_{81}N_{17}O_{19}S_1$ Mol.Wt.: 1244.36

1 mg	$108.80
2 mg	$185.60
5 mg	$326.40

S5753

H-Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-Arg-Lys-OH

Somatostatin-28 (1-14)

$C_{61}H_{105}N_{23}O_{21}S$ Mol.Wt.: 1528.72

1 mg	$60.80
2 mg	$185.60
5 mg	$326.40

S5754

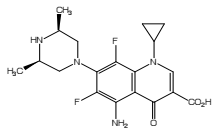
Ala-Gly-c[Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys]

Somatostatin Acetate

$C_{76}H_{104}N_{18}O_{19}S_2$ Mol.Wt.: 1637.88 [38916-34-6]

Please inquire

S6000



Sparfloxacin (See page 13 for more information)

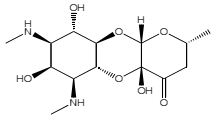
$C_{19}H_{22}F_2N_4O_3$ Mol. Wt.: 392.40 [110871-86-8]

500 mg	$161.10
1 g	$263.50

A fluoroquniolone antibacterial, acts on DNA gyrase.

Piddock LJ, Zhu M. Antimicrob Agents Chemother. 35:2423-7 (1991).

S6018



Spectinomycin hydrochloride

$C_{14}H_{24}N_2O_7.2HCl.5H_2O$ Mol. Wt.:495.25 [22189-32-8]

5 g	$44.40
25 g	$141.70

A broad-spectrum aminocyclitol antibiotic that is highly effective in the treatment of gonorrhea.

It has shown neuromuscular blocking activity by a predominant action on acetylcholine release.

Singh YN, Marshall IG, Harvey AL. Clin Exp Pharmacol Physiol. 6:159-65 (1979).
Holloway WJ. Med Clin North Am. 66:169-73 (1982).

S6019

Speract

H-Gly-Phe-Asp-Leu-Asn-Gly-Gly-Gly-Val-Gly-OH

$C_{38}H_{57}N_{11}O_{14}$ Mol.Wt.: 891.94

A peptide associated with eggs of sea urchin, Lytechinus pictus. It has been shown ot bind to the plasma membrane receptor of spermatozoa and stimulate sperm respiration.

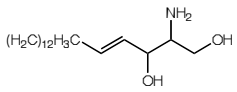
Repaske DR, Garbers DL. J Biol Chem. 258: 6025-9 (1983).

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

S6129

D-Sphingosine

0 °C



$C_{18}H_{37}NO_2$ Mol.Wt.: 299.5 [123-78-4]

It induces apoptosis by inhibiting protein kinase. It is also reported to cause inhibition of adrenaline stimulated cyclic AMP accumulation, permeation of cells and making them leaky to ATP, inhibition of adrenaline-stimulated adenylate cyclase inhibition of cyclic AMP.

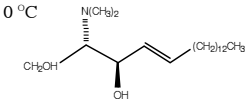
Souktani R, Berdeaux A, Ghaleb B et al. Am J Physiol cell Physiol. 2797:C158-65 (2000).
Ju TZ, Chen HL, Gu JX, Qin H. Glycoconj J. 12:767-72 (1995).
Johnson JA, Clark RB. Biochem J. 268:507-11 (1990).

5 mg	$46.10
25 mg	$172.20

S6131

Sphingosine, N, N-dimethyl

0 °C



$C_{20}H_{41}NO_2$ Mol.Wt.: 327.5 [119567-63-4]

A general modulator of protein kinases. Inhibites protein kinase C and stimulates src kinase; induces apoptosis in human leukemia HL-60 cells.

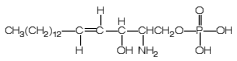
Igarashi Y et al. J Biol Chem. 265:5385 (1990).

5 mg	$92.20

S6130

Sphingosine 1-phosphate

0 °C



$C_{18}H_{38}NO_5P$ Mol. Wt.: 379.47 [26993-30-6]

Ligand for a family of specific G-protein that regulates a wide variety of important cellular functions, including vascular maturation, angiogenesis, apoptosis, cell growth, survival, cytoskeletal rearrangement and cell motility by divergent pathways.

Spiegel S, Milstien S. Biochem Soc trans. 31:1216-9 (2003).

1 mg	$193.70

S6134

Spinorphin, bovine

H-Leu-Val-Val-Tyr-Pro-Trp-Thr-OH

$C_{45}H_{64}N_8O_{10}$ Mol.Wt.: 877.06

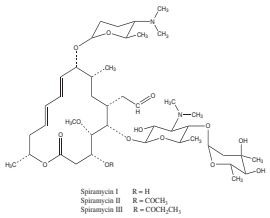
An endogenous factor that exhibits inhibitory effects on enkephalin-degrading enzymes.

Yamamoto Y, Ono H, Ueda A, Shimamura M, Nishimura K, Hazato T. Curr Protein Pept Sci. 3: 587-99 (2002).

5 mg	$166.40
10 mg	$283.20
25 mg	$499.20

S6232

Spiramycin



Spiramycin I R = H
Spiramycin II R = $COCH_3$
Spiramycin III R = $COCH_2CH_3$

[8025-81-8]

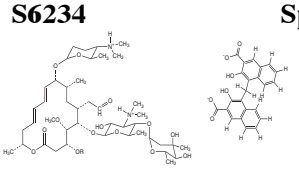
A macrolide antibiotic. It has been shown to decrease the replication index of human lymphocytes.

Rencuzogullari E, Ila HB, Topatkas M et al. Teratogenesis Carcinogenesis Mutagenesis. 22:51-58 (2002).

1 g	$39.20
5 g	$134.40

S6234

Spiramycin Embonate



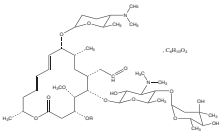
Spiramycin I Embonate R = H
Spiramycin II Embonate R = $COCH_3$
Spiramycin III Embonate R = $COCH_2CH_3$

1 g	$51.60
5 g	$154.60

S6233

Spiramycin Hexanedioate

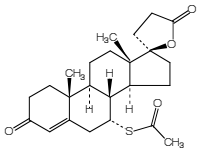
Spiramycin Adipate



Adipic spiramycin I R = H
Adipic spiramycin II R = $COCH_3$
Adipic spiramycin III R = $COCH_2CH_3$

1 g	$50.40
5 g	$151.20

S6235 — **Spironolactone** — 1 g $37.00; 5 g $147.90



$C_{24}H_{32}O_4S$ Mol. Wt.: 416.57 [52-01-7]

An aldosterone antagonist. It directly interferes with the biosynthesis of aldosterone in bovine and certain human adrenal cortical tissue.

Cheng SC, Suzuki K, Sadee W et al. Endocrinology. 99:1097-106 (1976).
Bendtzen K, Hansen PR, Rieneck K. Clin Exp Immunol. 134:151-8 (2003).

S7080 — **SR Poly Caspases Assay Kit** (See page 31 for more information) — 25 Tests $178.10; 100 Tests $435.70

SR-VAD-FMK

S7081 — **SR Caspases 3 and 7 Assay Kit** (See page 31 for more information) — 25 Tests $200.50; 100 Tests $480.50

SR-DEVD-FMK

S7082 — **SR Caspase 9 Assay Kit** (See page 31 for more information) — 25 Tests $200.50; 100 Tests $480.50

SR-LEHD-FMK

S7083 — **SR-101-Phe-CMK FLISP™ Assay Kit** (See page 31 for more information) — 25 Tests $144.50; 100 Tests $413.30

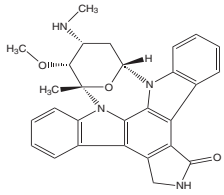
SFCK

S7084 — **SR-101-Leu-CMK FLISP™ Assay Kit** (See page 31 for more information) — 25 Tests $144.50; 100 Tests $413.30

SLCK

S7600 — **Staurosporine** (See page 28 for more information) — 1 mg $307.50; 5 mg $1,200.00

2-8 °C

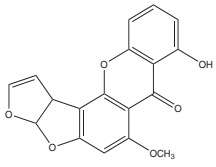


$C_{28}H_{26}N_4O_3$ FW 466.5 [62996-74-1]

A protein kinase C inhibitor that induces apoptosis in many cell types. Experimental results obtained in a cell-free assay suggest that cytoplasmic proteins directly modulated by staurosporine may be involved in signaling the induction of DNA fragmentation and apoptosis.

Romanova D, Novotny L, Sedlak J et al. Neoplasma. 45: 204-9. (1998).
Zhang H, Hoang T, Saeed B, Ng SC. Prostate. 29:69-76 (1996).
Bertrand R, Solary E, O'connor P et al. Exp Cel Res. 211:314-21 (1994).

S7717 — **Sterigmatocystin** — 1 mg $35.00; 5 mg $132.00; 10 mg $238.00

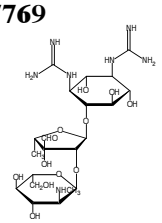


$C_{18}H_{12}O_6$ Mol. Wt.: 324.28 [10048-13-2]

Mycotoxin produced by strains of the common molds. Induces sister chromatid exchanges in bone marrow cells of mice. It causes necrosis of the liver and kidney and has an inhibitory effect on orotic acid incorporation into nuclear RNA.

Curry PT et al. Mutat. Res. 137:111 (1984).
Terao K Acta Pathol. Jpn. 23:647-53 (1973).
Nel W, Pretorius HE Biochem. Pharmacol. 19:957-9 (1970).

S7769 — **Streptomycin sulfate** — 25 g $19.80; 50 g $33.30; 100 g $56.70

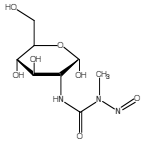


$(C_{21}H_{39}N_7O_{12})_2.3H_2SO_4$ Mol. Wt.: 1457.39 [3810-74-0]

An aminosugar containing antibiotic from *Streptomyces griseus*. It was the first antibiotic used for the treatment of tuberculosis. Its mechanism of action is the inhibition of ribosome protein synthesis.

Kornder JD. Med Hypotheses. 58:34-46 (2002).

S7870 — **Streptozocin** — 50 mg $20.20; 100 mg $31.40; 500 mg $106.40



Streptozotocin; N-(methyl-nitrosocarbamoyl)-α-D-glucosamine

$C_8H_{15}N_3O_7$ Mol. Wt.: 265.22 [18883-66-4]

An antitumor agent, used primarily for the treatment of pancreatic cancers.

DuPriest RW Jr., Huntington MC, Massey WH et al. Cancer. 35:358-367 (1975).

S7871

H-Thr-Lys-Phe-Thr-Leu-Ser-Leu-Asp-Val-Pro-Thr-Asn-Ile-Met-Asn-Leu-Leu-Phe-Asn-Ile-Ala-Lys-Ala-Lys-Asn-Leu-Arg-Ala-Gln-Ala-Ala-Ala-Asn-Ala-His-Leu-Met-Ala-Gln-Ile-NH_2

Stresscopin, human

$C_{195}H_{326}N_{56}O_{53}S_2$ Mol.Wt.: 4367.24

A neuropeptide with high affinity for type 2 corticotropin-releasing factor receptor. It is a potent regulator of cardiovascular functions.

Nazarloo HP, Buttrick PM, Saadat H, Dunn AJ. Curr Protein Pept Sci. 7: 229-39 (2006).

0.5 mg	$147.20
1 mg	$249.60
2.5 mg	$441.60

S7872

H-His-Pro-Gly-Ser-Arg-Ile-Val-Leu-Ser-Leu-Asp-Val-Pro-Ile-Gly-Leu-Leu-Gln-Ile-Leu-Leu-Glu-Gln-Ala-Arg-Ala-Arg-Ala-Ala-Arg-Glu-Gln-Ala-Thr-Thr-Asn-Ala-Arg-Ile-Leu-Ala-Arg-Val-NH_2

Stresscopin-Related Peptide, human

$C_{205}H_{358}N_{68}O_{57}$ Mol.Wt.: 4687.56

A type 2 corticotropin-releasing factor receptor agonist.

Gardiner SM, March JE, Kemp PA, Bennett T. J Pharmacol Exp Ther. 321: 221-6 (2007).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

S8005

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH_2

Substance P

$C_{63}H_{98}N_{18}O_{13}S_1$ Mol.Wt.: 1347.66

A neurotransmitter peptide that is distributed in sensory nerve fibers, bone, and bone-related tissue. It is involved in pain signal transmission and modulates the function of inflammatory and immune responses.

Michalski CW, Autschbach F, and Selvaggi F *et. al.* Am J Surg. 193: 476-81 (2007).

Corcoran KE, Patel N, Rameshwar P. J Immunol. 178: 2075-82 (2007).

Monnikes H, van der Voort IR, and Wollenberg B *et. al.* Digestion 71:111-23 (2005).

5 mg	$57.60
10 mg	$97.60
25 mg	$172.80

S8006

H-Arg-Pro-Lys-Pro-OH

Substance P (1-4)

$C_{22}H_{40}N_8O_5$ Mol.Wt.: 496.6

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

S8007

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-OH

Substance P (1-7)

$C_{41}H_{65}N_{13}O_{10}$ Mol.Wt.: 900.06

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

S8008

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-OH

Substance P (1-9)

$C_{52}H_{77}N_{15}O_{12}$ Mol.Wt.: 900.06

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

S8009

H-Phe-Phe-Gly-Leu-Met-NH_2

Substance P (7-11)

$C_{31}H_{44}N_6O_5S_1$ Mol.Wt.: 612.8

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

S8010

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Nle-NH_2

[Nle11] Substance P

$C_{64}H_{100}N_{18}O_{13}$ Mol.Wt.: 1329.62

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

S8011

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Pro-Leu-Met-NH_2

[Pro9] Substance P

$C_{66}H_{102}N_{18}O_{13}S_1$ Mol.Wt.: 1387.73

0.5 mg	$32.00
1 mg	$54.40
2.5 mg	$96.00

S8012

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met-NH_2

[Sar9] Substance P

$C_{64}H_{100}N_{18}O_{13}S$ Mol.Wt.: 1361.61

1 mg	$44.80
2 mg	$76.80
5 mg	$134.40

S8013

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Tyr-Gly-Leu-Met-NH_2

[Tyr8] Substance P

$C_{63}H_{98}N_{18}O_{14}S_1$ Mol.Wt.: 1363.66

1 mg	$51.20
2 mg	$86.40
5 mg	$153.60

S8014

H-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-OH

Substance P, Free Acid

$C_{63}H_{97}N_{17}O_{14}S$ Mol.Wt.: 1348.65

5 mg	**$57.60**
10 mg	**$97.60**
25 mg	**$172.80**

S7908

Suc-Ala-Pro-Ala-pNA

Suc-APA-pNA

$C_{21}H_{27}N_5O_8$ Mol Wt: 477.5

100 mg	**$60.80**
1g	**$376.00**

S7909

Suc-Leu-Glu-Pro-Phe-pNA

Suc-LEPF-pNA

$C_{35}H_{44}N_6O_{11}$ Mol Wt: 724.7

1 mg	**$64.00**
10 mg	**$256.00**

S7910

Suc-Arg-Gly-Pro-Phe-pNA

Suc-RGPF-pNA

$C_{32}H_{41}N_9O_9$ Mol Wt: 695.7

1 mg	**$64.00**
10 mg	**$256.00**

S7911

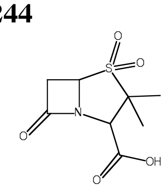
Suc-Ser-Asp-Pro-Phe-pNA

Suc-SDPF-pNA

$C_{31}H_{36}N_6O_{12}$ Mol Wt: 684.6

1 mg	**$64.00**
10 mg	**$256.00**

S8244



Sulbactam

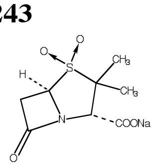
$C_8H_{11}NO_5S$ Mol. Wt.: 233.24 [68373-14-8]

A beta-lactamase inhibitor that has similar characteristics as ampicillin. Often used in combination with other antibiotics.

500 mg	**$66.00**
1 g	**$114.20**
5 g	**$439.10**

Wexler HM, Molitoris E, Finegold SM. Antimicrob Agents Chemother. 35:1219-24 (1991).
Foulds G, Stankewich JP, Marshall DC et al. Antimicrob Agents Chemother. 2:692-9 (1983).

S8243

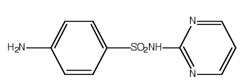


Sulbactam sodium salt

$C_8H_{10}NNaO_5S$ Mol. Wt.: 255.22 [69388-84-7]

500 mg	**$61.60**
1 g	**$112.00**
5 g	**$436.80**

S8245



Sulfadiazine

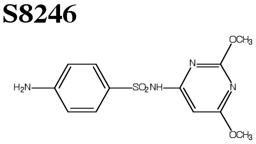
$C_{10}H_{10}N_4O_2S$ Mol. Wt.: 250.28 [68-35-9]

Anti-microbial agent. Its chlorambucil derivative is found to be a potent antitumor agent.

50 g	**$16.30**
100 g	**$27.20**
500 g	**$108.50**

Huang Z, Yang G, Lin Z, Huang J. Bioorg Med Chem Lett 11:1099-103 (2001).

S8246



Sulfadimethoxine

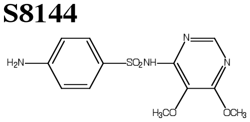
$C_{12}H_{14}N_4O_4S$ Mol. Wt.: 310.33 [122-11-2]

A sulfonamide antibiotic.

10 g	**$36.70**
25 g	**$66.00**
100 g	**$183.10**

Fish JG, Morgan DW, Horton CR. Vet Med Small Anim Clin. 60:1201-3 (1965).

S8144



Sulfadoxine

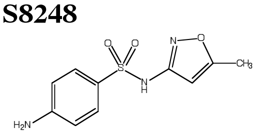
$C_{12}H_{14}N_4O_4S$ Mol. Wt.: 310.33 [2447-57-6]

An antibacterial agent.

10 g	**$43.20**
25 g	**$92.40**
100 g	**$246.40**

Bohni E, Fust B, Rieder J. Chemotherapy. 14:195-226 (1969).

S8248



Sulfamethoxazole

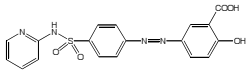
$C_{10}H_{11}N_3O_3S$ Mol. Wt.: 253.28 [723-46-6]

An antimicrobial. Used in conjunction with trimethoprim as the first-line treatment for P. carinii pneumonia.

10 g	**$22.40**
25 g	**$39.20**
100 g	**$112.00**

Kovacs JA, Gill VJ, Meshnick S et al. JAMA. 286: 2450-2460 (2001).
Rodriguez MR, Pizzorno MT, Albonico SM. J Pharm Sci. 66:121-123 (1977).

S8247



Sulfasalazine

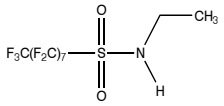
$C_{18}H_{14}N_4O_5S$ Mol. Wt.: 398.39 [599-79-1]

It is a disease-modifying antirheumatic drug (DMARD) that inhibits extracelluar release of proinflammatory secretory phospholipase A2. It was found to induce neutrophil apoptosis and regulate human B cell function.

Pruzanski W, Stefanski E, Vadas P, Ramamurthy NS. Biochem Pharm. 53:1901-1907 (1997).
Akahoshi T, Namai R, Sekiyama N et al. J Leuk Biol. 62:817-826 (1997).
Hirohata S, Ohshima N, Yanagida T, Aramaki K. Int Immunopharm. 2:631-640 (2002).

10 g	$40.70
50 g	$122.00
100 g	$196.60

S8251



Sulfluramid

$C_{10}H_6F_{17}NO_2S$ Mol. Wt.: 527.20 [4151-50-2]

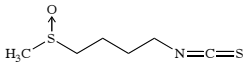
A delayed-action insecticide.

Reid BL, Bennett GW, Barcay SJ. J Econ Entomol. 83:148-152 (1990).

500 mg	$42.60
1 g	$61.60
5 g	$246.40

S8044

-20 °C



R,S-Sulforaphane (See page 27 for more information)

1-Isothiocyanato-4-(methylsulfinyl)-butane, D,L-sulforaphane

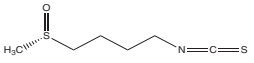
$C_6H_{11}NOS_2$ Mol. Wt. 177.29 b.p. 125-135°C (0.01 mm) [4478-93-7] d=1.183

Sulforaphane is a Phase II enzyme inducer present in brocolli. It was found to inhibit chemically induced mammary tumor formation in rats. R,S-sulforaphane is a synthetic compound.

Zhang Y, Talalay P, Cho CG, Posner GH. Proc Natl Acad Sci USA. 89:2399-2403 (1992).
Zhang Y, Kensler TW, Cho CG et al. Proc Natl Acad Sci USA. 91:3147-3150 (1994).

25 mg	$97.30
50 mg	$161.80
100 mg	$291.20
500 mg	$981.70

S8045



S-Sulforaphane (See page 27 for more information)

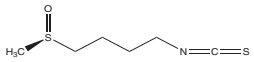
(+)1-Isothiocyanato-4S-(methylsulfinyl)-butane, D-sulforaphane

$C_6H_{11}NOS_2$ Mol. Wt. 177.29 b.p. 125-135°C (0.01 mm)

5 mg	$115.30
10 mg	$196.60

S8046

+4 °C



R-Sulforaphane (See page 27 for more information)

(-)1-Isothiocyanato-4R-(methylsulfinyl)-butane, L-sulforaphane

$C_6H_{11}NOS_2$ Mol. Wt. 177.29 [142825-10-3]

$[\alpha]_D^{22}$ -73.1± 0.4° (c=1, $CHCl_3$) b.p. 125-135°C (0.01mm)

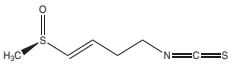
Chiral natural product from broccoli. Inducer of phase II enzymes.

Zhang Y, Talalay P, Cho C-G, Posner GH. Proc Natl Acad Sci USA. 89:2399-2403 (1992).

10 mg	$140.40
25 mg	$280.60
50 mg	$530.80

S8049

-20 °C



S-Sulforaphene

(-)4-Isothiocyanato-4S-(methylsulfinyl)-1-butene, L-sulforaphene

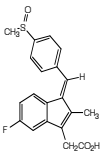
$C_6H_9NOS_2$ Mol. Wt. 175.27 [592-95-0] $[\alpha]_D$ -99.6°

Chiral natural product from radish.

10 mg	$140.40
25 mg	$280.60
50 mg	$530.80

S8145

RT



Sulindac (See page 28 for more information)

$C_{20}H_{17}FO_3S$ Mol. Wt.: 356.42 [38194-50-2]

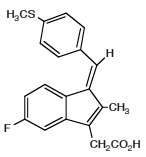
Non-steroidal anti-inflammatory agent. Has undergone clinical trials as a chemopreventive.

Kelloff GJ, Boone CW, Crowell JA et al. Cancer Epidemiol, Biomarkers Prev. 3:85-98 (1994).

5 g	$32.30
25 g	$109.80

S8147

RT



Sulindac sulfide (See page 28 for more information)

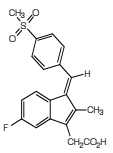
$C_{20}H_{17}FO_2S$ Mol.Wt.: 340.4 [32004-67-4]

An active metabolite of Sulindac. Inhibits cyclooxygenase, but induces apoptosis by a cyclooxygenase-independent mechanism.

Meade EA, Smith WL, DeWitt DL. J Biol Chem. 268:6610-6614 (1993).
Piazza GA, Rahm AL, Krutzsch et al. Cancer Res. 55:3110-3116 (1995).

25 mg	$66.00
100 mg	$183.10
500 mg	$585.50

S8146



Sulindac sulfone (See page 28 for more information)

$C_{20}H_{17}FO_4S$, F.W. 372.41, [59864-04-9]

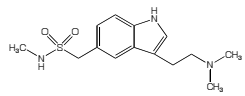
A metabolite of Sulindac, found to inhibit rat colon and mammary carcinogenesis without reducing prostaglandin levels.

Piazza GA, Alberts DS, Hixson LJ et al. Cancer Res. 57:2909-2915 (1997).
Thompson HJ, Jiang C, Lu J et al. Cancer Res. 57:267-271 (1997).

50 mg	$66.00
250 mg	$190.20
500 mg	$307.50

S8151

Sumatriptan Succinate



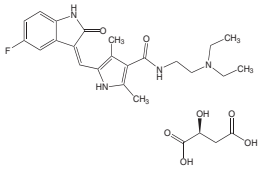
$C_{14}H_{21}N_3O_2S \cdot C_4H_6O_4$ Mol. Wt.: 413.49 [103628-48-4]

Antimigrane.

100 mg	$75.00
250 mg	$145.00
1 g	$450.00

S8253

Sunitinib Malate



Sutent

$C_{26}H_{33}FN_4O_5$ Mol. Wt.: 532.56 [341031-54-7]

Inhibitor of VEGF and PDGF tyrosine kinase.

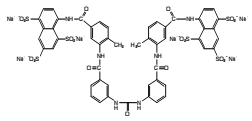
Sosman JA, Puzanov I, Atkins MB Clin. Cancer Res. 13:764s-769s (2007).

25 mg	$80.00
100 mg	$250.00

S8169

Suramin hexasodium salt

+4 deg C



$C_{51}H_{34}N_6O_{23}S_6Na_6$ Mol. Wt.: 1429.19 [129-46-4]

An antitumor and antiparasitic compound. Uncouples G-proteins from receptors.
A potent inhibitor of melanoma heparanase and tumor cell metastasis.

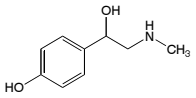
Huang RR, Dehaven RN, Cheung AH et al. Mol Pharmacol. 37:304-310 (1990).
Nakajima M, DeChavigny A, Johnson CE et al. J BiolChem. 266:9661-9666 (1991).

50 mg	$108.20
250 mg	$365.80

S9753

Synephrine

2-8 °C



1-[4-Hydroxyphenyl]-2-[methyl-amino]ethanol

$C_9H_{13}NO_2$ Mol. Wt.: 167.21 [94-07-5]

A biogenic amine present in herbal products and citrus juices. It has antidepressant-like effects by stimulating α1-adrenoceptors in mice.

Hurlbut JA, Carr JR, Singleton ER et al. J Aoac Int. 81:1121-112 (1998).
Cancalon PF. J Aoac Int. 82:95-106 (1999).
Song DK, Suh HW, Jung JS et al. Neurosci Lett. 214:10-110 (1996).
Brown CM, McGrath JC, Midgley JM. Br J Pharmacol. 3:41-429 (1988).

1 g	$27.60
5 g	$100.10
10 g	$153.70

S9754

Syntide 2

H-Pro-Leu-Ala-Arg-Thr-Leu-Ser-Val-Ala-Gly-Leu-Pro-Gly-Lys-Lys-OH

$C_{68}H_{122}N_{20}O_{18}$ Mol.Wt.: 1507.85

A synthetic substrate for Ca^{2+} calmodulin-dependent protein kinase II

Colavizza M, Hervagault JF. Biochimie. 84: 605-10 (2002).

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

S9775

Systemin

H-Ala-Val-Gln-Ser-Lys-Pro-Pro-Ser-Lys-Arg-Asp-Pro-Pro-Lys-Met-Gln-Thr-Asp-OH

$C_{85}H_{144}N_{26}O_{28}S$ Mol.Wt.: 2010.32

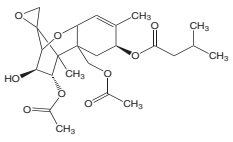
A polypeptide induces the expression of proteinase inhibitor gene in (tomato).

Wasternack C, Stenzel I and Hause B *et. al.* J Plant Physiol. 163: 297-306 (2006).

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

T0002

T2 Toxin



Insariotoxin, T2 Trichothecene

$C_{24}H_{34}O_9$ Mol. Wt.: 466.52 [21259-20-1]

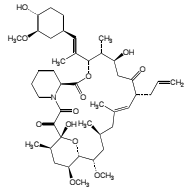
A potent trichothecene group mycotoxin. It elicits a severe inflammatory reaction in animals and has teratogenic effects.

Rocha O, Anasari K, Doohan FM Food Addit. Contam. 22:369-78 (2005).

1 mg	$30.00
5 mg	$118.00
10 mg	$210.00

T0008

Tacrolimus



FK506

$C_{44}H_{69}NO_{12}$ Mol. Wt.: 804.02 [104987-11-3]

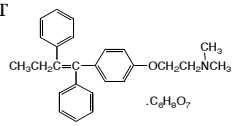
An immunosuppressant commonly used in transplant operations to prevent graft-versus-host disease.

Sawada S, Suzuki G, Kawase Y et al. J Immunol. 139:1797-1803 (1987).

1 mg	$50.40
5 mg	$134.40
25 mg	$543.20

T0250 — Tamoxifen Citrate

RT



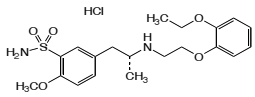
$C_{26}H_{29}NO \cdot C_6H_8O_7$ Mol. Wt.: 563.6 [54965-24-1]

Antiestrogenic compound. It inhibits carcinogenesis and induces apoptosis in cancer cell lines.

500 mg	$75.00
1 g	$133.10
5 g	$474.00

Ueo H, Matsuoka H, Honda M et al. Cancer Lett. 71:19-24 (1993).
Moon RC, Kelloff GJ, Detrisac CJ et al. Anticancer Res. 12:1147-53 (1992).
Cadieux, R. Post Graduate Medicine. 106:6 (1999).

T0251 — Tamsulosin Hydrochloride



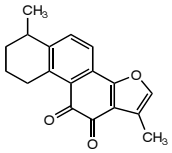
$C_{20}H_{28}N_2O_5S \cdot HCl$ Mol. Wt.: 444.98 mp 280-230 [106463-17-6]

An α1-adrenoceptor antagonist used to treat benign prostatic hypertrophy.

10 mg	$40.00
25 mg	$68.00
100 mg	$175.00

Takenaka T, Fujikura T, Honda K et al. Yakugaku Zasshi. 115:773-89 (1995).

T0153 — Tanshinone I (See page 28 for more information)



$C_{18}H_{16}O_3$ Mol. Wt.: 280.32 [568-73-0]

Tanshinones are pigments isolated from the herbal medicine *Salvia miltiorrhiza* BUNGE.

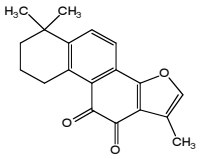
Tanshinone I was found to have cytotoxicity against human macrophages and IFN-g production in KLH-primed lymph node cells.

10 mg	$81.40
25 mg	$176.20
100 mg	$569.20

Li ZT, Yang BJ, Ma GE. Acta Pharm Sinica. 26:209-213 (1991).
Ryu SY, Lee CO, Choi SU, Planta Medica. 63:339-342 (1997).
Kang BY, Chung SW, Kim SH et. al. Immunopharm. 49:355-361 (2000).

T0154 — Tanshinone IIA (See page 28 for more information)

0 °C



$C_{19}H_{18}O_3$ Mol. Wt.: 294.34 [568-72-9] m.p. 198-200 °C

Tanshinone IIA is one of the active ingredients isolated from the roots of the Chinese medicinal plant, *Salvia miltiorrhiza* B. Tanshinones are cytoxic to various human cancer cell lines.

Dihydrotanshinones and others have anti-allergic activity in in vitro studies.

10 mg	$81.40
25 mg	$176.20
100 mg	$569.20

Sato M, Sato T, Ose Y et al. Mutat Res. 265:149-154 (1992).
Wu WL, Chang WL, Chen CF. Am J Chin Med. 19:207-216 (1991).
Ryu SY, Lee CO, Choi SU. Planta Med. 63:339-342 (1997).
Ryu SY. Oak MH, Kim KM. Planta Med. 65:654-655 (1999).

T0076 — TAT

H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-NH_2

$C_{64}H_{119}N_{33}O_{13}$ Mol.Wt.: 1558.88

A transcriptional transactivator protein essetial for HIV-1 viral replication. It also stimulates the transcription of intergratded provirus.

0.5 mg	$57.60
1 mg	$97.60
2.5 mg	$172.80

Liou L, Herrmann CH, Rice AP. J Virol. 76: 10579-10587 (2002).

T0077 — TAT 2-4

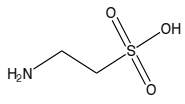
H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Gly-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Gly-OH

$C_{132}H_{240}N_{66}O_{29}$ Mol.Wt.: 3215.81

0.5 mg	$48.00
1 mg	$82.00
2.5 mg	$144.00

T0081 — Taurine

RT



2-Aminoethanesulfonic acid

$C_2H_7NO_3S$ Mol. Wt.: 125.15 m.p. 300°C [107-35-7]

Inhibits diethylnitrosamine and phenobarbital-induced heptocarcinogenesis.

50 g	$36.70
100 g	$66.60

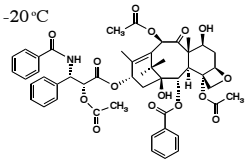
Okamoto, K., Sugie, S., Ohnishi, M et al. Jpn J Cancer Res. 87:30-36 (1996).

Taxanes: (See page 24 for more information)

Taxol (Please see Paclitaxel)

T0093 — 2'-Acetyltaxol

-20 °C

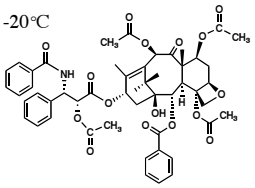


$C_{49}H_{53}O_{15}$ Mol. Wt.: 895.4 [92950-40-8]

5 mg	$203.30
10 mg	$315.40
25 mg	$616.00

T0094 **2',7-bis Acetyltaxol**

-20°C

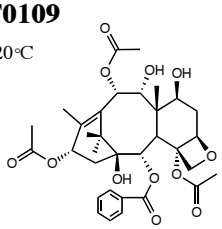


$C_{51}H_{55}O_{16}$ Mol. Wt.: 937.98

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0109 **13-Acetyl-9-Dihydrobaccatin-III**

-20°C

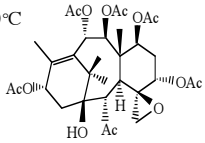


$C_{33}H_{42}O_{12}$ Mol. Wt.: 630.68

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0092 **1-Hydroxy Baccatin I**

-20°C

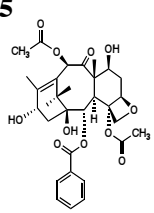


$C_{32}H_{44}O_{13}$ Mol. Wt.: 636.88

5 mg	$141.70
10 mg	$246.40
25 mg	$492.80

T0095 **Baccatin III**

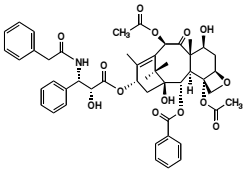
-20°C



$C_{31}H_{39}O_{11}$ Mol. Wt.: 586.63 [27548-93-2]

5 mg	$135.60
10 mg	$246.40
25 mg	$492.80

T0117 **Benzyl Analog of Taxol**

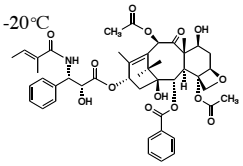


$C_{48}H_{53}NO_{14}$ Mol. Wt.: 867.93

1 mg	$246.40
5 mg	$837.80

T0096 **Cephalomannine**

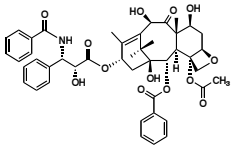
-20°C



$C_{45}H_{53}NO_{14}$ Mol. Wt.: 831.9 [71610-00-9]

5 mg	$135.60
10 mg	$246.40
25 mg	$492.80

T0118 **7-epi-Cephalomannine**

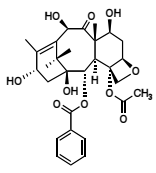


$C_{45}H_{53}NO_{14}$ Mol. Wt.: 831.9

5 mg	$345.00
10 mg	$591.40
25 mg	$985.60

T0099 **10-Deacetylbaccatin-III**

-20°C

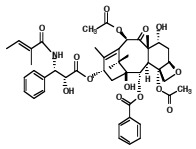


$C_{29}H_{36}NO_{10}$ Mol. Wt.: 544.60 [32981-86-5]

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0100 **10-Deacetyl taxol**

-20°C

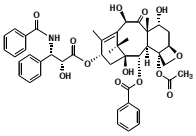


$C_{45}H_{49}NO_{13}$ Mol. Wt.: 811.87

5 mg	$197.20
10 mg	$315.40
25 mg	$677.60

T0101 **7-epi-10-Deacetyltaxol**

-20°C

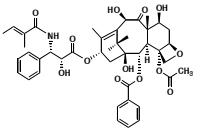


$C_{45}H_{49}NO_{13}$ Mol. Wt.: 811.87

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0097 **10-Deacetyltaxol-B (10-Deacetylcephalomannine)**

-20°C

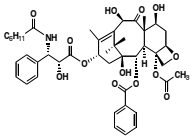


$C_{43}H_{51}NO_{13}$ Mol. Wt.: 789.86

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0098 **10-Deacetyltaxol-C**

-20°C

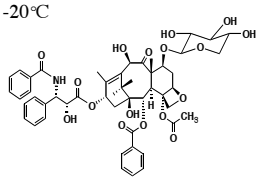


$C_{45}H_{55}NO_{13}$ Mol. Wt.: 817.92

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0108 **10-Deacetyl-7-xylosyltaxol, 90%**

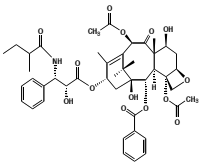
-20°C



$C_{50}H_{57}NO_{17}$ Mol. Wt.: 943.98

5 mg	$246.40
10 mg	$394.30
25 mg	$739.20

T0116 **2",3"-Dihydrocephalomannine**

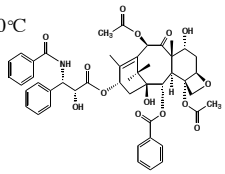


$C_{45}H_{55}NO_{14}$ Mol. Wt. 833.92

5 mg	$345.00
10 mg	$591.40
25 mg	$985.60

T0102 **7-epi-Taxol**

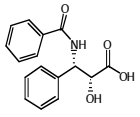
-20°C



$C_{47}H_{51}NO_{14}$ Mol. Wt. 853.91 [105454-04-4]

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0115 **Taxol side chain acid**

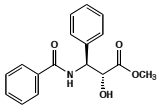


$C_{16}H_{15}NO_4$ Mol. Wt.: 285.29

5 mg	$141.70
10 mg	$246.40
25 mg	$492.80

T0103 **Taxol-side chain diol**

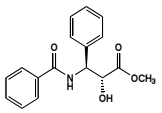
-20°C



$C_{16}H_{17}NO_3$ Mol. Wt.: 271.31

5 mg	$141.70
10 mg	$246.40
25 mg	$492.80

T0104 -20°C

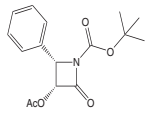


Taxol-side chain methyl ester

$C_{17}H_{17}NO_4$ Mol. Wt.: 299.32

5 mg	$141.70
10 mg	$246.40
25 mg	$492.80

T0119 -20°C



Taxol-side chain β-lactam

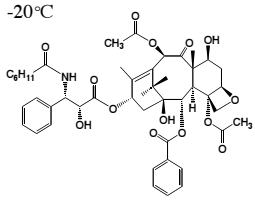
(3R,4S) -3-(acetyloxy)-2-oxo-4-phenyl-1-azetidinecarboxylic acid 1,1-dimethylethyl ester

$C_{16}H_{19}NO_5$ Mol. Wt.: 305.33 [161183-22-8]

Intermediate for the semi-synthesis of various taxanes.

5 mg	$126.50
10 mg	$220.00
25 mg	$440.00

T0105 -20°C

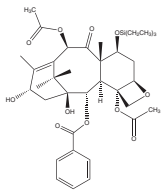


Taxol C

$C_{47}H_{57}NO_{14}$ Mol. Wt.: 859.95

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0090 -20°C



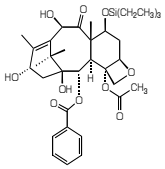
7-(triethylsilyl)-Baccatin III

$C_{37}H_{52}O_{11}Si$ Mol. Wt: 700.89

Intermediate for the semi-synthesis of various taxanes.

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

T0091 -20°C



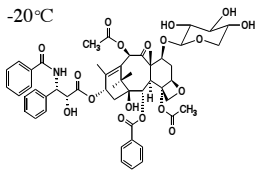
7-(triethylsilyl)-10-deacetyl Baccatin III

$C_{35}H_{50}O_{10}Si$ Mol. Wt.: 658.85

Intermediate for the semi-synthesis of various taxanes.

5 mg	$197.20
10 mg	$315.40
25 mg	$616.00

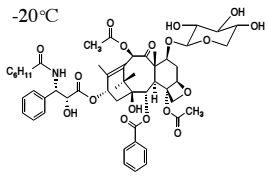
T0106 -20°C



Xylosyltaxol, 90%

5 mg	$215.10
10 mg	$345.00
25 mg	$672.00

T0107 -20°C



Xylosyltaxol C, 90%

5 mg	$141.70
10 mg	$246.40
25 mg	$492.80

T0110 -20°C

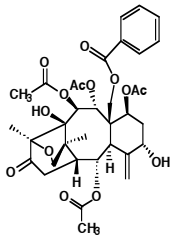
Taxanes Standards Mixture

A mixture of 13 different taxanes at a concentration of 50 μg/ml in methanol and 0.1% acetic acid.

10-deacetylbaccatin III, Baccatin III, 10 deacetyl-7-xylosyltaxol B, Taxinine M, 10 deacetyl 7 zylosyltaxol, 10 deacetyl 7 xylosyltaxol C, 10 deaceytltaxol, 7-Xylosyltaxol, Cephalomannine, 10-deacetyl-7-epitaxol, Paclitaxel, Taxol C, 7-epi taxol.

500 μl	$379.50

T0114

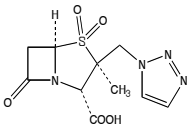


Taxinine M

$C_{35}H_{42}O_{14}$ Mol. Wt.: 686.70

5 mg	$246.40
10 mg	$394.30
25 mg	$739.20

T0298



Tazobactam

Free acid

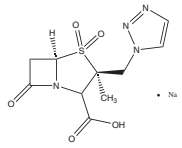
$C_{10}H_{12}N_4O_5S$ Mol. Wt.: 300.29 [89786-04-9]

A beta-lactamase inhibitor antibacterial.

Bryson HM, Brogden RN. Drugs. 47:506-35 (1994).

100 mg	$51.30
500 mg	$193.40
1 g	$351.30

T0299



Tazobactam sodium

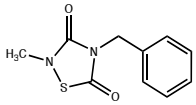
$C_{10}H_{11}N_4NaO_5S$ Mol. Wt.: 322.274 [89785-84-2]

A beta-lactamase inhibitor antibacterial.

Bryson HM, Brogden RN. Drugs. 47:506-35 (1994).

100 mg	$51.30
500 mg	$193.40
1 g	$351.30

T1298



TDZD-8

$C_{10}H_{10}N_2O_2S$ Mol. Wt.: 222.26 [327036-89-5]

An inhibitor of glycogen synthase kinase-3 (GSK3) beta, which was found to be a key intermediate in apoptotic signaling associated with neurodegenerative diseases such as Parkinsons'.

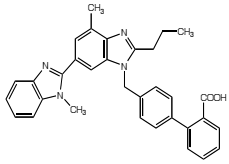
Chen G, Bower KA, Ma C et al. FASEB J. 18:1162-1164 (2004).
Barry FA, Graham GJ, Fry MJ et al. FEBS letters. 553:173-178 (2003).

5 mg	$180.40

Tegafur

See Ftorafur

T1644



Telmisartan

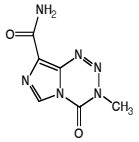
$C_{33}H_{30}N_4O_2$ Mol.Wt.: 514.62 [144701-48-4]

A nonpeptide angiotensin II receptor antagonist which inhibits the angiotensin II AT1 receptor.

McClellan KJ, Markham A. Drugs. 56:1039-44 (1998).

50 mg	$70.30
100mg	$109.80
500 mg	$402.60

T1849



Temozolomide

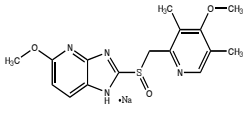
$C_6H_6N_6O_2$ Mol. Wt.: 194.15 [85622-93-1]

An alkylating antitumor agent that has antiangiogenic activity and induces apoptosis in cell cultures.

Tisdale MJ. Biochem Pharmacol. 36:457-62 (1987).
Kurzen H, Schmitt S, Naher H, Mohler T. Anticancer Drugs. 14:515-22 (2003).
Gunther W, Pawlak E, Damasceno R et al. Br J Cancer. 88:463-9 (2003).

25 mg	$92.40
100 mg	$277.20
500 mg	$1,108.80

T1754



Tenatoprazole Monosodium

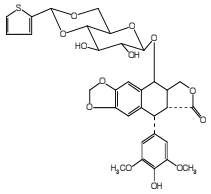
$C_{16}H_{17}N_4O_3S{\cdot}Na$ Mol. Wt.: 369.40 [113712-98-4]

A proton pump inhibitor.

Nakamura T, Nippon Rinsho. 60 Suppl. 2:650-4 (2002).

100 mg	$43.20
500 mg	$129.40
1 g	$207.00

T1652



Teniposide

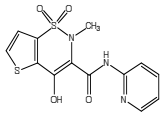
$C_{32}H_{32}O_{13}S$ Mol. Wt.: 656.65 [29767-20-2]

A derivative of the cytotoxic natural product, epipodophyllotoxin, acts on topoisomerase II that results in DNA strand breaks.

Ross W, Rowe T, Glisson B, Yalowich J, Liu L. Cancer Res. 44:5857-60 (1984).

25 mg	$58.60
100 mg	$197.60
500 mg	$731.90

T1654



Tenoxicam (See page 23 for more information)

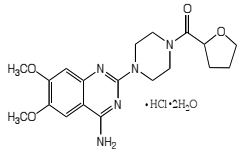
$C_{13}H_{11}N_3O_4S_2$ Mol. Wt.: 337.38 [59804-37-4]

Nonsteroidal anti-inflammmatory, analgesic agent. Found to have antitumor effects.

Giordano V, Giordano M, Knackfuss IG et al. Injury 34:85-94 (2003).
Sakusabe N, Okada K, Sato K et al. Jpn J Cancer Res. 90:1146-51 (1999).

250 mg	$31.20
1 g	$81.40
5 g	$271.10

T1670



Terazosin Hydrochloride dihydrate

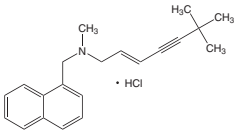
$C_{19}H_{25}N_5O_4 \cdot HCl \cdot 2H_2O$ Mol. Wt.: 423.93 [70024-40-7]

An α1-selective blocker. Its inhibitory effect on prostate tumor growth may be the result of antiangiogenic activity.

Kyncl JJ. J Clin Pharmacol. 33:878-83 (1993).
Pan SL, Guh JH, Huang YW et al. J Urol. 169:724-9 (2003).

50 mg	$61.60
250 mg	$246.40
1 g	$739.20

T1672



Terbinafine Hydrochloride

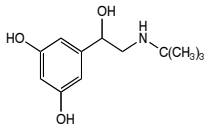
$C_{21}H_{25}N \cdot HCl$ Mol. Wt.: 327.90 [78628-80-5]

An antimicrobial agent. It was recently found to have anticancer properties in human cancer cell lines.

Lee WS. Chen RJ. Wang YJ et al Int J Cancer. 106:125-37 (2003).
Petranyi G, Ryder NS, Stutz A. Science. 224:1239-41 (1984).

1 g	$61.60
5 g	$246.40
10 g	$431.20

T1674



Terbutaline

$C_{12}H_{19}NO_3$ Mol. Wt.: 225.28 [23031-25-6]

A beta-adrenoceptor agonist used to treat asthma and premature labor.

Aldridge JE, Meyer A, Seidler FJ, Slotkin TA. Toxicol Appl Pharmacol. 203:132-44 (2005).

1 g	$35.00
5 g	$145.00

T1675

Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe-OH

Teriparatide Acetate

$C_{181}H_{291}N_{55}O_{51}S_2$ Mol.Wt.: 4117.72 [52232-67-4]

A synthetic peptide that consists the 1-34 amino acid fragment of human parathyroid hormone. It stimulates new bone formation, repairs structural defects and reduces risks of fractures in postmenauposal women with severe osteoporosis.

Yodfat Y. Harefuah. 146:134-9, 164 (2007).

Please inquire

T1673

Gly-Gly-Gly-c[Cys-Tyr-Phe-Gln-Asn-Cys]-Pro-Lys-Gly-NH_2

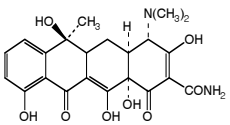
Terlipressin Acetate

$C_{52}H_{74}N_{16}O_{15}S_2$ Mol.Wt.: 1227.37 [14636-12-5]

In humans, the anabolic effects of teriparatide are manifest as an increase in skeletal mass, an increase in markers of bone formation and resorption, and an increase in bone strength.

1 mg	$50.00
5 mg	$175.00

T1677



Tetracycline

$C_{22}H_{24}N_2O_8$ Mol. Wt.: 444.43 [60-54-8]

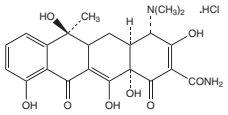
It is used in the treatment of chronic inflammatory cells. Tetracycline derivatives induce apoptosis in osteoclasts, Jurkat T lymphocyte cells and in cultured monocytes and macrophages.

Bettany JT, Peet NM, Wolowacz RG et al. Bone. 27:75-80 (2000).
Liu J, Kuszynski CA, Baxter BT. Biochem Biophys Res Commun. 260:562-7 (1999).
Bettany JT, Wolowacz RG. Adv dent Res. 12: 136-43 (1998).

10 g	$23.20
25 g	$36.70
100 g	$105.80

T1679

Tetracycline Hydrochloride



$C_{22}H_{24}N_2O_8 \cdot HCl$ Mol. Wt.: 480.90 [64-75-5]

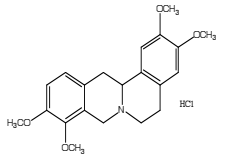
Antimicrobial agent. Tetracycline-controlled antisense bcl-2 expression induce apoptosis in human neuroblastoma cell line SK-N_MC.

Atrasheuskaya AV, Fredeking TM, Ignatyev GM. Clin Exp Immunol. 131:148-154 (2003).
Guan J, Chen J, Zhao H. Zhonghua Bing Li Xue Za Zhi. 31:135-139 (2002).

1 g	$17.10
5 g	$27.20
25 g	$92.40

T1676

L-Tetrahydropalmatine Hydrochloride



$C_{21}H_{25}NO_4 \cdot HCl$ Mol. Wt.: 391.89 [10097-84-4]

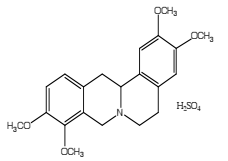
An alkaloid found in the plants of the Carydalis species. It depletes neurotransmitters such as dopamine, noradrenaline and serotonin.

Liu GQ, Algeri S, Garattini S. Arch Int Pharmacodyn Ther. 258:39-50 (1982).
Lin MT, Chueh FY, Hsieh MT, Chen CF. Clin Exp Pharmacol Physiol. 23:738-42 (1996).

100 mg	$29.40
500 mg	$105.60

T1678

D,L-Tetrahydropalmatine Sulfate



$C_{21}H_{25}NO_4 \cdot H_2SO_4$ Mol. Wt.: 453.50

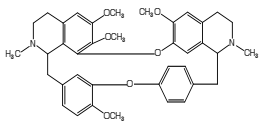
An alkaloid found in the plants of the Carydalis species. It depletes neurotransmitters such as dopamine, noradrenaline and serotonin.

Liu GQ, Algeri S, Garattini S. Arch Int Pharmacodyn Ther. 258:39-50 (1982).
Lin MT, Chueh FY, Hsieh MT, Chen CF. Clin Exp Pharmacol Physiol. 23:738-42 (1996).

100 mg	$36.70
500 mg	$134.70

T1777

Tetrandrine



$C_{38}H_{42}N_2O_6$ Mol. Wt.: 622.75 [518-34-3]

A bisbenzylisoquinoline alkaloid, purified from chinese medicinal herb. It acts as an immuno suppressant and a Ca^{+2} channel blocker. Tetrandrine also induces apoptotic cell death in human leukemic U397 and human leukemic HL-60 cells.

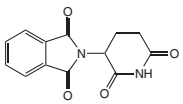
Lai YL, Chen YJ, Wu TY et al. Anticancer Drugs. 9:77-81 (1998).
Dong Y, Yang MM, Kwan CY. Life Sci. 60:135-40 (1997).

100 mg	$30.80
500 mg	$83.80
1 g	$129.40

T2800

Thalidomide

RT



$C_{13}H_{10}N_2O_4$ Mol. Wt.: 258.23 [50-35-1]

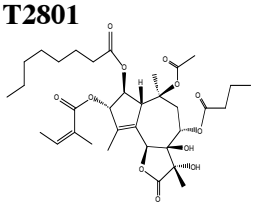
Highly teratogenic compound associated with fetal abnormalities. Recently found to have antiangiogenic and antitumor activities.

Fratta ID et al. Toxicol Appl Pharmacol 7:268 (1965).
D'Amato J, Loughnan MS, Flynn E, Folkman J. Proc Natl Acad Sci USA. 91:4082-5 (1994).
Eisen T, Boshoff C, Mak I et al. Br J Cancer. 82:812-7 (2000).

100 mg	$76.90
250 mg	$123.00
500 mg	$153.70

T2801

Thapsigargin



$C_{34}H_{50}O_{12}$ Mol.Wt.: 650.75 [67526-95-8]

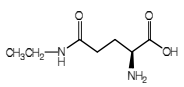
A cell permeable intracellular calcium releaser and tumor promoter.

Hakii H, Fujiki H, Suganuma M et al. J. Cancer Res. Clin. Oncol 111:177-181 (1986).
Takemura H, Hughes AR, Thastrup O, Putney JW. J. Biol. Chem. 264:12266-12271 (1989).

1 mg	$83.50
5 mg	$332.60

T2816

L-Theanine



N γ-Ethyl L-glutamine, L-glutamic acid γ-(ethylamide)

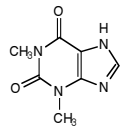
$C_7H_{14}N_2O_3$ Mol. Wt.: 174.20 [3081-61-6]

One of the components of green tea. It was found to decrease the blood pressure of spontaneously hypertensive rats. It modulates the activity of several antitumor drugs.

Yokogoshi, H, Kat Y, Sagesaka YM et al. Biosci Biotech Biochem. 59:615-618 (1995).
Sugiyama T, Sadzuka Y, Nagasawa K et al. J Cancer Res. 90:775-780 (1999).

1 g	$34.00
5 g	$132.90
25 g	$474.40

T2817 RT



Theophylline

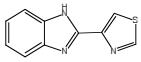
$C_7H_8N_4O_2$ Mol.Wt.: 180.16 [58-55-9]

An inhibitor of cyclic phosphodiesterase. Found to decrease incidence and multiplicity of tumors in the brain, spinal cord, peripheral nerves, and kidneys.

Alexandrov VA, Bespalov VG, Petrov AS et al. Carcinogenesis. 17:1935-1939 (1996).

100 g	$33.00
250 g	$82.40

T2930



Thiabendazole

$C_{10}H_7N_3S$ Mol. Wt.: 201.25 [148-79-8]

A widely used fungicide and antihelminthal agent. Mediates Cytochrome P450 1A1 induction.

Ogunsusi RA. Res Vet Sci. 25:251-252 (1978).

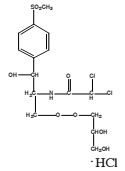
lemaire G, Delescluse C, Pralavorio M et al. Life Sci. 74:2265-2278 (2004).

10 g	$28.00
100 g	$54.90
500 g	$199.40

Thiamazole

See Methimazole

T2932



Thiamphenicol Glycinate HCl

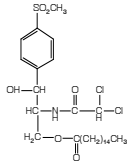
$C_{14}H_{19}Cl_3NO_6S$ Mol. Wt.: 449.70 [2611-61-2]

Used in the treatment of respiratory infections.

Ferrari V. Sex Transm Dis. 11:336-9 (1984).

1 g	$32.20
5 g	$120.00
25 g	$479.50

T2934



Thiamphenicol Palmitate

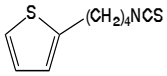
$C_{28}H_{45}Cl_2NO_6S$ Mol. Wt.: 594.63

Non-carcinogenic synthetic ester of thiamphenicol.

Della Bella D, Veronese M, Marca G, Franceschinis R. Arzneimittelforschung. 24:836-9 (1974).

5 g	$104.00
25 g	$399.60

T3031



Thienylbutyl Isothiocyanate

$C_9H_{11}NS_2$ Mol. Wt.: 197.32

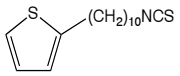
(See page 28 for more information)

A bifunctional inhibitor of lung and colon carcinogenesis.

Lam LKT, Kenney P, Bergstrom CP, Lam SH. Proc. Am. Assoc. Cancer Res. 40: 57 (1999).

25 mg	$102.50
50 mg	$172.60
100 mg	$288.60
500 mg	$1,150.80

T3032



Thienyldecyl Isothiocyanate

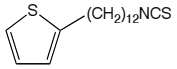
$C_{15}H_{23}NS_2$ Mol. Wt.: 281.48

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$108.70
50 mg	$182.50
100 mg	$295.80
500 mg	$1,163.70

T3033



Thienyldodecyl Isothiocyanate

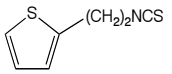
$C_{17}H_{27}NS_2$ Mol. Wt.: 309.54

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$131.30
50 mg	$235.80
100 mg	$422.30
500 mg	$1,590.40

T3034



Thienylethyl Isothiocyanate

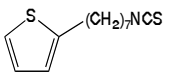
$C_7H_7NS_2$ Mol. Wt.: 169.27

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$55.30
50 mg	$100.10
100 mg	$176.00
500 mg	$719.30

T3035



Thienylheptyl Isothiocyanate

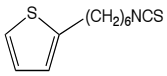
$C_{12}H_{17}NS_2$ Mol. Wt.: 239.40

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

10 mg	$104.80
25 mg	$236.60
50 mg	$423.70
100 mg	$727.40

T3036 **Thienylhexyl Isothiocyanate**



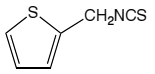
$C_{11}H_{15}NS_2$ Mol. Wt.: 225.38

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$104.00
50 mg	$176.00
100 mg	$287.80
500 mg	$1,150.80

T3037 **Thienylmethyl Isothiocyanate**



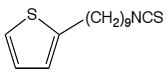
$C_6H_5NS_2$ Mol.Wt.: 155.24

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

100 mg	$48.90
500 mg	$199.70
1 g	$351.80

T3038 **Thienylnonanyl Isothiocyanate**



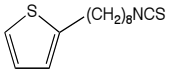
$C_{14}H_{21}NS_2$ Mol. Wt.: 267.46

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$131.30
50 mg	$235.80
100 mg	$422.30
500 mg	$1,590.40

T3039 **Thienyloctyl Isothiocyanate**



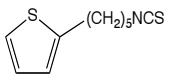
$C_{13}H_{19}NS_2$ Mol. Wt.: 253.43

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$115.30
50 mg	$179.10
100 mg	$291.00
500 mg	$1,158.80

T3040 **Thienylpentyl Isothiocyanate**



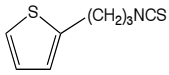
$C_{10}H_{13}NS_2$ Mol. Wt.: 211.35

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$108.70
50 mg	$182.50
100 mg	$295.80
500 mg	$1,163.70

T3041 **Thienylpropyl Isothiocyanate**



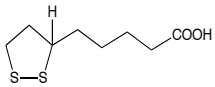
$C_8H_9NS_2$ Mol. Wt.: 183.30

(See page 28 for more information)

An analog of thienylbutyl isothiocyanate.

25 mg	$108.70
50 mg	$182.50
100 mg	$295.80
500 mg	$1,163.70

T3133 **Thioctic Acid**



$C_8H_{14}O_2S_2$ Mol. Wt.: 206.33 [62-46-4]

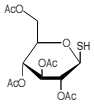
Growth factor for bacteria; prosthetic group, coenzyme or substrate in plants and animals. Occurs naturally in the (d) conformation. It has antioxidant and neuroprotecitve effects.

Packer L, Tritschler HJ, Wessel K. Free Radic Biol Med. 22:359-78 (1997).

5 g	$56.20
10 g	$96.00
25 g	$215.90

T2833 **1-Thio-β-D-glucose tetraacetate**

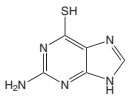
+4 °C



$C_{14}H_{20}O_9S$ Mol. Wt.: 364.4 [19879-84-6]

250 mg	$22.60
1 g	$67.20

T2835 **6-Thioguanine** (See page 29 for more information)

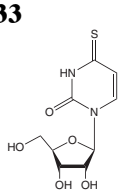


A chemotherapy drug that demonstrates anti-neoplastic, immunosuppressive and anti-cancer activities. 6-Thioguanine is often used to treat inflammatory diseases and leukemia.

Karran P. Br Med Bull 79-80: 153-70 (2006).
Sartorelli AC, Booth BA. Cancer Res. 25: 1393-40 (1965).

250 mg	$28.00
500 mg	$45.00
1 g	$70.00

T2933 **4-Thiouridine**



$C_9H_{12}N_2O_5S$ Mol. Wt.: 260.27 m.p. 141-143 C [13957-31-8]

Thionucleobase, used as antisense agent.

Testa SM, Disney MD, Turner DH, Kierzek R. Biochemistry 38:16655-62 (1999).

5 mg	$23.90
25 mg	$58.20
100 mg	$188.00
250 mg	$380.40

T2970 — **Thrombin Receptor Agonist**

H-Ser-Phe-Leu-Leu-Arg-Asn-Pro-Asn-Asp-Lys-Tyr-Glu-Pro-Phe-OH

$C_{81}H_{118}N_{20}O_{23}$ Mol.Wt.: 1739.96 [137339-65-2]

A synthetic peptide that mimics the effects of thrombin, activates proteaase activated receptor-1 in wounds of mice.

Strukova SM, Dugina TN, and Chistov IV *et. al.*Clin Appl Thromb Hemost. 7: 325-9 (2001).

1 mg	$115.20
2 mg	$195.20
5 mg	$345.60

T3093 — **Thymopentin**

H-Arg-Lys-Asp-Val-Tyr-OH

$C_{30}H_{49}N_9O_9$ Mol.Wt.: 679.8

A synthetic peptide corresponding to the 32-36 amino acid fragment of thymopoietin. It exhibits biological fuctions like the natural hormone including T-cells differentiation and immune systems regulation.

Onoue S, Liu B, Nemoto Y, Hirose M, Yajima T. Anal Sci. 22:1531-5 (2006).

5 mg	$96.00
10 mg	$163.20
25 mg	$288.00

T3094 — **Thymopentin Acetate (TP-5)**

Arg-Lys-Asp-Val-Tyr

$C_{30}H_{49}N_9O_9 \cdot CH_3COOH$ Mol Wt: 739.8

A synthetic immunomodulating pentapeptide, found to increase the number of cells undergoing apoptosis in irradiated cells and selectively bind to apoptotic cells.

Gonser S, Crompton NE, Folkers G et al. Mutat Res. 558:19-26 (2004).
Gonser S, Weber E, Folkers G. Pharm Acta Helv. 73:265-73 (1999).

10 mg	$53.80
50 mg	$233.00
1 g	$860.20

T3096 — **Thymosin α-1**

Ac-Ser-Asp-Ala-Ala-Val-Asp-Thr-Ser-Ser-Glu-Ile-Thr-Thr-Lys-Asp-Leu-Lys-Glu-Lys-Lys-Glu-Val-Val-Glu-Glu-Ala-Glu-Asn

$C_{129}H_{215}N_{33}O_{55}$ Mol Wt: 3108.3 [62304-98-7]

An immunomodulating thymic peptide that has been used for the treatment of chronic hepatitis B viral infection. It has been shown to activate tumor-associated macrophages to a tumoricidal state in a murine model.

Shrivastava P, Singh SM, Singh N. J Biomed Sci. 11:623-30 (2004).
Li CL, Zhang T, Saibara T et al. Int Immunopharmacol. 2:39-46 (2002).

10 mg	$400.00
50 mg	$1,280.00
1g	$4,800.00

T3097 — **Thymosin α-1 Acetate**

Ac-Ser-Asp-Ala-Ala-Val-Asp-Thr-Ser-Ser-Glu-Ile-Thr-Thr-Lys-Asp-Leu-Lys-Glu-Lys-Lys-Glu-Val-Val-Glu-Glu-Ala-Glu-Asn

$C_{129}H_{215}N_{33}O_{55}$ Mol.Wt.: 3108.3 [62304-98-7]

Thymosin α1 has immunoregulatory properties enhancing immune functions.
For the treatment of hepatitis B and C.

Please inquire

T3098 — **Thymosin β-4 Acetate**

Ac-Ser-Asp-Lys-Pro-Asp-Met-Ala-Glu-Ile-Glu-Lys-Phe-Asp-Lys-Ser-Lys-Leu-Lys-Lys-Thr-Glu-Thr-Gln-Glu-Lys-Asn-Pro-Leu-Pro-Ser-Lys-Glu-Thr-Ile-Glu-Gln-Glu-Lys-Gln-Ala-Gly-Glu-Ser-OH

$C_{212}H_{350}N_{56}O_{78}S$ Mol.Wt.: 4963.49 [77591-33-4]

An actin-sequestering peptide that modulates inflammation and healing in different tissues. It plays a major role in angiogenesis and tumor metastasis.

Moon HS, Even-Ram S, Kleinman HK, Cha HJ. Exp Cell Res. 312: 3425-31 (2006).
Larsson LI, Holck S. Hum Pathol. 38: 114-9 (2007).

Please inquire

T3099 — **Thymus Factor**

H-Gln-Ala-Lys-Ser-Gln-Gly-Gly-Ser-Asn-OH

$C_{33}H_{57}N_{13}O_{15}$ Mol.Wt.: 875.9

A thymic peptide hormone.

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

T3100 — **Thyrotropin-Releasing Hormone (TRH)**

H-pGlu-His-Pro-NH_2

$C_{16}H_{23}N_6O$ Mol.Wt.: 363.4

The final precursor for TRH formation. It signals through a G protein-coupled receptor.

Laakkonen L, Li W, Perlman JH, and Guarnieri F. *et. al.*Mol Pharmacol. 49: 1092-6 (1996).

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

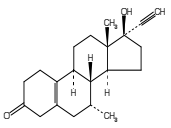
T3101 — **TRH, Free Acid**

pGlu-His-Pro-OH

$C_{16}H_{21}N_5O_5$ Mol.Wt.: 363.4

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

T3305 **Tibolone**



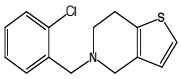
$C_{21}H_{28}O_2$ Mol. Wt.: 312.45 [5630-53-5]

A synthetic normethyl testosterone derivative used in the prevention of postmenopausal osteoporosis. It is capable of inducing apoptosis in breast cancer cell lines.

Coope J. Br Med J. 281:456-7 (1980).
Kandouz M, Lombet A, Perrot JY et al. J Steroid Biochem Mol Biol. 69:463-71 (1999).

100 mg	$123.20
500 mg	$462.00
1 g	$739.20

T3310 **Ticlopidine Hydrochloride**



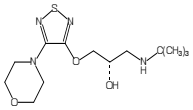
$C_{14}H_{14}ClNS.HCl$ Mol. Wt.: 300.25 [53885-35-1]

A platelet aggregation inhibitor capable of inducing apoptosis in various cancer cell lines. Its effects on platelet aggregation may be the result of inhibition of VEGF.

Chen WH, Yin HL, Chang YY et al. Kaohsiung J Med Sci. 13:589-97 (1997).
Ma L, Elliott SN, Cirino G et al. Proc Natl Acad Sci U S A. 98:6470-5 (2001).

1 g	$21.00
5 g	$61.60
25 g	$228.00

T3350 **Timolol Maleate**



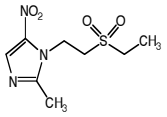
$C_{13}H_{24}N_4O_3S.C_4H_4O_4$ Mol. Wt.: 432.50 [26921-17-5]

A β-adrenergic receptor selective antagonist used as a antiglaucoma agent.

Hall RA, Robson RD, Share NN. Arch Int Pharmacodyn Ther. 213:251-63 (1975).
Feghali JG, Kaufman PL, Radius RL et al. Acta Ophthalmol (Copenh). 66:180-6 (1988).

100 mg	$37.00
250 mg	$80.10
1 g	$221.80

T3454 **Tinidazole**



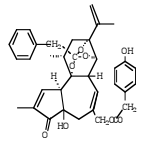
$C_8H_{13}N_3O_4S$ Mol. Wt.: 247.27 [19387-91-8]

A synthetic imidazole derivative used in antiprotozoal treatment.

Sawyer PR, Brogden RN, Pinder RM et al. Drugs. 11:423-40 (1976).

100 g	$55.50
250 g	$120.80

T3354 **Tinyatoxin (TYX)**



$C_{36}H_{38}O_8$, F.W. 598.70, [58821-95-7]

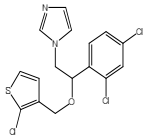
Analog of resiniferatoxin (RTX). It is less potent as an irritant than RTX.

It is more stable against air oxidation than RTX.

Geiges D, Meyer T, Marte B et al. Biochem Pharmacol. 53:865-75 (1997).

1 mg	$135.30
5 mg	$550.30

T3357 **Tioconazole**



$C_{16}H_{13}Cl_3N_2OS$ Mol. Wt.: 387.71 [65899-73-2]

Antifungal agent. Potent inhibitor of cytochrome-P450.

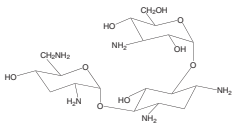
Somchit MN, Reezal I, Nur IE, Mutalib AR. J Ethnopharmacol. 84:1-4 (2003).
Alvarez J, Montero M, Garcia-Sancho J. J Biol Chem. 267:11789-11793 (1992).

1 g	$38.00
5 g	$78.70
25 g	$379.50

Tioguanine

See thioguanine

T5604 **Tobramycin** (free base)



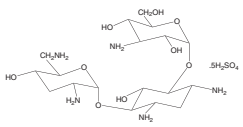
$C_{18}H_{37}N_5O_9$ Mol. Wt.: 467.51 [32986-56-4]

Used in the treatment of respiratory infection and cystic fibrosis.

Brogden RN, Pinder RM, Sawyer PR. Drugs. 12:166-200 (1976).

25 mg	$26.30
100 mg	$58.60
500 mg	$256.20

T5605 **Tobramycin Sulfate**



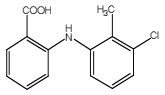
$(C_{18}H_{37}N_5O_9)_2 \bullet 5H_2SO_4$ Mol. Wt.: 1425.45 [79645-27-5]

Used in the treatment of respiratory infection and cystic fibrosis.

Brogden RN, Pinder RM, Sawyer PR. Drugs. 12:166-200 (1976).

100 mg	$40.10
500 mg	$135.90
1 g	$239.80

T5846 **Tolfenamic Acid**



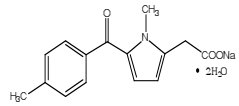
$C_{14}H_{12}ClNO_2$ Mol. Wt.: 261.70 [13710-19-5]

Non steroidal anti-inflammatory agent. Found to inhibit COX-2 isoenzymes in dogs. Analgesic property is due to activation of Ca^{2+}-activated K^+ channels.

Kay-Mugford P, Benn SJ, LaMarre J, Conlon P. Am J Vet Res. 61:802-810 (2000).
Li L, Vaali K Vapaatalo H, Kankaanranta H. Eur J Pharmacaol. 383:169-176 (1999).

5 g	$38.00
25 g	$124.70
50 g	$203.30

T5944 **Tolmetin Sodium**



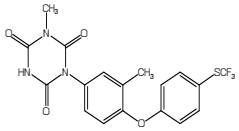
$C_{15}H_{14}NNaO_3 \cdot 2H_2O$ Mol. Wt.: 315.30 [64490-92-2]

Anti-inflammatory, antirheumatic agent.

Lewis JR. JAMA 237:1260-1261 (1997).

1 g	$19.00
5 g	$54.30
25 g	$196.60

T5946 **Toltrazuril**



$C_{18}H_{14}F_3N_3O_4S$ Mol. Wt.: 425.38 [69004-03-1]

An anticoccidial agent. Its mode of action appears to be a reduction of redox enzymes such as succinate-cytochrome C reductase and NADH oxidase and fumarate oxidase.

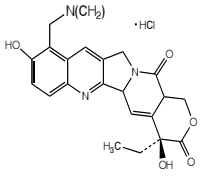
Harder A, Haberkorn A, Parasitol Res. 76:8-12 (1989).

1 g	$43.20
5 g	$178.70
10 g	$320.40

Tomoxetine Hydrochloride

See atomoxetine Hydrochloride

T5761 **Topotecan Hydrochloride** (See page 8 for more information)



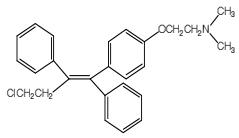
$C_{23}H_{23}N_3O_5 \cdot HCl$ Mol. Wt.: 459.91 [119413-54-6]

Topoisomerase I inhibitor that is a water soluble semisynthetic camptothecin derivative.

Rothenberg ML. Ann Oncol. 8:837-55 (1997).

1 mg	$104.00
5 mg	$439.50

T5769 **Toremifene**



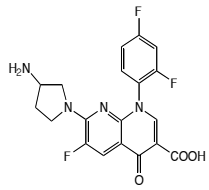
$C_{26}H_{28}ClNO$ Mol. Wt.: 405.96 [89778-26-7]

A chlorinated tamoxifen analogue. It competes with estradiol for estrogen receptors and has growth inhibitory effects on MCF-7 breast cancer cells. It causes growth inhibition of estrogen-sensitive breast cancer cells by inducing some cells to undergo apoptosis and by inhibiting other cells from entering mitosis.

Maenpaa JU, Ala-Fossi SL. Drugs Aging. 11:261-70 (1997).
Warri AM, Huovinen RL, Laine AM et al. J Natl Cancer Inst. 85:1412-8 (1993).

500 mg	$38.50
1 g	$61.50
5 g	$230.50

T5672 **Tosufloxacin Tosylate** (See page 13 for more information)



$C_{19}H_{15}F_3N_4O_3 \cdot C_7H_8O_3S$ Mol. Wt.: 576.55 [115964-29-9]

Antimicrobial agent.

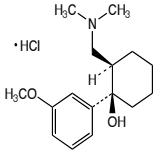
Mori S, Ohashi K, Akiyama H, Kansenshogaku Zasshi. 68:872-8 (1994).

100 mg	$58.60
500 mg	$219.60
1 g	$366.00

T5677 **Total Cell Death Assay Kit** (See page 31 for more information)

125 Tests	$323.70
250 Tests	$536.50

T6802 **Tramadol Hydrochloride**



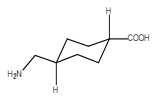
$C_{16}H_{25}NO_2 \cdot HCl$ Mol. Wt.: 299.84 [22204-88-2]

An analgesic, acts by inhibiting type 3 muocarinic receptors function via quinuclidinyl benzilate binding sites. It activates the mu and kappa opioid receptors.

Shiga Y, Minami K, Shiraishi M et al. Anesth Analg. 95:1269-73 (2002).
Sun HL, Zheng JW, Wang K et al. Life Sci. 72:1221-30 (2003).

500 mg	$98.60
1 g	$154.00
5 g	$628.40

T6811



Tranexamic acid

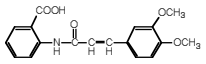
$C_8H_{15}NO_2$ Mol. Wt.: 157.21 [1197-18-8]

An antifibrinolytic agent. Inhibits plasmin-induced fibrinolysis by binding plasmin.

5 g	$16.80
10 g	$28.00
50 g	$89.60

Iwamoto M. Thrombosis et Diathesis Haemorrhagica. 33:573-585 (1975).
Wellington K, Wagstaff AJ. Drugs. 63:1417-1433 (2003).

T6902



Tranilast

$C_{18}H_{17}NO_5$ Mol. Wt.: 327.34 [53902-12-8]

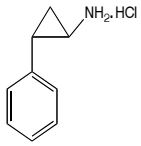
Anti-allergic agent with antiasthmatic property. It was found to have antiangiogenic and antitumor activity.

50 mg	$56.20
100 mg	$104.00
500 mg	$399.60

Garcia Mesa M. Allergol Immunopathol (Madr). 18:53-6 (1990).
Yatsunami J, Aoki S, Fukuno Y. Int J Oncol. 17:1151-6 (2000).
Isaji M, Miyata H, Ajisawa Y et al. Br J Pharmacol. 122:1061-6 (1997).

T6903

2-8 °C



Tranylcypromine Hydrochloride

trans-2-phenylcyclopropylamine hydrochloride

$C_9H_{11}N \cdot HCl$ Mol. Wt.: 169.7 [95-62-5]

A monoamine oxidase (MAO) inhibitor. It reduces MAO catalyzed conversion of N-acetyl-1,6-diaminohexane(NAD-AH) to 6-acetamidohexanoic acid (AcHA), enhances cell differentiation induced by hexmethylene bisacetamide (HMBA) and its metabolite NAD-AH.

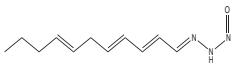
250 mg	$41.50
1 g	$113.70

Snyder SW, Egorin MJ, Zuhowski EG et al. Cancer Commun. 2:231-6 (1990).

Tretinoin

See all trans-retinoic acid

T6834



Triacsin C

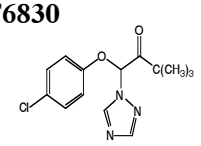
$C_{11}H_{17}N_3O$ Mol.Wt.: 207.27 [76896-80-5]

A long-chain fatty acid acyl-CoA synthetase inhibitor demostrating vasodilating activities.

1 mg	$450.00
5 mg	$1,800.00

Madusa et. al. J Lipid Res. 47: 87-98 (2006).
Hartman EJ, Omura S, Laposata M. Prostaglandins. 37: 655-71 (1989)

T6830



Triadimefon

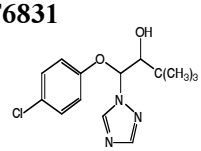
$C_{14}H_{16}ClN_3O_2$ Mol. Wt.: 293.75 [43121-43-3]

Bayleton, a widely used fungicide. P450 inhibitor, induces brassinosteroid deficiency in plants.

5 g	$34.00
10 g	$54.30
25 g	$115.30

Asami T, Mizutani M, Shimada Y et al. Biochem J. 369:71-76 (2003).

T6831



Triadimenol

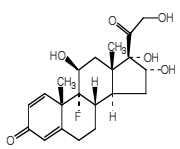
$C_{14}H_{18}ClN_3O_2$ Mol. Wt.: 295.76 [55219-65-3]

Triazole-type fungicide. Identified as weak estrogen receptor agonists.

10 g	$40.70
25 g	$84.00
100 g	$268.40

Vinggaard AM, Breinholt V, Larsen JC. Food Addit Contam. 16:533-542 (1999).

T7032



Triamcinolone

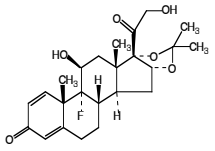
$C_{21}H_{27}FO_6$ Mol. Wt.: 394.43 [124-94-7]

Glucocorticoid capable of sustaining neuromuscular transmission during early motor nerve degeneration. Triamcinolone is also known to induce apoptosis in T lymphocytes.

50 mg	$16.10
250 mg	$46.90
1 g	$123.20
5 g	$431.20

Hall ED, Riker WF, Baker T. Exp Neurol. 79:488-96 (1983).
Perrin-Wolff M, Bertoglio J, Bressac B et al. Biochem Pharmacol. 50:103-10 (1995).

T6832



Triamcinolone acetonide

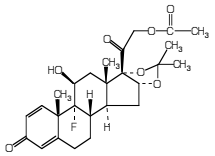
$C_{24}H_{31}FO_6$ Mol. Wt.: 434.50 [76-25-5]

An antiinflammatory steroid inhibits the IgE-dependent release of histamine by human basophils and the growth of NEL-M1 human melanoma cells.

Schleimer RP, MacGlashan DW Jr et al. J Immunol. 129:1632-6 (1982).
DiSorbo DM. Cancer Res. 46:3964-8 (1986).

50 mg	$17.60
250 mg	$47.00
1 g	$124.50
5 g	$439.10

T7044



Triamcinolone Acetonide Acetate

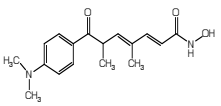
$C_{26}H_{33}FO_7$ Mol. Wt.: 476.53

A corticosteroid that induces chondrocyte apoptosis in an experimental arthritis model.

Nakazawa F, Matsuno H, Yudoh K et al. Clin Exp Rheumatol. 20:773-81 (2002).

50 mg	$16.10
250 mg	$43.20
1 g	$117.10
5 g	$425.10

T6933



Trichostatin A

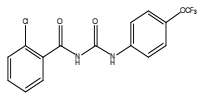
$C_{17}H_{22}N_2O_3$ Mol. Wt.: 302.37 [58880-19-6]

A histone deacetylase inhibitor. It induces apoptotic cell death in cancer cells. It induces pro-apoptotic genes like ID1, ID2, ID3, down regulates the anti-apoptotic genes, Hsp 27 and Bcl-xL and induces activities of calcium/ calmodulin dependent kinase II and protein kinase C, which have been assigned pro-apoptotic function.

Suzuki T, Yokozaki H, Kuniyasu H et al. Int J cancer. 88:992-7 (2000).
Eickhoff B, Germeroth L, Stahl C et al. J Biol Chem. 381:1127-32 (2000).

1 mg	$173.80
5 mg	$764.30

T7031



Triflumuron

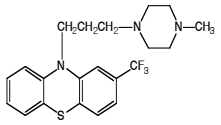
$C_{15}H_{10}ClF_3N_2O_3$ Mol. Wt.: 358.70 [64628-44-0]

A chitin biosynthesis inhibitor. It has been shown to inhibit uridine incorporation into RNA.

Klitschka GE, Mayer RT, Droleskey RE et al. Toxicol. 39: 307-315 (1986).

10 g	$22.40
25 g	$39.20
100 g	$123.20

T7033



Trifluoperazine

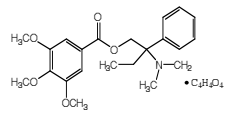
$C_{21}H_{24}F_3N_3S$ Mol. Wt.: 407.50 [117-89-5]

A phenothiazine class calmodulin antagonist which is known for its inhibition of DNA synthesis and cell proliferation activities. It is shown to stimulate Egr-1 gene experession by modulating Ras/MEK/ERK and activation of the E1K-1 pathway in human fibrosarcoma HT1080 cells. Trifluoperazine also induces apoptosis in human cholangiocarcinoma cells in vitro, probably acting via the Fas system.

Shin SY, Kim SY, Kim JH et al. J Biol Chem. (2000).
Pan G, Vickers SM, Pickens A et al. Am J Pathol. 155:193-203 (1999).

5 g	$43.20
10 g	$69.30
25 g	$130.60

T6934



Trimebutine maleate

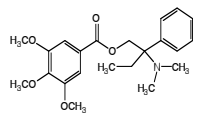
$C_{22}H_{29}NO_5C_4H_4O_4$ Mol. Wt.: 503.54 [34140-59-5]

Gastrointestinal antispasmotic.

Yamada K, Iizuka M, Takaiti O. Jpn J Pharmacol. 33:301-8 (1983).

1 g	$27.60
5 g	$47.10

T6935



Trimebutine base

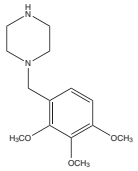
$C_{22}H_{29}NO_5$ Mol. Wt.: 387.47 [39133-31-8]

An opioid receptor agonist.

Luttecke K. J Int Med Res. 6:86-88 (1978).
Kountouras J, Chatzopoulos D, Zavos C et al. Hepato-Gastroenterology. 49:193-197 (2002).

10 g	$56.00
50 g	$156.80

T7133



Trimetazidine

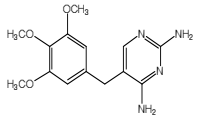
$C_{14}H_{22}N_2O_3$ Mol. Wt.: 266.34

A vasodilator shown to exert a marked anti-ischemic effect on patients with left ventricle dysfunction and moderate heart failure.

Tepliakov *et. al.* Klin Med (Mosk). 82: 57-62 (2004).

250 mg	$38.00
1 g	$60.00
5 g	$225.00

T7034



Trimethoprim

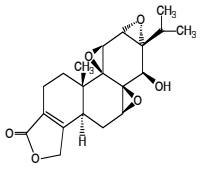
$C_{14}H_{18}N_4O_3$ Mol. Wt.: 290.32 [738-70-5]

Antimicrobial agent. Trimethoprim-sulfamethoxazole (TMP-SMX) is widely used to treat urinary and respiratory tract infections and for prophylaxis and treatment of P carinii infection. TMP-SMX combination may be used for patients with beta-lactam intolerance.

Cunha BA. Postgrad Med. 101:68-70 (1997).
Safdar A, Armstrong D. Clin Microbiol. 41:483-485 (2003).

5 g	$34.00
25 g	$135.60
100 g	$379.50

T7035



Triptolide

$C_{20}H_{24}O_6$ Mol. Wt.: 360.40 [38748-32-2]

A diterpene triepoxide, immunosuppresive agent extracted from the Chinese herb *Tripterygium wilfordi*. It has inhibitory activity on breast, stomach, and leukemia HL-60 cells. Triptolide induces apoptosis in tumor cells by blocking NF-KB activation and sensitizing tumor cells for TNF-α induced programmed cell death.

Wei YS, Adachi I. Chung Kuo Yao Li Hsueh Pao. 12:406-10 (1991).
Chang WT, Kang JJ, Lee KY et al. J Biol Chem. 276:2221-7 (2001).

1 mg	$74.00
5 mg	$308.00

T7037

pGlu-His-Trp-Ser-Tyr-D-Trp-Leu-Arg-Pro-Gly-NH_2

Triptorelin Acetate

$C_{64}H_{82}N_{18}O_{13}$ Mol.Wt.: 1311.46 [57773-63-4]

A gonadotropin releasing hormone (GnRH) agonist.

Weiss JM, Polack S, Treeck O, Diedrich K, Ortmann O. Endocrine. 30:139-44 (2006).

10 mg	$105.00
25 mg	$225.00
100 mg	$700.00

T7036

Glp-His-Trp-Ser-Tyr-D-Trp-Leu-Arg-Pro-Gly-NH_2

Triptorelin, [DTrp^6]-LH-RH, Amide

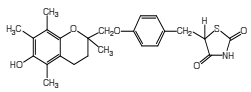
$C_{64}H_{83}N_{18}O_{13}$ Mol Wt: 1311.5

A GnRH agaonist shown to inhibit estradiol-induced cancer cell proliferation.

Grundker C, Gunthert AR, Hellriegel M et al. Eur J Endocrinol. 151(5):619-628 (2004).

10 mg	$71.70
25 mg	$179.20

T7056



Troglitazone

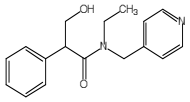
$C_{24}H_{27}NO_5S$ Mol. Wt.: 441.54 [97322-87-7]

A novel antidiabetic agent. It is found to exert significant cell cycle arrest and apoptosis in hepatocellular carcinoma cell lines. It has a unique property of selectively inducing EGR-1 gene independent of PPARg. Potential preventive agent for colon carcinogenesis.

Fugiwara T, Horikoshi H. Life Sci. 67:2405-16 (2000).
Osawa E et al. Gastroenterology. 124:361-367 (2003).
Baek SJ, Wilson LC, His LC, Eling TE. J Biol Chem. 278:5845-53 (2003).

10 mg	$47.50
50 mg	$183.10
100 mg	$271.10

T7158



Tropicamide

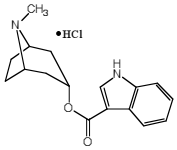
$C_{17}H_{20}N_2O_2$ Mol. Wt.: 284.35 [1508-75-4]

A specific muscarinic (M4) antagonist.

Blessel K W et al. Anal Profiles Drug Subs. 3:565-80 (1974).

100 mg	$30.80
500 mg	$80.10
1 g	$123.20

T7156



Tropisetron Hydrochloride

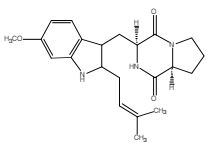
$C_{17}H_{20}N_2O_2.HCl$ Mol. Wt.: 320.82 [105826-92-4]

A 5-hydroxytryptamine 3 receptor antagonist. Found to be a potent and selective partial agonist at α7 nicotinic receptors.

Tonini M, Candura SM Onori L et al. Life Sci. 50:PL173-8 (1992).

10 mg	$37.00
50 mg	$104.80
100 mg	$154.00

T7197



Tryprostatin A

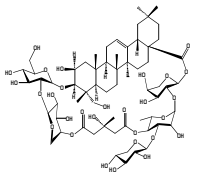
$C_{22}H_{29}N_3O_3$ Mol. Wt.: 383.48

An antimitotic agent that interferes with the interaction between tubulin and microtubular association protein.

Osada H. Current Med Chem. 10:727-732 (2003).

0.5 mg	$304.60

T8004 **Tubeimoside I**



$C_{63}H_{98}O_{29}$ Mol. Wt.: 1319.43 [102040-03-9]

A triterpenoid saponin isolated from tubers of bolbostemma paniculatum, Franquet, a traditional Chinese medicine "Tu-Bei-Mu". Used as anti-tumor agent, induces cell cycle arrest and apoptosis.

Yang P, Yu Tx, Ma RD et al. Ai Zheng. 21:346-350 (2002).

10 mg	$40.70
25 mg	$81.40
100 mg	$264.40

T8020 **Tuftsin**

H-Thr-Lys-Pro-Arg-OH

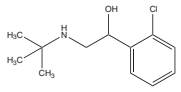
$C_{21}H_{40}N_8O_6$ Mol.Wt.: 500.6

An endogeneous peptide that is known to have immunogenic activity against tumors and pathogens by potentiating monocytes, macrophages, and polymorphonuclear leukocytes.

Gupta CM, Haq W. Methods Enzymol. 391: 291-304 (2005).

5 mg	$32.00
10 mg	$54.40
25 mg	$96.00

T8145 **Tulobuterol**



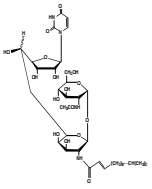
A beta-adrenoreceptor agonist used in the treatment of moderate to severe asthma.

Yoshihara S, Yamada Y, Abe T, Arisaka O. Ann Allergy Asthma Immunol. 96: 879-80-(2006).
Nishiyama *et. al.* Clin Exp Pharmacol Physiol. 33:1016-21 (2006).

1 g	$50.00
5 g	$200.00

T8153 **Tunicamycin**

2-8 °C



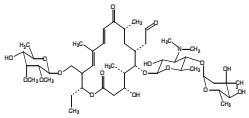
$C_{40}H_{66}N_4O_{16}$ Avg. Mol. Wt.: 840.0 [11089-65-9]

A glucosamine-containing pryrimidine nucleotide and an inhibitor of glucosaminyl-1-phosphate transferase. It induces apoptosis in cultured brain neurons, Melanoma and SV40-transformed cells by inhibiting N-linked glycosylation.

Lin TY, Wang SM, Fu WM, Chen YH, Yin HS. J Cell Biochem. 74:638-47 (1999).
Dricu A, Carlberg M, Wang M, Larsson O. Cancer Res. 57:543-8 (1997).

1 mg	$29.60
5 mg	$98.50
10 mg	$164.60

T9945 **Tylosin tartrate**



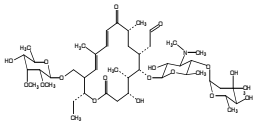
$C_{46}H_{77}NO_{17} \cdot C_4H_4O_6$ Mol. Wt.: 1066.2 [1405-54-5]

A macrolide antibiotic used in animal feed.

Knothe H. Infection. 5:183-7 (1977).

1 g	$17.30
5 g	$49.30
10 g	$86.30

T9946 **Tylosin phosphate**



$C_{46}H_{77}NO_{17} \cdot H_3PO_4$ Mol. Wt.: 1014.11 [1405-53-4]

1 g	$17.30
5 g	$49.30
10 g	$86.30

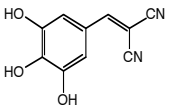
T9974 **[Asp371] Tyrosinase (369-377), human**

Tyr-Met-Asp-Gly-Thr-Met-Ser-Gln-Val

$C_{42}H_{66}N_{10}O_{16}S_2$ Mol Wt: 1031.2

1 mg	$89.60

T9968 **Tyrphostin A25** (See page 29 for more information)



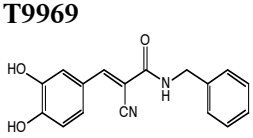
$C_{10}H_6N_2O_3$ Mol. Wt.: 202.17 [118409-58-8]

Protein tyrosine kinase inhibitor.

Gazit, A. et al. J Med Chem. 32:2344-52 (1989).

5 mg	$41.00
25 mg	$140.60

T9969 **Tyrphostin AG490** (See page 29 for more information)



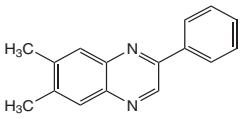
$C_{17}H_{14}N_2O_3$ Mol. Wt.: 294.30 [34036-52-5]

A selectrive PDGF receptor autophosphorylation inhibitor.

Kovalenko M et al. Cancer Res. 54:6106-6114 (1994).
Levitsky A, Gazit A. Science. 267:1782-1788 (1995).

5 mg	$51.60
10 mg	$88.20
25 mg	$196.60

T9970



Tyrphostin AG1295 (See page 29 for more information)

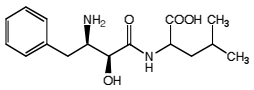
$C_{16}H_{14}N_2$ Mol. Wt.: 234.30 [71897-07-9]

A specific and potent JAK-2 protein tyrosine kinase inhibitor. Found also to inhibit EGF receptor autophosphorylation and induce apoptosis.

Levitzki A. Biochem. Pharmacol. 40:913-918 (1990).
Gazit A et al. J Med Chem. 34:1896-1907 (1991).
De Vos J et al. Br J Haematol. 109:823-828 (2000).

1 mg	$34.00
5 mg	$88.20

U0618



Ubenimex

Bestatin

$C_{16}H_{24}N_2O_4$ Mol. Wt.: 308.37 [58970-76-6]

Ubenimex is an antitumor agent effective against murine syngeneic tumors including mouse colon 26 and C1498 leukemia. It was found to be active against MNNG-induced rat tumor by oral administration. It also inhibits leucine aminopeptidase and aminopeptidase B in cell membrane, in addition to modulating PKC in K562 cells and inducing apoptosis.

Sekine K, Fujii H, Abe F. Leukemia. 13:729-34 (1999).
Tsukagoshi S. Gan To Kagaku Ryoho. 14:2385-91 (1987).
Ebihara K, Abe F, Yamashita T et al. J Antibiot. 39:966-70 (1986).

10 mg	$43.20
50 mg	$178.70
100 mg	$277.20

U5233

Gln-Tyr-Ile-Lys-Ala-Asn-Ser-Lys-Phe-Ile-Gly-Ile-Thr-Glu-Leu

Universal TT epitope P2 (830-844)

$C_{80}H_{129}N_{19}O_{23}$ Mol.Wt.: 11725.03

Addition of this peptide to vaccines enhances the efficacy of the immune response to malaria prophylaxis.

Fryauff DJ, Mouzin E and Church LW. *et. al.* Vaccine. 17: 59-63 (1999).

1 mg	$64.00
2 mg	$108.80
5 mg	$192.00

U6118

pGlu-Pro-Asp-Pro-Asn-Ala-Phe-Tyr-Gly-Leu-Met-NH_2

Uperolein

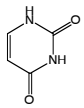
$C_{57}H_{79}N_{13}O_{16}S$ Mol.Wt.: 1234.42

A physalaemin-like endecapeptide that is selective for Neurokinin 1 receptor.

Dike A, Cowsik SM. J Struct Biol. 156: 442-52 (2006).

1 mg	$70.40
2 mg	$120.00
5 mg	$211.20

U6901



Uracil

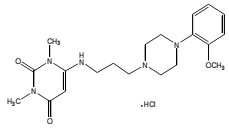
$C_4H_4N_2O_2$ Mol. Wt.: 112.09 [66-22-8]

Used in the treatment of metastatic colorectal cancer and hormone refractory prostate cancer.

Lin JK, Fan FS, Yen CC et al. Jpn J Clin Oncol. 30:510-4 (2000).
Nishimura K, Nomomura N, Ono Y et al. Oncology. 60:49-54 (2001).

10 g	$15.30
25 g	$23.20
100 g	$38.50

U6802



Urapidil hydrochloride

$C_{20}H_{29}N_5O_3.HCl$ Mol. Wt.: 423.93 [64887-14-5]

500 mg	$49.30
1 g	$80.10
5 g	$308.00

U6854

H-Asp-Asn-Pro-Ser-Leu-Ser-Ile-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Thr-Leu-Leu-Glu-Leu-Ala-Arg-Thr-Gln-Ser-Gln-Arg-Glu-Arg-Ala-Glu-Gln-Asn-Arg-Ile-Ile-Phe-Asp-Ser-Val-NH_2

Urocortin, human

$C_{204}H_{337}N_{63}O_{64}$ Mol Wt: 4696.3 [171543-83-2]

A CRF-related peptide involved in the relaxation of pulmonary arteries.

Lau CW, Chan YC, Yao X. Eur J Pharmacol. 488:169-172 (2004).

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

U6855

H-Asp-Asp-Pro-Pro-Leu-Ser-Ile-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Thr-Leu-Leu-Glu-Leu-Ala-Arg-Thr-Gln-Ser-Gln-Arg-Glu-Arg-Ala-Glu-Gln-Asn-Arg-Ile-Ile-Phe-Asp-Ser-Val-NH_2

Urocortin, rat

$C_{206}H_{338}N_{62}O_{64}$ Mol.Wt.: 4707.37

0.5 mg	$160.00
1 mg	$272.00
2.5 mg	$480.00

U6856

H-Ile-Val-Leu-Ser-Leu-Asp-Val-Pro-Ile-Gly-Leu-Leu-Gln-Ile-Leu-Leu-Glu-Gln-Ala-Arg-Ala-Arg-Ala-Ala-Arg-Glu-Gln-Ala-Thr-Thr-Asn-Ala-Arg-Ile-Leu-Ala-Arg-Val-Gly-His-Cys-NH_2

Urocortin II, human

$C_{194}H_{338}N_{63}O_{54}S_1$ Mol.Wt.: 4449.31

A selective CRF receptor type 2 agonist that enhances contractility of ventricular mycocytes in rabbit.

Yang LZ, Kockskamper J, Heinzel FR. *et. al.* Cardiovasc Res. 69: 402-11 (2006).

0.5 mg	$224.00
1 mg	$380.80
2.5 mg	$672.00

U6858 — **Urocortin II, mouse**

H-Val-Ile-Leu-Ser-Leu-Asp-Val-Pro-Ile-Gly-Leu-Leu-Arg-Ile-Leu-Leu-Glu-Gln-Ala-Arg-Tyr-Lys-Ala-Ala-Arg-Asn-Gln-Ala-Ala-Thr-Asn-Ala-Gln-Ile-Leu-Ala-His-Val-NH_2

$C_{187}H_{320}N_{56}O_{50}$ Mol.Wt.: 4152.98

0.5 mg	$224.00
1 mg	$380.80
2.5 mg	$672.00

U6859 — **Urocortin III, human**

H-Phe-Thr-Leu-Ser-Leu-Asp-Val-Pro-Thr-Asn-Ile-Met-Asn-Leu-Leu-Phe-Asn-Ile-Ala-Lys-Ala-Lys-Asn-Leu-Arg-Ala-Gln-Ala-Ala-Ala-Asn-Ala-His-Leu-Met-Ala-Gln-Ile-NH_2

$C_{185}H_{307}N_{53}O_{50}S_2$ Mol.Wt.: 4137.96

A selective CRF receptor type 2 agonist that exhibits bronchorelaxant and anti-inflammatory activities.

Moffatt JD, Lever R, Page CP. FASEB J. 20:1877-9 (2006).

0.5 mg	$224.00
1 mg	$380.80
2.5 mg	$672.00

U6860 — **Urocortin III, mouse**

H-Phe-Thr-Leu-Ser-Leu-Asp-Val-Pro-Thr-Asn-Ile-Met-Asn-Ile-Leu-Phe-Asn-Ile-Asp-Lys-Ala-Lys-Asn-Leu-Arg-Ala-Lys-Ala-Ala-Ala-Asn-Ala-Gln-Leu-Met-Ala-Gln-Ile-NH_2

$C_{186}H_{312}N_{52}O_{52}S_2$ Mol.Wt.: 4173.01

0.5 mg	$224.00
1 mg	$380.80
2.5 mg	$672.00

U6857 — **Urodilatin CCC/ANP-95-126**

H-Thr-Ala-Pro-Arg-Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Met-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr-OH
(Disulfide bridge Cys_{11}-Cys_{27})

$C_{145}H_{234}N_{52}O_{44}S_3$ Mol Wt.: 3506.0 [115966-23-9]

A renal natriuretic peptide that has been shown to possess a vasodilatory effect in pulmonary circulation.

Schermuly RT, Weissman N, Enke B et al. Am J Respir Cell Mol Biol. 25:219-225 (2001).

1 mg	$288.00

U6956 — **Uroguanylin, human**

H-Asn-Asp-Asp-Cys-Glu-Leu-Cys-Val-Asn-Val-Ala-Cys-Thr-Gly-Cys-Leu-OH
(Cys_4-Cys_{12}, Cys_7-Cys_{15})

$C_{64}H_{102}N_{18}O_{26}S_4$ Mol.Wt.: 1667.89

An endogenous ligand that binds and stimulates intestinal guanylate cyclase-C.

Whitaker TL, Steinbrecher KA, Copeland NG, Gilbert DJ, Jenkins NA, Cohen MB. Genomics. 45: 348-54 (1997).

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

U6957 — **Urotensin I**

H-Asn-Asp-Asp-Pro-Pro-Ile-Ser-Ile-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Asn-Met-Ile-Glu-Met-Ala-Arg-Ile-Glu-Asn-Glu-Arg-Glu-Gln-Ala-Gly-Leu-Asn-Arg-Lys-Tyr-Leu-Asp-Glu-Val-NH_2

$C_{210}H_{340}N_{62}O_{67}S_2$ Mol.Wt.: 4869.55

A neuroprotective that increase the survival rate of central and peripheral neuronons by activation of cAMP-dependent pathways.

Facci L, Stevens DA, Pangallo M, Franceschini D, Skaper SD, Strijbos PJ. Neuropharmacology. 45: 623-36 (2003).
Marshall WS, Bern HA. Gen Comp Endocrinol. 43: 484-91 (1981).

0.5 mg	$184.00
1 mg	$313.60
2.5 mg	$553.60

U6958 — **Urotensin II (Frog)**

H-Ala-Gly-Asn-Leu-Ser-Glu-Cys-Phe-Trp-Lys-Tyr-Cys-Val-OH
(Disulfide bridge Cys_7-Cys_{12})

$C_{69}H_{96}N_{16}O_{19}S_2$ Mol.Wt.: 1517.76

A neuropeptide that inhibits the active chloride transport of teleost fish.

Marshall WS, Bern HA. Gen Comp Endocrinol. 43: 484-91 (1981).

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

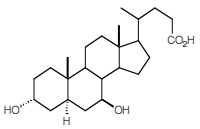
U6959 — **Urotensin II, human**

H-Glu-Thr-Pro-Asp-Cys-Phe-Lys-Tyr-Cys-Val-OH
(Disulfide bridge Cys_5-Cys_{10})

$C_{64}H_{85}N_{13}O_{18}S_2$ Mol.Wt.: 1388.6

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

U6873 — **Ursodeoxycholic acid**



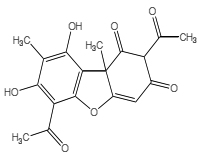
$C_{24}H_{40}O_4$, Mol. Wt.: 392.57, m.p. 203-204°C, [128-13-2]

A bile acid with significant chemopreventive activity in the colon.

Wali RK, Frawley BP, Hartmann S et al. Cancer Res. 55:5257-5264 (1995).

1 g	$34.20
5 g	$108.70

U7354 — **Usnic acid**



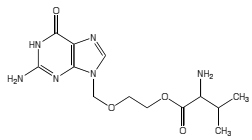
$C_{18}H_{16}O_7$ Mol. Wt.: 344.32 [125-46-2]

An antimicrobial, antitumor and enzyme inhibiting agent. Shown to uncouple oxidative phosphorylation in mouse-liver mitochondria. Induces necrosis in certain cells.

Abo-Khatwa AN, al-Robai AA, al-Jawhari DA. Natural Toxins. 4:96-102 (1996).
Han D, Matsumaru K, Kettori D, Kaplowiz N. Biochem Pharm. 67:439-451 (2004).

5 g	$30.30
25 g	$109.80

V0045



Valacyclovir Hydrochloride

$C_{13}H_{20}N_6O_4 \cdot HCl$ Mol. Wt.: 360.80 [124832-27-5]

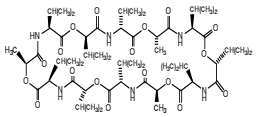
L-valine ester of acyclovir that increases oral absorption before conversion to acyclovir.

Ormrod D, Scott LJ, Perry CM. Drugs. 59:839-63 (2000).

50 mg	$58.30
100 mg	$100.00
500 mg	$407.50

V0145

2-8 °C



Valinomycin

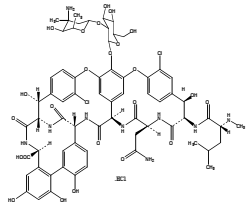
$C_{54}H_{90}N_6O_{18}$ Mol. Wt.: 1111.32 [2001-95-8]

A potassium ionophore that is well known to cause the collapse of the mitochondrial membrane potential, which precedes cytoplasmic acidification, cysteine-active-site protease activation, DNA fragmentation and apoptotic cell death.

Inai Y, Yabuki M, Kanno T et al. Cell Struct Funct. 22:555-63 (1997).
Furlong IJ, Lopez Mediavilla C, Ascaso R et al. Cell Death Differ. 5:214-21 (1998).

5 mg	$30.80
10 mg	$53.90
25 mg	$97.70

V0252



Vancomycin Hydrochloride

$C_{66}H_{75}Cl_2N_9O_{24} \cdot HCl$ Mol. Wt.: 1485.73 [1404-93-9]

A glycopeptide antibiotic that is commonly used for treatment of methicillin resistant bacteria. It has been shown to inhibit glucose 6-phosphate dehydrogenase in vitro.

Beydemir S, Kulacoglu DN, Ciftci M, Kfrevioglu OI. Eur J Ophthal. 13:155-161 (2004).
Homer P, Peyman GA, Koziol J, Sanders D. Acta Ophthal. 53:311-320 (1975).

100 mg	$22.40
250 mg	$42.60
1 g	$134.40

V0153

H-Cys-Glu-Asp-Ala-Glu-Val-Phe-Lys-Asp-Ser-Met-Val-Pro-Gly-Glu-Lys-OH

Vanilloid Receptor Subtype 1 (VR1)

$C_{75}H_{117}N_{18}O_{28}S_2$ Mol.Wt.: 1783

A heat-gated ion channel that mediates responses fo sensory neurons.

Caterina MJ, Rosen TA, Tominaga M, Brake AJ, Julius D. Nature 398: 436-41 (1999).

1 mg	$102.40
2 mg	$174.40
5 mg	$307.20

V0160

D-Phe-Cys-Tyr-D-Trp-Lys-Val-Cys-Trp-NH_2

RC-160 (Vapreotide)

$C_{57}H_{70}N_{12}O_9S_2$ Mol Wt: 1131.4 [103222-11-3]

An octapeptide derivative of somatostatin (SRIF) capable of inhbiting growth in OV-1063 human epithelial cancer cells.

Yano T, Radulovic S, Osuga Y et al. Oncology. 59 suppl 1:45-49 (2000)

0.5 mg	$70.40
1 mg	$120.00
2.5 mg	$211.20

V0273

His-Ser-Asp-Ala-Val-Phe-Thr-Asp-Asn-Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Asn-Ser-Ile-Leu-Asn-NH_2

Vasoactive Intestinal peptide (VIP)

$C_{147}H_{238}N_{44}O_{42}S$ Mol.Wt.:3325.7 [40077-57-4]

A neuropeptide that exhibits anti-inflamatory properties by inducing regulatory dendritic cells.

Gonzalez-Rey E, Delgado M. Gastroenterology. 131: 199-811 (2006).

0.5 mg	$83.20
1 mg	$140.80
2.5 mg	$249.60

V3360

H-His-Ser-Asp-Ala-Leu-Phe-Thr-Asp-Thr-Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Met-Ala-Met-Lys-Lys-Tyr-Leu-Asn-Ser-Val-Leu-Asn-NH_2

VIP, guinea pig

Vasoactive Intestinal peptide, guinea pig

$C_{147}H_{239}N_{43}O_{42}S_2$ Mol.Wt.: 3344.93

0.5 mg	$108.80
1 mg	$185.60
2.5 mg	$326.40

V0274

H-Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Arg-Gly-NH_2
(Disulfide bridge Cys_1-Cys_6)

[Lys8] Vasopressin

$C_{46}H_{65}N_{13}O_{12}S_2$ Mol.Wt.: 1056.24

A neurohypophyseal peptide that mediates central and peripheral antidiuretic effects as a result of modifying four different G protein receptors.

Pena A, Murat B, Trueba M *et. al.* J Med Chem. 50: 835-47 (2007).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

V0275

H-Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Arg-Gly-NH_2
(Disulfide bridge Cys_1-Cys_6)

[Arg8] Vasotocin

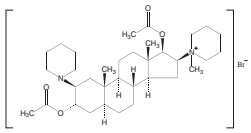
$C_{43}H_{67}N_{15}O_{12}S_2$ Mol.Wt.: 1050.23

A neuropeptide hormone that controls water and salt metabolism.

Leake RD, Weitzman RE. Clin Perinatol. 6: 65-85 (1979).

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

V1810



Vecuronium Bromide

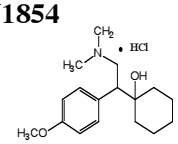
$C_{34}H_{57}BrN_2O_4$ Mol. Wt.: 637.74 [50700-72-6]

A nonpolarizing neuromuscular relaxant.

Marshall IG, Agoston S, Booij LH et al. Br J Anaesth. 52 Suppl 1:11S-19S (1980).

10 mg	$55.50
50 mg	$154.00
100 mg	$246.40

V1854



Venlafaxine Hydrochloride

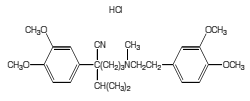
$C_{17}H_{27}NO_2.HCl$ Mol. Wt.: 313.87 [99300-78-4]

A heterocyclic antidepressant inhibits the re-uptake of serotonin, norepinephrine, and dopamine.

Morton WA, Sonne SC, Verga MA. Ann Pharmacother. 29:387-95 (1995).

500 mg	$39.50
1 g	$64.10
5 g	$264.90

V1769



(±)Verapamil Hydrochloride

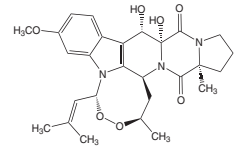
$C_{27}N_{38}N_2O_4$•HCl Mol. Wt.:491.07 [152-11-4]

A calcium channel blocker with chemopreventive character. Verapamil was found to inhibit carcinogen-induced aberrant crypt foci formation, mammary carcinogenesis, and pancreatic carcinogenesis.

Wargovich MJ, Jimenez A, Mckee K et al. Carcinogenesis. 21:1149-55 (2000).
Soybir G, Koksoy F, Koyuncu H et al. Breast Cancer Res Treat. 50:193-9 (1998).
Nakaizumi A, Uehara H, Baba M et al. Cancer Lett. 105:23-7 9 (1996).

1 g	$36.90
5 g	$110.70

V1870



Verruculogen

$C_{27}H_{33}N_3O_7$ Mol.Wt.: 511.567 [12771-72-1]

A tremorgenic neurochemical produced by various soil fungi.

Paterson D, Shreeve B, Robberts B, MacDonald S, Appl Environ Microbiol. 42: 916-7 (1981).
Norris P, Smith C, De Belleroche J, Bradford H, Mantle P, Thomas A, Penny R. J Neurochem. 34: 33-42 (1980).

1 mg	$72.00
5 mg	$298.00

V1872

Arg-Gly-Tyr-Val-Tyr-Gln-Gly-Leu

Vesicular Stomatitis Virus peptide

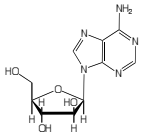
$C_{44}H_{66}N_{12}O_{12}$ Mol.Wt.:955.09

A antigenic peptide of vesicular stomatitis virus binds to H-2Kb antigens.

Shibata K, Imarai M, van Bleek GM *et. al*. Proc Natl Acad Sci U S A. 89: 3135-9 (1992).

1 mg	$32.00
2 mg	$59.20
5 mg	$105.60

V3212



Vidarabine

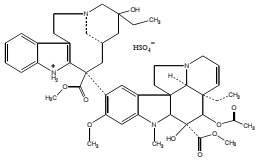
$C_{10}H_{13}N_5O_4$ Mol. Wt.: 267.24 [5536-17-4]

Anti-leukemic agent.

Honma Y, Nitsu N. Leuk Lymphoma. 399:57-66 (2000).

100 mg	$30.80
500 mg	$86.20
1 g	$138.40

V3253



Vinblastine sulfate

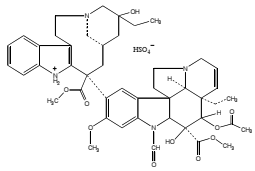
$C_{46}H_{59}N_4O_9$•HSO_4 Mol. Wt.: 909.05 m.p. 267°C [143-67-9]

A vinca alkaloid isolated from *Vinca rosea* (periwinkle). It is an antimitotic agent which binds to tubulin. Clinically used as an antitumor agent.

Gorman M et al. J Amer Chem Soc. 81:4745 (1959).
Mareel MM, De Brabander MJ. J Natl Cancer Inst. 61:787-92 (1978).

5 mg	$70.70
10 mg	$128.00

V5254



Vincristine sulfate

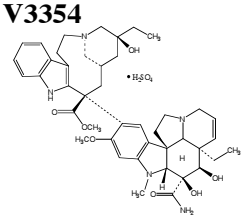
$C_{46}H_{57}N_4O_{10}$• HSO_4 Mol. Wt.: 923.04 m.p. >300°C [2068-39-4]

An antimitotic agent which binds to tubulin. Clinically used as an antitumor agent. Induces apoptosis.

Mareel MM, Storme GA, De Bruyne GK, Van Cauwenberge RM. Eur J Cancer Clin Oncol. 18:199-210 (1982).
Harmon BV, Takano Y S, Winterford CM, Potten CS. Cell Prolif. 25:523-36 (1992).

5 mg	$122.40
10 mg	$220.40

V3354



Vindesine sulfate

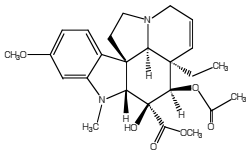
$C_{43}H_{55}N_5O_7$•H_2SO_4 Mol. Wt.: 852.02 [59917-39-4]

Vindesine, a vinca alkaloid derived from vinblastine. Potentially useful against a variety of solid and hematological malignancies. More often used in combination regimens with cisplatin and ifosfamide.

Dancey J, Steward WP. Anticancer Drugs. 6:625-636 (1995).
Kodani T, Ueoka H, Kiura K et al. Lung Cancer. 36:313-319 (2002).

1 mg	$70.50
5 mg	$271.10
10 mg	$474.40

V3355



Vindoline

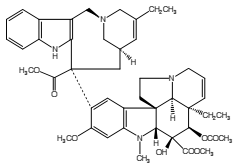
$C_{25}H_{32}N_2O_6$ Mol. Wt.: 456.53 [2182-14-1]

Monomeric vinca-alkaloid, forms lower portion of the lead anti-tumor agents, vinblastine and vincristine. Found to exhibit reciprocal cross-resistance to vincristine and vinblastine.

Fahy J. Curr Pharm Des. 7:1181-1197 (2001).
Inaba M, Nagashima K. Jpn J Cancer Res. 77:197-204 (1986).

25 mg	$51.60
100 mg	$132.90
500 mg	$508.30

V3251



Vinorelbine base

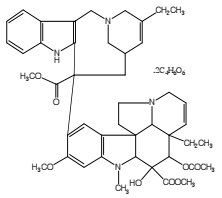
$C_{45}H_{54}N_4O_8$ Mol. Wt.: 778.93 [71486-22-1]

Member of vinca-alkaloid. It is used in the treatment of anthracycline-resistent advanced breast cancer and recommended for the treatment of bronchial cancer.

Brown RE, Hutton J, Burrell A. Pharmacoeconomics. 19:1091-1102 (2001).
Ribet JP, Zalavari P, Commenges G et al. Ann Pharm Fr. 55:20-34 (1997).

1 mg	$47.50
5 mg	$169.50
25 mg	$657.40

V3252



Vinorelbine Ditartrate

$C_{45}H_{54}N_4O_8 \cdot 2C_4H_6O_6$ Mol. Wt.:1079.10 [125317-39-7]

A chemotherapeutic agent effective against a number of solid tumors including non-small-cell carcinoma, advanced prostatic carcinoma, breast cancer, head and neck cancer, and Hodgkin's lymphoma. It induces apoptosis and caspase-3 (CPP32) expression in leukemia and lymphoma cells.

Goa KL, Faulds D. Drugs Aging. 5:200-34 (1994).
Jones SF, Burris HA 3rd. Ann Pharmacother. 30:501-6 (1996).
Toh HC, Sun L, Koh CH, Aw SE. Leuk Lymphoma. 31:195-208 (1998).

1 mg	$61.10
5 mg	$196.60
25 mg	$792.90

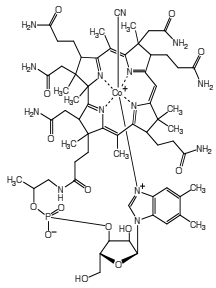
Vitamin A

See Retinol

Vitamin B6

See pyridoxine HCl

V3378



Vitamin B12

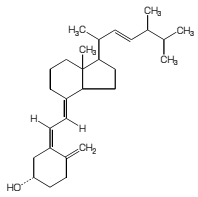
$C_{63}H_{88}CoN_{14}O_{14}P$ Mol. Wt.: 1355.37 [68-19-9]

Also known as methylcobalamin/cobalamine. Prevents chronic diseases, including cancer, coronary heart disease, and osteoporosis.

Fairfield KM, Fletcher RH. JAMA. 287:3116-31126 (2002).
Ames BN, Wakimoto P. Nat Rev Cancer. 2:694-704 (2002).

500 mg	$40.70
1 g	$67.80
5 g	$223.70

V3476



Vitamin D2

$C_{28}H_{44}O$ Mol. Wt.: 396.65 [50-14-6]

One of the vitamin D family. It is used in the treatment of refractory rickets (vitamin D resistant rickets), familial hypophosphatemia and hypoparathyroidism. It also has a strong inhibitory effect against bladder tumor promotion by sodium saccharin and induces cell differentiation in leukemia cells.

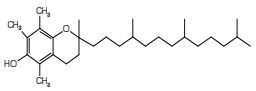
Yazawa Y, Yokota M, Sugiyama K, Biol Pharm Bull. 23:1298-302 (2000).
Yen A, Blue J, Forbes M. In vitro cell dev Biol. 27A:518-20 (1991).

1 g	$69.30
5 g	$271.30

Vitamin D3

See Cholecalciferol

V3277 — Vitamin E



D,L-α-Tocopherol

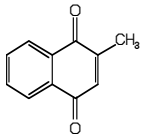
$C_{29}H_{50}O_2$ Mol.Wt.: 430.7 [2074-53-5]

An antioxidant and anticarcinogen toward a variety of cancers.

Wattenberg LW. Cancer Res. 45:1-8 (1985).

100 g	$44.30
500 g	$169.80

V3479 — Vitamin K3



2-Methyl-1,4-naphthoquinone, menadione

$C_{11}H_8O_2$ Mol. Wt.: 172.18 [58-27-5]

Induces apoptosis in various cultured cells including leukemia cells. It has been shown that vitamin K exerts anti-tumor activity by inhibiting cdk1 activity and over expressing the c-myc gene to induce apoptotic cell death. Another hypothesis based on investigation done on the mode of actions of vitamin K suggests that VK3 induces apoptosis by promoting the generation of intracellular reactive oxygen intermediates and Fas/APO-1 expression.

Nishimaki J, Miyazawak, Yaguchi M et al. Leukemia. 13:1399-405 (1999).
Wu FY, Sun TP. Eur J Cancer. 35:1388-93 (1999).
Sun LK, Yoshii Y, Miyagi K. J Neurooncol. 47:31-8 (2000).

10 g	$15.30
25 g	$24.60

W4096 — W-K-Y-M-V-M-NH2

H-Trp-Lys-Tyr-Met-Val-Met-NH_2

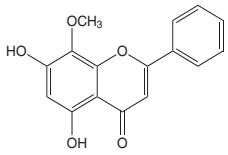
$C_{41}H_{61}N_9O_7S_2$ Mol.Wt.: 856.13

A formyl peptide receptor-like 1 ligand, induces superoxide production by human neutrophils.

Lee HY, Jo SH, Lee C, Baek SH, Bae YS. Biochem Pharmacol. 72: 860-8 (2006).

0.5 mg	$44.80
1 mg	$75.20
2.5 mg	$134.40

W5726 — Wogonin



5,7-Dihydroxy-8-methoxyflavone

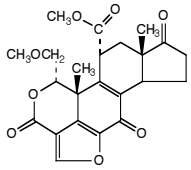
$C_{16}H_{12}O_5$ Mol. Wt. 248.26 [632-85-9]

A flavanoid compound that exhibits cell apoptotic and cytotoxic effects in Bel-7402 cells. This compound also demostrates anti-inflammatory and anti-cancer activities.

Yu JQ, Liu HB, Tian DZ, Liu YW, Lei JC, Zou GL. Hepatol Res. 37: 68-76 (2007).
Tai MC, Tsang SY, Chang LY, Xue H. CNS Drug Rev. 11:141-50 (2005).

5 mg	$65.00
10 mg	$98.00
25 mg	$220.00

W5769 — Wortmannin



$C_{23}H_{24}O_8$ Mol. Wt.: 428.43 [19545-26-7]

An inhibitor of PI3-K and DNA-dependent protein kinase, which is known to mediate DNA double strand break repair. It induces apoptosis and also sensitizes cells to ionizing radiation.

Boulton S, Kyle S, Yalcintepe L, Durkacz BW. Carcinogenesis. 17: 2285 -90 (1996).
Ng SSW, Tsao MS, Chow S, Hedley DW. Cancer Res. 60: 5451-5 (2000).
Kubota N, Okada S, Inada T, Ohnishi K, Ohnishi T. Cancer Lett. 161:141-7 (2000).

1 mg	$52.90
5 mg	$208.60

X1752 — Xenin

H-Met-Leu-Thr-Lys-Phe-Glu-Thr-Lys-Ser-Ala-Arg-Val-Lys-Gly-Leu-Ser-Phe-His-Pro-Lys-Arg-Pro-Trp-Ile-Leu-OH

$C_{139}H_{224}N_{38}O_{32}S_1$ Mol.Wt.: 2971.63

An amphibian xenopsin-related peptide that stimulates exocrine pancreatic secretion.

Feurle GE, Hamscher G, Kusiek R, Meyer HE, Metzger JW. J Biol Chem. 267: 22305-9 (1991).
Hamscher G, Meyer HE, Metzger JW, Feurle GE. Peptides. 16: 791-7 (1995).

0.5 mg	$121.60
1 mg	$206.40
2.5 mg	$364.80

X1753 — Xenopsin

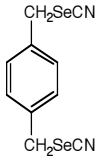
pGlu-Gly-Lys-Arg-Pro-Trp-Ile-Leu-OH

$C_{47}H_{73}N_{13}O_{10}$ Mol.Wt.: 980.19

1 mg	$32.00
2 mg	$54.40
5 mg	$96.00

X1854 — p-Xyleneselenocyanate, 99%

(See page 26 for more information)



1,4-Phenylenebismethyleneselenocyanate, p-XSC

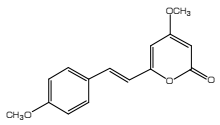
$C_{10}H_8N_2Se_2$ Mol. Wt.: 314.10 m.p.156°C [85539-83-9]

A synthetic organoselenium chemopreventive agent. Found to inhibit chemically induced carcinogenesis in the mammary glands, colon and lung of laboratory animals.

Tanaka T, Makita H, Kawabata K et al. Cancer Res. 57:3644-3648 (1997).
Prokopczyk B, Amin S, Desai DH et al. Carcinogenesis. 9:1855-1857 (1997).

100 mg	$50.00
250 mg	$100.00
500 mg	$173.80

Y0052



Yangonin

$C_{15}H_{14}O_4$ Mol. Wt.: 258.27 [500-62-9]

One of the major components of kava extract reported to have binding affinities to CNS receptors.

Dinh LD, Simmen U, Bueter KB. Planta Med. 67:306-11 (2001).

5 mg	$99.50
10 mg	$153.70

Z0146

Z-Ala-Ala-Leu-pNA

Z-Ala-Ala-Leu-pNA

$C_{26}H_{33}N_5O_7$ Mol Wt: 527.6 [61043-33-2]

100 mg	$80.00
250 mg	$160.00

Zalcitabine

See 2',3'-Dideoxycytidine

$C_9H_{13}N_3O_3$ Mol. Wt.: 211.22 [7481-89-2]

An anti-HTLV-III/LAV drug.

Z1216

Z-Asp-Glu-Val-Asp-AMC

Z-D-E-V-D-AMC

Ac-Asp-Glu-Val-Asp-7-amino-4-methylcoumarin

$C_{36}H_{41}N_5O_{14}$ Mol.Wt.: 767

A fluorogenic peptide substrate used to determine caspase activties.

Haviv R, Lindenboim L, Li H, Yuan J, Stein R. J Neurosci Res. 50: 69-80 (1997).

5 mg	$185.60
10 mg	$315.20
25 mg	$556.80

Z2268

Z-Phe-Arg-AMC

Z-F-R-AMC

$C_{33}H_{36}N_6O_6$ Mol.Wt.: 612.68

A peptide substrate used to experimentally determine cathepsin B and L activities.

Li Y. *et. al*. Zhongguo Ji Sheng Chong Xue Yu Ji Sheng Chong Bing Za Zhi. 16: 101-4 (1998).

10 mg	$147.20
20 mg	$249.60
50 mg	$441.60

Z6269

Z-Pro-D-Leu-OH

Z-Pro-D-Leu

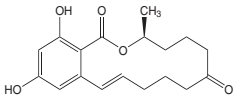
$C_{19}H_{26}N_2O_5$ Mol.Wt.: 362.4

A synthetic peptide derived from the c-terminus fragment of oxytocin. It is an effective inhibitor of tolerance to and dependence on morphine in mice.

Kovacs GL, Acsai L, Tihanyi A, Faludi M, Telegdy G. Pharmacol Biochem Behav. 18: 345-9 (1983).

10 mg	$64.00
20 mg	$108.80
50 mg	$192.00

Z1602



Zearalenone

$C_{18}H_{22}O_5$ Mol. Wt.: 318.36 [17924-92-4]

An estrogenic mycotoxin produced by genus Fusarium found in cerea grains. Zearalenone induced apoptosis and proliferation in granusola cells from cycling mare ovaries.

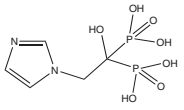
Tiemann U, Danicke S. Food Addit Contam. 24: 306-14 (2007).
Minervini F, Giannoccaro A, Fornelli F. *et. al*. Reprod Biol Endocrinol. 4: 62 (2006).

1 mg	$20.00
5 mg	$40.00
10 mg	$72.00

Zidovudine

See 3'-Azido-3'-deoxythymidine (AZT)

Z5744



Zoledronic acid

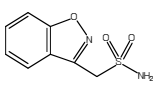
$C_5H_{10}N_2O_7P_2$ Mol. Wt.: 272.09 [118072-93-8]

A potent bone resorption inhibitor. May improve osteosarcoma treatments when administered with anticancer agents.

Schortinghuis J, Witjes MJ, Spijkervet KL, de Visscher JG. Ned Tijdschr Geneeskd. 151:314-8 (2007).
Horie N *et. al*.Br J Cancer. 96: 255-61 (2007).

10 mg	$50.00
25 mg	$100.00
100 mg	$300.00

Z5653



Zonisamide (See page 21 for more information)

$C_8H_8N_2O_3S$ Mol. Wt.: 212.23 [68291-97-4]

A new-generation antiepileptic drug (AED) with applications as an antinocireceptive agent.

Sakaue A, Honda M, Tanabe M, Ono H. J Pharm Sci. 95:181-8 (2004).
Low PA, James S, Peschel T et al. J Neur. 251:1043-9 (2004).

10 mg	$89.60
25 mg	$168.00
100 mg	$560.00

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Exciting New Additions in this Catalog

A2044	Aflatoxin B1
A2046	Aflatoxin B2
A2048	Aflatoxin G1
A2050	Aflatoxin G2
A2052	Aflatoxin M1
A2054	Aflatoxin M2
A4930	7-Amino-actinomycin D
A5135	Aminophylline Dihydrate
A5056	Amorolfine Hydrochloride
A7208	Ascomycin
A7656	Atomoxetine Hydrochloride
A9817	Azelaic acid
B1753	Benfotiamine
B1669	Berbamine Hydrochloride,95%
B3203	Biapenem
B3210	R-Bicalutamide
B8112	Budesonide
C1648	α-Cembrenediol
C1649	β-Cembrenediol
C2942	Chlormethine A3
C2969	Chromomycin Olamine
C3208	Ciclopirox
C3260	Ciprofibrate
C3479	Citrinin
C4402	Cladribine A
C5654	Concanavalin acid
C9809	Cyclopiazonic
C9878	Cytochalasin A
C9879	Cytochalasin B
C9880	Cytochalasin C
C9881	Cytochalasin D
C9882	Cytochalasin E
D0033	Daidzin
D0375	Dasatinib
D1624	Deflazacort
D1759	Deoxynivalenol
D0368	Deoxysarcophine, 2-epi-16-
D1875	Desulfo-glucoraphanin
D3223	Difloxacin
D3429	Dihydrocytochalasin B
D4802	17-DMAG
D5746	Dolasetron
E0403	Ebastine
E6435	Epiprogoitrin
E8657	Evodiamine
F1745	Felodipine
F1895	Fexofenadine Hydrochloride
F4781	Fludarabine
F5773	Fosinopril sodium
G1745	Gemcitabine Hydrochloride
G3352	Ginkgolic acid
G3359	Ginkgolide J
G6802	Granisetron
I4802	Imatinib mesylate
I4934	Imipenem
K0021	K252a
K0022	K252b
K7600	KT5720
K7602	KT5823
L0349	Lamotrigine
L0076	Latrunculin A
M3476	Mithramycin
M3576	Mitotane
M9710	Mycophenolic acid
N5652	Nonactin
O1176	n-Octyl-Caffeate
O1177	n-Octyl-3,4-Dimethylcaffeate
O1178	n-Octyl-3-methylcaffeate
O1179	n-Octyl-4-methylcaffeate
O4533	Oligomycin
O6953	Ornidazole
P0270	Parthenolid
P0278	Patulin
P0392	Paxilline
P1854	Penicillic acid
P1952	Penitrem A
P7057	Progoitrin
P8167	Puromycin-aminonucleoside
Q8135	Quinestrol
R3347	Riluzole
R3477	Ritodrine
S0368	Sarcophine
S3452	Sinalbin
S7717	Sterigmatocystin
S8253	Sunitinib Malate
T0002	T2 Toxin
T0299	Tazobactam Sodium
T2835	6-Thioguanine
T6834	Triacsin C
T7133	Trimetazidine
T7037	Triptorelin Acetate
T8145	Tulobuterol
V1870	Verrculogen
W5726	Wogonin
Z1602	Zearalenone
Z5744	Zoledronic acid

Categorized Specialty Chemicals

The following lists are classifications of the specialty chemicals into categories according to the work that has been published in the current literature.

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Anti-Angiogenic Compounds

A0819 Acetylsalicyclic acid / Aspirin
A1865 Aeroplysinin
A5133 Amiloride
A5228 Angiogenin
A5230 Angiostatin
A6234 Apigenin
A6268 Aprotinin
A6823 Argatroban
A6979 Dihydroartemisinin
A6982 Artesunate
A7658 Atorvastatin
B7973 Busulfan
C0150 Camptothecin
C0154 Camptothecin, 7-ethyl-10-hydroxy
C0155 Camptothecin, 10-hydroxy
C0156 Camptothecin, 9-nitro-20(S)
C0171 Carboplatin
C0173 Carmustine
C0261 Captopril
C2800 Chalcone
C2847 Chlormadinone acetate
C3374 Cisplatin
C4534 Clindamycin Palmitate
C5645 Colchicine
C5771 Corticosterone
C8069 Curcumin
C9611 Cyclophosamide
C9611 Cyclosporin A
C9612 Cyclosporin C
C9613 Cyclosporin D
C9614 Cyclosporin H
C9709 Cycloheximide
D0011 Dacarbazine
D0032 Daidzein
D1693 Dexamethasone
D3221 Difluoromethylornithine
D5709 Docetaxel
D5794 Doxorubicin
D5897 Doxycycline Hydrochloride
D5898 Doxycycline Monohydrate
E6234 Epigallocatechin gallate
F4480 Fluorouracil
F4481 Flurbiprofen
F5668 Forskolin
F8048 Fumagillin
G0152 Ganciclovir
G1652 Genistein
G4581 Glucosamine
H1894 Hexestrol
H9611 Hydrocortisone
H9613 Fenretinide
H9715 Hydroxyurea
I5315 Indomethacin
I6068 Ipriflavone
I6933 Irinotecan
L0107 Lactacystin
L0284 Lavendustin A
L1682 Levamisole Hydrochloride
L3374 Lisinopril
L5785 Lovastatin
M1613 Medroxyprogesterone 17-Acetate
M3221 Mifepristone
M3353 Minocycline HCl
M3377 Mitomycin C
O1078 Octreotide
O4917 Omeprazole
O9201 Oxaliplatin
P0092 Paclitaxel
P1753 Penicillamine
P1755 Pentoxifylline
P6801 Pravastatin
P6818 Prednisolone
Q8133 Quinacrine
R0212 Radiciol
R1780 Tretinoin (trans-Retinoic Acid)
S3449 Simvastatin
S5749 Somatostatin
S7600 Staurosporine
S8169 Suramin
T0250 Tamoxifen Citrate
T1670 Terazosin Hydrochloride
T1677 Tetracycline
T1777 Tetrandrine
T1849 Temozolomide
T2800 Thalidomide
T5761 Topotecan
T6902 Tranilast
T8153 Tunicamycin
U6873 Ursodeoxycholic Acid
V5254 Vincristine
W5769 Wortmannin

Antimicrobials

A0816 Acemetacin
A0819 Acetylsalicylic Acid / Aspirin
A0977 Actinomycin D
A0978 Actinonin
A6229 Aphidicolin
A4930 7-Amino-actinomycin D
A4440 Allicin
A4544 Allyl Disulfide
A4802 Amantadine Hydrochloride
A5033 4-Aminosalicylic acid
A5034 4-Aminosalicylic acid sodium dihydrate
A5039 Amitraz
A5132 Amikacin Disulfate
A5056 Amorolfine Hydrochloride
A5130 Amphotericin B
A5160 Ampicillin Trihydrate
A5162 Amprolium Hydrochloride
A5315 Andrographolide, deoxy-
A5373 Anisomycin
A6264 Apramycin
A7208 Ascomycin
A6804 Arbutin
A6970 Artemether
A7618 Atenolol
A7672 Atropine Sulfate
A9834 Azithromycin
B0025 Bafilomycin A1
B0026 Bafilomycin B1
B0108 Bactenecin
B0133 Baicalin
B0150 Bambuterol Hydrochloride
B1878 Betamethasone 21-phosphate sodium salt
B3320 Biapenem
B3202 Bifonazole
B4517 Blasticidin S
B4401 Bleomycin A5 HCl
B4518 Bleomycin sulfate
B6816 Brefeldin A
C0016 Caerulomycin A
C0168 Carbadox
C0267 Carnosol
C1627 Cefaclor
C1629 Cefoperazone acid
C1630 Cefoperazone Sodium
C1632 Cefotoxime Acid
C1633 Cefotaxime sodium
C1635 Ceftazidime
C1718 Cepharanthine
C2844 Chloramphenicol
C2945 Chlorpheniramine Maleate
C2950 Chloroquine phosphate
C3252 Chromomycin A3
C2970 Chrysophanol
C2969 Ciclopirox Olamine
C3208 Cinoxacin
C3262 Ciprofloxacin
C4502 Clarithromycin
C4510 Climbazole
C4532 Clindamycin HCl
C4535 Clinafloxacin HCl
C4657 Closantel
C4657 Clotrimazole
C4659 Clobetasol Propionate
C5647 Colistin sulphate
C6955 Cromolyn sodium
C6956 Crotamiton
C8069 Curcumin
C9610 D-Cylcoserine
C9611 Cyclosporin A
C9670 Cyclosporin B
C9612 Cyclosporin C
C9613 Cyclosporin D
C9614 Cyclosporin H
C9615 Cyromazine
C9709 Cycloheximide
D0182 Daunorubicin HCl
D1748 Demeclocycline
D3209 Diclofenac, Sodium Salt
D3322 Difloxacin
D3223 Diflunisal
D3357 Diosmin
D5794 Doxorubicin HCl
D5897 Doxycycline HCl
E0073 Ebselen
E0180 Ebulin 1
E5358 Enoxacin
E5369 Enrofloxacin
E6994 Erythromycin
E6995 Erythromycin Ethylsuccinate
E6996 Erythromycin thiocyanate

Antimicrobials

E7228 Ethacridine Lactate Monohydrate
E7230 Ethambutol
E7657 Etoposide
F0048 Famciclovir
F1652 Fenbufen
F4481 Flurbiprofen
F4518 Fleroxacin
F4556 Florfenicol
F4582 Fluocinolone Acetonide
F4680 Flubendazole
F4682 Fluconazole
F8048 Fumagillin
F8270 Furosemide
G0152 Ganciclovir
G0278 Gatifloxacin
G1646 Geldanamycin
G1658 Gentamycin sulfate
H5654 Honokiol
H9611 Hydrocortisone
H9801 Hyaluronic Acid Sodium salt
H9861 Hypericin
I0481 Ibuprofen
I0482 S(+) Ibuprofen
I1257 Idoxuridine
I4000 Ikarugamycin
I5315 Imipenem
I4934 Indomethacin
I5753 Ionomycin
I7870 Itraconazole
K1676 K252a
K0021 K252b
J0022 KT5720
K7600 KT5823
K0053 Kanamycin A
K0054 Kanamycin B
K7602 Ketoconazole
K1677 Ketoprofen
L0209 Lactoferrin, Bovine
L1786 Levofloxacin HCl
L3454 Lincomycin HCl Monohydrate
L5660 Loperamide HCl
L5749 Lomefloxacin HCl
L5873 Losartan potassium
M0125 Magnolol
M1605 Mebendazol
M1644 Meloxicam
M1669 6-Mercaptopurine Monohydrate
M1676 Methotrexate
M1977 Metronidazole
M3309 Miconazole.
M3310 Miconazole Nitrate
M3353 Minocycline HCl
M3377 Mitomycin C
M5753 Monensin Sodium Salt
M5813 Modafinil
N0075 Natamycin
N0114 Nadifloxacin
N0205 Nabumetone
N1755 Neomycin Sulfate
N1976 Netilmicin Sulfate
N3450 Nimesulide
N3520 Nifursol
N5768 Norfloxacin
N9874 Nystatin
O2144 Ofloxacin
O9234 Oxiconazole Nitrate
O9302 Oxacillin Sodium Monohydrate
O9322 Oxfendazole
O9334 Oxibendazole
O9396 Oxytetracycline
O9397 Oxytetracycline HCl
P0219 Paeonol
P0370 Paromomycin Sulphate
P0398 Pazufloxacin
P1622 Pefloxacine Mesylate
P1852 Penicillin G Procaine
P1853 Penicillin V Potassium
P2445 PGLa
P2845 Phleomycin
P2995 Physcion
P3462 Piperacillin
P3463 Piperacillin sodium
P5885 Povidone iodine
P6959 Prothionamide
P7033 Primaquine phosphate
P7103 Praziquantel
P8168 Puromycin
P9668 Pyrantel Pamoate
P9671 Pyrazinamide
R0161 Rapamycin

Antimicrobials

R3205 Ribavirin
R3220 Rifampin
R3221 Rifamycin SV-3 formyl
R3222 Rifamycin SV-Sodium
R3249 Rimantadine HCl
R3321 Rifaximin
R5874 Rosmarinic acid
R5992 Roxithromycin
R8207 β-Rubromycin
R8122 Rufloxacin
S0053 α-Santonin
S0170 Sarafloxacin HCl
S1059 Scopolamine Hydrobromide
S1810 Secnidazole
S3033 Shikimic acid
S6000 Sparfloxacin
S6018 Spectinomycin HCl
S6232 Spiramycin
S6234 Spiramycin Embonate
S6233 Spiramycin Hexanedioate
S7600 Staurosporine
S7769 Streptomycin sulfate
S8144 Sulfadoxine
S8169 Suramin hexasodium salt
S8248 Sulfamethoxazole
T1654 Tenoxicam
T1672 Terbinafine HCl
T1677 Tetracycline
T1679 Tetracycline HCl
T2932 Thiamphenicol Glycinate HCl
T3357 Tioconazole
T5604 Tobramycin (free base)
T5605 Tobramycin Sulfate
T5672 Tosufloxacin
T5846 Tolfenamic acid
T5944 Tolmetin sodium
T6832 Triamcinolone acetonide
T7034 Trimethoprim
T9945 Tylosin tartrate
U7354 Usnic acid
V0145 Valinomycin
V3253 Vinblastine sulfate
V5254 Vincristine sulfate

Antineoplastics
(Cancer Chemotherapeutics)

A0816 Acemetacin
A0934 Acivicin
A0977 Actinomycin / Dactinomycin
A1318 Adenine
A4445 Allopurinol
A4521 Alfacalcidol
A4547 Alloxan Monohydrate
A4544 Allyl disulfide
A4578 Altretamine
A4931 3-Aminobenzamide
A4933 Amifostine
A5017 L-(+)-Amethopterin Dihydrate
A5302 Anastrazole
A5230 Angiostatin
A5217 trans-Anethole / p-Propenylanisole
A5478 Antipain
A6229 Aphidicolin
A6823 Argatroban
B0025 Bafilomycin A1
B1669 Berbamine Hydrochloride, 95%
B1774 Bestatine Hydrochloride
B3358 Biochanin A
B4517 Bleomycin A5 hydrochloride
B4518 Bleomycin sulfate
B6816 Brefeldin A
B6998 Bryostatin 1
B7973 Busulfan
C0016 Caerulomycin A
C0145 Calcitriol / 1 a, 25-Dihydroxyvitamin D3
C0147 Calcium folinate, pentahydrate
C0150 Camptothecin
C0154 Camptothecin, 7-ethyl-10-hydroxy
C0155 Camptothecin, 10-hydroxy
C0168 Canthaxanthin
C0171 Carboplatin
C0174 Carmofur
C0261 Captopril
C0265 Carnosic acid
C0277 Catechin
C0376 Catharanthine base
C0377 Catheranthine sulfate
C0378 Catheranthine tartrate
C2946 Chlorambucil
C2942 Chlormethine
C2956 Cholecalciferol/ Vitamin D3
C3374 Cisplatin
C5645 Colchicine
C5654 Concanavalin A
C5662 Copper bis-3,5-diisopropylsalicylate
C5771 Corticosterone
C9677 Cyclocytidine Hydrochloride
C9709 Cycloheximide
C9609 Cyclophosphamide
C9778 Cytarabine
D0011 Dacarbazine
D0182 Daunorubicin Hydrochloride
D0253 Danazol
D3219 Diflubenzuron
D3221 Difluoromethylornithine
D3328 Dihydrokainic acid
D5692 Doxifluridine
D5709 Docetaxel
D5794 Doxorubicin Hydrochloride
D5898 Doxycycline
E6235 Epirubicin
E7657 Etoposide
E7668 Etretinate
E9317 Exemestane
F4480 5-Fluorouracil
F4557 Floxuridine
F4680 Flutamide
G1745 Gemcitabine Hydrochloride
G1652 Genistein
G3460 Ginsenoside F1
G3461 Ginsenoside F2
G3462 Ginsenoside F3
G3454 Ginsenoside Rb1
G3553 Ginsenoside Rb2
G3554 Ginsenoside Rb3
G3455 Ginsenoside Rc
G3456 Ginsenoside Rd
G3457 Ginsenoside Re
G3458 Ginsenoside Rg1
G3459 Ginsenoside Rg2
G3556 Ginsenoside Rg3
G3557 Ginsenoside Rh1
G3453 Ginsenoside Rh2
G3463 Ginsenoside X
G4597 18 β-Glycyrrhetinic Acid
G4598 Glycyrrhizic acid

Antineoplastics
(Cancer Chemotherapeutics)

H0169 Harringtonin
H1794 Hexamethonium bromide hydrate
H5748 DL-Homocysteine thiolactone HCl
H5750 Homoharringtonin
H9614 Hydrocortisone
H9618 Hydroquinone
H9661 Hypocrellin A
H9662 Hypocrellin B
H9711 (*Z*)-4-Hydroxytamoxifen
H9712 (*E*)-4-Hydroxytamoxifen
H9713 (*E, Z*)-4-Hydroxytamoxifen
H9715 Hydroxyurea
H9861 Hypericin
I0502 Ibandronate
I1400 Idarubicin hydrochloride
I2056 Ifosfamide
I4802 Imatinib mesylate
I5753 Ionomycin
I6933 Irinotecan
K0117 Kaempferol
K1676 Ketoconazole
L0107 Lactacystin
L0286 Lavendustin A
L1682 Levamisole
L1882 Levamisole hydrochloride
L3250 D-Limonene
L3374 Lisinopril
L5648 Lomustine
L5686 Lonidamine
M1613 Medroxyprogesterone 17-acetate
M1626 Megestrol Acetate
M1644 Meloxicam
M1669 6-Mercaptopurine monohydrate
M1676 Methotrexate
M1678 2-Methoxy estradiol
M1679 2-Methoxy estrone
M1685 Mevastatin
M1747 Melphalan
M1774 Mesna
M1877 Methylprednisolone
M3309 Miconazole
M3321 Mifepristone
M3377 Mitomycin C
M3379 Mitoxantrone
N0212 Nedaplatin
N3452 Nimustine
N5409 Nocodazole
N5766 Norepinephrine
O7012 Prednisolone sodium phosphate
O9301 Oxaliplatin
P0092 Paclitaxel, (Taxol)
P0245 Palmatine
P1770 Perillyl alcohol
P2400 Phenethyl caffeate
P2857 Phorbol-12-myristate-13-acetate
P2997 Phytic Acid
P5712 Podophyllotoxin
P6818 Prednisolone
P6858 Procarbazine HCl
P8117 Puerarin
P8168 Puromycin
P8270 Purvalanol A
P9768 Pyronaridine Tetraphosphate
Q8133 Quinacrine
R1985 Reveromycin A
R3205 Ribavirin
R8206 Rubescensin A
R8207 β-Rubromycin
S0278 Satraplatin
S1069 Scriptaid
S3449 Simvastatin
S7870 Streptozocin
S8169 Suramin hexasodium salt
S8247 Sulfadiazine
T0153 Tanshinones I
T0154 Tanshinones IIA
T0250 Tamoxifen citrate
T1652 Teniposide
T1654 Tenoxicam
T1670 Terazosin HCl
T1677 Tetracycline
T2800 Thalidomide
T2817 Theophylline
T5761 Topotecan
T5769 Toremifene
T6902 Tranilast
T6933 Trichostatin A
T7033 Trifluoperazine
T7035 Triptolide
T7056 Troglitazone

Antineoplastics
(Cancer Chemotherapeutics)

T7197 Tryprostatin A
T8004 Tubeimoside I
U6901 Uracil
U7354 Usnic Acid
V3212 Vidarabine
V3252 Vinorelbine
V3253 Vinblastine sulfate
V3277 Vitamin E
V3354 Vindesine sulfate
V3355 Vindoline
V3375 Vitamin A
V3479 Vitamin K3
V5254 Vincristine sulfate
Z0145 Zalcitabine

Apoptosis Detection Assay Kits

C2962	Cholinesterase Assay Kit
C2963	Cholinesterase and Apoptosis Assay Kit
C9782	Cytotoxicity Test Kit
F0010	FAM FLICA ™ Poly Caspases Assay Kit
F0011	FAM FLICA ™ Caspase 1 Assay Kit
F0012	FAM FLICA ™ Caspase 2 Assay Kit
F0013	FAM FLICA ™ Caspase 3 & 7 Assay Kit
F0014	FAM FLICA ™ Caspase 6 Assay Kit
F0015	FAM FLICA ™ Caspase 8 Assay Kit
F0016	FAM FLICA ™ Caspase 9 Assay Kit
F0017	FAM FLICA ™ Caspase 10 Assay Kit
F0018	FAM FLICA ™ Caspase 13 Assay Kit
F0019	FAM-Phe-CMK FLISP ™ Assay Kit
F0020	FAM-Lys-CMK FLISP ™ Assay Kit
F0021	FAM-Leu-CMK FLISP ™ Assay Kit
F0022	FAM-Spacer-Phe-CMK FLISP ™ Assay Kit
F0023	FAM-Spacer-Leu-CMK FLISP ™ Assay Kit
F0024	FAM-Leu-DAP FLISP ™ Assay Kit
M0115	Magic Red ™ Caspases 3 & 7 Assay Kit
M0116	Magic Red ™ Cathepsin B Assay Kit
M0117	Magic Red ™ Cathepsin K Assay Kit
M0118	Magic Red ™ Cathepsin L Assay Kit
M3378	MitoPT ™ Kit
S7080	SR Poly Caspases Assay Kit
S7081	SR Caspases 3 and 7 Assay Kit
S7082	SR Caspase 9 Assay Kit
S7083	SR-101-Phe-CMK FLISPTM Assay Kit
S7084	SR-101-Leu-CMK FLISPTM Assay Kit
T5677	Total Cell Death Assay Kit

Apoptosis Inducers

A0025 17-AAG
A0817 D,L-1'-Acetoxychavicol acetate
A0918 N-Acetyl-L-Cysteine
A0819 Acetylsalicyclic acid/ Aspirin
A0934 Acivicin
A0978 Actinonin
A1318 Adenine
A1865 Aeroplysinin
A4440 Allicin
A4515 Alendronate
A4544 Allyl disulfide
A4577 Alsterpaullone
A4847 Amylin, human
A4931 3-aminobenzamide
A4940 6-Aminonicotinamide
A5001 Aminopterin
A5037 Amiodarone HCl
A5044 Amlodipine besylate
A5045 Amlodipine
A5130 Amphotericin B
A5230 Angiostatin
A5326 Anethole-trithione
A5373 Anisomycin
A5378 Antimycin A
A6229 Aphidicolin
A6234 Apigenin
A6979 Dihydroartemisinin
A7085 Arvanil
A7209 Ascorbic acid
A7210 L(+)-Ascorbic acid
A8070 Auraptene
A9817 Azelaic Acid
B0133 Baicalin
B1545 Benzalkonium Bromide
B1853 1,4-Benzoquinone
B1874 Bestatine Hydrochloride
B1876 Betamethasone
B3209 Bicalutamide
B3210 R-Bicalutamide
B4401 Blasticidin *S*
B4402 Blasticidin *S* HCl
B4517 Bleomycin A5 hydrochloride
B4518 Bleomycin Sulfate
B5753 Bongkrekic acid
B6800 Bradykinin
B6816 Brefeldin A
B8275 n-Butyric acid
C0173 Carmustine
C0245 Calyculin A
C0246 Calcimycin
C0344 Calphostin C
C1718 Cepharanthine
C1869 Cerulenin
C2818 Chelerythrine Chloride
C2830 Chartreusin
C2844 Chloramphenicol
C2916 Chenodeoxycholic acid
C2946 Chlorambucil
C2844 Chloramphenicol
C2942 Chlormethine
C2947 Chlorpromazine
C3045 Chloroadenosine
C3210 Ciglitazone
C3260 Ciprofibrate
C4402 Cladribine
C4557 Clofibrate
C4559 Clomiphene Citrate
C5645 Colchicine
C5654 Concanavalin A
C5662 Copper bis-3,5-diisopropylsalicylate
C5771 Corticosterone
C9609 Cyclophosphamide
C9611 Cyclosporin A
C9612 Cyclosporin C
C9613 Cyclosporin D
C9614 Cyclosporin H
C9662 Cyproterone Acetatte
C9709 Cycloheximide
C9710 Cyclopamine
C9878 Cytochalasin A
C9879 Cytochalasin B
C9880 Cytochalasin C
C9881 Cytochalasin D
C9882 Cytochalasin E
D0182 Daunorubicin Hydrochloride
D1695 Dexamethasone Sodium Phosphate
D1749 Demecolcine
D3218 Diethylstilbestrol
D3219 Diflubenzuron
D3221 Difluoromethylornithine

Apoptosis Inducers

D3232 3,3'-Diindolylmethane
D3374 Disulfiram
D5709 Docetaxel
D5794 Doxorubicin HCl
E0073 Ebselen
E0813 Ecdysterone
E6232 (-)Epicatechin gallate
E6234 Epigallocatechin gallate
E7657 Etoposide
E8657 Evodiamine
F0268 Farnesol
F1895 Fexofenadine Hydrochloride
F3354 Finasteride
F4781 Fludarabine
F4480 5-Fluorouracil
F4481 Flurbiprofen
F4501 Flavanone
F4681 2-Hydroxyflutamide
F5868 Formoterol Fumarate
F8149 Fumonisin B1
G0144 Galactosamine
G0145 Gallic acid
G1745 Gemcitabine Hydrochloride
G1650 Geniposide
G1652 Genistein
G1653 Genistin
G1869 Geranylgeraniol
G3453 Ginsenoside Rh2
G5874 Gossypol
H0142 Haloperidol
H0169 Harringtonine
H1794 Hexamethonium bromide hydrate
H1892 Hexamethylene bisacetamide
H5654 Honokiol
H5750 Homoharringtonin
H8162 Huperizine
H9611 Hydrocortisone
H9613 N-(4-Hydroxyphenyl)retinamide
H9715 Hydroxyurea
H9861 Hypericin
I0481 Ibuprofen
I1400 Idarubicin HCl
I5034 Imiquimod
I5315 Indomethacin
I5753 Ionomycin
I6933 Irinotecan
K0117 Kaempferol
K1655 Kenpaullone
K1677 Ketoprofen
L0107 Lactacystin
L1684 Levonorgestrel
L1761 Leptomycin B
L1882 Levamisole HCl
L5648 Lomustine
L5686 Lonidamine
L5785 Lovastatin
L8377 Luteolin
M0125 Magnolol
M0172 Mastoparan
M1669 6-Mercaptopurine monohydrate
M1745 Melatonin
M1877 Methylprednisolone
M1976 Methimazole
M3321 Mifepristone
M3377 Mitomycin C
M5752 Monastrol
M5753 Monensin sodium salt
N0069 Naringin
N3213 Nidulal
N3225 Nigericin
N3228 Nifidepine
N3378 S-Nitrosoglutathione
N3450 Nimesulide
N5709 Nocodazole
O6845 Orlistat
P0255 Pantoprazole
P0270 Parthenolide
P1755 Pentoxifylline
P1770 Perillyl Alcohol
P1917 Phenylethyl 3-methylcaffeate
P2508 Phenethyl isothiocyanate
P2510 Phenylbutyl isothiocyanate
P2515 Phenylpropyl isothiocyanate
P2815 Phenylbutyrate
P2922 Phenylhexyl isothiocyanate
P2857 Phorbol-12-myristate-13-acetate
P3269 Piroxicam
P3465 Piperine
P5878 Potassium canrenoate
P6818 Prednisolone

Apoptosis Inducers

P7012 Prednisolone sodium phosphate
P8168 Puromycin
P8270 Purvalanol A
R1985 Reveromycin A
R2917 Rhein
S0033 Saikosaponin B2
S1609 Securinine
S3449 Simvastatin
S5749 Somatostatin
S6129 D-Sphingosine
S6130 Sphingosine-1-phosphate
S6131 Sphingosine, N,N-dimethyl
S7701 Staurosporine
S8147 Sulindac, sulfide
S8247 Sulfasalazine
T0250 Tamoxifen citrate
T1677 Tetracycline
T1777 Tetrandrine
T1849 Temozolomide
T2835 6-Thioguanine
T3305 Tibolone
T3310 Ticlopidine HCl
T5769 Toremifene
T6832 Triamcinolone acetonide
T6933 Trichostatin A
T7032 Triamcinolone
T7033 Trifluoperazine
T7034 Triamcinolone Acetonide Acetate
T7035 Triptolide
T7056 Troglitazone
T7197 Tryprostatin A
T8004 Tubeimoside I
T8153 Tunicamycin
T9713 Tamoxifen, 4-hydroxy
U0618 Ubenimex
V0145 Valinomycin
V1769 Verapamil Hydrochloride
V3253 Vinblastine sulfate
V3479 Vitamin K3
V5254 Vincristine sulfate
W5726 Wogonin
W5769 Wortmanin

Apoptosis Inhibitors

A0918	N-Acetyl-L-Cysteine
A0977	Actinomycin D
A4931	3-Aminobenzamide
A5334	Anisomycin
A6229	Aphidicolin
B5753	Bongkrekic acid
C0221	Caffeine
C0346	Calyculin A
C0150	Camptothecin
C9709	Cycloheximide
C9611	Cyclosporin A
D0182	Daunorubicin Hydrochloride/ Daunomycin
D5794	Doxorubicin Hydrochloride
E0073	Ebselen
E7657	Etoposide
F4480	5-Fluorouracil
G1652	Genistein
H1669	Herbimycin
H8162	Huperzine
K0117	Kaempferol, 95%
N0069	Naringin
N3378	S-Nitrosoglutathione
P1761	Pepstatin
P2856	Phorbol-12,13-dibutyrate
P2857	Phorbol-12-myristate-13-acetate
P3313	Pidotimod
S1069	Scriptaid
V1769	(+)Verapamil

Biologically Active Peptides

A0099 A-779
A0812 Ac-D-E
A0825 Ac-GPK-pNA
A0826 Ac-GPK(Ac)-pNA
A0832 Ac-IEAR-pNA
A0834 Ac-IETD-pNA
A0962 ACTH (1-4)
A0963 ACTH (1-10), human
A0964 ACTH (1-13), human
A0965 ACTH (1-14)
A0966 ACTH (1-16), human
A0967 ACTH (1-17), human
A0968 ACTH (1-24), human
A0960 ACTH (1-39), human
A0961 ACTH (1-39), rat
A0970 ACTH (18-39), human
A0969 ACTH (4-10), human
A1084 Ac-VEID-pNA
A1097 Ac-YVAD-pNA
A1330 Adipokinetic Hormone
A1332 Adipokinetic Hormone II from LM
A1333 Adipokinetic Hormone II from SG
A1331 Adipokinetic Hormone, AKH, locust
A1368 Adrenomedullin (1-52), human
A1369 Adrenomedullin (13-52),
A1370 Adrenomedullin (22-52),
A1371 Adrenorphin
A2412 A-G-D-V
A4369 A-K-R-R-R-L-S-S-L-R-A
A4401 A-L-A-L
A4403 Alarelin Acetate
A4438 Allatostatin I
A4498 Alytesin
A4844 Amylin (8-37), human
A4845 Amylin (8-37),rat
A4846 Amylin (IAPP), feline
A4847 Amylin, human
A4850 Amylin, rat
A4851 β-Amyloid (1-40), rat
A4852 β-Amyloid (1-40), Ultra Pure, TFA
A4853 β-Amyloid (1-42), human
A4849 β-Amyloid (25-35)
A4854 β-Amyloid Peptide (1-42), rat
A4848 Amyloid-β Protein (1-40)
A5225 α-ANF (1-28), human
A5070 Angiotensin Acetate
A5272 Angiotensin Converting Enzyme Inhibitor
A5273 Angiotensin I [Des-Asp1-], human
A5276 Angiotensin I, human
A5277 Angiotensin II, human
A5279 Angiotensin II (1-4), human
A5280 Angiotensin II (3-8), human
A5281 Angiotensin II (4-8), human
A5282 Angiotensin II [Sar1 Ile8]
A5283 Angiotensin II [Sar1]
A5284 Angiotensin II, human [Val5]
A5278 Angiotensin III, human
A5285 [Ile7] Angiotensin III
A5272 Angiotensin, Canine, Rat
A5287 Angiotensinogen (1-14), human
A5458 Anorexigenic Peptide
A5460 ANP (1-11), rat
A5461 ANP (1-30), frog
A5476 Antagonist G
A5477 Antide Acetate
A5478 Antiestrogen
A6002 Apamin
A6017 Apelin-13, human, bovine
A6827 Argpressin Acetate
A7657 Atosiban Acetate
A7669 Atrial Natriuretic Peptide (1-28), rat
A7670 Atriopeptin I
A7071 Atriopeptin II, rat, rabbit,mouse
A7072 Atriopeptin III
A8071 Auriculin A
A8077 Autocamtide 2
B0000 2B-(A)
B0072 2B-(S)
B0108 Bactenecin, bovine
A0248 BAM-12P
A0249 BAM-22P
B3324 Big Endothelin-1 (1-38), human
B5560 BNP (1-32), human
B5561 BNP (1-32), rat
B5608 Boc-FAAGRK-AMC
F4420 Boc-F-L-F-L-F
B5609 Boc-GRR-AMC
B5610 Boc-PRR-AMC
B5611 Boc-RRR-AMC
B5648 Bombesin

Biologically Active Peptides

B5649 [Tyr4] Bombesin
B6800 Bradykinin
B6802 Bradykinin (1-3)
B6803 Bradykinin (1-5)
B6804 Bradykinin (1-6)
B6805 Bradykinin (1-7)
B6806 Bradykinin (2-9)
B6807 Bradykinin [Des-Arg9]
B6808 Bradykinin [Des-Pro2]
B6809 Bradykinin [DPhe7]
B6810 Bradykinin [Hyp3]
B6811 [Tyr8] Bradykinin
B6812 Bradykinin Potentiator B
B6813 Bradykinin Potentiator C
B3346 Brain injury-derived Neurotrophic Peptide
B8010 Buccalin
B8271 Bursin
C0247 Calcineurin Autoinhibitory Peptide
C0248 Calcineurin Substrate
C0146 Calcitonin, chicken
C0152 Calcitonin, eel
C0148 Calcitonin, human
C0153 Calcitonin, rat
C0149 Calcitonin, salmon
C0244 α-Calcitonin gene Related Peptide, chicken
C0151 α-Calcitonin gene Related Peptide, human
C0245 Calcitonin Gene Related Peptide, rat
C0243 Calcitonin Gene Related Peptide (8-37), human
C0249 Calcitonin Gene Related Peptide (8-37), rat
C0250 Calcitonin Gene Related Peptide II, human
C0251 Calcitonin Gene Related Peptide II, rat
C0175 Carbetocin Acetate
C0372 Casein Kinase 2 Assay Kit
C0374 β-Casomorphin, human
C0375 Caspase 3, Substrate,Colorimetric
C0376 Catch-Relaxing Peptide (CARP)
C0476 CB-TH
C1600 CEA (605-613)
C1601 CEA (605-613) analogue
C1609 Cecropin B
C1620 CEF3
C1621 CEF4
C1622 CEF6
C1623 CEF10
C1868 Cerebellin
C1879 Cetrorelix Acetate
C2468 β-CGRP, human
C2970 Chromostatin, bovine
C4274 CKS-17
C5196 C-Myc Peptide
C5260 CNP-22, human, porcine, rat
C5646 Collagen Binding Fragment
C5655 Conotoxin GI
C5656 Conotoxin IMI
C5768 Corazonin
C5770 Corticotropin Releasing Factor, bovine
C5772 Corticotropin Releasing Factor, human, rat
C5774 Corticotropin Releasing Factor, ovine
C5773 Cortistatin-14
C6018 C-Peptide, dogs
C6019 C-Peptide, human
C6916 CREBtide
C6982 Crustacean Cardioactive Peptide, CCAP
C7098 Crystalline
C7602 CTAP
C7618 C-telopeptide
C7692 CTX IV (6-12)
C7693 [Arg3,14] CTX IV (3-14)
C7997 C-Type Natriuretic Peptide (1-22), human
C7998 C-Type Natriuretic Peptide, chicken
D0025 DAGO
D0044 D-Ala-D-Ala
D0254 Dansyl-Y-V-G
D1643 Delta Sleep Inducing Peptide
D1644 Deltorphin I
D1768 Dermaseptin I
D1767 Dermenkephalin
D1769 Dermorphin
D1770 Dermorphin Analog
D1775 Deslorelin Acetate
D1776 Desmopressin
D1777 Desmopressin Acetate
E2424 Egg Laying Hormone of Aplysia
E4408 Elcatonin Acetate
E4416 Eledoisin
E4417 Eledoisin Related Peptide
E5210 Endomorphin-1
E5211 Endomorphin-2
E5212 Endonuclease Antigenic Site
E5214 α-Endorphin

Biologically Active Peptides

E5215 Acetyl, α-Endorphin
E5216 α-Endorphin, camel
E5217 α-Endorphin, human
E5218 α-Endorphin, rat
E5219 Endothelin-1, human
E5221 Endothelin-2, human
E5222 Endothelin-3, human
E5220 Enfuvirtide (T-20)
E5240 Leu-Enkephalin
E5241 Met-Enkephalin
E2542 Met-Enkephalin, amide
E5276 Enterostatin, human
E5277 Enterostatin, porcine, rat
E6376 Eptifibatide
E6993 Erythromycin resistance peptide MRLFV
E9416 Exendin-3
E9417 Exendin-4
E9418 Exendin (9-39)
F3204 Fibrinogen-binding Peptide
F3205 Fibrinogen γ-chain dodecapeptide
F3206 Fibrinolysis Inhibiting Factor
F3208 Fibrinopeptide B, human
F3209 Fibronectin-Binding Protein
F3207 Fibronectin CS-1 Peptide
F4400 Flag Protein
F4580 FluM1 A2 (58-66)
F4856 Fmoc-Lys(Boc)-Leu-Lys(Boc)
F4859 F-M-R-F
F4857 FMRF amide
F4858 FMRF-like peptide from Snail
F5869 N-Formyl-Met-Ala-Ser
F5870 N-Formyl-Met-Leu-Phe
F5871 N-Formyl Met-Leu-Phe-Lys
F5872 N-Formyl-Nle-Leu-Phe-Nle-Tyr-Lys
G0000 G250.A2
G0146 Galanin, human
G0147 Galanin, porcine
G0148 Galanin, rat
G0044 Galantide
G0175 Gastric Inhibitory Peptide (GIP), human
G0180 Gastrin I, human
G0178 Gastrin, chicken
G0179 Gastrin-1, rat
G0181 Gastrin Releasing Peptide, human
G0182 Gastrin Releasing Peptide, porcine
G0096 G-A-Y
G2368 G-F-R
G2868 Ghrelin, human
G2869 Ghrelin, rat
G2870 GHRF (1-44), human
G2871 GHRF, bovine
G2872 GHRF, mouse
G2873 GHRF, ovine
G2874 GHRF, rat
G2968 GHRP-2
G2969 GHRP-6
G4479 Glucagon (19-29), human
G4480 Glucagon, human
G4481 Glucagon-Like Peptide I (7-36), amide, human
G4482 Glucagon-Like Peptide I (7-37); GLP-1 (7-37)
G4483 Glucagon-Like Peptide II, human
G4484 Glucagon-Like Peptide II, rat
G4485 [Ala19] Glucagon-Like Peptide II, rat
G5752 Gonadorelin Acetate
G5772 Goserelin Acetate
G6000 gp38
G6368 G-P-R
G6400 G-Q
G6803 Granuliberin R
G6856 Growth Hormone Releasing Factor, Human
G8103 Guanylin, human
G8104 Guanylin, rat, mouse
H0100 HA Peptide
H0207 HBV core protein (128-140)
H1643 Helodermin
H1644 Helodormin
H1645 Helospectin I
H1646 Helospectin II
H1648 Hemorphin-7
H1657 Heparin-Binding Peptide
H1661 HBV Core protein (128-140)
H1662 HER2/neu (654-662) GP2
H1663 HER2/neu (869-877)
H1893 Hexarelin
H3272 His Tag
H3273 Histatin 5
H3277 Histerlin Acetate
H3274 HIV p17 Gag (77-85)
H3275 HIV Integrase Protein Inhibitor(1)
H3276 HIV Protease Substrate

Biologically Active Peptides

H3278 HIV RT (pol) A2.1 peptide
H2876 H-Trp-Gly-OH
H8048 Human Follicular Conadotropin Releasing Peptide
H2980 Humanin (human)
I5215 Indolicidin
I5476 Interleukin-6 Receptor (partial)
K0144 Kallikrein Inhibitor
K0172 Kassinin
K0276 Katacalcin
K1650 Kemptide
K1674 Ketolide resistance Peptide MRFFV
K2412 K-G-D-S
K3352 Kinetensin
K4401 KL-1
K6864 K-R-Q-H-P-G
K9858 Kyotorphin
L0248 Laminin peptide YIGSR
L0249 Laminin peptide YIGSR-NH2
L0250 Laminin peptide SIKVAV
L0251 Laminin peptide CDPGYIGSR
L1628 Ac-LEHD-PNA
L1660 Leptin (22-56), human
L1661 Leptin (116-130), mouse
L1980 Leucokinin I
L1981 Leucokinin VIII
L1983 Leucomyosuppresin (lms)
L1881 Leuprolide Acetate Salt
L1882 Leuprorelin Acetate
L1735 Levitide
L3362 β-Lipotropin (61-64)
L3577 Litorin
L8276 LHRH
L2876 LHRH-III, lamprey
L8277 [Gln8] LH-RH, chicken
L8278 LH-RH, salmon
L9875 Lys(Boc)-Leu-Lys(Boc)-Obzl
L9875 Lysipressin Acetate
M0035 M35
M0040 M40
M0124 Magainin 1
M0126 Magainin 2
M0224 MAGE-3 Antigen (271-279), human
M0144 Malantide
M0272 Mas7
M0273 Mas8
M0275 Mas17
M0276 Mast Cell Degranulating Peptide
M0172 Mastoparan
M0173 Mastoparan X
M1646 MCH, human, mouse, rat
M1647 MCH, salmon
M7528 α-Melanocyte stimulating hormone
M7529 β-Melanocyte stimulating hormone, human
M7530 [Nle4, D-Phe7] α-Melanocyte stimulating hormone
M7531 γ 1-Melanocyte stimulating hormone
M7532 γ 3-Melanocyte stimulating hormone
M1649 Melanoma-associated antigen peptide
M1648 Melanostatin, frog
M1650 Melanotan II
M1744 Melittin (Mellitin)
M1752 Men 10376
M2460 MGP-pNA
M3219 MIF-1 Tyr
M3220 Tyr-W-MIF-1
M5675 Motilin, canine
M5776 Motilin, porcine
M9643 Myelin Basic Protein (1-11), human
M9644 Myelin Basic Protein (87-99), guinea pig, human
M9645 Myelin Oligodendrocyte Glycoprotein (35-55), ratt
M9646 Myelin Basic Protein (68-82), guinea pig
M9356 Myomodulin
N0160 NAP
N1873 Nesiritide Acetate (BNP-32)
N1977 Neurokinin A (4-10)
N1978 Neurokinin B
N1979 Neuromedin
N1980 Neuromedin B, porcine
N1981 Neuromedin C, porcine GRP (18-27)
N1982 Neuromedin U, rat
N1984 Neuropeptide FF F-8-F-NH2
N1985 Neuropeptide K, porcine
N1983 Neruopeptide Y (3-36), human
N1987 Neuropeptide Y (13-36), human
N1986 Neuropeptide Y, human, rat
N1988 γ-Neuropeptide, rabbit
N1989 Neurotensin
N1990 [Gln4] Neurotensin
N1991 [D-Trp11]-Neurotensin
N1992 Neurotensin (1-11)
N1993 Neurotensin (9-13)

Biologically Active Peptides

N1994 Neurotensin, frog
N1995 Neurotensin, guinea pig
N5210 Nociceptin Orphanin FQ
N5211 Nocistatin
N6020 NPF
N6076 N(p-Tosyl)-GPR-pNA
N7604 NTB (Naltriben)
O0978 Octaneuropeptide
O6132 Opioid receptor antagonist
O7116 Orexin-B, human
O8500 Ovalbumin (257-264) antigen peptide
O8503 OVA (323-339)
O9497 Oxytocin
P0001 P1
P0055 P55-TNFR
P0075 P75-TNFR
P0005 PACAP (1-27), human, ovine, rat
P0006 PACAP (1-38), human, ovine, rat
P0007 PACAP (6-27), human, ovine, rat
P0008 PACAP (6-38), human, ovine, rat
P0009 PACAP 38, frog
P0010 PACAP-Related Peptide, human
P0011 PACAP-Related Peptide, rat
P0350 Pancreatic Polypeptide, avian
P0351 Pancreatic Polypeptide, rat
P0352 Pancreastatin, porcine
P0353 Pancreatic Polypeptide, human
P0260 Papain Inhibitor
P0268 Parasin I
P0269 Parathyroid Hormone (1-34), bovine
P1955 Pentagastrin
P1764 Pep-1
P1765 Peptide Standard 1
P1766 Peptide B, bovine
P1767 Peptide F, bovine
P1760 Peptide T
P1762 Peptide YY, porcine
P1763 Peptide YY, human
P1768 Peptide YY(3-36), PYY, human
P2445 PGLa
P2832 PHI, porcine
P2833 PHI, rat
P2859 Phosphate Acceptor Peptide
P2992 Phyllolitorin
P2993 Phyllomedusin
P2994 Physalaemin
P4403 Plasminogen Activator Inhibitor 1
P4560 PLP (139-151)
P7022 Pressinoic Acid
P7034 Prion Peptide (106-126), human
P6855 Proctolin
P6850 Prolactin-Releasing Peptide (1-31), human
P7628 pTH-Related Protein (1-34), human, rat
P6977 Pyr-Gly-Arg-pNA
Q4370 Q-K-R-P-S-Q-R-S-K-Y-L
R0250 Ranatensin
R0251 Ranatensin R
R1752 Renin Inhibitor Pepide
R2112 RFDS
R2353 P-F-NH2
R2369 RFRP-1, human
R2512 RGD
R2510 RGD-4C
R2511 R-G-D-C
R2513 RGDS
R2514 RGDV
R2516 R-G-E-S
R2599 R-G-Y-S-L-G
R3224 Rigin
R6871 RR-SRC
R6873 R-S-R
S0006 S6-1
S0049 Salmon Calcitonin Acetate
S0200 SAMs Peptide
S0171 Sarafotoxin 6c
S0381 Sauvagine
S1060 SCPA
S1061 SCPB
S1343 Ac-S-D-K-P
S1604 Secretin Acetate
S1605 Secretin, human
S1606 Secretin, porcine
S1607 Secretin, rat
S1843 L-Selectin
S1969 Sermorelin Acetate
S1970 Serum Thymic Factor
S2044 S-F-L-L-R
S3452 Sincalide (CCK-8)
S3585 SIVmac239-1
S3586 SIVmac239-2

Biologically Active Peptides

S5745 [Tyr1] Somatostatin
S5747 [Tyr11] Somatostatin
S5748 Somatostatin
S5749 Somatostatin-14
S5751 Somatostatin-25
S5750 Somatostatin-28
S5752 Somatostatin-28 (1-12)
S5753 Somatostatin-28 (1-14)
S5754 Somatostatin Acetate
S6019 Speract
S6134 Spinorphin, bovine
S7871 Stresscopin, human
S7872 Stresscopin-Related Peptide, human
S8005 Substance P
S8006 Substance P (1-4)
S8007 Substance P (1-7)
S8008 Substance P (1-9)
S8009 Substance P (7-11)
S8010 [Nle11] Substance P
S8011 [Pro9] Substance P
S8012 [Sar9] Substance P
S8013 [Tyr8] Substance P
S8014 Substance P, Free Acid
S7908 Suc-APA-pNA
S7909 Suc-LEPF-pNA
S7910 Suc-RGPF-pNA
S7911 Suc-SDPF-pNA
S9754 Syntide 2
S9775 Systemin
T0002 T2 Toxin
T0076 TAT
T0077 TAT 2-4
T1675 Teripatartide Acetate
T1673 Terlipressin Acetate
T2970 Thrombin Receptor Agonist
T3093 Thymopentin
T3094 Thymopentin Acetate (TP-5)
T3096 Thymosin α-1
T3097 Thymosin α-1 Acetate
T3098 Thymosin β-4 Acetate
T3099 Thymus Factor
T3100 Thyrotropin-Releasing Hormone (TRH)
T3101 TRH, Free Acid
T7037 Triptorelin Acetate
T7036 Triptorelin, [DTrp6]-LH-RH, Amide
T8020 Tuftsin
T9974 [Asp371] Tyrosinase(369-377), human
U5233 Universal TT epitope P2 (830-844)
U6118 Uperolein
U6854 Urocortin, human
U6855 Urocortin, rat
U6856 Urocortin II, human
U6858 Urocortin II, mouse
U6859 Urocortin III, human
U6860 Urocortin III, mouse
U6857 Urodilatin CCC/ANP-95-126
U6956 Uroguanylin, human
U6957 Urotensin I
U6958 Urotensin II, frog
U6959 Urotensin II, human
V0153 Vanilloid Receptor Subtype 1
V0160 RC-160 (Vapreotide)
V0273 Vasoactive Intestinal peptide
V3360 VIP, guinea pig
V0274 [Lys8] Vasopressin
V0275 [Arg8] Vasotocin
V1872 Vesicular Stomatitis Virus peptide
W4096 W-K-Y-M-V-M-NH2
X1752 Xenin
X1753 Xenopsin
Z0146 Z-Ala-Ala-Leu-pNA
Z1216 Z-D-E-V-D-AMC
Z2268 Z-F-R-AMC
Z6269 Z-Pro-D-Leu

Cancer Chemopreventive Agents

A0817	D,L-1'-Acetoxychavicol acetate
A0819	Acetylsalicylic acid/ Aspirin
A0918	N-Acetyl-L-cysteine
A4440	Allicin
A4443	L(+) Alliin
A4444	L(+) Alliin
A4496	Alyssin
A4497	Alyssin sulfone
A4544	Allyl disulfide/ Diallyl disulfide
A4931	3-Aminobenzamide
A4940	6-Aminocaproic Acid
A5033	Aminoglutethimide
A5161	Ampiroxicam
A5217	*trans*-Anethole/ p-Propenylanisole
A5219	Anethole-trithione
A5478	Antipain
A7210	L(+)-Ascorbic acid
A7309	Ascorbyl palmitate
A8070	Auraptene
A9817	Azelaic Acid
B1653	Benzyl isothiocyanate
B1654	Benzyl selenocyanate
B1655	S-(N-Benzylthiocarbamoyl)-L-cysteine
B1656	Benzyl thiocyanate
B1669	Berbamine Hydrochloride, 95%
B1668	Berteroin
B1853	1, 4-Benzoquinone
B1870	Berberine hydrochloride hydrate
B1898	Bezafibrate
B3358	Biochanin A
B6801	Brassinin
B6957	4' Bromoflavone
B6998	Bryostatin 1
B6999	Bryostatin 2
B8112	Budesonide
B7977	Butylated Hydroxytoluene
B8070	2-tert-Butyl-4-hydroxyanisole
B8071	3-tert-Butyl-4-hydroxyanisole
B8072	3-tert-Butyl-5-methoxy-catechol
B8073	4-tert-Butyl-5-methoxy-catechol 3-tert-
B8074	Butyl-5-methoxy-1, 2-quinone
B8075	4-tert-Butyl-5-methoxy-1, 2-quinone
B8174	Butylated Hydroxyanisole
B8176	2-n-Butylthiophene
B8275	n-Butyric acid
B8278	Butyric acid sodium salt
C0020	Cafestol
C0021	Cafestol acetate
C0022	Cafestol palmitate
C0025	Cafestol eicosanate
C0027	Cafestol linoleate
C0029	Cafestol oleate
C0033	Cafestol stearate
C0121	Caffeic acid
C0145	Calcitriol
C0169	Carbenoxolone
C0221	Caffeine
C0265	Carnosic acid
C0269	β-Carotene
C0277	Catechin
C0368	Carveol
C1718	Cepharanthine,95%
C2800	Chalcone
C2816	Cheirolin
C2944	Chlorogenic acid
C2945	Chlorophyllin
C2947	Chlorpromazine
C2956	Cholecalciferol/ Vitamin D3
C2968	Chrysin
C2997	Chymostatin
C3210	Ciglitazone
C5645	Colchicine
C5782	Coumarin
C6955	Cromolyn sodium
C8069	Curcumin
C9673	Cysteamine hydrochloride
D0032	Daidzein
D0033	Daidzin
D0253	Danazol
D1629	Dehydroepiandosterone
D1693	Dexamethasone
D1757	L-Deoxyalliin/ S-Allyl-L-cysteine
D3201	Diallyl sulfide
D3202	Diallyl trisulfide
D3209	Diclofenac, sodium salt
D3221	Difluoromethylornithine
D3232	3,3'-Diindolylmethane
D3261	Dipropyl disulfide/ Propyl disulfide
D3262	Dipropylsulfide
D3322	Diflunisal

Cancer Chemopreventive Agents

D3357 Diosmin
D3374 Disulfiram
D3462 Diphenhydramine
D4873 DMSA
E4444 Ellagic Acid
E6234 Epigallocatechin gallate
E6880 Erucin
E6896 Erysolin
E7309 Esculetin
E7310 Esculin
E7329 Ethoxyquin
E7657 Etoposide
F1669 Ferulic acid
F4480 5-Fluororacil
F4481 Flurbiprofen
F4582 Fluocinolone Acetonide
F4680 Flutamide
F5745 Folic Acid
F7657 Ftorafur
G0145 Gallic acid
G0152 Ganciclovir
G1650 Geniposide
G1652 Genistein
G3460 Ginsenoside F1
G3461 Ginsenoside F2
G3462 Ginsenoside F3
G3454 Ginsenoside Rb1
G3553 Ginsenoside Rb2
G3554 Ginsenoside Rb3
G3455 Ginsenoside Rc
G3456 Ginsenoside Rd
G3457 Ginsenoside Re
G3458 Ginsenoside Rg1
G3459 Ginsenoside Rg2
G3556 Ginsenoside Rg3
G3557 Ginsenoside Rh1
G3453 Ginsenoside Rh2
G3463 Ginsenoside X
G4518 Glucaric Acid
G4597 18 β-Glycyrrhetinic Acid
G4598 Glycyrrhizic acid
G5654 Honokiol
G6817 Green tea polyphenols
H1660 2-n-Heptylfuran
H1672 Hesperetin
H1673 Hesperidin
H5748 D,L-Homocysteine thiolactone HCl
H9613 N-(4-Hydroxyphenyl)retinamide
I0416 Iberin
I0418 Iberverin
I0481 Ibuprofen
I0482 S(+) Ibuprofen
I0901 Icariin
I2056 Ifosfamide
I5213 Indole-3-carbinol hydrate
I5315 Indomethacin
I5357 Inositol
I7357 Isorhamnetin
K0030 Kahweol
K0031 Kahweol acetate
K0032 Kahweol palmitate
K0034 Kahweol eicosanate
K0036 Kahweol linoleate
K0038 Kahweol oleate
K0040 Kahweol stearate
K0117 Kaempferol
K1677 Ketoprofen
L0109 Lactalbumin
L0211 Lactulose
L0284 Lavendustin A
L1881 Leuprolide
L3250 D-Limonene
L3374 Lisinopril
L3550 Limonin
L5769 Lorglumide
L9609 Lycopene
M0114 Magnolol
M1560 Methyl caffeate
M1613 Medroxyprogesterone 17-acetate
M1622 Mefenamic acid
M1644 Meloxicam
M1745 Melatonin
M1877 Methylprednisolone
M3377 Mitomycin C
M9368 Myristicin
N0061 D-Naproxen
N0062 D,L-Naproxen
N0068 Naringenin
N0161 β-Naphthoflavone
N0205 Nabumetone

Cancer Chemopreventive Agents

N1757 Neostigmine Bromide
N1769 Nerolidol
N3310 Niacinamide
N3450 Nimesulide
N5550 Nomilin
N5669 Nordihydroguaiaretic Acid
O4578 Oltipraz
O1176 n-Octyl Caffeate
O1177 n-Octyl-3,4-Dimethylcaffeate
O1178 n-Octyl-3-methylcaffeate
O1179 n-Octyl-4-methylcaffeate
P0253 Panaxadiol
P0254 Panaxatriol
P1770 Perillyl alcohol
P1917 Phenylethyl 3-methylcaffeate
P2400 Phenethyl caffeate
P2410 Phenethyl dimethyl caffeate
P2502 Phenethyl glucosinolate potassium salt
P2508 Phenethyl isothiocyanate
P2510 4-Phenylbutylisothiocyanate
P2513 Phenyl isothiocyanate
P2515 3-Phenylpropylisothiocyanate
P2810 Phenylbutazone
P2815 Phenylbutyrates (2-Phenylbutyric acid)
P2816 S-(N-3-Phenylpropylthiocarbamoyl)-L-cysteine
P1917 Phenylethyl 3-methylcaffeate
P2918 Phenylethyl-4-methylcaffeate
P2997 Phytic Acid, 40-50 wt% aqueous solution
P3269 Piroxicam
P3465 Piperine
P6857 Protocatechuic acid
P6957 Protopanaxadiol
P6958 Protopanaxatriol
P7318 Pseudoginsenoside F11
P8169 Purpurin
P9770 Pyrrolostatin
Q8016 Quercetin dihydrate
R1776 Resveratrol
R1777 9-cis Retinoic acid
R1779 13-cis-Retinoic acid
R1780 trans-Retinoic acid
R1876 Retinol/ Vitamin A
R1878 Retinyl acetate
R1879 Retinyl palmitate
R8076 Rutin hydrate
R8206 Rubescensin A
R8207 β-Rubromycin
S1612 Sedanolide
S1845 L-(+)-Selenomethionine
S1848 Se-methylseleno-L-cysteine
S3343 Silybin
S3345 Silymarin
S8044 R,S-Sulforaphane
S8045 S-Sulforaphane
S8046 R-Sulforaphane
S8049 S-Sulforaphane
S8145 Sulindac
S8146 Sulindac sulfone
S8147 Sulindac sulfide
T0081 Taurine/ 2-Amineoethanesulfonic acid
T0153 Tanshinones
T0250 Tamoxifen citrate
T1654 Tenoxicam
T2817 Theophylline
T3031 Thienylbutyl isothiocyanate
T3032 Thienyldecyl isothiocyanate
T3033 Thienyldodecyl isothiocyanate
T3034 Thienylethyl isothiocyanate
T3035 Thienylheptyl isothiocyanate
T3036 Thienylhexyl isothiocyanate
T3037 Thienylmethyl isothiocyanate
T3038 Thienylnonanyl isothiocyanate
T3039 Thienyloctyl isothiocyanate
T3040 Thienylpentyl isothiocyanate
T3041 Thienylpropyl isothiocyanate
T7056 Troglitazone
T8004 Tubeimoside I
U6873 Ursodeoxycholic Acid
V1769 Verapamil
V3277 Vitamin E (tocopherol)
V3375 Vitamin A
V3378 Vitamine B12
V3476 Vitamin D2
X1854 p-Xyleneselenocyanate

Natural Products

A0958 Aconitine
A0977 Actinomycin
A1017 Aceclofenac
A1332 Adipokinetic Hormone II from LM
A1333 Adipokinetic Hormone II from SG
A2044 Aflatoxin B1
A2046 Aflatoxin B2
A2048 Aflatoxin G1
A2050 Aflatoxin G2
A2052 Aflatoxin M1
A2054 Aflatoxin M2
A4496 Alyssin
A4544 Allyl disulfide
A5202 Anabasine HCl
A5225 α-ANF(1-28), human
A5276 Angiotens I, human
A5277 Angiotens II, human
A5278 Angiotens III, human
A5313 Andrographolide
A5373 Anisomycin
A6932 Aristolochic acid A
A6933 Aristolochic acid B
A6934 Aristolochic acid C
A6970 Artemether
A6978 Artemisinin (Qinghaosu)
A6982 Artesunate
A7209 Ascorbic acid
A7332 Asiatic acid
A7333 Asiaticoside
A8070 Auraptene
B0025 Bafilomycin A1
B0026 Bafilomycin B1
B0133 Baicalin
B1753 Benfotiamine
B1669 Berbamine Hydrochloride, 95%
B1653 Benzyl isothiocyanate
B1769 Bergenin
B1870 Berberine HCl hydrate
B3345 Bilobalide
B3358 Biochanin A
B4515 Bleomycin A2
B4517 Bleomycin A5
B4518 Bleomycin sulfate
B5753 Bongkrekic acid
B6801 Brassinin
B6916 Brefeldin A
B6998 Bryostatin 1
B6999 Bryostatin 2
B8144 Bulleyaconitine A
C0016 Caerulomycin A
C0020 Cafestol
C0022 Cafestol palmitate
C0121 Caffeic acid
C0148 Calcitonin, human
C0149 Calcitonin, salmon
C0150 Camptothecin
C0168 Canthaxanthin
C0221 Caffeine
C0260 Capsanthin
C0265 Carnosic acid
C0266 Capsaicin, natural
C0267 Carnosol
C0269 β-Carotene
C0277 Catechin
C0368 Carveol
C0370 Carrageenan
C0376 Catharanthine base
C0377 Catharanthine sulfate
C0378 Catharanthine tartrate
C1718 Cepharanthine
C2800 Chalcone
C2803 Chartreusin
C2818 Chelerythrine
C2969 Cholesterol
C2957 Chromomycin A3
C2968 Chrysin
C3479 Chyrsophanol
C5654 Citrin
C2970 Concanavalin A
C5645 Colchicine
C5647 Colistin sulphate
C7097 Cryptotanshinone
C8069 Curcumin
C9610 D-Cylcoserine
C9710 Cyclopamine
C9779 Cytisine
C9878 Cytochalasin A
C9879 Cytochalasin B
C9880 Cytochalasin C
C9881 Cytochalasin D

Natural Products

C9882 Cytochalasin E
D0032 Daidzein
D0033 Daidzin
D1628 5,6-Dehydrokawain
D1644 Deltorphin I
D1757 L-Deoxyalliin
D1759 Deoxynivalenol
D1769 Dermorphin
D1873 Desoxypeganine HCl
D3201 Diallyl sulfide
D3202 Diallyl trisulfide
D3227 Dihydromethysticin
D3229 7,8-Dihydrokawain
D3262 Dipropyl sulfide
D3330 Dihydrotanshinone
D3357 Diosmin
D5794 Doxorubicin Hydrochloride
E0180 Ebulin
E4444 Ellagic acid
E6234 Epigallocatechin gallate
E6235 Epirubicin
E6825 Ergosterol
E6994 Erythromycin
E7657 Etoposide
E8129 Euphorbiasteroid
F0268 Farnesol
F4501 Flavanone
F5745 Folic Acid
F5846 Folinic Acid
F8048 Fumagillin
F8149 Fumonisin B1
F8150 Fumonisin B2
G0144 Galactosamine
G1650 Geniposide
G1652 Genistein
G3353 Genistin
G3352 Ginkgolic acid
G3354 Ginkgolide A
G3355 Ginkgolide B
G3357 Ginkgolide C
G3358 Ginkgolides
G3460 Ginsenoside F1
G3461 Ginsenoside F2
G3462 Ginsenoside F3
G3454 Ginsenoside Rb1
G3553 Ginsenoside Rb2
G3554 Ginsenoside Rb3
G3455 Ginsenoside Rc
G3456 Ginsenoside Rd
G3457 Ginsenoside Re
G3458 Ginsenoside Rg1
G3459 Ginsenoside Rg2
G3556 Ginsenoside Rg3
G3557 Ginsenoside Rh1
G3453 Ginsenoside Rh2
G3463 Ginsenoside X
G4518 Glucaric acid
G4597 18 β-Glycyrrhetinic acid
G4598 Glycyrrhizic acid
G5874 Gossypol
G6817 Green tea polyphenols
H0169 Harringtonin
H5654 Honokiol
H5750 Homoharringtonin
H8162 Huperizine
H9620 7-Hydroxyaristolochic acid A
H9661 Hypocrellin A
H9662 Hypocrellin B
H9759 Hypaconitine
H9861 Hypericin
I0416 Iberin
I0901 Icariin
I4000 Ikarugamycin
I5213 Indole-3-carbinol hydrate
I7357 Isorhamnetin
I7456 1-Isothiocyanato-7-(methylsulfinyl)-heptane
K0030 Kahweol
K0032 Kahweol palmitate
K0088 Kawain
K0117 Kaempferol
K0133 Kainic Acid
K0172 Kassinin
L0060 Lappaconitine
L0226 Lagochiline
L3250 D-Limonene
L3550 Limonin
L3551 Limonin glucoside
L8262 Lupinine
L8377 Luteolin
L9609 Lycopene

Natural Products

L9752 Lyngbyatoxin
M0114 Madecassic acid
M0125 Magnolol
M0172 Mastoparan
M1677 11-Methoxyyangonin
M1679 Methysticin
M5776 Motilin, porcine
M9367 Myricetin
M9368 Myristicin
N0068 Naringenin
N0069 Narigin
N0075 Natamycin
N3213 Nidulal
N3230 Nigrin b
N5550 Nomilin
N5669 Nordihydroguiaretic acid
N5778 Notoginsenoside R1
O4101 Okadaic acid
O7053 L-Ornithine Hydrochloride
O7377 Osthole
P0092 Paclitaxel, (Taxol)
P0218 Paeoniflorin
P0219 Paeonol
P0245 Palmatine
P0253 Panaxadiol
P0254 Panaxatriol
P0370 Paromomycin Sulphate
P1625 Peganine
P1761 Pepstatin A
P1770 Perillyl alcohol
P2303 Phallacidin
P2304 Phalloidin
P2304 Phalloidin
P2400 Phenethyl caffeate
P2445 PGLa
P2502 Phenethyl glucosinolate
P2508 Phenethyl isothiocyanate
P2845 Phleomycin
P2857 Phorbol-12-myristate-13 acetate
P2958 Phorbol 12,13-dibutyrate
P2995 Physcion
P2997 Phytic Acid
P3465 Piperine
P5712 Podophyllotoxin
P5845 Polydatin
P6857 Protocatechuic acid
P6957 Protopanaxadiol
P6958 Protopanaxatriol
P7318 Pseudoginsenoside F11
P8117 Puerarin
Q8016 Quercetin dihydrate
R1774 Resiniferatoxin
R1776 Resveratrol
R3206 Riboflavin
R5874 Rosmarinic Acid
R8076 Rutin hydrate
R8178 Rutaecarpine
R8206 Rubescensin A
R8207 β-Rubromycin
S0046 Salsolidine
S0047 Salsoline
S0048 Salicin
S0053 α-Santonin
S0132 Saikosaponin A
S0133 Saikosaponin C
S0134 Saikosaponin D
S0830 R(+) Schisandrin A
S0831 S(-) Schisandrin B
S0930 Schisantherin A
S1612 Sedanolide
S3343 Silybin
S3345 Silymarin
S3353 Sinomenine
S6232 Spiramycin
S6233 Spiramycin Adipate
S6234 Spiramycin Embonate
S7600 Staurosporine
S8044 R,S-Sulforaphane
S8046 R-Sulforaphane
S8049 S-Sulforaphene
S9753 Synephrine
T0091 7-(triethylsilyl)-10-deacetyl Baccatin III
T0092 Baccatin I1-hydroxy
T0093 2'-Acetyltaxol
T0094 2',7-bis Acetyltaxol
T0095 Baccatin III
T0096 Cephalomannine
T0097 10-Deacetyltaxol-B
T0098 10-Deacetyltaxol-C
T0099 10-Deacetylbaccatin-III

Natural Products

T0100	10-Deacetyl taxol
T0101	7-epi-10-Deacetyltaxol
T0102	7-epi-Taxol
T0103	Taxol-side chain diol
T0104	Taxol-side chain methyl ester
T0105	Taxol C
T0106	Xylosyltaxol
T0107	Xylosyltaxol C
T0108	10-Deacetyl-7-xylosyltaxol
T0109	13-Acetyl-9-Dihydrobaccatin-III
T0110	Taxanes Standards Mixture
T0114	Taxanine M
T0115	Taxol side chain acid
T0116	2",3"-Dihydrocephalomannine
T0117	Benzyl Analog of Taxol
T0118	7-epi-Cephalomannine
T0153	Tanshinones I
T0154	Tanshinone IIA
T1652	Teniposide
T1676	L-Tetrahydropalmatine
T1678	D,L-Tetrahydropalmatine sulfate
T3133	Thioctic Acid
T7035	Triptolide
T7197	Tryprostatin A
T8004	Tubeimoside I
U7354	Usnic Acid
V3253	Vinblastine sulfate
V3354	Vindesine sulfate
V3355	Vindoline
V3378	Vitamin B12
V5254	Vincristine sulfate
W5726	Wogonin
Y0052	Yangonin

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

A0816 Acemetacin
A0819 Acetyl salicylic acid
A1017 Aceclofenac
A4508 Alcofenac
A5161 Ampiroxicam
A5334 Anisodamine
B1669 Berbamine Hydrochloride, 95%
D0255 Dantrolene sodium
D1774 Desloratadine
D3209 Diclofenac
D3322 Diflunisal
D3351 Dimethylaminopyridine
E0073 Ebselen
E7556 Etodolac
F1652 Fenbufen
F1655 Fenoprofen
F4481 Flurbiprofen
F4483 Flufenamic acid
I0481 Ibuprofen
I0482 S(+) Ibuprofen
I5315 Indomethacin
K1677 Ketoprofen
L1780 Levocetirizine
L1878 Letrozole
M1622 Mefenamic acid
M1644 Meloxicam
N0061 D-Naproxen
N0062 D,L-Naproxen
N0205 Nabumetone
N3322 Niflumic acid
N3450 Nimesulide
P2810 Phenylbutazone
P3269 Piroxicam
S0048 Salicin
S8145 Sulindac
S8146 Sulindac sulfone
S8147 Sulindac sulfide
S8247 Sulfasalazine
T1654 Tenoxicam
T1777 Tetrandrine
T5846 Tolfenamic acid
T5944 Tolmetin
T7035 Triptolide

Signal Transduction Reagents

A0025 17-AAG
A0817 D,L-1'-Acetoxychavicol acetate
A0918 N-Acetyl-L-cysteine
A1332 Adipokinetic Hormone II from LM
A1333 Adipokinetic Hormone II from SG
A4806 Ambroxol
A4848 Amyloid-β Protein (1-40)
A4849 β-Amyloid (25-35)
A5225 α-ANF (1-28), human
A5276 Angiotens I, human
A5277 Angiotens II, human
A5278 Angiotens III, human
A5334 Anisodamine
A5373 Anisomycin
A7085 Arvanil
B0025 Bafilomycin A1
B3458 Biopterin
B4401 Blasticidin *S*
B4402 Blasticidin *S* HCl
C0221 Caffeine
C0148 Calcitonin, human
C0149 Calcitonin, salmon
C0150 Camptothecin
C0155 Camptothecin, 10-hydroxy
C0245 Calyculin A
C0262 L-Carnitine
C0263 L-Carnitine HCl
C0264 L-Carnitine tartrate
C0267 Carnosol
C0344 Calphostin C
C2818 Chelerythrne Chloride
C2916 Chenodeoxycholic acid
C3477 Citalopram
C4757 Clozapine
C5662 Copper bis-3,5-diisopropylsaliccylate
C9610 D-Cycloserine
C9611 Cyclosporin A
C9710 Cyclopamine
C9773 L-Cystine
D0182 Daunorubicin HCl
D0255 Dantrolene sodium
E0073 Ebselen
E6235 Epirubicin HCl
E6432 (-)-Epinephrine
E6997 Erythropoietin
E7376 Estradiol
E7657 Etoposide
F4483 Flufenamic acid
F4780 Fluoxetine hydrochloride
F4854 Fluphenazine
F5770 Forskolin
G0048 GABA
G0106 Gabapentin
G0246 Galanthamine Hydrobromide
G3354 Ginkgolide A
G3453 Ginsenoside Rh2
G3454 Ginsenoside Rb1
G3455 Ginsenoside Rc
G3456 Ginsenoside Rd
G3457 Ginsenoside Re
G3458 Ginsenoside Rg1
G3459 Ginsenoside Rg2
G3460 Ginsenoside F1
G3461 Ginsenoside F2
G3462 Ginsenoside F3
G3463 Ginsenoside X
G3553 Ginsenoside Rb2
G3554 Ginsenoside Rb3
G3556 Ginsenoside Rg3
G3557 Ginsenoside Rh1
G4535 Glimepiride
G4634 Glipizide
H0001 H7
H0002 H-8
H0003 H89
H0142 Haloperidol

Signal Transduction Reagents

H1669 Herbimycin
H8162 Huperizine
H9759 Hydroxyzine
H9717 Hypaconitine
H9861 Hypericin
I5034 Imiquimod
I7074 Irsogladine Maleate
I7302 Isatin
I8618 Ivermectin
K1655 Kenpaullone
L0060 Lappaconitine
L0226 Lagochiline
L0284 Lavendustin A
L1817 Leflunomide
L1884 Levosimendam
L3375 Lisinopril
L9752 Lyngbyatoxin
M0125 Magnolol
M0278 Matrine
M1699 Mezerein
M1749 Memantine hydrochloride
M5756 Montelukast
M5776 Motilin, porcine
M5813 Modafinil
N0262 Naphazoline Hydrochloride
N1822 Nefazodone
N3225 Nigericin
N3278 7-Nitroindazole
N3422 Nifekalant
N3448 Nimodipine
O0829 Ochratoxin A
O4101 Okadaic Acid
O4102 Okadaic Acid Ammonium Salt
O4103 Okadaic Acid Sodium Salt
O4657 Olomoucine
O7377 Osthole
O9398 Oxymetazoline Hydrochloride
P0145 Palmitoyl-DL-carnitine chloride
P0146 Palmitoyl-L-carnitine chloride
P0255 Pantoprazole
P2857 Phorbol 12-Myristate 10- Acetate
P2858 4-α-Phorbol 12-myristate 13-acetate
P2958 Phorbol 12,13-dibutyrate
P3597 Pizotifen malate
P7020 Prednisone
P7021 Prednisone Acetate
P7023 Pregnenolone
P9767 Pyriproxyfen
R0161 Rapamycin
R1774 Resiniferatoxin
R1775 Resiniferonil-9,13,14-orthophenyl acetate
R3205 Ribavirin
R5661 Ropinirole
R5774 Roscovitine
S0032 Saikosaponin B1
S0047 Salsoline
S1069 Scriptaid
S6129 D-Sphingosine
S6130 Sphingosine 1-phosphate
S6131 Sphinosine, N,N-dimethyl
S7600 Staurosporine
S8169 Suramin hexasodium salt
T1298 TDZD-8
T2801 Thapsigargin
T2930 Thiabendazole
T3354 Tinyaoxin
T5761 Topotecan
T6802 Tramadol Hydrochloride
T6933 Trichostatin A
T9968 Tyrophostin A25
T9969 Tyrophostin AG490
T9970 Tyrophostin AG1295
Z5653 Zonisamide

Snake Venoms

Crotalidae
Agkistrodon contortrix contortrix
Agkistrodon contortrix laticinctus
Agkistrodon contortrix mokasen
Agkistrodon contortrix pictigaster
Agkistrodon piscivorous leucostoma
Agkistrodon piscivorous piscivorous
Bothrops atrox
Bothrops leucurus
Bothrops moojeni
Calloselasma rhodostoma
Crotalus adamanteus
Crotalus atrox
Crotalus basiliscus
Crotalus cerastes
Crotalus durissus collineatus
Crotalus durissus cumanensis
Crotalus durissus durissus (fmr. C.d.dryinas)
Crotalus durissus terrificus(Paraguay)
Crotalus horridus
Crotalus horridus (Type A neurotoxin)
Crotalus molossus (Texas origin)
Crotalus scutulatus scutulatus
Crotalus simus culminatus (fmr. C. durissus culminatus)
Crotalus simus simus (fmr. C. d. durissus)
Crotalus viridis viridis
Protobothrops flavoviridis
Sisturus catenatus tergeminus

Helodermatidae
Heloderma horridum
Heloderma suspectum

Elapidae
Aspidelaps scutatus scutatus
Dendroaspis angusticeps
Dendroaspis jamesoni kaimosae
Dendroaspis polylepis
Micrurus fulvius fulvius
Naja annulifera
Naja kaouthia (Suphan province)
Naja kaouthia
Naja melanoleuca
Naja naja (India)
Naja naja (Pakistan)
Naja nigricollis nigricollis
Naja nivea
Naja oxiana
Naja pallida
Naja siamensis
Ophiophagus Hannah
Oxyuranus scutellatus scutellatus
Oxyuranus scutellatus canni
Pseudechis colletti

Viperidae
Atheris chlorechis
Bitis arietans
Bitis gabonica gabonica
Bitis gabonica rhonoceros
Daboia (Vipera) russelli russelli
Daboia (Vipera) palestinae
Echis carinatus sochureki
Echis pyramidium

* All venoms are collected in a sterile manner and frozen at - 70 °C before lyophilization.
* Other venoms are available upon request. Please contact us for more information on other species.

BULK SUPPLY

OF

PHARMACEUTICAL

RAW MATERIALS

(Commercial Quantity)

Please call, fax, or email for quotations

Toll Free: **888-558-5227**
(888-LKT-LABS)

Fax: **651-644-8357**

Email: **info@lktlabs.com**

Website: **www.lktlabs.com**

Medicinal and Pharmaceutical Raw Materials

DM16692 6-Mercaptopurine
DA09152 Acetyl-L-Carnitine HCl
DA09332 Acipimox
DA09982 Acyclovir
DA05192 Albendazole
DA05202 Albendazole Sulfoxide
DA44182 Alendronate Sodium
DA44442 Allopurinol
DA49082 Amantadine HCl
DA49342 Amikacin Sulfate
DA49362 Amitraz
DA50442 Amlodipine Maleate
DA50502 Ammoniinm Glycyrrhizinate
DA50612 Amprolium
DA50702 Amrinone
DA53012 Analgin
DA74612 Aspartame
DA76582 Atorvastatin
DA78692 Atracurium besilate
DA79682 Atropine sulfate
DA84162 Avermectins
DA98012 Azasetron
DA98022 Azathioprine
DB17532 Benazepril
DC02692 Beta-Carotene (Natural)
DB34622 Biphenyldicarboxylate
DB33732 Bisacodyl
DB32162 Bleomycin Sulfate
DB81132 Budesonide
DB81222 Buflomedil
DB81622 Bupivacaine HCl
DB80722 Busulfan
DB81772 Butenafine
DC01452 Calcium Folinate
DC01492 Camphor Sythetic Powder
DC01532 Candesartan
DC02622 Captopril
DC02692 Carbamazepine
DC01712 Carboplatin
DC01692 Carvedilol
DC17212 Cefixime
DC17222 Ceftriaxone
DC18212 Cefuroxime
DC18692 Cerivastatin
DC28432 Chloramphenicol
DC28452 Chloramphenicol Palmitate
DC28472 Chloronicotinic Acid
DC28492 Chlorotetracycline Hydrochloride
DC29572 Chondroitin Sulfate, Bovine
DC33492 Cimetidine A Type
DC34622 Ciprofloxacin HCl
DC34632 Ciprofloxacin lactate
DC33742 Cisplatin
DC33792 Citalopram
DC33782 Citric Acid Anhydrous
DC45012 Clavulante potassium
DC46322 Clinafloxacin
DC46332 Clindamycin HCl
DC46342 Clindamycin Phosphate
DC44582 Clopidogrel
DC45572 Clopidol
DC46562 Closantel sodium
DC46582 Clozapine
DC69172 Creatine Monohydrate
DC81612 Cuproterone acetate
DC98102 Cyclopropylamine
DC98082 Cyclosporine A
DC98112 Cyclovirobuxine
DC02452 D-Calcium Panthotena
DD01092 Dacarbazine
DD01102 Dactinomycin
DD01532 Danofloxacin mesulate
DD00802 Daunorubicin
DD16482 Demeclocycline
DD17922 Dexamethasone Base
DD17932 Dexamethasone Acetate
DD17942 Dexamethasone Sodium Phosphate
DD33092 Diclazutil
DD33172 Diethylstilbestrol
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DD57092 Docetaxel
DD57952 Doxazoxin
DD56922 Doxifluridine
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DE53012 Enalapril maleate
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DE60332 Epirubicin HCl

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DE73492 Esmolol
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DE77332 Etidronate Disodium
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DE76572 Etoposide
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DK33772 Kitasamycin tartrate
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DL17222 Leflunomide
DL17812 Leucovorin calcium
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DL17862 Levocarnitine
DL17872 Levofloxacin
DL33532 Lincomycin HCl
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DL57622 Loperamide HCl
DL58692 Loratadine
DL58712 Lorazepam
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DL56842 Lovastatin
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DM17452 Melatonin
DM16442 Meloxicam
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DM18782 Methylprednisolone
DM19762 Metronidazole
DM33092 Miconazole nitrate
DM33132 Midazolam HCl/ Maleate
DM33452 Milrinone
DM32522 Minocycline
DM32552 Minoxidil
DM32762 Mitomycin
DM32772 Mitomycin HCl
DM33792 Mitosantrone HCl
DM58462 Molsidomine
DM58742 Mosapride
DN01052 Nabumetone
DN01222 Naftopidil
DN02532 Nandrolone phenylpropionate
DN02622 Naphazoline HCl

DN02622 Naproxen
DN17572 Neomycin Sulfate
DN19762 Netilmicin sulfate
DN33082 Nicardipine
DN32092 Niclosamide
DN32202 Nifedipine
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DN34492 Nimodipine
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DO53152 Ondansetron HCl
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DO92962 Oxytetracycline Hydrochloride
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DP02492 Pamidronate disodium
DP02532 Pancyclovir
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DP02552 Pantoprazole sodium
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DP03702 Paroxedine
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DP17532 Penicillin G Potassium Sterile
DP17542 Penicillin G Procaine 1% Lecithin
DP17552 Penicillin G Procaine Sterile
DP17562 Penicillin G Sodium Sterile
DP17572 Penicillin Procaine:Potassium 3:1
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DP33692 Piroxicam
DP57132 Podophyllotoxin
DP68002 Pranoprofen
DP02692 Pravastatin
DP68012 Pravastatin sodium
DP69012 Praziquantel
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DP69182 Prednisone
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DT17712 Terbinafine HCL
DT18772 Tetracycline Base
DT18782 Tetracycline HCl
DT19762 Tetramethrin
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DT29342 Thiamphenicol palmitate HCl
DT31332 Thioctic acid
DT31352 Thiotepa
DT32082 Ticlopidine HCl

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DT56042 Tobramycin
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DT69342 Trimebutione Maleate
DT69582 Tropisetron HCl
DV00452 Valaciclovir
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DV17532 Venalfaxine
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DV34562 Vitamin B2
DV32762 Vitamin B4
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