

# Chem 412 Seminar

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## *Schizophrenia: Uncovering a Molecular Origin so Humanity May Better Deal With Insanity*

### **Abstract:**

Schizophrenia is a brain disease that affects approximately one percent of Americans sometime during their life. Symptoms are wide ranging, and are found across multiple cultural and ethnic groups. Profound changes in cognitive and emotional functioning characterize the disease. Senses are altered in schizophrenics; they are often overwhelmingly enhanced in early stages, however the opposite— a blunting of sensations, thoughts, and responsiveness—is more likely in later stages of disease development. Patients often have an altered sense of self due to an inability to differentiate their body or internal thoughts from the external material world. Delusions or hallucinations are relatively common, but not required for a diagnosis. Genetic links to schizophrenia have been discovered including several chromosome loci polymorphisms that are associated with the disease. No absolute genetic requirement for schizophrenia is known, and many people with genetic defects that are common in schizophrenics never develop any symptoms. There is no known anatomic abnormality that encompasses all schizophrenics, but dysfunctions in neuronal interconnections within the limbic system appears to be a constant feature. With the development of the first antipsychotic drugs came massive deinstitutionalization and symptomatic improvements in patients. New antipsychotics have been developed in the last decade and may once again revolutionize treatment for schizophrenics.

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