

# Chem 412 Seminar

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## *Tourette Syndrome: What Makes 'em Tic*

Gilles de la Tourette syndrome is one of the most common genetic disorders affecting man. It affects about 1 in 100 individuals in some way—only one in four of those affected being female. Tourette syndrome is an autosomal dominant, neurological disorder. One of the oldest theories of the cause of Tourette syndrome is an imbalance in the dopamine pathway. This results in disinhibited vocal and motor tics. The tics can range from animal noises to uncontrollable spasms of profanity or self-mutilation. The motor tics are characterized by constant, sudden, involuntary contraction of the muscles.

The enzyme, tryptophan oxygenase is thought to play a role in the cause of Tourette syndrome. Because the spectrum on suspicions of where the syndrome originated from, there are lots of closely related disorders which are thought to be linked genetically.

Because of the large population that Tourette syndrome affects treatments are being tested at a high rate. Each of the symptoms of Tourettes can be treated by separate medications. Tics can be suppressed by Neuroleptics, or by Alpha-adrenergic drugs. It is also shown that self-determination and concentration can withhold tics for minutes up to an entire day.

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