

Green Chemistry

Biochemistry Module

- The Invention and Commercialization of a New Chemical Family of Insecticides Exemplified by CONFIRM Selective Caterpillar Control Agent and the Related Selective Control Agents MACH 2 and INTREPID

Examples of Pesticides

- organophosphates
- carbamates
- a botanical pesticide—rotenone
- molting accelerators--diacylhydrazines

Modes of Action

- Acetylcholinesterase inhibitors
- Inhibition of the Electron Transport Chain
- Molting Accelerators

Acetylcholinesterase Inhibitors

- function of acetylcholinesterase
- acetylcholinesterase catalysis
- enzyme inhibition
- organophosphates
- carbamates

Inhibition of the Electron Transport Chain

- oxidative phosphorylation
- NADH oxidation
- rotenone

Molting Accelerators

- 20-hydroxyecdysone and ecdysone receptors
- diacylhydrazines