



Ecdysteroid Biosynthetic Enzyme Inhibitors

IP Status: Issued US Patent; **Application #:** 10/236,433

Insecticide Molecule Identification

Screening assays have been developed that allow for the discovery and further development of insecticides to reduce the harmful impact of insect pests on crop production. The tests identify agents that target the enzymes involved in ecdysone biosynthesis using the *Drosophila* P450 enzyme, Shade. By using a product-specific or substrate-specific antibody, it can be determined if candidate inhibitor molecules inhibit enzyme activity.

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Ecdysteroid Synthesis Inhibitor

Insect pests negatively affect agricultural production by decreasing the quantity and quality of crop yield. It is possible to control these pests via insecticides that disrupt metabolic functions essential to insect development. Ecdysteroids regulate many cellular processes during arthropod growth. There exists a need to target the systems that produce ecdysteroids in order to inhibit harmful insect growth and maximize crop production.

BENEFITS AND FEATURES OF INSECTICIDE TARGETS:

- Ecdysteroid synthesis inhibitor screening method facilitates the discovery of new enzyme inhibitors in the ecdysone synthesis pathway
- Ability to determine molecule effect on ecdysteroid biosynthetic enzyme activity
- Ability to determine insect viability via in vivo phenotypic screening

Technology ID

z01201

Category

Agriculture & Veterinary/Ag
Biotechnology

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