



Natural AESCP-2 Inhibitors as New Insecticides

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing promising natural AESCP-2 inhibitors (SCPIs) that may provide effective anti-mosquito insecticides.

Overview

Many diseases, including malaria, West Nile virus and equine encephalitis, are spread by mosquitoes. Mosquitoes are common backyard pests and may deter outdoor activity and tourism as well. Although several insecticides against mosquitoes are available, many people are concerned about the environmental and health effects of toxic chemicals. In addition, some insect pests have become resistant to currently available insecticides. Effective, natural insecticides are needed.

The protein AESCP-2 is involved in cholesterol transport in mosquitoes. Because inhibiting cholesterol transport is lethal to mosquito larvae, AESCP-2 is a potential target for insecticides.

The Invention

UW-Madison researchers have discovered promising natural AESCP-2 inhibitors (SCPIs) that may provide effective anti-mosquito insecticides with minimal environmental impact. They screened a natural products library to identify compounds that inhibited AESCP-2. These compounds then were tested against the major mosquito species responsible for malaria.

The inhibitors may provide an effective means to control adult mosquito populations by killing mosquito larvae. In addition, they may provide a means to control Colorado potato beetle populations—tests showed that SCPIs are also potent larvicides for this pest.

Applications

- Controlling mosquitoes and other insect pests

Key Benefits

- May slow the spread of diseases like malaria
- Because these inhibitors are natural products, they are not likely to adversely impact humans, animals or the environment.

Tech Fields

- [Animals, Agriculture & Food : Plant health](#)

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