

UNIQUE INSECTICIDAL COMPOUNDS

Researchers at the University of California have extracted from a plant several novel insecticides (four oils and a triglyceride) which in various combinations act together in a synergistic manner, and have developed protocols both for efficient extraction of the compounds from natural sources and for a simple synthesis of the active components of these compounds.

Currently many synthetic pesticides are being banned for health and environmental concerns. Further, many show diminished effectiveness as insects gain tolerance to the synthetic agents, and increased concentrations are required to achieve the same levels of insecticidal activity. One of the most common agricultural pests in California, the beet armyworm, has gained tolerance to most currently available synthetic pesticides.

At low concentrations (.06-1.7%), one of the natural plant oil extracts shows insecticidal activity against the beet armyworm. Conversely, the oils and the triglyceride are safe to people and other animals, as the plant is commonly eaten without adverse effects. Further, tests on cosmetics which contain the extracted plant oils show that they are nonirritating

components. Additional studies have shown that certain combinations of two or more of the UC compounds are far more toxic than each of the individual compounds.

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