

Synthesized 'natural' insecticide perseanol could cut use of harsher pesticides

First discovered back in the 1990s, perseanol exerts its insecticidal effects by paralyzing the muscular tissues of pests, in the same fashion as another natural pesticide ryanodine. Both perseanol and ryanodine can bind ryanodine receptors disabling the contraction of muscle cells.

Ryanodine can paralyze pets, cattle, and humans because its toxicity is non-discriminatory between mammals and insects. On the other hand, perseanol's toxicity is specific to insects, making it a safer pesticide. But to get more a large quantity of the compound isn't a simple task [P]erseanol does not appear in abundance. As the agriculture industry eagerly wishes to replace chemical pesticides with safe and naturally derived substitutes, there's always a strong interest to chemically synthesize perseanol.

Led by chemistry professor Sarah E. Reisman, researchers at Caltech have been [working on the total synthesis](#) of the eco-friendly pesticide.

Read full, original article: [A Natural, Eco-friendly Pesticide Synthesized for the First Time](#)