

New pest control strategy

insect pest / fly / *Drosophila* / chemical mediator / biocontrol



CONTEXT

In the present climate of the environment and public health preservation, reducing or avoiding the use of insecticides to control insect pests is a major challenge for researchers in the field.

New plant protection strategies are based on an ever-increasing knowledge of insect biology, their behaviour and ecosystems.

DESCRIPTION

The proposed invention is based on the innovative use of volatile molecules to reduce the presence of insect pests by disrupting their courtship ritual and copulation (at low concentrations). At higher concentrations, these molecules can have a repellent or even lethal effect.

The target insects of this invention are: the *Drosophila melanogaster*, responsible for the acid rot of the vine, and the *Drosophila suzukii*, which attacks the fruits and thus destroys the crops of the market gardeners.

However, this control strategy can also be extended to other types of insects: for example, certain mosquitoes, which are vectors of serious diseases for humans.

COMPETITIVE ADVANTAGES

- Use of molecules that are non-toxic to humans and the environment (alternative to insecticides)
- Use of molecules that respect ecosystems and biodiversity
- Currently there is no biocontrol solution against *Drosophila suzukii*



Markets & applications

Biocontrol:

- ❖ insect pests control



Development stage

Proof of concept validated at the laboratory scale (TRL 3)



Research team

Laboratory "Perception Sensorielle & Interactions Glie/Neurones"
"Centre des Sciences du Goût et de l'Alimentation" - Dijon (France)



Intellectual property

Patent application in progress



Target partnership

Co-development with a company

CONTACT-US

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