

New plant defense stimulator for effective biocontrol

plant defence stimulator / elicitor / fungicide / phytopharmaceutical / biocontrol



CONTEXT

In a context where societal expectations on the use of eco-compatible phytopharmaceuticals are becoming ever stronger, plant defence stimulators (PDS) are attracting a great deal of interest from players in the field. Many efforts are therefore being made to develop new PDS.

DESCRIPTION

At the Agroecology UMR of Dijon, researchers have developed, in partnership with the INRA of Nantes and the University of Picardy, a molecule capable of effectively stimulating plant defence responses against various pathogenic microorganisms. It is a low molecular weight oligogalacturonan produced from pectin. The new PDS is water-soluble and sprayable, which allows its application on the aerial part of the plant without changing practices or materials.

This molecule stimulates the plant's immune responses. Its protective efficacy has been demonstrated on a model plant, *Arabidopsis thaliana*, and on the vine against botrytis, powdery mildew and downy mildew (other pathosystems are currently under validation).

COMPETITIVE ADVANTAGES

- Greater phyto-protective efficacy than marketed molecules in performed tests
- Environmental impact predicted to be negligible and absence of toxicity
- Broad spectrum of defence: against botrytis, powdery mildew and downy mildew
- Use of natural raw material at low cost



Markets & applications

Agriculture - fungicide sector:

- ❖ Stimulator of the plant's defence mechanisms against pathogens



Development stage

The phyto-protective efficacy of the molecule has been validated in *Arabidopsis thaliana* and vine against botrytis, powdery mildew and downy mildew



Research team

Agroecology UMR of Dijon (France) - Team Plant-Microorganism Interactions



Intellectual property

Patent application in progress



Target partnership

Patent licensing

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