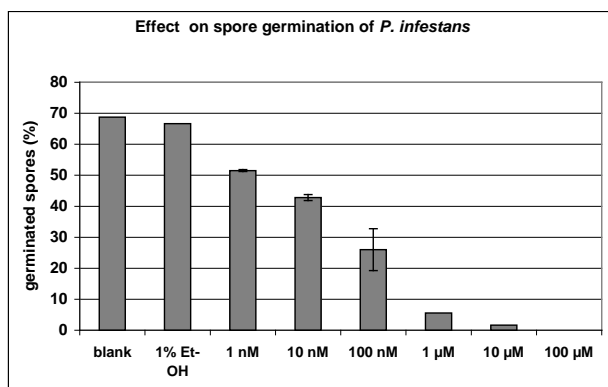


Antioomycotica

Problem to be solved

Some of the agriculturally very important plant pathogens belong to the order of *Peronosporales* (*Oomycetes*) - among them the causal agent of potato and tomato late blight disease *Phytophthora infestans*. Infections with this pathogen can lead to complete crop losses since the disease is hard to control and the life cycle only takes a few days. Most of the commonly used fungicides are not effective against this pathogen. Recently, molecular and biochemical approaches provided evidence that these pathogens do not belong to the kingdom of fungi. Typical fungal target sites of fungicide action are absent which may serve as an explanation for the ineffectivity of most conventional fungicides.

Novel substances



Substances are provided that show significant potential against pathogens from the class of *Oomycetes* such as *P. infestans*. The inhibitory effect on spore germination and mycelium growth was demonstrated *in vitro*. The *in vivo* effect on infections of whole potato plants was shown by spraying plants. Most interestingly, the lead compounds have been isolated from (partially edible) natural resources but can be easily produced and modified synthetically.

The compounds exerted no phytotoxic effect when sprayed on potato plants. Compounds have also been demonstrated to be active against other types of phytopathogens, including fungi and some bacteria.

The compounds commonly have $\log P_{\text{calc}}$ values between 0.2 and 5 and can be synthetically varied for higher or lower lipophilicity, higher activity, or other desirable properties.

Applications

Development of formulations for pest control e.g. for *P. infestans*

Commercialization

We are seeking to establish collaboration and licensing relationships to develop this exciting technology.

Patent situation

Patent granted for Europe and for US.

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