ESA Patentverwertungsagentur
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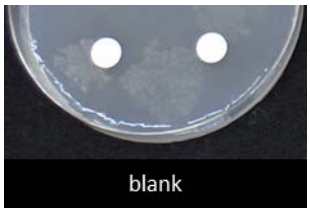
Technology Offer

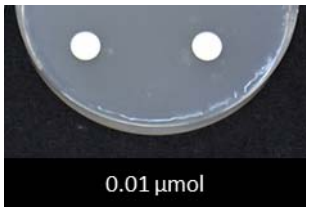
Substances effective against Oomycetes

Problem to be solved

Some very important pathogens belong to the order of *Peronosporales* (*Oomycetes*) - among them the causal agents of oomycosis (Pythiosis, Lagenidiosis). Infections with these pathogens can lead to severe illnesses, mainly known for dogs and horses but also for other domestic animals and even humans. The disease is very difficult to control and the prognosis is rather bad. Most of the commonly used fungicides are not effective. Recently, molecular and biochemical approaches provided evidence that these pathogens do not belong to the kingdom of fungi. Typical target sites of fungicide action are absent which may serve as an explanation for the ineffectivity of most conventional antimycotics.

Novel substances





Novel substances are provided that show significant potential against pathogens from the class of Oomycetes. First evidence comes from tests against plant pathogens such as Phytophthora. infestans, and moreover, from agar-diffusions assays against the human and animal pathogenic oomycete Pythium insidiosum causing pythiosis, a chronic, pyogranulomatous disease in mammals. Most interestingly, the lead compounds have been isolated from (partially edible) natural resources but can be easily produced and modified synthetically.

Initial cytotoxicity and irritation assays of the most relevant natural component gave no adverse indication. Two subclasses of compounds with different profiles are currently available. The compounds commonly have $\log P_{calc.}$ values between 0.2 and 5 and can be synthetically varied for higher or lower lipophilicity, activity, or other desirable properties.

Applications

Development of pharmaceutical formulations for treatment of diseases caused by fungi e.g. *P. insidiosum.*

Commercialization

We are seeking to establish collaboration and licensing relationships to develop this exciting compound class for medical, veterinary, or cosmetic applications.

Patent situation

Two German patent applications as well as PCT applications have been filed.

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