TECHNOLOGY OFFER

# ANTIFUNGAL AGENTS TO COMBAT THE CHESTNUT BROWN ROT FUNGUS

## Background

The fungus *Gnomoniopsis smithogilvyi* (Gs) is responsible for brown chestnut rot that damages the fruit after harvest and causes wood cankers in the chestnut tree - responsible for massive losses in the chestnut sector.
There are currently limited options to fight this fungus, which consists only of synthetic fungicides that have a significant impact on the environment, as well as on human and animal health – which for this reason will be banned.

## Technology

The technology provides a solution that uses marine actinobacteria strains, from *Streptomyces* genus, or its spores, as a fungicide capable of inhibiting the growth of the Gs fungus.
The extracts of the *Streptomyces* strains presented a significant anti-Gs activity comparable to or higher than the inhibition caused by Fluconazole and Amphotericin, two common antifungal agents.
This technology can sustainably control Gs, which can be used in integrated and organic agriculture for biological control.

Chestnut infection with *Gnomoniopsis smithogilvyi*

## Advantages

- Environmental friendly solution;
- Replacement of synthetic fungicides by natural biocontrol agents;
- Reduction of agricultural economic losses resulting from the fungus infection on chestnut.

## PATENT STATUS

European Patent Application
EP4541191A1
Priority date: 13.07.2023
Pending in Europe

## DEVELOPMENT STAGE

**TRL 3 – Experimental proof of concept**

## APPLICATIONS

Treatment of *Gnomoniopsis smithogilvyi* fungus in chestnut.

## COOPERATION

Research Cooperation Agreement;
Licensing Agreement.

## KEYWORDS

Antifungal
Brown Chestnut rot
Agriculture
Actinobacteria

## DEVELOPED BY

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