

## Identification of Secondary Metabolites from *Phytophthora alni*, the Cause of Decline of Alder Trees in Europe

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**Abstract** – Within the genus *Phytophthora* (*Oomycetes*, *Pythiales*, *Pythiaceae*) the distinct species *P. alni* has been developed as a pathogen on alder trees (*Alnus* spp.) causing the European alder decline in natural stands since the ninetieth. The pathogen was considered likely to be a hybrid between *P. cambivora* and a *P. fragariae*-like species. Both species are known as producers of toxic compounds causing necroses and wilt on different plant families. Strains of *P. alni* ssp. *alni* isolated from damaged tissue of alder bark were cultivated on the five media FCM, FDM, M1, MEA, and PDA. From the cell extracts of these strains 15 novel cyclic peptides named phytophthoralnins are identified by means of LC-PDA-ESI-Q-TOF-MS, MALDI-TOF- and -TOF/TOF-MS. Structure elucidation of the metabolites produced by *P. alni* has carried out partly.

Compounds from group of cyclic peptides are secondary metabolites which have varied properties acting as toxins or forming pathogenicity and virulence factors resp. within the host-pathogen complex.

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