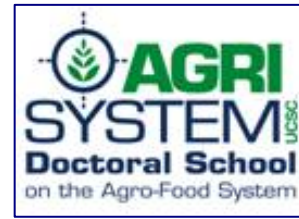


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ROLE OF STILBENES AS A RESISTANCE FACTOR OF THE GRAPEVINE TOWARDS BIOTIC STRESS

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Abstract

The grapevine is able to activate a defence mechanism whenever it interacts with biotic or abiotic stress, mainly by producing defence substances as the stilbenic compounds, phytoalexins known for their health related influence. Combining this fact and the knowledge that the *Plasmopara viticola* Berk et Curtis, the causal agent of downy mildew, causes considerable damages worldwide to *Vitis vinifera* L. production during its life cycle, this thesis aims to explore the differences that several grapevine varieties and clones display when confronted with this pathogen.

The leaves and small berries of 10 different clones of Cabernet Sauvignon were used to assess infection time course and stilbenic production overtime.

Likewise, young and old leaves of the varieties Müller-Thurgau, Chardonnay, Sangiovese, Pinot noir, Cabernet Sauvignon and Solaris, ordered in assumed increasing resistance, were used to assess infection time course, stilbene production on the leaves and the activation of a stilbene synthase gene.

All trials conducted highlighted not only the differences within grapevine varieties and grapevine clones but most importantly between the studied grapevine organs.

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