

Is "Bois Noir" a Suitable Model for Grapevine Yellow Diseases?

Marina Dermastia

National Institute of Biology, Ljubljana, Slovenia

marina.dermastia@nib.si

Abstract—Production and export of grapevine planting material and wine is threatened by epidemics of several grapevine yellow diseases associated with the presence of taxonomically unrelated phytoplasmas –wall- less phytopathogenic bacteria from the Mollicutes class. The plant-pathogen system of ‘*Candidatus Phytoplasma solani*’, associated with ‘bois noir’ disease in grapevine, is commonly used as an experimental model for grapevine yellow diseases. Its choice for a model is based on the assumption that similar symptoms of grapevine yellow diseases, although associated with the presence of different phytoplasmas, are the result of similar responses of grapevine to the infection. Results of many studies show that indeed changes in photosynthesis, carbohydrate metabolism and secondary metabolism follow similar pathways during different grapevine yellows. However, recent comparisons of signaling pathways, which follow the infection, are different. In this talk, the importance of understanding how grapevine recognizes its pathogens will be discussed.

Key words—‘bois noir’, grapevine yellows, responses of grapevine to phytoplasma, signalling.