An -omics insight into the pathogenicity of *Penicillium digitatum*: an overview

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Abstract

Penicillium digitatum (Pers.:Fr.) Sacc., the causal agent of citrus green mold, is the main postharvest pathogen of citrus fruit. The control of this pathogen relies on the use of synthetic chemical fungicides. The long-term use of a few authorized fungicides, however, has led to the appearance of resistant strains worldwide. In the last few decades, a great effort has been invested in the search of alternative physical, chemical and biological treatments, however, the development of most of the alternative treatments has been based on empirical approaches in the sense that they have not been driven by a knowledge of the citrus fruit-pathogen interaction. Knowledge of the defense responses in fruit and of the mechanisms responsible for fungal pathogenicity could provide important clues leading to the development of new strategies for disease control. The following overview provides information on how the use of various -omic technologies (transcriptomic, genomic, proteomic, etc.) has shed light on the citrus-*P. digitatum*, host-pathogen system.