

Abstract:

Botrytis cinerea is a ubiquitous filamentous fungal pathogen of a wide range of plant species. The fungus is able to infect all aerial parts of its host plants to a certain extent. Infection may cause enormous damage both during plant growth and in the post-harvest phase (during cold storage or transport). *B. cinerea* is a major cause of economic loss in the production chain of cut flowers, bulb flowers and pot plants. Molecular-genetic studies performed over the past decade have provided a wealth of novel insights into the infection mechanisms utilised by the pathogen. Fungal genes were identified that are important for successful infection by *B. cinerea*. Such knowledge provides perspectives for designing novel, rational plant protection strategies that effectively counteract important fungal virulence factors. In this review I will divide the infection process into different stages and discuss the role of various fungal enzymes and metabolites in the individual stages. Finally some perspectives are addressed for novel control strategies that may reduce and/or delay the damage inflicted by *B. cinerea* infection