

The role for basal resistance in non-host interactions

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Species of the *Magnaporthe* complex include *M. oryzae*, which is able to infect small grain cereals such as rice, wheat and barley and *M. grisea*, able to infect grasses such as *Digitaria sanguinalis*. In rice, *M. oryzae* causes rice blast, an agronomically important disease of rice. In wheat, *M. oryzae* has only recently presented as a disease of wheat in the field, appearing in Brazil in the 1980's. In this study we examine the interactions between host isolates of *M. oryzae* and non-host isolates of *M. grisea* on the wheat cultivar Renan. Both the cellular and gene expression response of Renan are examined. At the cellular level a strong physical barrier response is observed in Renan towards the *Digitaria* isolates of *M. grisea*. Microarray expression screens have identified a number of candidate genes implicated in the differential responses seen between Renan and the different isolates of *Magnaporthe*. The results of these studies will be presented.