



Biotrophic fungi and plant defence

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Abstract:

Biotrophic pathogens derive nutrients from living cells by maintaining host viability. This host Maintenance sustain through highly specialized structural and biochemical relations. For valuable virulence activity biotrophic fungi have: highly developed infection structures; limited secretory activity, carbohydrate rich and protein-containing interfacial layers; long-term suppression of host defense; haustoria that used for nutrient absorption and metabolism. Plant defenses biotrophic fungal pathogen by penetration resistance and program cell death (PCD). Plant strengthens cell wall and membrane to halt spore germination and prevent the formation of the haustorium by Penetration resistance. The second resistance mechanism applied inside the penetrated epidermal cell that terminates nutrient supply to fungi for further development by induction of invaded program cell death. Plant innate immune responses occur through two basic interconnected forms: pathogen-associated molecular patterns (PAMP)-triggered immunity (PTI) and effector-triggered immunity (ETI) to activate defense signal molecules. However, Biotrophic fungi have several mechanisms to defend their effectors from plant receptor molecules. Once the fungal effector passes plant defense mechanism the plant will



not resist. Subsequently the plant reduces production of defense signaling molecule like salicylic acid. This review overviews recent knowledge of biotrophic fungi infection and plant defense strategies.

Biography:

Mohammad Ammar Latif is pursuing a Final year of BS.c(HONS) Agriculture Plant pathology from The Islamia University of Bahawalpur, Pakistan.

Recent Publications:

1. Biotrophic Fungi and Plant Defence