

GROWTH, ADHESION, AND PENETRATION IN RICE BLAST FUNGI

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The fungus *Magnaporthe grisea* commonly referred as the rice blast fungus, is responsible for destroying from 10% to 30% of the world's rice crop each year. The fungus attaches to the rice leaf and forms a dome-shaped structure, the appressorium, in which enormous pressures are generated that are used to blast a penetration peg through the rice cell walls and infect the plant [1-3]. These mechanical actions raise many intriguing questions relevant to different penetration processes in biology. These include: (i) the material properties of the appressorial wall; (ii) the strength of the adhesive that keeps the appressorium anchored to the rice leaf surface; and (iii) the forces involved in the penetration process whereby a peg is driven through the host cell wall. An elastic model of appressorium formation [4] and magnitude estimates of all three of these quantities will be discussed [5].

References

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