

## Section 1 Abstracts: Molecular Biology of Hypovirulence

**Cutinase Gene Expression in *Cryphonectria parasitica*, The Chestnut Blight Fungus: Effect of Hypovirulence Agents on Expression.** D.A. Varley,<sup>1</sup> G.K. Podilal and S.T. Hiremath<sup>2</sup>. <sup>1</sup>Department of Biological Sciences, Michigan Technological University, Houghton, MI 49931, and <sup>2</sup>Northeastern Forest Experiment Station, Delaware, OH 43015, USA

Plant pathogenic fungi produce cutinase, an enzyme required to degrade plant cuticles and facilitate penetration into the host. The absence of cutinase or decrease in its production has been associated with a decrease in pathogenicity of the fungus. A set of isogenic strains of *Cryphonectria parasitica*, the chestnut blight fungus, was tested for the presence and amounts of cutinase activity. The virulent strain of *C. parasitica* produced and secreted significantly higher amounts of cutinase than the hypovirulent strains. Use of both nucleic acid and polyclonal antibody probes for cutinase from *Fusarium solani*, f. sp. *pisi* showed that cutinase in *C. parasitica* is **25kD** in size and is coded by a 1.1 kb mRNA. Both mRNA and protein were inducible by cutin hydrolysate while hypovirulence agents suppressed the level of mRNA and the enzyme. Since all the strains had the cutinase gene the suppression of expression was due to the hypovirulence agents. The data presented is the first report indicating that hypovirulence agents in *C. parasitica* regulate a gene associated with pathogenicity in other plant pathogenic fungi.