

**Ospina-Giraldo, M.D.;** Laird, E.; and Mingora, C. 2010. Gene transcription patterns in *Phytophthora infestans* cultures grown *in vitro* and *in planta*. *Phytopathology* 100:S94.

A total of 49 putative genes homologous to members of 8 families belonging to the Carbohydrate esterase (CE) gene superfamily have been identified in the genome of the oomycete *Phytophthora infestans*. It has been suggested that CE enzymes, such as the ones classified within the CE Family 5 (the “cutinase” family) may play a role in the infection process by targeting and degrading the cell wall. Because no EST evidence supporting the expression of some of these genes was available, we analyzed the expression of a subgroup of CE-coding genes using reverse-transcription PCR (RT-PCR) and found that most genes are expressed in mycelium of *P. infestans* grown *in vitro*. To determine the level of expression of each of these genes, a quantitative PCR (qPCR) analysis was conducted. In addition, because of the potential importance of cutinase for *P. infestans* pathogenicity, a qPCR study was performed using plant tissue samples obtained at different stages of the infection process. Results of these investigations will be presented and discussed.