Meet an MPRINT Scientist

Christie Williams

Christie graduated from the University of California-Davis (B.S.) and U.C. Berkeley (Ph.D.) with degrees in Genetics. In 1995 she joined the USDA-ARS as a Research Molecular Biologist and became an Assistant Professor-Adjunct in the Department of Entomology at Purdue University.

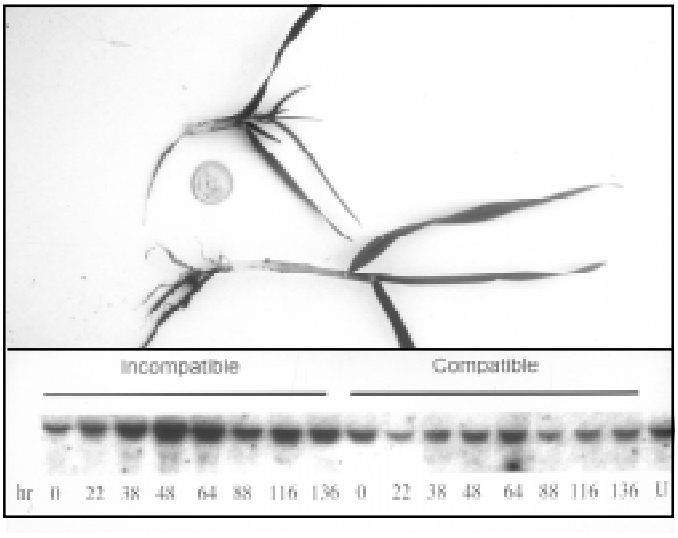
Previously, her interests focused on gene regulation in maize and *Drosophila*, and molecular aspects of disease resistance in potato, tomato, and rice. This background paved the way for her current research topic, wheat/Hessian fly interactions. An on-going project focuses on characterizing new resistance genes and designing molecular markers for use in the wheat breeding program at Purdue in collaboration with Dr. H. Ohm, of Purdue's Department of Agronomy, and Drs. J. Anderson, R. Ratcliffe, and S. Goodwin, from USDA. Additional lines of research include comparative genomics of related resistance genes in wheat and rice in collaboration with Dr. M. Mohan, India; antixenosis in collaboration with Dr. M. Harris, New Zealand; virulence in collaboration with MPRINT's Jeff Stuart; and characterization of altered plant-gene expression in response to larval infestation.

Some MPRINT Science

Williams, C. E., S. Yanagihara, S. McCouch, D. Mackill, and P. Ronald. (1997) Predicting success of *indica/japonica* crosses in rice, based on a PCR Marker for the S-5n allele at a hybrid-sterility locus. Crop Sci. 37: 1910-1912.

Williams, C. E., B. Wang, T. E. Holsten, J. Scambray, F. de Assis Goes da Silva, and P. C. Ronald. (1996) Markers for selection of the rice *Xa21* disease resistance gene. Theor. Appl. Genet. 93:1119-1122.

Williams, C. E., S. M. Wielgus, G. T. Haberlach, C. Guenther, H. Kim-Lee, and J. P. Helgeson. (1993) RFLP analysis of homeologous recombination in a *Solanum tuberosum* + *S. brevidens* somatic hybrid. Genetics 135: 1167-1173.



Top: Two four-week-old wheat seedlings, one susceptible to the Hessian fly and stunted and the other resistant
Bottom: mRNA expression levels of a pathogenesis-related wheat gene that responds quickly in resistant plants to feeding by avirulent Hessian fly larvae

Personal MPRINT

When not in the lab, Christie participates in dog agility with her Airedale Terriers, Erin and Argus; is a quilter; and enjoys backpacking.