

CIRRICULUM VITAE
GINA BROWN-GUEDIRA

Education:

- 1995 Ph.D. Genetics, Kansas State University, Manhattan, KS
1991 M.S. Agronomy, University of California, Davis, CA
1988 B.S. Agronomy, University of Kentucky, Lexington, KY

Professional Experience:

- 2004- present Research Geneticist, Plant Science Research Unit, USDA/ARS, Raleigh, NC; and Associate Professor, Dept of Crop Science, North Carolina State University, Raleigh, NC.
- 2003-2004 Research Geneticist, Plant Science and Entomology Research Unit, USDA/ARS, Manhattan, KS; and Adjunct Associate Professor. Dept. of Agronomy, Kansas State University, Manhattan, KS.
- 1997-2004 Research Geneticist, Plant Science and Entomology Research Unit, USDA/ARS, Manhattan, KS; and Adjunct Assistant Professor. Dept. of Agronomy, Kansas State University, Manhattan, KS.
- 1995 -1997 Research Affiliate, Plant Physiology and Genetics Research Unit, USDA/ARS. Urbana, IL.

Appointment with USDA/ARS at Raleigh, NC (2004-present):

Research Geneticist (GS-13) with the Plant Science Research Unit, Raleigh, NC. Investigator on the USDA/ARS project "Improvement and Genotyping of Cereal Germplasm and Epidemiology of Cereal Diseases". Responsible for research to develop and utilize molecular marker-assisted selection for development of soft red and white winter wheat, specialty-purpose wheats, winter barley, and winter oat cultivars. The main quality traits for molecular genotyping in the lab are protein functionality, sprouting resistance, milling and baking quality in wheat; groat protein content in oats and alternative end-use traits in barley. Genotyping for improved resistance to production risks includes resistance to powdery mildew, Hessian fly, Septoria and Stagonospora leaf and glume blotches in wheat; resistance to *Fusarium* head blight, leaf rust and stripe rust in wheat and barley; resistance to crown rust and to winter injury in oats; resistance to cereal leaf beetle and barley yellow dwarf virus in wheat and oats.

Research Interests and Activities

Current research involves developing protocols for deployment of agronomically important genes by marker-assisted breeding and developing new markers for small grains. Identifying molecular markers associated with genes for resistance to diseases of wheat and developing pest-resistant wheat and oat germplasm using molecular markers.

Professional Society Memberships and Honors:

American Society of Agronomy
Crop Science Society of America

American Phytopathology Society
Association of Women in Science
Gamma Sigma Delta
Sigma Xi

Selected Recent Academic and Service Activities:

2002-present Grain Genes Liaison Committee
2000-present Wheat Crop Germplasm Committee, Vice-Chair, 2002-2003.
2001-2004 North Central Regional Association committee on Karnal bunt of wheat
1998-2004 Hard Winter Wheat Improvement Committee.

Productivity:

- Developer on 12 winter wheat germplasms with improved resistance to foliar disease and insect pests of wheat or modified quality attributes (*KS96WGRC35, KS96WGRC36, KS96WGRC37, KS96WGRC38, KS96WGRC39, KS96WGRC40, KS00WGRC44, KS04WGRC45, KS04WGRC46, KS04WGRC47, KS04WGRC48, and KS04WGRC49*).
- Author of 28 research papers in refereed journals.
- Obtained \$500,000 in competitive grants from 1999-2004.

Foreign Service:

Established nurseries at Punjab Agricultural University, India to evaluate U.S. winter wheat varieties and breeding lines for reaction to Karnal bunt. Field testing with KB can not be done in the U.S. due to quarantine.

Adviser to student under “Women in Leadership Positions in Agriculture” project through Mid-America International Agricultural Consortium (MIAC) and the International Center for Improvement of Maize and Wheat (CIMMYT, Mexico).

Technical consultant for projects with research institutes in the Former Soviet Republics including the Academy of Sciences of Tajikistan, the Armenian Agrarian Academy, and the All-Russian Research Institute of Biological Plant Protection.

Special Assignments:

Served as Acting Research Leader of the Plant Science and Entomology Research Unit from August, 2001 to February, 2002. Provided guidance and supervision to unit personnel, including two Category 1 scientists, two research associates, unit secretary, and two unit technical staff. Was involved in establishing an ARS Regional Genotyping Lab in the unit that serves as a model for similar labs being established at other ARS locations. Two new unit scientists were recruited and hired. Awarded Certificate of Appreciation for Extra Effort in serving as Acting Research Leader.