

**NORTH CAROLINA STATE UNIVERSITY'S COLLEGE OF AGRICULTURE AND LIFE SCIENCES**  
**Dean's Postdoctoral Fellowship Opportunity**

**GENERAL REQUIREMENTS:** Persons interested in the Dean's Postdoctoral Fellowship opportunity must hold an earned PhD and meet the qualifications of their project of interest. The post doc will be required to teach one class per year based on his/her background and interests. Additionally, the post doc will work on one project with the Office of Diversity Affairs. Therefore, prior experience working with underrepresented minority populations is highly desirable.

**POSTDOCTORAL STIPEND:** \$40,000 to \$45,000 per year PLUS benefits and up to \$1500 for professional development.

**By May 11, 2012, interested persons must contact the project leader of the project in which they are interested.** Interested persons of Native American and African American decent are encouraged to contact the project leader.

**POTENTIAL PROJECT ONE: Environmental Remediation Sciences**

Description: The successful candidate will investigate the molecular mechanisms that control parthenogenic reproduction in insects. Research will include the isolation and functional characterization of relevant genes along with identifying potential targets of disruption as a means of insect population control.

Qualifications: Candidates will be considered that have a PhD in any one of the biological sciences and a passion for addressing population-level outcomes by developing an understanding of the underlying molecular processes that govern them.

Research Program Information: <http://projects.cals.ncsu.edu/toxicology/people/david-b-buchwalter/> and <http://projects.cals.ncsu.edu/toxicology/people/gerald-a-leblanc/>

Project Leaders: Dr. David Buchwalter, (919) 513-1129, [david\\_buchwalter@ncsu.edu](mailto:david_buchwalter@ncsu.edu); Gerald LeBlanc, [gerald\\_leblanc@ncsu.edu](mailto:gerald_leblanc@ncsu.edu)

**POTENTIAL PROJECT TWO: Investigation of the Genetic Control of Basal Immunity in Maize**

Description: The postdoctoral researcher will investigate the genetic and molecular underpinnings of the basal defense response in maize using a variety of techniques, including expression and biochemical analysis, quantitative genetics and plant pathology. Using a previously-defined set of assays, the researcher will identify loci that control variation in basal defense and will define and characterize a set of genes upregulated during the basal defense response. The researcher will also assess the effects of enhanced basal immunity in protecting maize from a variety of fungal pathogens

Qualifications: The candidate should possess a Ph.D in one of the following areas: Molecular Genetics, Statistical Genetics, Genomics or Plant Pathology.

Research Program Information: <http://www4.ncsu.edu/~pibalint/peter.htm>.

Project Leader: Dr. Peter Balint-Kurti, (919) 515-3516, [peter\\_balintkurti@ncsu.edu](mailto:peter_balintkurti@ncsu.edu)

**POTENTIAL PROJECT THREE: Weed Science and Pest Management**

Description: The project involves field and greenhouse research with a multi-disciplined approach to pest management in peanut including evaluation of interactions of disease, insect, and weed complexes with the goal of implementing more efficient and environmentally sustainable practices at the farm level. The project will also involve identifying herbicide-resistant weeds and assessing programs for managing these weeds.

Qualifications: The candidate should have a PhD in agronomy, pest management, or related field.

Research Program Information: [http://www.crops.ncsu.edu/personnel/jordan\\_david/](http://www.crops.ncsu.edu/personnel/jordan_david/)

Project Leader: Dr. David Jordan, [david\\_jordan@ncsu.edu](mailto:david_jordan@ncsu.edu), (919) 515-4068

**POTENTIAL PROJECT FOUR: Ecoinformatics**

Description: The Postdoctoral Fellow would be engaged in research in applied ecoinformatics, exploring the interface of information science and vegetation science. The focus of the project is a large existing database containing information on vegetation and environment collected over the past 25 years by the Carolina Vegetation Survey (CVS). Using modern statistical and informatics tools, the Fellow would take the lead in analyzing specific questions about spatial and compositional variation in the natural plant communities of the Carolinas.

Qualifications: We seek an individual with background in both field-oriented and analytical approaches to study of vegetation.

Research Program Information: <http://cals.ncsu.edu/plantbiology/Faculty/twentworth/twentworth.html> and

<http://cvs.bio.unc.edu/> Project Leader: Dr. Thomas R. Wentworth, [tom\\_wentworth@ncsu.edu](mailto:tom_wentworth@ncsu.edu), (919) 515-2168

**POTENTIAL PROJECT FIVE: Geomicrobiological Research in Environmental Remediation**

Description: We seek an exceptional postdoctoral fellow to conduct independent research in the growing interdisciplinary field of environmental remediation. Activities may include conducting microbiological and geochemical experiments, electron microscopy, molecular biology approaches, and cutting-edge spectroscopic techniques to better understand the transformations of manganese in an environmental remediation system at a Superfund site. Opportunities exist to interact closely with a group of distinguished intramural and extramural collaborators, including at National Laboratories and the Smithsonian Institution.

Qualifications: The successful candidate should have the demonstrated ability to conduct independent research, and have a Ph.D. in soil science, geology, geochemistry, environmental engineering, chemistry, or molecular biology.

Research Program Information: <http://www4.ncsu.edu/~owduckwo/>

Project Leader: Dr. Owen Duckworth, [owen\\_duckworth@ncsu.edu](mailto:owen_duckworth@ncsu.edu), (919) 513-1577