

MULTIPLE POSITION ANNOUNCEMENTS ENCLOSED

*Multi-Institutional National Science Foundation Project*

**University of Delaware, Cornell University,  
Iowa State University, North Carolina State University**

**GENETIC & HISTOLOGICAL DISSECTION OF  
PHENOTYPIC VARIATION IN  
RESISTANCE TO MAIZE DISEASES**

<http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=1127076>

## POSTDOCTORAL SCHOLAR – University of Delaware

Co-advisors: Dr. Randall J. Wisser and Dr. Kirk Czymmek; University of Delaware, Newark, DE, USA

- R. J. Wisser Laboratory of Quantitative Genetics & Plant Breeding, Department of Plant and Soil Sciences; <http://www2.udel.edu/wisserlab/>
- K. Czymmek Laboratory of Fungal Biology & Plant Pathology, Department of Biological Sciences; <http://bioimaging.dbi.udel.edu/>

**Overview:** An opening is now available for a postdoctoral scholar to direct advanced histological analysis of fungal pathogenesis on maize plants. The scholar will couple histology with contemporary imaging tools and statistical analyses to contextualize the genetic basis of plant quantitative defense in terms of its effect on pathogenesis. More specifically, the scholar will lead the characterization of *Cochliobolus heterostrophus* and *Setosphaeria turcica* pathogenesis on maize in a spatiotemporal context and develop semi-automated micro-imaging assay pipelines to dissect stages of pathogenesis affected by host resistance QTL.

This is an opportunity for an aspiring scholar to take part in an NSF-funded multi-institutional investigation addressing key hypotheses regarding the mechanistic basis of genetic variation in plant quantitative disease resistance; project title: **GENETIC AND HISTOLOGICAL DISSECTION OF PHENOTYPIC VARIATION IN RESISTANCE TO MAIZE DISEASES**. As a member of a large inter-disciplinary project team, the scholar will be exposed to multiple fields of study including breeding, pathology, genetics, statistics, histology and molecular biology. The scholar will coordinate interactions between participating institutions (Cornell University, North Carolina State University, Iowa State University and USDA-ARS) to gain experience in collaborative and integrative science.

**Qualifications:** A highly skilled and motivated individual with a Ph.D. in Plant Pathology, Plant Genetics or a related field of study; experience in histology using confocal and/or fluorescence microscopy of plants is preferred.

For further details contact Dr. Randall Wisser at [rjw@udel.edu](mailto:rjw@udel.edu). To apply for the position provide a statement of interest, CV, and contact information for three references.

**Ph.D. in PLANT GENETICS & BIOINFORMATICS – University of Delaware**

R. J. Wisser Laboratory of Plant Breeding & Genetics, Department of Plant and Soil Sciences, University of Delaware, Newark, DE, USA; <http://www2.udel.edu/wisserlab/>

***Seeking a student to begin by spring semester, February 2012***

**Overview:** An opening is now available for a Ph.D. seeking student interested in studying genome sequence variation and quantitative and population genetics in maize.

The Ph.D. candidate will be involved in an NSF-funded multi-institutional investigation addressing key hypotheses regarding the mechanistic basis of genetic variation in plant quantitative disease resistance; project title: **GENETIC AND HISTOLOGICAL DISSECTION OF PHENOTYPIC VARIATION IN RESISTANCE TO MAIZE DISEASES**. The student will develop their thesis topic based on the following project activities: resequencing of 300 diverse maize inbred lines, characterization of sequence variation across disease-associated loci and genes, and collaborative application of high-resolution association mapping. As a member of a large inter-disciplinary project team, the student will be exposed to multiple fields of study including breeding, pathology, genetics, statistics, histology, and molecular biology. The student will have educational opportunities to attend outside workshops in quantitative and population genetics or bioinformatics as a supplement to UD coursework and present at professional conferences and travel to co-investigating laboratories to build a network with other students and co-investigators. Opportunities are available at UD to attain professional certification in bioinformatics or statistics while pursuing a Ph.D.

**Qualifications:** Prior research experience in genetics, statistics, bioinformatics, and/or related fields of study is required. Candidates with an M.S. degree in a related field are highly encouraged to apply.

For further details contact Dr. Randall Wisser at [rjw@udel.edu](mailto:rjw@udel.edu). To apply for the position provide a statement of interest, CV, and contact information for three references.

## POSTDOCTORAL SCHOLAR – North Carolina State University

P. Balint-Kurti Laboratory of Maize Disease Resistance Genetics, USDA-ARS at NCSU, Raleigh, NC, USA; <http://www4.ncsu.edu/~pibalint/peter.htm>

**Overview:** An opening is now available for a postdoctoral scholar to work on molecular genetics of maize disease resistance.

This is an opportunity for an aspiring scholar to take part in an NSF-funded multi-institutional investigation addressing key hypotheses regarding the mechanistic basis of genetic variation in plant quantitative disease resistance; project title: **GENETIC AND HISTOLOGICAL DISSECTION OF PHENOTYPIC VARIATION IN RESISTANCE TO MAIZE DISEASES**. As a member of a large inter-disciplinary project team, the scholar will be exposed to multiple fields of study including breeding, pathology, genetics, statistics, histology and molecular biology. The scholar will coordinate interactions between participating institutions (Cornell University, North Carolina State University, Iowa State University and USDA-ARS) to gain experience in collaborative and integrative science.

**Qualifications:** A highly skilled and motivated individual with a Ph.D. in Plant Pathology, Plant Genetics, Plant Molecular Biology or a related field of study.

For further details contact Dr. Peter Balint-Kurti at [peter\\_balintkurti@ncsu.edu](mailto:peter_balintkurti@ncsu.edu). To apply for the position provide a statement of interest, CV, and contact information for three references.

## Ph.D. in PLANT PATHOLOGY – Cornell University

R. J. Nelson Laboratory, Department of Plant Pathology, Cornell University, Ithaca, NY, USA; [http://www.plantpath.cornell.edu/labs/nelson\\_r/index.html](http://www.plantpath.cornell.edu/labs/nelson_r/index.html)

***Seeking a student to begin by spring semester, February 2012***

**Overview:** An opening is now available for a Ph.D. seeking student interested in studying pathology and quantitative genetics in maize.

The Ph.D. candidate will be involved in an NSF-funded multi-institutional investigation addressing key hypotheses regarding the mechanistic basis of genetic variation in plant quantitative disease resistance; project title: **GENETIC AND HISTOLOGICAL DISSECTION OF PHENOTYPIC VARIATION IN RESISTANCE TO MAIZE DISEASES**. The student will develop their thesis topic surrounding project activities related to understanding mechanisms of plant defense using a well developed model pathosystem. As a member of a large inter-disciplinary project team, the student will be exposed to multiple fields of study including breeding, pathology, genetics, statistics, histology, and molecular biology. The student will have educational opportunities to attend outside workshops as a supplement to CU coursework and present at professional conferences and travel to co-investigating laboratories to build a network with other students and co-investigators.

**Qualifications:** Prior research experience in pathology, genetics, biology and/or related fields of study is required. Candidates with an M.S. degree in a related field are highly encouraged to apply.

For further details contact Dr. Rebecca Nelson at [rjn7@cornell.edu](mailto:rjn7@cornell.edu). To apply for the position provide a statement of interest, CV, and contact information for three references.