

# Plant Pathology

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[www.ag.ndsu.edu/plantpath/](http://www.ag.ndsu.edu/plantpath/)

**Department Chair:** Dr. Jack Rasmussen

**Department Location:** Walster Hall

**Telephone Number:** (701) 231-8362

**Degrees Offered:** Ph.D., M.S.

**Application Deadline:** International applications are due May 1 for fall semester and August 1 for spring and summer semesters. Domestic applicants should apply at least one month prior to the start of classes.

**English Proficiency TOEFL ibT 79**

**Requirements:** IELTS 6.5

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## Program Description

The Department of Plant Pathology offers graduate study leading to the M.S. and Ph.D. degrees. Advanced degrees may involve specialized training in the following areas: host-parasite genetics, molecular biology and genomics, epidemiology, tissue culture, soil and seed-borne diseases, microbial ecology, and integrated disease management.

Student research and academic programs are tailored to individual needs and interests.

Five graduate faculty members are housed in the Northern Crops Science Laboratory located on campus. This relationship provides additional opportunities for research and consultation.

## Admissions Requirements

The Department of Plant Pathology graduate program is open to all qualified graduates of universities and colleges of recognized standing. In addition to the Graduate School requirements (<http://bulletin.ndsu.edu/past-bulletin-archive/2014-15/graduate/admission-information>), the applicant must have adequate preparation in Plant Pathology or Biology.

## Financial Assistance

Research assistantships and part-time positions are available in the department. Applicants are considered on the basis of scholarship and potential to undertake advanced study and research. To be considered for an assistantship, a completed Graduate School application, official transcripts, and three letters of reference must be submitted. In addition to these materials, international applicants must also submit TOEFL scores. These items must be submitted to The Graduate School.

The program generally requires a minimum of two years of full-time study for the M.S. degree and three years of full-time study for a doctorate, during which an overall GPA of 3.0 or better must be maintained.

For M.S. candidates, an oral defense of a research-based thesis or paper, and academic subject matter is required. Candidates for the Ph.D. will be required to pass a preliminary written and oral examination covering academic subject matter and a final oral defense of a research-based dissertation. Programs of study are developed to meet both disciplinary requirements as well as special interests of the students.

**Maricelis Acevedo, Ph.D.**

University of Nebraska-Lincoln, 2007

Research Interests: Rust-pathogen's Virulence Evolution, Host Resistance, Pathogen Population Diversity

**Robert Brueggeman, Ph.D.**

Washington State University, 2009

Research Interests: Barley Disease Resistance Gene Characterization and Deployment, Molecular Mechanisms of Host-Pathogen Interactions

**Luis del Rio, Ph.D.**

Iowa State University, 1999

Research Interests: Epidemiology of Plant Diseases, Chemical and Biological Control of Fungal Diseases, Management of Canola Diseases

**Neil C. Gudmestad, Ph.D.**

North Dakota State University, 1982

Research Interests: Ecology and Epidemiology of Plant Pathogenic Bacteria, Foliar Diseases of Potato

**Mohamed Khan, Ph.D.**

Clemson University, 1998

Research Interests: Sugarbeet Management

**Zhaohui Liu, Ph.D.**

North Dakota State University, 2006

Research interests: Molecular biology and genetics of host-pathogen interactions in wheat leaf spot diseases

**Samuel Markell, Ph.D.**

University of Arkansas, 2007

Research Interests: Extension Plant Pathology, Rust Diseases, IPM, Emerging Diseases, Chemical Control

**Steven W. Meinhardt, Ph.D.**

University of Illinois, 1984

Research Interests: Structure/Function Relationships in Enzymes and Toxins

**Berlin D. Nelson, Ph.D.**

Washington State University, 1979

Research Interests: Oilseed Diseases, Biological Control, Mycology

**Jack B. Rasmussen, Ph.D.**

Michigan State University, 1987

Research Interests: Molecular Biology and Role in Disease of Pathogen-Produced Toxins, Genetics of Resistance to Cereal Rust Diseases

**Gary A. Secor, Ph.D.**

University of California-Davis, 1978

Research Interests: Potato Diseases Management and Control, Biotechnology for Cultivar Improvement

**Julie Sherman Pasche, Ph.D.**

North Dakota State University, 2012

Research Interests: Pulse Crop and Dry Bean disease management, fungicide efficacy and resistance management, pathogen detection and diversity

**Shaobin Zhong, Ph.D.**

North Dakota State University, 2000

Research Interests: Fusarium Head Blight of Wheat, Fungal Biology and Genetics, Genomics and Functional Genomics of Host-Pathogen Interaction in Cereal Crops

## **Adjunct**

**Timothy L. Friesen, Ph.D.**

USDA/ARS

North Dakota State University, 2001

Research Interests: Host Parasite Interactions of Foliar Diseases of Cereals

**Michael C. Edwards, Ph.D.**

USDA/ARS

Cornell University, 1983

Research Interests: Virology, Cereal Virus Diseases

**Rubella Goswami, Ph.D.**

University of Minnesota, 2005

Research Interests: Pathogen Interactions, Fungal Biology, Molecular Biology and Genomics

**Thomas J. Gulya, Ph.D.**

USDA/ARS

Iowa State University, 1978

Research Interests: Downy Mildew, Rust, Phomopsis Stem Canker, Sclerotinia Wilt of Sunflower

**Michael Wunsch, Ph.D.**

Cornell University, 2010

Research Interests: Varietal Disease Resistance, Fungicide Efficacy and Timing, and Use of Cropping Systems to Manage Disease