

# Pharmaceutical Sciences

---

## Department Information

- **Department Chair:**  
Jagdish Singh, Ph.D.
- **Department Location:**  
102 Sudro Hall
- **Department Phone:**  
(701) 231-7661
- **Department Web Site:**  
[www.ndsu.edu/pharmsci/](http://www.ndsu.edu/pharmsci/)
- **Application Deadline:**  
March 15 for fall semester and October 1 for spring semester, if positions are available.
- **Credential Offered:**  
Ph.D.
- **Test Requirement:**  
GRE (300 or more)
- **English Proficiency Requirements:**  
TOEFL iBT 90; IELTS 6.5

---

## Program Description

The Department of Pharmaceutical Sciences offers graduate study leading to the Master of Science and Doctor of Philosophy degrees. Advanced work may be selected from pharmaceuticals, pharmacokinetics, pharmacology, and medicinal chemistry."

The pharmaceutical sciences curriculum consists of a core of courses involving both basic and pharmaceutical sciences. In addition, students will select courses that will prepare them to be competent scientists in their fields.

## Admissions Requirements

The Department of Pharmaceutical Sciences graduate program is open to all qualified graduates of recognized universities and colleges. In addition to the Graduate School requirements, the applicant must have adequate preparation in pharmacy or a biological or physical science related to pharmaceutical sciences.

Students interested in the Master of Science degree should contact the Department of Pharmaceutical Sciences for more information.

## Financial Assistance

Graduate assistantships are available. To be considered for an assistantship, the student must have completed a Graduate School application, be accepted by the department, and submit a formal letter to the department chair requesting an assistantship.

## Doctor of Philosophy

The Doctor of Philosophy program requires the completion of 30 semester credits of letter-graded course work with a GPA of 3.0 or better. Of the 30 credits, at least 18 credits must be at 700 level. Candidates defend their dissertations. Candidates for the Ph.D. will be required to take an examination directed at determining competency in the pharmaceutical sciences.

The department requires the following core courses:

Code	Title	Credits
PSCI 611	Principles of Pharmacokinetics and Pharmacodynamics	3
PSCI 670	Pharmacokinetics	3
PSCI 790	Graduate Seminar	1-3
BIOC 701	Comprehensive Biochemistry I	4
BIOC 702	Comprehensive Biochemistry II	4
STAT 725	Applied Statistics	3

## Master of Science

In consultation with the adviser and student's supervisory committee a Plan of Study would be developed. The Master of Science in Pharmaceutical Sciences program follows Graduate College degree requirements (<https://bulletin.ndsu.edu/graduate/graduate-school-policies/masters-program-policies>).

### **Amanda Brooks, Ph.D.**

University of Wyoming, 2006

Postdoctoral: University of California San Diego, 2006-2007; University of Utah, 2008-2010

Assistant Research Professor, 2011-2014

Research interests: Biomimetics, Recombinant Protein Expression for Biomedical Devices, Controlled Drug Delivery to Combat Antibiotic Resistance

### **Ang Guo, Ph.D.**

Chinese Academy of Sciences, 2010

Postdoctoral: University of Iowa, 2009-2014

Research Interests: Metabolomics and Epi-Transcriptomic in Cardiovascular Diseases

### **Yagna Jarajapu, M.Pharm., Ph.D.**

University of Strathclyde, 1998

Glasgow Caledonian University, 2002

Postdoctoral: University of Florida and Wake Forest University 2003-2008

Research Interests: ACE2/Angiotensin-(1-7) and Bone Marrow Progenitor Cells in Diabetes

### **Estelle Leclerc, Ph.D.**

University Paris XI, 1994

Postdoctoral: ETH-Zurich, 1994-1998; The Scripps Research Institute, 1998-2003

Junior Group Leader Children's Hospital Zurich, 2004

Research Assistant Professor Florida Atlantic University, 2005-2009

Research Interests: Biopharmaceutics

### **Sanku Mallik, Ph.D.**

Case Western Reserve University, 1992

Postdoctoral: California Institute of Technology, 1993-95

Research Interests: Synthetic medicinal chemistry

### **Stephen T. O'Rourke, Ph.D.**

University of Wisconsin, 1985

Postdoctoral: Mayo Clinic and Foundation, 1985-87

Research Interests: Vascular Pharmacology

### **Steven Qian, Ph.D.**

The University of Iowa, 1999

Postdoctoral: National Institute of Environmental Health Science (NIEHS, NIH) 2000-2004

Research Interests: Roles of Lipid Derived and Protein-Derived Free Radical Metabolites in All Kinds of Health Related Problems

### **Jagdish Singh, Ph.D.**

Banaras Hindu University, 1982

Postdoctoral: University of Otago, New Zealand, 1985-88; University of California-San Francisco, 1992-94

Research Interests: Novel Dosage and Drug Delivery Systems, Biopharmaceutics

### **Kristine Steffen, Pharm.D., Ph.D.**

North Dakota State University, 2002

North Dakota State University, 2007

Postdoctoral: Neuropsychiatric Research Institute, 2007-2009

Research Interests: Pharmacokinetics, Bariatric Surgery, Eating Disorder and Obesity Pharmacotherapy

### **Chengwen Sun, M.D., Ph.D.**

Norman Bethune University of Medical Sciences, 1988

Norman Bethune University of Medical Sciences, 1996

Postdoctoral: Department of Physiology, Medical College of Wisconsin, 1996-2000

Research Interests: Central Blood Pressure Control and Hypertension Gene Therapy

### **Sathish Venkatachalem, Ph.D.**

University of Madras, 2003

Postdoctoral: University of Western Ontario, 2004-2006

Research Interests: Human Lung Diseases (Asthma, Chronic Obstructive Pulmonary Disease and Pulmonary Hypertension)