

# Pharmaceutical Sciences

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## Program and Application Information

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

## Program Description

The Department of Pharmaceutical Sciences offers graduate study leading to the Doctor of Philosophy degree. Advanced work may be selected from pharmaceutics, 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.

## 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.

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:

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| PSCI 611 | Principles of Pharmacokinetics and Pharmacodynamics | 3   |
| PSCI 670 | Pharmaceutics III: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   |

### 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

### Bin Guo, Ph.D.

State University of New York at Buffalo, 1999

Postdoctoral: Burnham Institute, 1999 - 2003

Research interests: Molecular and Cell Biology of Apoptosis; Cancer Pharmacology

### 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

**R. Craig Schnell, Ph.D.**

Purdue University, 1969

**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

**Stefan Vetter, Ph.D.**

Swiss Institute of Technology (ETH) Zurich, 1998

Postdoctoral: The Scripps Research Institute, 2000-2005

Research Interest: Medicinal Protein Biochemistry