



# The Pharmacology Major

From its beginnings more than a half-century ago, Stony Brook University has been characterized by innovation, energy, and progress, transforming the lives of people who earn degrees, work, and make groundbreaking discoveries here. A dramatic trajectory of growth has turned what was once a small teachers college into an internationally recognized research institution that is changing the world

Today Stony Brook is one of only 62 members of the prestigious, invitation-only Association of American Universities and the London *Times Higher Education World University Rankings* lists Stony Brook in the top 1 percent of the world's universities.

*Note: Stony Brook's undergraduate major in pharmacology does not prepare you for employment as a pharmacist. Pharmacy, which involves the dispensing of drugs as a pharmacist, is pursued through a university with a PharmD or pharmacy program, which Stony Brook does not have (for a listing of PharmD programs visit <http://www.uspharmd.com/school/>). The emphasis of our pharmacology program is on preparing students for Advanced training in medical, graduate, and other professional programs..*

Pharmacology is a science devoted to unlocking the mysteries of drug action to discover new therapies and treatments to prolong life, making it basic to medicine, pharmacy, dentistry, veterinary medicine, and many other healthcare fields. Focusing on cellular, molecular, and human pharmacology, the program allows students to learn in a basic science and research environment interacting with medical school faculty. Many of our students publish their results in scientific journals.

We currently maintain an enrollment of 25-30 students per year. Students receive individual attention, and courses are taught by faculty members. The Program provides excellent academic training for students planning to enter graduate programs or pursue careers in medicine or other health sciences. Current career objectives in order of choice include Ph.D. programs in pharmacology and other basic sciences, com-

bined MD/PhD programs, MD degrees, various health sciences programs, and positions in academic and industry labs.

Students with interests in physiology, chemistry, biochemistry, and cell biology are excellent candidates for entering the Pharmacology Program. The major in Pharmacology introduces students to the scientific principles and mechanisms of drug action on biological systems. Experimental studies in pharmacology range from the treatment and prevention of disease states to determining the effects of chemical agents upon subcellular processes. In addition, the toxicology of biohazardous materials, pesticides, and industrial pollutants is explored.

If you are a highly motivated and curious individual who is fascinated with the life sciences and enjoys problem solving— then pharmacology is for you. Pharmacological sciences include biochemical, cardiovascular, endocrine, molecular, and neuropharmacology. Related fields are clinical pharmacology and medical chemistry. Novel drugs have been designed to combat cancer, AIDs, diabetes, cardiovascular disease, and neurological disorders, among others. The effects of chemicals and industrial pollutants upon the environment and ecosystems are monitored by pharmacologists and toxicologists. Marine natural products with therapeutic properties are being isolated. Drugs are being used as probes to better understand the molecular,

[www.stonybrook.edu/admissions](http://www.stonybrook.edu/admissions)



Priority Application Deadline:  
**January 15**

E-mail: [enroll@stonybrook.edu](mailto:enroll@stonybrook.edu)  
Phone: (631) 632-6868

cellular, and physiological processes occurring within the human body. There are no boundaries for the science of drug discovery to improve the quality of human life, and many career pathways and opportunities are available for pharmacologists.

## INTERNSHIP IN INDUSTRY PROGRAM

Students enrolled in the pharmacology undergraduate program at Stony Brook are eligible for internships in the research laboratories of major pharmaceutical and biotechnology companies. Junior and senior pharmacology majors of good academic standing may submit applications for summer positions which include stipends. Students are assigned a project and supervised by an industrial scientist, becoming a temporary member of his/her research team. The project is written up in a short research paper format and a verbal presentation of the results made at the company.

These internships provide:

- ★ Experience the working environment of a major pharmaceutical or biotechnology company
- ★ Actively participate in ongoing research for the development of new drugs
- ★ Establish networking for future employment and career development following graduation
- ★ Participate in placement services for industrial employment and entry into academic programs for further education

## ADMISSION TO THE PHARMACOLOGY MAJOR AT STONY BROOK UNIVERSITY

### FRESHMAN ADMISSION TO THE PHARMACOLOGY PROGRAM

High achieving freshman applicants who meet the following minimum criteria are encouraged to apply for direct admission to the pharmacology major:

- ★ A grade point average of 90 or higher
- ★ A combined SAT score (critical reading and math) of 1200 or higher
- ★ An SAT math score of 600 or higher
- ★ Successful completion of both physics and calculus while in high school
- ★ Outstanding grades in high school math and science courses (NYS residents should have Regents scores in math and science of 88 or higher)

To be considered for direct admission to the pharmacology major, freshman applicants must indicate pharmacology as their choice of major/curriculum on their application to the University.

Your application to the University will be reviewed and a decision made regarding your admission to the University and the pharmacology major. Those who are admitted to the University, but not directly into the pharmacology major, will be able to apply for admission to the major as a continuing student after completing one or more semesters of coursework at Stony Brook.

### TRANSFER AND CURRENT STUDENT ADMISSION TO THE PHARMACOLOGY PROGRAM

Transfer applicants and current students must have a minimum grade point average of 3.0 (B) in a strong college science curriculum.

Transfer applicants who receive an offer of admission to the University and current students may apply for admission to the pharmacology major. Please note, however, that you must complete at least one semester of coursework at Stony Brook before your application can be processed. Enrollment is limited, so students should initiate the application process as early as possible.

Applications and instructions are available on the Pharmacology Department Web site.

All applications must include:

- 1) A brief essay (500 words) describing why you believe the Pharmacology Program will help you realize your career goals.
- 2) Copies of your college transcript.
- 3) Two recommendation letters. Recommendation letter forms are provided in the application file. Provide one form to each respondent that you have selected to write a letter on your behalf. Remember that neither of the respondents can be related to you and one respondent must be a Stony Brook University faculty member. All recommendation letters must be submitted in a signed and sealed envelope.

Mail or fax the completed application to:  
Undergraduate Pharmacology Program  
Stony Brook University  
BST-8, Room 140  
Stony Brook, NY 11794-8651

Fax: (631) 444-9749

### BS/PhD TRACK IN PHARMACOLOGY

This track is open to outstanding pharmacology majors who plan to pursue a PhD in Cellular and Molecular Pharmacology at Stony Brook.

Criteria for the BS/PhD track in Pharmacology:

1. Be an undergraduate pharmacology major
2. Have a minimum cumulative GPA of 3.4
3. Provide three reference letters, including one from your undergraduate research mentor
4. Participate in Summer research that includes a minimum of ten weeks in the lab (stipend will be provided)
5. Apply by March 1

### COMBINED BS PHARMACOLOGY/MBA PROGRAM

In conjunction with the College of Business, we are pleased to offer a five-year program leading to a combined BS/MBA degree. The program is designed for outstanding students with a strong record of academic leadership and excellence. The deadline for applying to the combined program is February 01, and students should apply in their junior year (or when they have junior standing). For more information, contact the College of Business or stop by the Pharmacology Office (BST-8 Room 140).

### COMBINED BS PHARMACOLOGY/MPH PROGRAM

This 5-year program leads to a BS in Pharmacology and Master of Public Health combined degree. A major goal of the combined program is to attract talented students with a commitment to Pharmacology into the public health field. This is the first BS Pharmacology/MPH combined degree program to be offered in the United States, despite a strong demand for MPH graduates with highly developed analytical and quantitative lab skills. The program is highly selective, and only a few students are admitted each year.

### FOR MORE INFORMATION ABOUT THE UNDERGRADUATE PHARMACOLOGY MAJOR

[www.pharm.stonybrook.edu](http://www.pharm.stonybrook.edu)

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