



RUTGERS UNIVERSITY

PSYCHOLOGY DEPARTMENT - BUSCH CAMPUS

BEHAVIORAL PHARMACOLOGY CERTIFICATE PROGRAM

I. Program Description

Goals: The primary goal of the Certificate Program is to provide undergraduate students with an integrated academic and technical background in psychopharmacology and the behavioral sciences that will enhance their eligibility for employment in the pharmaceutical, biotechnology, and/or health-related industries, particularly in New Jersey and Pennsylvania. The Certificate will be enacted through a certification program in Behavioral Pharmacology organized and operated by the Rutgers University Department of Psychology at New Brunswick.

Rationale: The New Jersey area contains a large number of Pharmaceutical, Biotechnology, and other companies in the health-related industry. The program will provide an important advantage for Psychology undergraduates who wish to pursue careers in the pharmaceutical or biotechnology sector. Specifically, students who are attracted to laboratory work within these companies, may enjoy an employment advantage with an educational background in specific techniques and methods provided by the Certificate Program. Also, research experience within the industrial setting itself will contribute to the competitive advantage students obtain through this program.

Biopsychology/Industry Integration: The Certificate Program takes advantage of the breadth of Psychology Department laboratories and the expertise of participating faculty investigators. Students will learn a variety of techniques in the department laboratories and will also be provided the opportunity to work in laboratories at pharmaceutical companies located in and around the New Jersey area. Opportunities for disabled and minority students will be especially encouraged through outreach programs provided through the National Institutes of Health. *The Certificate Program provides a direct service to the diverse social and economic needs of New Jersey and serves the interests and needs of students at Rutgers University. In general, the program will produce a well-educated and experienced workforce that will be attractive to employers in various sectors of the biomedical research community.*

Administrative Structure: The Certificate Program is coordinated by a Director and a Committee consisting of both Rutgers faculty and participating scientists from pharmaceutical/biotechnology companies. The Certificate Program Committee will (1) evaluate student applications for the program, (2) examine the progress of students in the program, (3) seek external funding, and (4) initiate contacts with the pharmaceutical and biotechnology companies in the NJ area.

The Rutgers Psychology Director of the Certificate Program Committee is:

George Wagner, Ph.D.; Professor of Psychology, Rutgers University, Department of Psychology, 152 Frelinghuysen Road, Piscataway, NJ 08854-8020; 732 445-4660; gcwagner@rci.rutgers.edu

Laboratory experience will be tailored to each student in terms of an individual research project relevant to the laboratory in which a project is being conducted and generally relevant to the goals of the pharmaceutical industry. Each principal investigator will provide to the student upon entry to the laboratory an outline description of the research project and the time-course under which the project is to be completed. Authorship on resulting publications will be negotiated depending on research conducted and relative effort of students, faculty and technical staff.

II. Student Qualifications for Program Entry

- Undergraduates in their junior or senior year.
- The student has at least a “B” (3.0/4.0) average
- The Certificate Program Committee evaluates each application and selects interns based on academic excellence, relevant experience, and a personal statement outlining career goals.

III. Requirements for Completion of the Program

1. To complete the program, the student must have completed three of the following four courses with a grade of “B” or better:

Conditioning and Learning (Psych 311; 3 hrs credit)
Physiological Psychology (Psych 313; 3 hrs credit)
Behavioral Pharmacology (Psych 463 (formerly 363); 3 hrs credit)
Neuropsychopharmacology (Psych 412; 3hrs credit)

2. Completion of two semesters of research for a minimum of 6 hours total credit, in participating faculty member’s labs will be required. To complete this requirement, the student, may take Research in Psychology (Psych 391, 392 or Psych 495, 496), or if qualified, Honors Research in Psychology (Psych 497, 498).

3. Students become eligible for pharmaceutical company summer internships after they have completed at least one semester of research in the laboratory of a Rutgers faculty member.

Assuming available resources, the Rutgers faculty member, the company sponsor, and the Certificate Program Committee will jointly determine a student's placement in a pharmaceutical company.

IV. Training Protocol

Step 1. Successful applicants will acquire specific research skills in, at least, one laboratory at Rutgers University (Research in Psychology/Honor's Research). The specific research skills to be acquired by the student will be compatible with current methods used in central nervous system (CNS) drug-development efforts within industry. The areas of research in CNS drug development include, but are not limited to: nociception, Alzheimer's disease, obesity, Parkinson's disease, depression, schizophrenia, anxiety, sleep disorders, drug addiction and alcoholism. During this time students will take courses relevant to their research and to behavioral pharmacology in general.

Step 2. Following completion of Step 1, students will join a research laboratory within a pharmaceutical/biotechnology company for a minimum of 8 weeks during the summer. Funds for this phase of the Certificate Program will be sought from the participating companies, from internal sources, and from state and national agencies. At the end of this phase, students will provide a written report and critique, to the Certificate Program Committee, of their experience.

Finally, throughout the Program, a faculty advisor will help tailor students' curriculum to maximize their background in behavioral pharmacology. It should be noted that students often leave the New Jersey area for summer break; therefore, every effort will be made to contact research scientists who work in pharmaceutical companies based in other states. Rutgers students from out of state may be able to fulfill their summer internship in their local communities.