DEPARTMENT OF BIOCHEMISTRY

The graduate program in Biochemistry began in 1960 starting with the offering of Masters in Science (M.S.) and doctor in Philosophy (Ph.D.) degrees in Biochemistry and Nutrition. The name of the department was changed in 1992 to Department of Biochemistry. The graduates of our program can be found throughout the industrial, academic and government environment in Puerto Rico, the U.S. mainland and in Latin America. The department faculty actively seeks external funds to support our graduate students and have been able to improve our research facilities with state of the art instrumentation.

The Department of Biochemistry characterizes itself by conducting research in the following areas: Molecular and Genetic Alterations in Disease, Biochemistry of Proteins, Protein Structure/Function Relationships, Biochemistry of Glycoconjugates and Cellular Differentiation, Regulation of Gene Expression, Aging and Oxidative Stress, Development of Cancer Drugs, Clinical Biochemistry, Analytical Biochemistry, Biochemical and Molecular Toxicology, Biochemical Pharmacology and Molecular Biology. Individual

faculty members also participate as mentors

in the Intercampus Ph.D. program

in Biology.





UPR School of Medicine

Medical Sciences Campus PO Box 365067 San Juan PR 00936-5067

Dr. Suranganie Dharmawardhane

Coordinator of Graduate Studies Department of Biochemistry, 6th Floor

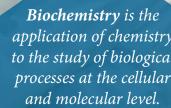
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UNIVERSITY OF PUERTO RICO SCHOOL OF MEDICINE



Graduate Studies in **BIOCHEMISTRY**

application of chemistry to the study of biological processes at the cellular



Graduate Studies in BIOCHEMISTRY

PROGRAM DESCRIPTION AND ADMISSION REQUIREMENTS:

The Department of Biochemistry is located in the sixth and second floor of the University of Puerto Rico, Medical Sciences Dr. Guillermo Arbona Irizarry Building at the Río Piedras Medical Center. Available Research Facilities include the Metabolomics Research Core, the Genomics Translational Research Unit, Molecular Biology Core and the facilities of the Center for Environmental and Toxicological Research. Also available are the Translational Proteomics Center, Flow Cytometry and Electron Microscopy Units, the campus Computer Center and the Animal Laboratory Resources Center. These resources complement the facilities offered by the individual investigators in their respective laboratories.

Candidates for an M.S. degree are required to complete a minimum of 24 credits in addition to 6 thesis credits. Ph.D. candidates must complete a minimum of 45 course credits in addition to 15 dissertation credits. Ph.D. candidates must pass a qualifying exam that is taken after the second year of course work.

THE REQUIREMENTS FOR ADMISSION ARE AS FOLLOWS:

- All applicants must fulfill the general requirements of the Graduate Division of the School of Medicine. The applicant must submit scores on the GRE General Test. Please, contact de Deanship for Biomedical Sciences regarding the deadline to apply for admission.
- 2. It is desirable that applicants have a B.S. degree in Chemistry or Biology, however, applicants with majors in other areas are strongly encouraged to apply.
- 3. Applicants must have a minimum G.P.A. of 3.0.
- Required undergraduate courses are: General Chemistry, Analytical Chemistry, Organic Chemistry, Physics, Differential and Integral Calculus. Recommended courses include Cell Biology, Biochemistry, Genetics and Physical Chemistry.

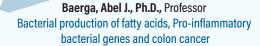


Teaching and Research
Assistantships are available through
the Dean of Academic Affairs. Financial aid through
special programs such as NIGMS-RISE and other federal grants
may also be available. Information on other financial aid is
available through the Office of Financial Aid.

RESEARCH INTEREST

- Molecular and Genetic
 Alterations in Disease
- Biochemistry of Proteins
- Protein Structure/Function
 Relationships
- Glycobiology
- Genomics
- Clinical Biochemistry
- Analytical Biochemistry

- Biochemical Toxicology
- Biochemical Pharmacology
- Molecular and Cell Biology
- Proteomics
- Cancer Metastasis
- Metabolomics



THE BIOCHEMISTRY FACULTY AND

THEIR RESEARCH INTERESTS:

Banerjee, Dipak, Ph.D., Professor Glycobiologyin angiogenesis and breast cancer metastasis, ER stress and UPR signaling

Cadilla, Carmen L., Ph.D., Professor

Human Genetics and Genomics, Rare Disorders that affect the PR
population, Regulation of gene expression

Chorna, Nataliya, Ph.D., Adjunct Professor Microbiota-gut-brain axis in development and disease, metabolomics

Dharmawardhane, Suranganie, Ph.D., Professor Signal transduction in cancer metastasis. Experimental Therapeutics for breast and pancreatic cancer

Jiménez, Braulio D., Ph.D., Professor Molecular Toxicology. Effects of environmental pollutants on gene expression and asthma

León Vázquez, Ruth G., Ph.D., Assistant Professor Molecular mechansims of bone development and tissue repair

Rodríguez Medina, José R., Ph.D., Professor, Chairman Stress signaling in yeast. Protein interactions of stress receptors

> Rodríguez Orengo, José F., Ph.D., Professor Biochemical and pharmacological processes of antiretroviral and anticancer drugs

Vivas Mejía, Pablo E., Ph.D., Associate Professor Non-coding RNAs, Nanomedicine Mechansims of cancer drug resistance

