

# BASIC BIOMEDICAL SCIENCES

## Leadership

Daniela Salvemini, Ph.D.

*Pharmacology and Physiology Chairperson*

Enrico Di Cera, M.D.

*Biochemistry and Molecular Biology Chairperson*

Willis K. Samson, Ph.D., D.Sc.

*Biomedical Science Graduate Program Director*

Richard DiPaolo, Ph.D.

*Molecular Microbiology and Immunology Chairperson*

## Overview

In addition to contributing strongly to the first two years of the Doctor of Philosophy curriculum, Saint Louis University's pre-clinical, medical-science departments offer post-baccalaureate work leading to the Ph.D.

Three offerings, each affiliated with an individual department at SLU, are available. However, most students admitted for direct Ph.D. study take a common, first-year core in the basic biomedical sciences. Furthermore, studies toward the Ph.D. in a medical-science field may be combined with the M.D. curriculum, and the two degrees pursued concurrently by selected students.

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About 50 faculty members in the programs of biochemistry and molecular biology, molecular microbiology and immunology, and pharmacology and physiology, provide an almost unlimited variety of research project choices for students. In recognition that successful graduates need a broad background in biomedical science and flexible skills, the first year includes laboratory rotations, interdisciplinary lecture courses, small-group discussions and participation in a colloquium series where contemporary developments in the biomedical sciences are presented and discussed. Informed by their experiences in this first year, students then select a Ph.D. mentor in a specific program and continue their Ph.D. training within that particular program.

Admission to the three Ph.D. programs in the biomedical sciences is by application to the core program in basic biomedical science at SLU. This interdisciplinary offering is intended for all students interested in biomedical research and/or teaching careers. Its objectives are to provide students with a strong foundation in all aspects of basic biomedical science and the freedom to explore diverse research opportunities during the first year of training.

At the end of this integrated first-year program, students select a dissertation research topic and mentor, and enter one of three departmental programs in the SLU School of Medicine: biochemistry and molecular biology; molecular microbiology and immunology; pharmacology and physiology.

The subsequent requirements for completion of the Ph.D. degree vary with the individual program and include specialized advanced courses and the performance of original research leading to the completion of the dissertation.

## Programs

- Biochemistry and Molecular Biology, Ph.D. (<https://catalog.slu.edu/colleges-schools/medicine/biomedical-science/doctor-philosophy-biochemistry-molecular-biology/>)

- Biochemistry and Molecular Biology, Ph.D. and Medicine, M.D. Dual Degree (<https://catalog.slu.edu/colleges-schools/medicine/biomedical-science/doctor-philosophy-doctor-medicine-dual-degree/>)
- Molecular Microbiology and Immunology, Ph.D. (<https://catalog.slu.edu/colleges-schools/medicine/biomedical-science/doctor-philosophy-molecular-microbiology-immunology/>)
- Pharmacology and Physiology, Ph.D. (<https://catalog.slu.edu/colleges-schools/medicine/biomedical-science/doctor-philosophy-pharmacology-physiological-science/>)

## Faculty Biochemistry and Molecular Biology

Madison Adolph, Ph.D.

Edwin Antony, Ph.D.

Yuna Ayala, Ph.D.

Ángel Baldán, Ph.D.

Yie-Hwa Chang, Ph.D.

Gucan 'Gabriel' Dai, Ph.D.

Reza Dastvan, Ph.D.

Enrico Di Cera, M.D.

Robert Fleming, M.D. (secondary)

David Ford, Ph.D.

Susana Gonzalo, Ph.D.

Tomasz Heyduk, Ph.D.

Henry Kaplan, M.D. (secondary)

Oleg Kisselev, Ph.D. (secondary)

Sergey Korolev, Ph.D.

Kyle McCommis, Ph.D.

Adriana Montano, Ph.D. (secondary)

Nicola Pozzi, Ph.D.

Jaya Gnana-Prakasam, Ph.D. (secondary)

Alireza Rezaie, Ph.D.

James Shoemaker, M.D., Ph.D.

Dorota Skowyra, Ph.D.

Fran Sverdrup, Ph.D.

Jeffrey Teckman, M.D. (secondary)

Tinghai Xu, Ph.D.

Silviya Zustiak, Ph.D. (secondary)

## Molecular Microbiology and Immunology

Elise Alspach, Ph.D.

Rajeev Aurora, Ph.D.

Richard J. DiPaolo, Ph.D.

Melissa Berrien-Elliott, Ph.D.

Stephen Ferris, Ph.D.

Daniel Hawiger, M.D., Ph.D.

Daniel Hoft, M.D., Ph.D. (secondary)

Jacki Kornbluth, Ph.D. (secondary)

Dr. Jianguo Liu, Ph.D. (secondary)

Lynda Morrison, Ph.D.

Ratna Ray, Ph.D. (secondary)

John Tavis, Ph.D.

Ryan Teague, Ph.D.

Karoly Toth, DVM

Nathan Ungerleider, Ph.D.

Long Ping Victor "Vic" Tse, Ph.D.

## Pharmacology and Physiology

Daniela Salvemini, Ph.D.

Willis K. Samson, Ph.D.  
Michael Ariel, Ph.D.  
Andrew A. Butler, Ph.D.  
John C. Chrivia, Ph.D.  
Vincenza Cifarelli, Ph.D.  
Ian de Vera, Ph.D.  
Susan A. Farr, Ph.D. (secondary)  
Liberty Francois-Moutal, Ph.D.  
Koyal Garg, Ph.D.(secondary)  
Mark M. Knuepfer, Ph.D.  
Grant Kolar, M.D., Ph.D. (secondary)  
Andrew Lechner, Ph.D.  
Juliana Navia Pelaez, Ph.D.  
Heather Macarthur, Ph.D.  
Aubin Moutal, Ph.D.  
Andy Nguyen, Ph.D. (secondary)  
John K. Walker, Ph.D.  
Gina Yosten, Ph.D