

BASIC BIOMEDICAL SCIENCES

Overview

Saint Louis University's biomedical sciences departments offer doctoral training leading to the Ph.D., combining rigorous coursework with mentored research across diverse areas of biomedical investigation.

Three doctoral programs, each housed within a specific biomedical sciences department, are offered. Students complete discipline-specific coursework alongside mentored research training. For qualified students, doctoral study in a biomedical science may be pursued in combination with the M.D., allowing for concurrent completion of both degrees.

More About Basic Biomedical Sciences

Approximately 50 faculty across the departments of biochemistry and molecular biology; molecular microbiology and immunology; and pharmacology and physiology offer a wide range of research opportunities for doctoral students. Recognizing that successful graduates require both depth and breadth in biomedical science, all incoming biomedical Ph.D. students complete a common, interdisciplinary first-year core. This integrated year includes laboratory rotations, foundational lecture courses, small-group discussions, and participation in a biomedical sciences colloquium series highlighting contemporary research.

Following completion of the first-year core, students select a dissertation mentor and research focus and enter one of the three departmental Ph.D. programs within the School of Medicine.

Degree requirements beyond the first year vary by department and include advanced specialized coursework and the completion of original research culminating in the doctoral 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 Leadership

Daniela Salvemini, Ph.D.

Pharmacology and physiology chairperson

Enrico Di Cera, M.D.

Biochemistry and molecular biology chairperson

Richard DiPaolo, Ph.D.

Molecular microbiology and immunology chairperson

Biochemistry and Molecular Biology

Madison Adolph, Ph.D.

Edwin Antony, Ph.D.

Anthony Anzell, Ph.D. (secondary)

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.

Jaya Gnana-Prakasam, Ph.D.

Susana Gonzalo, Ph.D.

Tomasz Heyduk, Ph.D.

Oleg Kisselev, Ph.D. (secondary)

Sergey Korolev, Ph.D.

Kyle McCommis, Ph.D.

Bassem Mohammed, Ph.D.

Adriana Montano, Ph.D. (secondary)

Nicola Pozzi, Ph.D.

Ratna Ray, Ph.D. (secondary)

Alireza Rezaie, Ph.D.

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

Dorota Skowrya, 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.

Melissa Berrien-Elliott, Ph.D.

Richard J. DiPaolo, Ph.D.

Uthayashanker Ezekiel, Ph.D. (secondary)

Sarah George, M.D. (secondary)

Stephen Ferris, Ph.D.

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

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

Jacki Kornbluth, Ph.D. (secondary)

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

Terry L. Moore, M.D. (secondary)

Lynda A. Morrison, Ph.D.

Ranjit Ray, Ph.D. (secondary)

Ratna Ray, Ph.D. (secondary)

Laurie Shornick, Ph.D. (secondary)

John Tavis, Ph.D.

Ryan Teague, Ph.D.

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

Nathan Ungerleider, Ph.D.

Pharmacology and Physiology

Michael Ariel, Ph.D.

Christopher Arnatt, Ph.D.

Andrew A. Butler, Ph.D.

Rafael Cazuza, Ph.D.

Vincenza Cifarelli, Ph.D.

Ian de Vera, Ph.D.

Susan A. Farr, Ph.D.

Liberty Francois-Moutal, Ph.D.

Koyal Garg, Ph.D.

Ajay K. Jain, M.D., DNB

Andrew Lechner, Ph.D.

Heather Macarthur, Ph.D.

Erick Messias, M.D., Ph.D.

Aubin Moutal, Ph.D.

Juliana Navia Pelaez, Ph.D.

Andy Nguyen, Ph.D.

Silviya Petrova Zustiak, Ph.D.

Daniela Salvemini, Ph.D.

Willis K. Samson, Ph.D.

John K. Walker, Ph.D.