MOLECULAR MICROBIOLOGY AND IMMUNOLOGY, PH.D.

Saint Louis University's Department of Molecular Microbiology and Immunology (https://www.slu.edu/medicine/medical-education/graduate-programs/biomedical-sciences/molecular-microbiology-immunology/) (MMI) offers a graduate program in molecular and cellular virology and immunology leading to a Ph.D. degree. The program aims to graduate exceptionally well-trained researchers who are prepared for a career in academic science or biotechnology. Research in the MMI doctoral program is diverse. Areas of research include cell and molecular biology, virology and immunology.

SLU's state-of-the-art research laboratories are located in the Doisy Research Center and basic science departments in the Saint Louis University School of Medicine (https://www.slu.edu/medicine/).

The primary and secondary faculty in the molecular microbiology and immunology department have strong independent research programs funded by the government, research foundations and industry. The faculty serve on national peer-review panels and journal editorial boards and often are invited to present research at other institutions. Their research is published in highly visible scientific journals.

Students receive a nationally competitive monthly stipend (12 months), as well as tuition waivers and health insurance.

Curriculum Overview

Graduate instruction in the MMI program includes:

- Advanced coursework
- Training in scientific writing and oral presentation skills
- Training in teaching skills for students interested in an academic career
- Performance of original biomedical research leading to scholarly publications and the Ph.D. dissertation

Each Ph.D. candidate will have at least one primary mentor within the department with whom they will conduct dissertation research.

Students with a bachelor's degree may enroll in the doctoral program after completing the year-long basic biomedical sciences core program. This one-year program provides a strong foundation for subsequent specialization in microbiology and/or immunology and allows students to rotate through various laboratories in the medical center before choosing a specific field of study.

Careers

Graduates with a degree in molecular microbiology and immunology are prepared for diverse careers in industry, government or academia.

Admission Requirements

A Bachelor of Science, Bachelor of Arts, Master of Science, Master of Arts, or doctoral degree is required, including coursework in the biological sciences, organic chemistry, and mathematics. Most students enter the program following one year in the core program in the basic biomedical sciences, although direct application to the program is possible for applicants with an advanced degree.

Application Requirements

- Application form and fee
- Transcript(s)
- Three letters of recommendation
- Curriculum vitae
- Interview
- Professional goal statement

Requirements for International Students

All Saint Louis University admission policies and requirements for domestic students apply to international students. International students applying to SLU must also meet the following additional requirements:

- Demonstrate English language proficiency (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/)
- Academic records must include an English translation. Unofficial copies may be accepted in some cases for initial admission review, however official copies must be received prior to enrollment. Course-by-course transcript evaluations are accepted.

Students must submit financial documents to be issued an I-20 for their F-1 visa application. Proof of financial support must include:

- A letter of financial support from the person(s) or sponsoring agency funding the student's time at Saint Louis University
- A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of the student's study at the University

Application Deadline

Students should apply by Feb. 1.

Review Process

A committee examines and reviews the applicant and application wholly.

Tuition

Tuition	Cost Per Credit
Graduate Tuition	$1,400

**Students on a graduate assistantship receive a full tuition waiver.

Additional charges may apply. Other resources are listed below:

Net Price Calculator (https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php)

Information on Tuition and Fees (https://catalog.slu.edu/academic-policies/student-financial-services/tuition/)

Miscellaneous Fees (https://catalog.slu.edu/academic-policies/student-financial-services/fees/)

Information on Summer Tuition (https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer/)

Scholarships and Financial Aid

For priority consideration for graduate assistantship, apply by Feb. 1.

For more information, visit the Office of Student Financial Services (https://www.slu.edu/financial-aid/).

Learning Outcomes

1. Graduates will be able to demonstrate sufficient knowledge of biomedical sciences to support independent biomedical research.
2. Graduates will be able to demonstrate the ability to formulate and test scientific hypotheses.

Requirements

Code	Title	Credits
Basic Biomedical Science Courses		
BBS 5010	Basic Biomedical Science I	5
BBS 5020	Special Topics in Basic Biomedical Sciences I	4
BBS 5030	Basic Biomedical Science II	5
BBS 5040	Special Topics in Basic Biomedical Sciences II	4
BBS 5100	Ethics for Research Scientists	0
BBS 5920	Basic Biomedical Sciences Colloquium	2
BBS 5970	Research Topics in Biomedical Sciences (taken over multiple semesters)	4
BCHM 6280	Intro to Genomics and Bioinformatics	2
Molecular Microbiology and Immunology Courses		
MB 6350	Virology	3
MB 6650	Basic Immunobiology	3
MB 6900	Microbiology Journal Club	1
MB 6920	Microbiology Colloquium	1
Dissertation Research		
MB 6990	Dissertation Research (taken over multiple semesters, 12hrs total)	0-6
Total Credits		**46**

Non-Course Requirements

Students are required to write a mock grant proposal for extramural research and/or stipend support that will be internally reviewed. Students must also publish at least one peer-reviewed scholarly article reporting the results of original research.

Continuation Standards

Students must maintain a cumulative GPA of 3.00 in all required graduate/professional courses.