Microbiology

School of Medicine
M616 Medical Sciences Building
573-882-8152
http://medicine.missouri.edu/mmi/

The Department of Molecular Microbiology and Immunology at the University of Missouri School of Medicine has three primary missions: to foster cutting-edge research on biomedically relevant problems in microbiology, immunology, and virology; to educate strong, independent research scientists; and to provide knowledge-based service to the state, nation and international communities.

Molecular Microbiology and Immunology has a long history of providing graduate and postgraduate education in basic principles of microbiology and immunology, as well as research training opportunities in the laboratories of established scientists with diverse research interests. Faculty expansion has provided new curricular offers with flexibility for personalized scholarly pursuits built in. The breadth of research training includes faculty laboratories in the School of Medicine (http://medicine.missouri.edu), the Bond Life Sciences Center (http://bondlsc.missouri.edu) and the College of Veterinary Medicine (http://vetmed.missouri.edu).

The Department of Molecular Microbiology & Immunology (MMI), in partnership with the faculty from the Department of Veterinary Pathobiology (VPB), offers a comprehensive graduate program, Molecular Pathogenesis and Therapeutics Graduate Program (MPT), leading to the Doctor of Philosophy (PhD) degree. Strong scientific interactions among faculty from these and other academic units across campus illustrate the importance of scientific collaborations not only in meeting the research challenges in microbiology and immunology, but also in providing a strong academic environment for the training of the next generation of scientists and educators in these disciplines. The faculty in this training program have achieved international recognition for their scientific contributions and expertise, with their research efforts published in top tier research journals and funded through stringent peer-reviewed federal grants. Many of these investigators serve on scientific review committees for these funding agencies.

This program provides individualized training that is strongly oriented toward basic research in molecular and cellular biology, microbiology, pathogenesis, immunology and host-parasite interactions. MMI offers under the program name of Molecular Pathogenesis and Therapeutics Graduate Program (MPT):

- PhD in Microbiology (Medicine)
- Cooperative Degrees: MD/ PhD in Microbiology (Medicine)

Faculty

Molecular Microbiology and Immunology

**Professor** D. Burke**, D. Duan**, M. McIntosh**, M. L. Misfeldt**, D. J. Pinter**, H. Zaghouani**

**Associate Professor** J. F. Cannon**, M. Johnson**, D. R. Lee**, S. Liu**, S. Sarafianos**

**Assistant Professor** M. R. Baldwin*, M. A. Daniels**, H. Guo **, E. Teixeiro-Pernas**

**Professor Emeritus** K. L. Bennett, H. Braley-Mullen**, R. A. Finkelstein, H. S. Goldberg, K. S. Wise**

Assistant Teaching Professor J. L. Furrer

Veterinary Pathobiology


**Associate Professor** D. Anderson**, M. J. Calcutt**


Jointly appointed to Molecular Microbiology and Immunology

**Professor** J. D. Wall**

**Associate Professor** U. Atasoy**, D. Cornelison**, B. Hahn**

**Assistant Professor** P. Brown**, S. C. McKarns**

- Graduate Faculty Member - membership is required to teach graduate-level courses, chair master’s thesis committees, and serve on doctoral examination and dissertation committees.
- Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

While the University of Missouri does not offer an undergraduate degree specifically in molecular microbiology and immunology, undergraduates are able to take basic courses offered by Molecular Microbiology and Immunology in the areas of microbiology, immunology and virology. MU does offer baccalaureate opportunities in a number of related areas in the other Schools and Colleges that make up the University. To name a few, Biological Sciences, Biochemistry, Pre-Med, Nursing, and Health Professions. The catalog provides a complete list of these degree options (http://catalog.missouri.edu/degreesanddegreeprograms).

Graduate

- MS in Microbiology (http://catalog.missouri.edu/undergraduategraduate/interdisciplinaryacademicprograms/molecularmicrobiologyandimmunology/ms-microbiology)
- PhD in Microbiology (http://catalog.missouri.edu/undergraduategraduate/interdisciplinaryacademicprograms/molecularmicrobiologyandimmunology/phd-microbiology-med)

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microbiology, pathogenesis, and immunology as well as research training opportunities in the laboratories of established scientists with diverse research interests.

**Faculty Research**

The program is equipped to support a wide range of research activities at the cutting edge of our diverse science. Faculty research activities focus on key problems in pathogenic microbiology, immunology, molecular biology, genetics, therapeutics, and virology.

**Research Facilities and Resources**

The research environment at MU with Colleges of Medicine, Veterinary Medicine, Agriculture, Engineering, and Arts and Sciences on one comprehensive campus fosters the development of interdisciplinary scientific interactions that enhance both research and training opportunities for faculty and students alike. The Bond Life Sciences Center represents such an interdisciplinary research enterprise and houses investigators from multiple colleges and departments, including MMI and VPB. Critical to the Molecular Pathogenesis and Therapeutics Graduate Program interests in infectious diseases, pathogenesis, therapeutics, and immunity research, the recent construction of an NIH-funded Laboratory for Infectious Disease Research provides modern BSL3/ABSL3 containment research space and animal holding facilities for the investigation of highly infectious organisms and human select agents. This resource, and the Molecular Pathogenesis and Therapeutics Graduate Program’s partnership with the Midwest Regional Center for Excellence in Biodefense and Emerging Infectious Disease Research, centered at Washington University in St. Louis, position MU in the national network of infectious disease research and training efforts. Please visit the MMI Web site (http://medicine.missouri.edu/mmi) for additional information on MMI’s access to state of the art facilities.

**Career Opportunities**

Graduates completing this training are prepared to pursue challenging and rewarding professional careers that involve research and teaching at supervisory levels in both the academic and private sectors.

**Research & Teaching Assistantships**

Students in the doctoral program are awarded research assistantships. Research assistants work with faculty members to obtain practical experience in carrying out research proposals through the collection of research data and writing research reports. All students in the graduate program are required to participate as teaching assistants for two semesters during their studies.

If you are interested in a the Molecular Pathogenesis Graduate Program, please see the "Degrees, Majors (Degree Programs), Emphasis Areas, Minors and Certificate (http://catalog.missouri.edu/degreesanddegreeprograms)" page for the Ph.D. in Microbiology.