

Molecular Biology, Microbiology & Biochemistry Program (MBMB)

The MBMB program at Southern Illinois University is an interdisciplinary program providing graduate level training leading to either the Doctor of Philosophy (Ph.D.) or Master of Science (M.S.) degrees.

The faculty consists of members of the Department of Medical Microbiology, Immunology and Cell Biology (MMICB in Springfield), the Simmons Cancer Institute at SIU (SCI in Springfield), the Department of Biochemistry and Molecular Biology (Carbondale) and the Department of Microbiology (Carbondale).

The program offers challenging advanced education and research training in diverse research fields to prepare successful graduates for the next step in their career. Our graduates have gone on to have careers as faculty members and researchers at colleges and universities, as researchers in the pharmaceutical and biotechnology arenas, and some have chosen to continue their education in medical and dental schools and public health programs throughout the nation.

Modern laboratories and state of the art instrumentation enables students to perform innovative research into clinically significant fields such as: mechanisms promoting tumor growth and metastasis, viral and bacterial pathogenesis, microbiome and human physiology, gene therapy approaches, and the role of the immune system in infections, cancer and reproduction.

Typically, the MBMB program in Springfield hosts a diverse group of 30+ graduate students including 4 students in the non-thesis tract in Public Health Laboratory Science (see last page).

Students in the MBMB program have a variety of opportunities to augment their education and training to be competitive at the next level.

- * Students hone their presentation skills during weekly student seminar series during graduate student oral and poster presentations at an Annual SIU Trainee Research symposium, and at the bi-annual Simmons Cancer Institute Research Symposium. Presentation awards accompany many of these endeavors.
- * The program hosts two scientific seminar series. The MBMB seminar series provides weekly seminars covering cutting edge advances in microbiology, immunology, biochemistry and cell biology. The Simmons Cancer Institute research seminar series provides monthly seminars by nationally renowned experts in cancer biology and therapy. Students can have lunch with the speakers, which provides a unique opportunity to network with some of the best scientists in the nation.
- * Seminar series are also available in the clinical departments on the SOM campus and students are eligible for departmental and program-based travel awards to attend national scientific meetings.

Collectively, these opportunities provide richness and depth to the training that MBMB students can experience at SIUSOM Springfield campus as they become the next generation of scientists, physicians and scholars.

ONLINE APPLICATION

<http://admissions.siu.edu/applynow.html>

CONTACT INFORMATION

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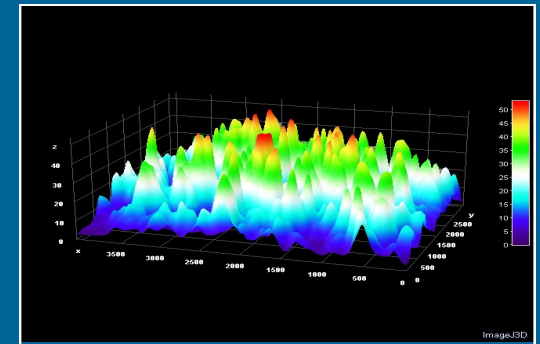
Public Health Laboratory Sciences

Within the MBMB program, there is a non-thesis degree option directed by **Dr. Andrew Wilber**. This option has an area of specialization in Public Health Laboratory Sciences (PHLS) and is a collaborative effort between the Illinois Department of Public Health and Southern Illinois University School of Medicine. Training consists of graduate level courses in the biological and analytical sciences augmented with extensive applied experience in one or more of the state public health laboratories. This program is geared toward individuals who have an interest and talent for rigorous analytical work, and a desire to promote the use of laboratory-derived information to improve health.

This program is dedicated to training the next generation of Public Health Laboratory employees and leaders, and designed to produce scientists with applied training in clinical, environmental and molecular testing protocols for infectious disease as well as food, milk, water and blood testing. Graduates are able to contribute to the provision of critical information needed to inform policy and program evaluation, and to continuing population science assessment, policy development and assurance for Public Health programs.

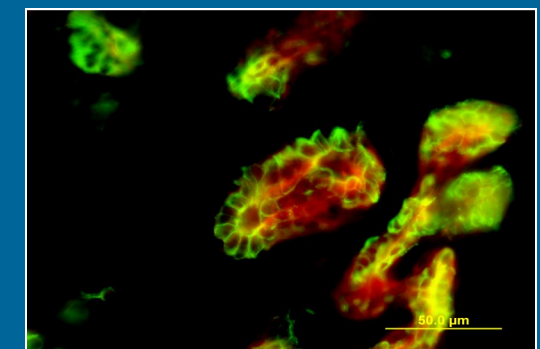
For more information, contact **Andrew Wilber**, Ph.D. at e-mail: awilber@siumed.edu

 *SIU School of Medicine*



Are You Interested in
Biomedical Research
or Public Health?

Join the MBMB Program
at Springfield!



www.siu.edu/mmi

Contact: **Sophia Ran, Ph.D.**
Graduate Adviser
(217) 545-7026 sran@siumed.edu

Meet Our Faculty

Dr. Andrea Braundmeier-Fleming, Assistant Professor



Research Focus:
Immune system's role in human reproduction

abraundmeier88@siumed.edu

Dr. Kathleen Campbell, Research Professor



Research Focus:
Ototoxicity and Otoprotective agents

kcampbell@siumed.edu

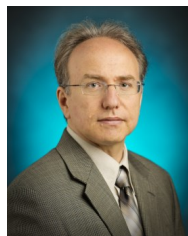
Dr. Deliang Cao, Associate Professor



Research Focus:
Cancer prevention and therapeutics

dcao@siumed.edu

Dr. Edward Gershburg, Associate Professor



Research Focus:
Virology and viral oncology

egershburg@siumed.edu

Dr. William Halford, Associate Professor



Research Focus:
Virology and viral immunology

whalford@siumed.edu

Dr. Daotai Nie, Professor



Research Focus:
Molecular oncology and treatment resistance

dnie@siumed.edu

Dr. Michael Olson, Assistant Professor



Research Focus:
Bacterial pathogenesis and bacterial physiology

molson39@siumed.edu

Dr. Sophia Ran, Professor



Research Focus:
Tumor microenvironment and metastasis

sran@siumed.edu

Dr. Donald Torry, Professor and Chair



Research Focus:
Cell biology and molecular immunology of human reproduction; tumor immunology

dtorry@siumed.edu

Dr. Andrew Wilber, Assistant Professor



Research Focus:
Hematopoietic stem cell-targeted gene therapy for hemoglobin disorders; tumor immunology

awilber@siumed.edu

Adjunct faculty from other departments who serve in the program:

Andrzej Bartke, PhD, Internal Medicine

- Research Interest: Effects of growth hormones and caloric restriction on aging

Randolph Elble, PhD, Pharmacology

- Research Interest: Cancer biology and tumor suppression

Karen Hales, PhD, Obstetrics and Gynecology

- Research Interest: Ovarian cancer

Joseph Kurian, PhD, Obstetrics and Gynecology

- Study how environmental conditions impair fertility and promote metabolic dysfunction; e.g., obesity and diabetes

Krishna Rao, MD, PhD, Internal Medicine

- Research Interest: Breast cancer, melanoma, skin cancer and head and neck cancer

Shelley Tischkau, PhD, Pharmacology

- Research Interest: Molecular interactions of the circadian clock in disease states

Rong Yuan, MD, PhD, Internal Medicine

- Research Interest: Identifying genetic mechanisms that regulate aging, aging related cancer and metabolic diseases

Do you know...

- All graduate students receive a stipend and most receive a tuition waiver.
- Applications are accepted throughout the year.
- Students can be admitted to the doctoral program with a bachelor's or master's degree.
- Affordable housing is within walking distance of the medical campus.
- For answers to many common questions, including more detailed faculty focus and course descriptions visit: www.mmbm.siuc.edu.
- Start your application process on-line at www.gradschool.siuc.edu/applygrad.htm.
- Preliminary contact with individual faculty is encouraged.

Alumni

This program has graduated 175 students. Some recent notable alumni are:

- Siying Peng, PhD, Postdoctoral Fellow at Harvard Medical School, Massachusetts
- Juan A. Arroyo, PhD, Assistant Professor, Brigham Young University, UT
- Jigisha Patel, PhD, Postdoctoral Fellow at Washington University School of Medicine, Missouri
- Beverly Barham, PhD, Associate Professor with tenure at Illinois State University
- Jamie Potter, PhD, Assistant Professor at Houghton College, New York
- Michael Flister, PhD, Postdoctoral Fellow at the Medical College of Wisconsin
- Miao Chang, PhD, Postdoctoral Fellow at the NYU Langone Medical Center, New York
- Marguerite Nelson, MS, Center for Disease Control, Atlanta GA
- Debolina Ghosh, PhD, Postdoctoral Fellow at Yale School of Medicine, CT