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A university – and therefore its medical school – has as its fundamental purpose the advancement of knowledge for the benefit of society. An active research environment contributes to the advancement, transmission and utilization of knowledge and thus promotes the professional and academic development of the faculty and students at SIU School of Medicine. Such an environment provides an opportunity for students to obtain a well-rounded medical education as opposed to merely receiving technical training. It also aids students in gaining life-long habits of inquiry and self-education.

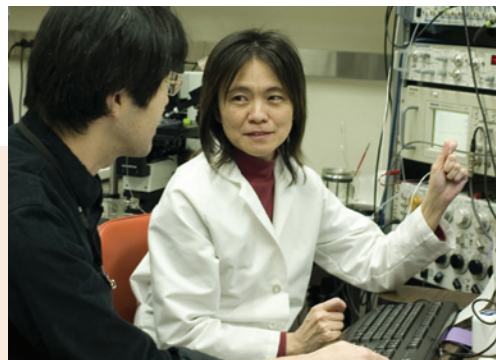
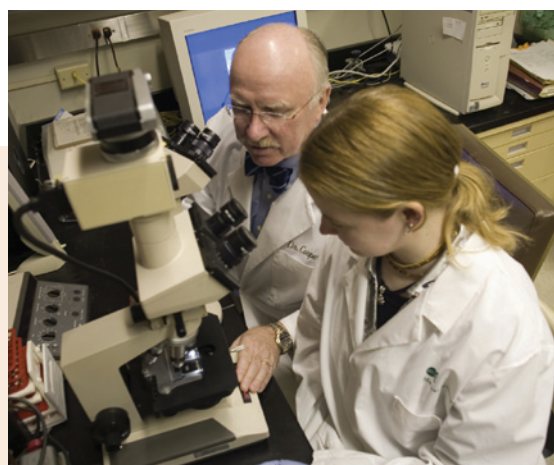
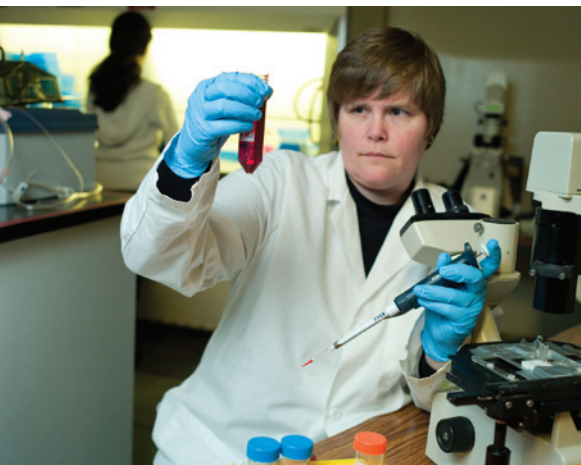
SIU medical students have many opportunities to participate in research activities in clinical and basic science departments, medical humanities and medical education. Students are encouraged to participate at all levels of their training. An annual Trainee Research Symposium gives medical and graduate students and residents opportunities to formally present their research results.

Research activity in both Springfield and Carbondale covers a wide range of the clinical and basic sciences. Collaborative research between faculty members from different disciplines is encouraged and supported with School of Medicine funds.

Some of the current areas of research in the School of Medicine include

- Diabetes and metabolic syndrome
- Cancer
- Cell signaling
- Geriatrics
- Hearing, tinnitus and age-related hearing loss
- Heart disease, vascular disease and stroke
- Infectious disease
- Ischemia-reperfusion injury
- Medical education
- Microsurgery and wound repair
- Molecular biology
- Neuroscience and neurology, including epilepsy, Alzheimer's disease and Parkinson disease
- Developmental disorders
- Women's health, including cancer, reproduction and infertility

The faculty's commitment to research is further manifested by graduate programs leading to master's and doctoral degrees in pharmacology, physiology, molecular biology, microbiology, cell biology and biochemistry.



Basic science laboratories are maintained on both the Carbondale and Springfield campuses. In Carbondale, the primary laboratories are located in Lindegren Hall, Life Science II and the Neckers Building. The Life Science III building in Carbondale provides offices, labs and research support space for medical school faculty in anatomy and physiology and also houses the botany, microbiology and zoology departments in the College of Science. In Springfield, laboratories are located in the Medical Instructional Facility, the Springfield Combined Laboratory Facility and its addition, and the Laboratory Research Facility.

Research activities are supported by many School of Medicine resources, shared facilities and committees. Research facilities include the Research Imaging Facility, which offers both scanning and transmission electron microscopes and confocal microscopy. A Flow Cytometer Laboratory houses three cytometers, one with cell sorting capability. The animal facilities at the School contain 19,991 gross square feet of modern, well-equipped space that includes a surgery suite, rodent barrier area, cagewash facility, diagnostic laboratory, necropsy room, quarantine area and infectious disease containment unit.

The level of externally funded grants currently received is \$31.7 million (FY10) with more than 220 research, training, institutional and other projects being funded. Approximately 45 percent of the School's research projects are supported by the federal government, including the National Institutes of Health. Others are funded through health associations, private foundations, state funds and pharmaceutical companies.

The School emphasizes collaborative research between clinicians and basic scientists to enhance the School's competitive position for large-scale federal research grants. Some projects are supported by the state-funded Excellence in Academic Medicine program. The School also provides support for small-scale individual research projects through the Research Seed Grant program. These funds are directed mainly toward investigators with no previous external support and for novel pilot projects for both established and new investigators.

Research continues to be a strong force at the School of Medicine, providing faculty and students with opportunities for professional and academic development while generating new knowledge for the benefit of Illinois residents and society as a whole.

Student Research Projects

Medical students have several opportunities to pursue research during the four-year medical curriculum. During the first year, students can arrange to work with faculty in Carbondale on on-going research projects. Between the first and second years of medical school, students can pursue various interests including research through the Mentored Professional Enrichment Experience (MPEE), a program supported by the School of Medicine. MPEE support can include a stipend to help defray expenses.

During the second and subsequent years, students can continue to pursue research projects with clinical or basic science faculty in Springfield. Examples are available for student participation are found on the Web at www.siumed.edu/edaff/mpee/.

A Trainee Research Symposium is sponsored every spring on the Springfield and Carbondale campuses. Medical students, residents and graduate students are invited to submit an abstract and prepare oral or poster presentations. This symposium is an excellent opportunity for students to gain experience in making formal presentations of their research findings. The best papers and presentations receive cash awards.

The SIU Chapter of the Alpha Omega Alpha Honor Medical Society (AOA) encourages the submission of research projects for funding by the national AOA. Each medical school can submit one project for potential funding. An SIU medical student has been a national winner of this prestigious award during almost all of the past eight years.

Medical students also are encouraged to apply for other research related fellowships, including the Howard Hughes Medical Institute-National Institutes of Health Research Scholars Program. This program supports students for a year of research work at the National Institutes of Health. Support includes a stipend for living expenses in Bethesda, Maryland. Students selected for this program are provided a year's leave of absence, generally between the second and third years of medical school.