

Medical Scientist Training Program

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The Iowa Medical Scientist Training Program (MSTP) prepares trainees for careers in academic medicine, emphasizing basic and clinical research.

Combined Programs

MD/PhD

The combined Doctor of Medicine/Doctor of Philosophy program normally requires seven to eight years of continuous study. It provides an effective and efficient means to integrate graduate and clinical training, combining the scientific approach with clinical medicine.

Students register for MSTP:8515 Medical Scientist Training Program Topics every semester. The course focuses on a variety of topics relevant to training as a physician-scientist.

During the first three semesters of the program, trainees take coursework in the basic sciences fundamental to the study of medicine and complete experiences that introduce mechanisms of health and disease, and principles of clinical practice; see Doctor of Medicine in the catalog. This early training provides broad exposure to the language and organizing concepts that form the foundation for a career as a physician-scientist. Trainees also begin the research component of the graduate phase of the program during this time, through summer laboratory MSTP:8511 Medical Scientist Training Program Research rotations, enrollment in MSTP:8513 Sitting in the Middle: Physician Scientist 101, research presentations by MSTP faculty and students, and a student-sponsored seminar series. Trainees participate in Conversations in Research, in which MSTP faculty members discuss their research and career interests, and they attend MSTP Grand Rounds, a forum for patient-based discussions that emphasizes how science and medicine intersect.

During the fourth and fifth semesters, trainees enroll in core clinical clerkships, in which they gain broad exposure to the spectrum of human disease and experience direct patient care before they enter the graduate phase of training.

After completing core clerkships and United States Medical Licensing Examination Step 1 and 2 examinations, trainees select a PhD thesis mentor and begin research. This happens in the spring of their third year. They also enroll in a graduate department or interdisciplinary graduate program to begin their scientific training in the fall of their fourth year.

The focus of the graduate years of study is engagement in academic and research experiences that promote the trainees' development into independent investigators. Clinical contact is maintained during this phase of training through participation in seminar programs, MSTP Grand Rounds, and MSTP:8512 Medical Scientist Training Program Clinical

Connections, a course that provides the opportunity for mentored clinical experiences.

Upon completing the PhD dissertation, trainees return to the Carver College of Medicine's MD curriculum to complete the advanced clinical clerkship requirements for the MD/PhD combined program. During this phase, trainees bring sophistication in the scientific approach to problem-solving that they apply to human disease. They renew and develop clinical skills acquired in their early training and reinforce their understanding of the scientific basis of disease through continued participation in MSTP Grand Rounds. Upon completion of the clinical curriculum, trainees are awarded the MD and PhD degrees.

Most graduates of the program elect to enter residency programs in clinical medicine and embark on careers as medical school faculty members in clinical disciplines with opportunities for basic and applied research. Other graduates accept academic appointments in basic science departments and spend a major part of their professional activity in biomedical research and teaching.