Mayo Graduate School

Mayo Graduate School offers training leading to the Ph.D., M.D.-Ph.D., and M.S. degrees. This education takes place in the collaborative academic environment of Mayo Clinic.

Mission

Mayo Graduate School's overriding mission is to train future leaders in biomedical research and education. In order to pursue this goal, we will:

- Enroll outstanding students;
- Utilize the unique education, research and clinical practice resources of Mayo Clinic to foster the individual academic strengths of each student;
- Engage students in interactive learning and research experiences that enhance their critical thinking, problem solving and biomedical knowledge.

A fundamental goal of Mayo Graduate School is to promote an academic environment that supports trainee and faculty development and facilitates biomedical innovation.

History

- The first Mayo graduate degree was awarded in 1917 through a joint relationship with the University of Minnesota. This joint relationship continued until 1982, at which time Mayo began seeking the authority to offer separate graduate degrees.
- The first Mayo Ph.D.'s and Master's in Biomedical Sciences degree were awarded in 1984. As a result of reorganization within Mayo Graduate School of Medicine January 1989, Mayo Graduate School became an independent school within Mayo Clinic.
- Since 1917, nearly 3,700 degrees have been conferred, including over 650 Ph.D. degrees and over 3,000 master's degrees.

2013-2014 Academic Year Update

L. James (Jim) Maher III, Ph.D., has served as Dean of Mayo Graduate School since September 2011. Currently, 190 students are pursuing Ph.D. and M.D.-Ph.D. degrees in Mayo Graduate School representing break through scientific research in Biochemistry and Molecular Biology, Biomedical Engineering and Physiology, Clinical and Translational Science, Immunology, Molecular Pharmacology and Experimental Therapeutics, Neurobiology of Disease/Neuroscience, and Virology and Gene Therapy. Philanthropic support through endowed predoctoral fellowships has been critical to the success of these students, supporting approximately 15% percent of the Mayo Graduate School budget.

Under Dr. Maher's leadership, Mayo Graduate School has launched Career Development Internships (CDI's), Mayo Graduate School-funded opportunities for upper-level predoctoral students to spend 100 hours in one of several career environments. Traditional training of biomedical scientists has presumed that all graduates will become leaders of grant-funded laboratories. However, in the 21st century there are many career opportunities for biomedical research scientists. Meeting this expectation is Mayo Graduate School's goal.

CDI's allow Mayo graduate students to explore possible interests, network with professionals, contribute to the mission of the CDI partner organization, and gain informed appreciation for career options. CDI activities are flexible, allowing approximately 100 hours of paid study leave from Mayo Graduate School during one quarter. For off-site CDI opportunities requiring travel, the CDI program covers travel and housing costs. Internships are individualized. The Mayo Graduate School intern and sponsoring CDI partner work together to design the ideal experience.

During the 2013-2014 academic year, Mayo Graduate School awarded 23 Ph.D. degrees and 35 master's degrees in the Biomedical Sciences; in conjunction with Mayo Medical School, 4 M.D.-Ph.D. combined degrees were awarded. Our Ph.D. and M.D.-Ph.D. graduates engage in further training at leading institutions throughout the country and around the globe:

- Vicki, a Biochemistry and Molecular Biology Ph.D. and Mayo Medical School M.D. graduate, was the first to extend genomic engineering to zebrafish, culminating in a first author paper in *Nature.* She is currently a resident in anesthesiology at the Hospital of the University of Pennsylvania.
- John, a Biomedical Engineering Ph.D. graduate, is pursuing a medical physics residency at Mayo Clinic with a focus on improving accuracy in proton beam cancer therapy.
- Allie, a Clinical and Translational Science Ph.D. graduate, is continuing her training as postdoctoral fellow in cancer prevention at the National Cancer Institute, National Institutes of Health.
- Rie, a Biochemistry and Molecular Biology Ph.D. and Mayo Medical School M.D. graduate was selected for a dermatology specialty training and advanced research (STAR) program at the University of California, Los Angeles.
- Tae Hyun, a Molecular Pharmacology and Experimental Therapeutics graduate, is currently a postdoctoral scholar in the department of genetics and genome sciences at Case Western Reserve University in Cleveland, Ohio.
- Holly, a Neurobiology of Disease Ph.D. graduate, is continuing her training as a postdoctoral research associate in pharmaceutical sciences at St. Jude Children's Research Hospital in Memphis, TN.

Future Directions and Purpose

Mayo Graduate School recognizes the changing landscape of biomedical research and the growing need for highly-skilled scientists who are well-prepared to fully exploit career opportunities in research, education and health.

Mayo Graduate School will train and prepare future scientific leaders by:

- Fostering curiosity-driven science that yields breakthrough discoveries by empowering students to follow their passions and focus on their interests
- Leveraging Mayo Clinic's world-class clinical practice to maximize an understanding of the role of research in modern medicine
- Involving students in clinical investigation and employing relevant model systems in their research
- Engaging students in internships that link Mayo Graduate School, Mayo Clinic, industry, and other fields promoting science, education and health
- Teaching a relevant curriculum that complements intramural research and extramural internships so students can confidently adapt to a diverse set of careers opportunities.

The innovative curriculum at Mayo Graduate School will prepare students to succeed in multiple career paths (including leadership of grant-funded academic laboratories and leadership in careers promoting science, education, and health), all of which ultimately support biomedical discoveries that translate into improved patient care. Students will leave Mayo Graduate School with established global networks, and will be prepared to be leaders in biomedical science in whatever realm they choose.