



## Description of the Elmezzi Graduate School of Molecular Medicine

The Jeanne & Thomas Elmezzi Graduate School of Molecular Medicine is a unique program, accredited by the State of New York, which grants a PhD in Molecular Medicine to physicians who have recently received their MD or equivalent degree. It addresses a mounting national concern - the disappearance of physician-scientists. The Graduate School has been termed "a model that should be copied in order to effectively train doctors to become physician-scientists and fill society's desperately needed shortage of these highly skilled investigators."

The Elmezzi Graduate School is an integral part of the North Shore-LIJ Health System. It operates in collaboration with The Feinstein Institute for Medical Research, which provides all facilities and faculty for the Elmezzi Graduate School. The graduate school was originally established as the Picower Graduate School, but ended when the Picower Institute closed. It was reconstituted, using the same concept, as part of the Health System and the Feinstein Institute in 2001, and was renamed The Elmezzi Graduate School of Molecular Medicine in 2008. The Feinstein investigators and Elmezzi faculty are world-renowned scientists in their respective fields, collaborating with scientists throughout the United States and globally. Faculty investigators and clinical scientists conduct research in autoimmunity, rheumatology, oncology, immunology and inflammation, genetics, psychiatry, neurology, surgery, and many other specialties. Through their connection to the hospital system, the Elmezzi Graduate School and The Feinstein Institute bridge the gap between biomedical research and patient care, accessing hundreds of thousands of patients in the health system's hospitals and outpatient facilities for studies.

### **Admission to the School**

The Elmezzi Graduate School is specifically intended for a select group of medical school graduates who are highly qualified, have already demonstrated interest in clinical and/or basic research, and are motivated to pursue a research career that embraces both the basic and clinical biomedical sciences. All applicants are expected to have mastered advanced courses in biochemistry, chemistry and human biology, and be well versed in supporting disciplines such as mathematics and physics before entering the program.

Admission is based on an application, with supporting transcripts and letters of recommendation, previous research experience, plus an interview. Acceptance is determined by the admissions committee. Applications are accepted on a rolling basis, with no deadline for submission. Decisions are made quarterly.

Accepted candidates receive an annual stipend appropriate for their post medical school training (PGY) level. There are no tuition charges. The cost of supporting the students, and providing funds for them to travel to one scientific conference each year to present their work, is approximately \$100,000/student. Funding for the program is provided through philanthropy, with support from the Feinstein Institute.

Since inception, the program has graduated 24 students, 8 under the Picower and 16 since re-established as the Elmezzi Graduate School. Eleven others are currently conducting their studies.

### **The Course of Study**

The program is highly selective, accepting only a limited number of exceptional candidates each year. Students come from all parts of the world, truly a selection of the brightest and best. Entry requirements for the Elmezzi program include a recent MD or equivalent degree (within the past seven years), and a commitment to spend 3 to 4 years in the graduate program as necessary to complete the thesis, with a minimum of 3 years residence. For Fellows in Medicine or Pediatric subspecialties already training within our health system, a required year of research for the fellowship can be included as part of the PhD program.

After admission, each student is given an advisory committee to assist them in planning their program and selecting an advisor and topic for their thesis studies. Students are required to submit a written proposal of their planned thesis project in the format of a fellowship grant application and defend this proposal orally to their advisory committee. Once accepted, the student may begin work on their thesis. The program has a minimal amount of required course work, building on the basic science courses taken during medical school. Courses are generally 1 semester long, and are primarily conducted in a discussion/journal club format based primarily on current original papers. The core courses are: Advanced Immunology; Biostatistics, Bioinformatics and Study Design; Ethics and Responsible Conduct of Research; Molecular Biology of the Cell; Molecular Genetics and Genomics; and Neuroscience. Students also participate in journal clubs, meetings of the lab group where they are conducting their research, and special lectures and programs at the Feinstein Institute. Students are required to present their studies annually at a work-in-progress seminar and submit an abstract for presentation at the annual research retreat of the Feinstein Institute.

Upon completion of their course of study, each student must present and defend their thesis research in a public lecture. The student must arrange a thesis committee prior to the planned defense date. The committee includes the student's advisor, graduate advisory committee and an outside examiner. The outside examiner is approved by the chair of the advisory committee. In order to receive their degree of doctor of philosophy, each student must have at least one manuscript accepted for publication in a peer-reviewed journal, complete the academic requirements of the school, present and defend their thesis by oral examination, and have a final bound copy of their complete dissertation accepted by their advisory committee.

Additional information about the program is available on the web site:

[www.elmezzigraduateschool.org](http://www.elmezzigraduateschool.org).