



Catalog and Student Handbook

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The Elmezzi Graduate School of Molecular Medicine

Overview

Welcome to the Elmezzi Graduate School of Molecular Medicine. The Elmezzi Graduate School is an individually tailored three-year program designed to train exceptional physicians with a recent MD or equivalent degree in research methodologies, culminating in a PhD in Molecular Medicine. The goal of the program is to create a cadre of highly trained physician/scientists who will establish careers in academic medicine and who will conduct “state of the art” basic and translational research directly related to human disease.

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 became part of the Health System and the Feinstein Institute in 2001 and was renamed The Elmezzi Graduate School of Molecular Medicine in 2008. Biomedical research in the Health System has been vital within its two major academic medical centers – North Shore University Hospital and Long Island Jewish Medical Center – since their establishment in the early 1950’s. With continued growth, The Feinstein Institute for Medical Research (the Institute) was created by the Health System in 1999 to facilitate disease-oriented basic and clinical research. The Institute seeks to improve people’s lives by advancing treatments and cures for illnesses and diseases. Its scientists are world-renowned in their respective fields, collaborating with scientists throughout the United States and globally. Currently, more than 125 investigators and clinical scientists are enrolled in the Institute, conducting research in autoimmunity, rheumatology, oncology, immunology and inflammation, genetics, psychiatry, neurology, surgery, obstetrics/gynecology and many other specialties. Through its 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 15 hospitals, four long-term care facilities, three trauma centers, six home health agencies and dozens of outpatient facilities. The scientists of the Institute and the students of the graduate school collaborate with clinicians (physicians, dentists, medical students, fellows and residents) throughout the system to identify critical unanswered questions relating to diseases treated in the hospitals. These questions are developed into research to shed light on basic biological processes underlying disease.

We stand at the threshold of an extraordinary time in medicine. The Elmezzi Graduate School of Molecular Medicine and The Feinstein Institute for Medical Research will be a growing force in research innovation, education and progress.

Mission of the Elmezzi Graduate School of Molecular Medicine

Provide superior academic training of physicians to discover and understand the causes of human diseases and to rapidly and effectively translate this information into diagnostic and therapeutic solutions

Vision

To train the next generation of leaders in the field of translational research

Objectives

1. To train medical school graduates in the skills and intellectual approaches necessary to become independent scientific investigators in medically relevant areas of research
2. To integrate this training into The Feinstein Institute for Medical Institute's highly interactive, multidisciplinary research environment
3. To grant the degree of Doctor of Philosophy in Molecular Medicine

Location

The Elmezzi Graduate School of Molecular Medicine is located on the North Shore of Long Island, New York, in a pleasant suburban environment, but is within one hour of Manhattan by car or train, making the cultural resources of New York City readily accessible. There is adequate affordable housing for students in the area, with good access by both car and by bus. The Graduate School provides assistance with relocation, including locating housing, arranging bank accounts, etc. It does not provide housing on campus.

Administrative Officials

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Detailed Description

The Elmezzi Graduate School of Molecular Medicine

Curriculum

The Elmezzi Graduate School of Molecular Medicine is a diploma program awarding a Ph.D. degree to individuals who hold an earned M.D. or equivalent degree, accredited by the State of New York.

The requirements of the Ph.D. degree are heavily weighted toward conduct and completion of a substantial scholarly body of research. 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 Pre-Thesis Committee. Students present their completed dissertation work at a public lecture and defend their completed written thesis before a formal Thesis Committee which includes at least one outside examiner.

The thesis is coupled with a focused core curriculum that builds on the basic science courses taken during medical school. Most courses are one semester in length,. Many are conducted in a discussion/journal club format. There are no credits assigned to courses. Students are expected to participate in all courses. The core curriculum consists of the following courses:

- Advanced Immunology
- Biostatistics, Bioinformatics and Study Design
- Current Topics in Translational Research
- Ethics and Responsible Conduct of Research
- Molecular Biology of the Cell
- Molecular Genetics and Genomics

Additional academic programs, which enrich the curriculum but are not courses per se, are listed below.

- Research Work-In-Progress (a weekly seminar by Institute/Graduate School investigators)
- Seminars in Investigative Medicine (a weekly seminar by external invited speakers)
- Match Distinguished Visiting Scientist Program (an annual lecture by preeminent scientists)
- Annual Scientific Retreat of The Feinstein Institute for Medical Research
- Workshop on Grantsmanship

Students also participate in journal clubs and meetings of the lab group where they are conducting their research, and attend and submit abstracts for presentation at national and international scientific conferences.

Academic Calendar

The school functions on a year-round calendar, with students admitted on a rolling basis. Students whose training is linked to clinical subspecialty training in Medicine or Pediatrics normal begin their studies in July. Courses are held in the Fall/Winter or the Spring, with laboratory research continuing throughout the summer.

Course Descriptions and Goals

Advanced Immunology

Course Leader: Dr. Barbara Sherry

This one-semester course, held every 3 years, meets weekly for 1.5 hrs. It covers the current state of knowledge of immunology, with a focus on recent research advances. A previous course in immunology is a necessary prerequisite. The course is taught using “Immunobiology: 7th Edition The immune system in health and disease”, (Janeway’s Immunobiology), Murphy K, Travers P, Walport M, eds., Garland Science Publishing, New York, NY USA, 2007 to provide background information, plus readings of seminal papers from the recent biomedical literature which are presented by the graduate students. Topics covered include innate immunity, T-cell and B-cell development, antigen processing and presentation, immune regulation and tolerance, vaccine immunology and tumor immunology.

Upon completion of the course, the student should have an understanding of the current state of knowledge in immunology, and be able to read and evaluate current publications in the field.

Biostatistics, Bioinformatics and Study Design

Course Leader: Dr. Martin Lesser

This is a one-semester course, held every third year, which meets for 2 hrs per week. A previous statistics course is desirable but not required. The course covers basic concepts in statistics, exploratory data analysis, estimation and confidence intervals and correlation and regression, management of large data sets, tools for data mining, cluster analysis and new analytic approaches, and basics of study design (sample size, power, case-control and cohort studies, design of laboratory studies).

Upon completion of the course, students should be able to design studies appropriately, analyze data, work productively with a biostatistician on complex analyses, and assess the appropriate use of statistics in published papers.

Current Topics in Translational Research

Course Leader: Various faculty

This is a course that is held every third year. It consists of assigned preparatory reading related to four selected diseases, introductory discussions of the selected disorders led by faculty of The Graduate School of Molecular Medicine, lectures on the disorders by invited outside experts in the diseases and a discussion group meeting of the students with the invited lecturer. Typical diseases that are discussed are chronic lymphocytic leukemia, sepsis, metastatic cancer and Parkinson’s disease.

After completion of the course, the student should have a better understanding of the multiple components of any disease process that impact on the clinical presentation, including function/non-function of organ systems, tissues and cells and subcellular organelles.

Ethics and Responsible Conduct of Research

Course Leader: Dr. Bettie Steinberg

This is a one-semester course, held every third year, which meets for 1.5 hrs weekly. It is required of all graduate students. There are no prerequisites. The purpose of the course is to provide young clinician-scientists with clear guidelines for ethical decisions that might and do occur in research. The course is taught by discussion of specific cases and problems and their disposition, using “Scientific Integrity, 3rd Edition” by F.L. Macrina, ASM Press, Washington D.C., 2005, as a guide. It covers the historical framework for a need for ethical standards in research, changing concepts in research ethics with time, current regulatory requirements for animal or human research, guidelines for appropriate authorship decisions, peer review, collaborative research, ownership of data and intellectual property, scientific record keeping, conflicts of interest, scientific misconduct, and ethical dilemmas in basic and clinical research.

After completion, the student should be knowledgeable of regulatory requirements, know current accepted practices, be sensitive to and aware of possible conflicts and ethical dilemmas as they occur, and have a set of guidelines for management of such dilemmas

Molecular Biology of the Cell

Course Leader: Dr. Christine Metz and Dr. Kaie Ojamaa

This one-semester course, held every three years, meets weekly for 1.5 hours. The course is intended to provide advanced graduate-level coverage of the molecular basis of cell function that can serve as the basis for understanding cellular disorders in various disease processes. . The course uses “Molecular Biology of the Cell, 5th Edition” B. Alberts, ed. Garland Publishing, Incorporated (2007) , as its text. Prerequisites include undergraduate organic chemistry and a medical school course in biochemistry. Topics covered include macromolecular structure and synthesis (DNA, RNA, proteins and lipids), regulation of gene expression, basics of signal transduction, the cell cycle, programmed cell death, regulation of cell shape and motility, cell-cell communication, membrane biochemistry and intracellular trafficking.

Upon completion, students should have a base of current advanced understanding of cell and molecular biology, be able to apply that knowledge as appropriate to their research interests, and be able to critically read papers in the current literature.

Molecular Genetics and Genomics

Course Leader: Dr. Peter Gregersen

This one-semester course is held every three years in journal club/discussion format. Each session is 1.5 hrs. A previous course in medical school genetics is required. Topics covered include chromosome and gene structure, concepts and methodologies in genetic analysis, discussion of simple vs. complex traits, use of animal models for genetic analysis, and new paradigms in genetics.

After completion, students should have a strong framework for understanding the contribution of genetics to functional variations between individuals and groups in susceptibility to and expression of various disorders.

Other Academic Programs

Research Work-In-Progress Seminars

Leaders: Dr. Bettie Steinberg and Dr. Marc Symons

This seminar meets weekly on an ongoing basis every semester. Each session is one hour. Each session consists of two presentations of current research, given by faculty in the Graduate School and Investigators within The Feinstein Institute for Medical Research, followed by a question and answer period. Students are required to attend, and to present their research at least once each year in this format.

Students in this course should have a complete base of information about the various types of research studies being conducted in the school and the Institute, a better foundation of information about the topics presented, and be able to effectively organize and present their own studies to a scientific audience.

Seminars in Investigative Medicine

Organizer: Dr. Bettie Steinberg

This seminar, sponsored jointly by The Feinstein Institute and the General Clinical Research Center, meets weekly on an ongoing basis every semester. Attendance of the students is required. Each session is one hour. The purpose of the program is to provide current state-of-the-art knowledge of biomedical research. Each session consists of a research seminar by an invited scientist who is a recognized expert in his/her respective field, followed by a question and answer period. Topics vary, with guest speakers invited by faculty in the Graduate School and Investigators in the Feinstein Institute. It has attracted more than 150 renowned leaders in translational research.

Students attending the seminars should gain solid general knowledge of current advances in these fields, and a thorough understanding in depth of those areas that impact directly or indirectly on their thesis topic.

Match Distinguished Visiting Scientist Day

Each year, an outstanding scientist is invited to attend the Institute for a day. This visit includes a lecture and meetings with small groups of scientists and the graduate students.

Visiting scientists have been:

1997 - William Paul	2003 - James Watson
1998 - Darwin Prockop	2004 - Peter Doherty
1999 - Luc Montagnier	2005 - Kary Mullis
2000 - Bruce Stillman	2006 - Paul Nurse
2001 - Gunter Blobel	2007 - Stanley Prusiner
2002 - Paul Greengard	2008 - Michael Brown

Annual Scientific Retreat of The Feinstein Institute for Medical Research

The Institute holds a 2 day retreat, off the premises, each year. Scientific abstracts are submitted, and presented as either talks or posters. All graduate students are required to submit an abstract each year.

Workshop on Grantsmanship

Organizer: Dr. Bettie Steinberg

This workshop is conducted annually in two sessions, held on successive weeks. Each session is 2.5 hrs in length. Students will be required to attend the workshop each year. Topics covered include Identifying Appropriate Funding Sources, Structure of a grant, Writing the Grant, and Pitfalls and Problems. Attendees submit a Specific Aims page for evaluation in the second session.

Participation should enable students to identify potential ideas that are suitable for grant development, learn the basics of grant writing and begin to learn the art of “grantsmanship”.

Facilities

The Elmezzi Graduate School is housed within The Feinstein Institute for Medical Research, a free-standing 150,000 ft. sq. building on the grounds of North Shore University Hospital. The Feinstein Institute also includes an additional 20,000 sq. ft. of research laboratory space located at Long Island Jewish (LIJ) Medical Center, 15,000 sq. ft. of research space at Zucker Hillside Hospital, a neuropsychiatric hospital whose grounds are contiguous to LIJ. LIJ is located 2.5 miles from North Shore University Hospital.

The facilities of the Institute include modern molecular biology laboratories, clinical research space, office space for faculty and graduate students, two IACUC-accredited animal facilities (one at North Shore and one at LIJ) and administrative offices.

An important resource of the Institute, which enhances training in molecular medicine, is an NIH-sponsored General Clinical Research Center (GCRC) with facilities for both out-patient and in-patient translational and clinical studies. This is one of only three NIH-designated GCRCs in the U.S. that is part of a research institute rather than a medical school, and the only one that is part of a clinical health system. The Herman and Susan Merinoff Center for Patient Oriented Research, which includes the GCRC, provides support services such as medicinal chemistry, pharmacology and pharmacokinetics, physiology, assistance with regulatory oversight and biostatistics to the Institute and the Graduate School.

The medical libraries at North Shore University Hospital and LIJ are available to Elmezzi students. The combined holdings of the two libraries consist of 3,210 journals and 20,069 books. The Institute also maintains a reading room with current and previous issues of many journals relevant to molecular medicine. In addition, faculty have electronic access to the on-line journal holdings of either Albert Einstein College of Medicine or New York University Medical School, which thereby makes those journals available to the students. Libraries get copies of older publications within 24 hours at no charge, through a library consortium.

The Institute also provides several other key Core Facilities, which provide investigators at the Feinstein Institute for Medical Research with centralized, state-of-the-art technologies to support their research efforts.

Core Facilities

<p style="text-align: center;">Biorepository Core</p> <p>The Biorepository Core collects, processes, stores and distributes large numbers of high quality research specimens quickly and efficiently using novel robotic technology and custom database software.</p>	<p style="text-align: center;">System Imaging Core</p> <p>The System Imaging Core provides a facility for functional brain and body imaging using Positron emission tomography (PET) and fMRI. This core has its own cyclotron for generation of novel ligands for PET studies.</p>
<p style="text-align: center;">Cell and Molecular Biology Cores</p> <p>The Cell and Molecular Biology Cores apply the techniques of molecular biology and biochemistry to research problems. These cores provide microarray facilities, real-time PCR, flow cytometry and cell sorting, and fluorescence and confocal laser scanning microscopy.</p>	<p style="text-align: center;">Tissue Donation Program</p> <p>The unique Tissue Donation Program, with its own global IRB approval, facilitates the collection of high-quality deidentified clinical samples and provides access to both retrospective and prospective clinical information, facilitating translational research.</p>

Graduate School Faculty

The faculty of the Elmezzi Graduate School are drawn from investigators at The Feinstein Institute for Medical Research. Thirty-seven investigators, all heads of research programs, currently comprise the faculty of the Graduate School. All faculty also hold appointments in one or more of the clinical departments within the North Shore – Long Island Jewish Health System.

Students conduct their research under the direction of faculty within any of the ten scientific Centers of Excellence of the Feinstein Institute: Autoimmune & Musculoskeletal Diseases, Alzheimer’s Disease & Memory Disorders, Experimental Immunology, Genomics & Human Genetics, Immunology & Inflammation, Neurosciences, Oncology & Cell Biology, and Translational Psychiatry, plus the Center for Patient Oriented Research. Research interests of the faculty within these Centers include: mechanisms of pathogenesis in autoimmune diseases, T & B cell function in leukemia and lymphoma, cytokine biology; inflammatory cascades in sepsis, toxic shock and pulmonary disease; human papillomaviruses and tumorigenesis; signal transduction and tumor biology; tumor metastasis; breast, prostate and brain cancer molecular pathobiology; thyroid hormones and cardiac function; genetics and molecular regulation of autoimmune diseases; Parkinson’s Disease and other movement disorders; psychopharmacology; Schizophrenia; Alzheimer’s disease; and neuropsychiatric disorders.

Graduate School for Molecular Medicine Faculty

Name	Title	Degree	Awarding Institution	Year	Center of Excellence
Al-Abed, Yousef	Professor	Ph.D.	Univ. of Tübingen, Germany	1993	Patient Oriented Research
Batliwalla, Franak	Assistant Professor	Ph.D.	University of Bombay	1993	Genomics & Human Genetics
Bonagura, Vincent	Professor	M.D.	Columbia University	1975	Immunology & Inflammation
Chiorazzi, Nicholas	Professor	M.D.	Georgetown University	1970	Immunology & Inflammation
Cornblatt, Barbara	Professor	Ph.D.	New York University	1978	Translational Psychiatry
Davies, Peter	Professor	Ph.D.	University of Leeds, UK	1974	Alzheimer's Disease
Diamond, Betty	Professor	M.D.	Harvard Medical School	1973	Autoimmune & Musculoskeletal Disease
Eidelberg, David	Professor	M.D.	Harvard Medical School	1981	Neuroscience
Gregersen, Peter	Professor	M.D.	Columbia University	1976	Genomics & Human Genetics
Grande, Daniel	Associate Professor	Ph.D.	Long Island University	1986	Oncology & Cell Biology
Gulko, Percio	Professor	M.D.	Univ. Fed Rio Grande	1987	Genomics & Human Genetics
Kane, John	Professor	M.D.	New York University	1971	Translational Psychiatry
Klein, Irwin	Professor	M.D.	New York University	1973	Oncology & Cell Biology
Lee, Annette	Associate Professor	Ph.D.	Rockefeller University	1984	Genomics & Human Genetics
Lesser, Martin	Professor	Ph.D.	Rutgers University	1978	Patient Oriented Research
Lipton, Jeffrey	Professor	Ph.D. M.D.	Syracuse University St. Louis University	1972 1975	Oncology & Cell Biology/ Patient Oriented Research
Liu, Johnson	Associate Professor	M.D.	University of Michigan	1986	Oncology & Cell Biology
Malhotra, Anil	Associate Professor	M.D.	Bowman Gray School	1989	Translational Psychiatry
Metz, Christine	Associate Professor	Ph.D.	New York University	1992	Immunology & Inflammation
Miller, Edmund J.	Associate Professor	PhD	Kings College, London	1989	Immunology & Inflammation
Mongini, Patricia A.	Associate Professor	Ph.D.	Stanford University	1976	Immunology & Inflammation
Ojamaa, Kaie	Associate Professor	Ph.D.	Penn State University	1985	Oncology & Cell Biology
Powell, Saul	Associate Professor	Ph.D.	Medical College of Penn.	1983	Oncology & Cell Biology
Robinson, Delbert	Associate Professor	Ph.D.	University of Tennessee	1979	Translational Psychiatry
Rothstein, Thomas	Professor	M.D., Ph.D.	Duke University School of Medicine	1974	Oncology & Cell Biology
Ruggieri, Maria	Assist. Professor	Ph.D.	The Weizmann Institute	1987	Oncology & Cell Biology
Sherry, Barbara	Professor	Ph.D.	Brandeis University	1986	Immunology & Inflammation
Shi, Y. Eric	Associate Professor	M.D. Ph.D.	Beijing Med. Univ. Dartmouth Med. School	1983 1989	Oncology & Cell Biology
Singhal, Pravin C.	Professor	M.D.	S.P. Medical College, Bikaner	1968	Immunology & Inflammation
Sircar, Ratna	Associate	Ph.D.	All-India Institute	1981	Neuroscience

	Professor				
Steinberg, Bettie	Professor	Ph.D.	SUNY Stony Brook	1976	Oncology & Cell Biology
Symons, Marc	Professor	Ph.D.	Vrije Universiteit Brussel	1980	Oncology & Cell Biology
Tracey, Kevin	Professor	M.D.	Boston University	1983	Immunology & Inflammation
Trachtman, Howard	Professor	M.D.	University of Pennsylvania	1978	Immunology & Inflammation
Wang, Haichao	Assoc. Professor	Ph.D.	Louisiana State Univ	1992	Immunology & Inflammation
Wang, Ping	Professor	M.D.	Changwei Medical College	1982	Immunology & Inflammation

Admissions Requirements

The Elmezzi Graduate School of Molecular Medicine 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. The Elmezzi Graduate School admissions process considers both conventional graduate school admissions criteria, such as academic record, as well as the special abilities required to complete this ambitious program. Acceptance will be determined by the admissions committee based on the application, letters of recommendation, previous research experience and an interview.

Applications are accepted on a rolling admission basis, with no deadlines for submission and quarterly decision re acceptance. Applicants to the Elmezzi Graduate School of Molecular Medicine should have an earned doctorate in medicine from an accredited American or International medical school within the past 8 years, and desire advanced scientific research training. 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.

The Elmezzi Graduate School strives to locate and attract individuals from underrepresented minorities and encourages members of underrepresented minorities to apply to its doctoral program. The faculty and graduate program administrators provide mentoring and guidance to ensure the successful progress of all students.

In accordance with its commitment to support equality of opportunity for all, the Elmezzi Graduate School of Molecular Medicine prohibits discrimination on the basis of age, color, religion, sex, race, national or ethnic origin, disability, marital status or sexual preference.

Tuition/Financial Support/Costs

All students in the Elmezzi Graduate School are employees of The Feinstein Institute, holding the title of Elmezzi Scholar, and receive a salary commensurate with their PGY level of medical training. There are no tuition charges or other fees. Text books are provided to the students at no cost or made available to them in the Institute Library.

Application Process

Insert Link

- A. Completion of the two-page application form
- B. A current curriculum vitae that thoroughly describes the applicants academic history, clinical experience, research qualifications and a list of any publications, immediate and long-term career goals.
- C. Official transcripts of all medical school and post-medical school studies.
- D. Confidential letters of recommendation from at least three (3) sponsors, one of which must be from a mentor from a research or clinical setting. A letter from the Dean of the applicant's medical school is also encouraged.
- E. Submission of the required \$25.00 application fee.
- F. Interview with the Admissions Committee.

Assessment of Academic Competence and Progress

Graduate Advisory Committee

A Graduate Advisory Committee is designated for each student upon entrance to the program. The committee is composed of at least three (3) members of the faculty, chosen in accordance with the research interests of the student. The committee will assist the student with selection of a laboratory and research advisor, and will monitor the progress of the student throughout his/her academic program. The first meeting of the Graduate Committee is scheduled by the Associate Dean. Students must meet formally with their Graduate Committee at least annually to present progress reports and an update on research activities. The committee Chairperson submits a written report to the Dean, which becomes part of the student's graduate record.

Research Advisor

A key aspect of the Graduate Program is the establishment of a productive association between the student and a research advisor. The research advisor not only guides the student in conducting the body of research for the thesis, but also helps to ensure that the student is also broadly educated in the field of biomedical research. Each student, upon determining an area in which to initiate thesis work, will enlist the formal agreement of an appropriate faculty member to serve as research advisor. Faculty members are not assigned to act as research advisors, nor are students placed into faculty laboratories. Typically, there is a single advisor for a student, but depending on the interdisciplinary nature of the proposed thesis project, co-advisors may be recommended.

Academic Requirements

All students must have a minimum of three years of full-time enrollment in residence at the Elmezzi Graduate School of Molecular Medicine. Any exception to the full-time requirement must be approved by the Dean of the School. Due to the unique nature of the

graduate classes, all academic course work must be completed at the Graduate School. If unusual circumstances require a student to request a temporary leave of absence for personal reasons or for requirements by a joint program with a Medical Fellowship training program, such leave will be granted by the Dean of the School. The annual stipend and benefits do not apply if the student is not in residence.

Each student will prepare a research proposal in the form of a fellowship grant application at the end of their first year of study. This proposal will be submitted to the Graduate Advisory Committee for evaluation, followed by oral presentation, questioning and approval, which will constitute the Qualifying Examination. To enhance their careers as well as to provide support for the graduate school, eligible students are encouraged to submit proposals to outside funding agencies that provide training grants, such as the National Institutes of Health (NIH) Ruth Kirschstein Individual Research Training Grant (<http://grants1.nih.gov/training/nrsa.htm#inst>). Receipt of an award is not a requirement of the program, but students receiving such an award will have additional recognition of excellence.

Students are expected to satisfactorily participate fully in courses and seminars. Each student will present his/her studies annually in the Work-In-Progress Seminars, and will submit an abstract for presentation at the annual Research Retreat of the Institute.

Students expecting to complete their thesis and graduate during a given academic year must initiate a Thesis Committee approximately 8 months prior to the planned date for the formal thesis defense. The Thesis Committee includes the student's advisor, the Graduate Advisory Committee and an outside examiner. The selection of the outside examiner, to be made by the student and the student's advisor, must be approved by the Chair of the Advisory Committee. The Thesis Committee will set a date for the presentation and defense of the thesis. This thesis can be, in part, a compilation of published manuscripts with the student either an author or co-author. Each student must have at least one manuscript accepted for publication in a peer-reviewed journal before graduation.

The degree of Doctor of Philosophy is granted to the successful Ph.D. candidate following completion of the academic requirements, presentation of the thesis research in a public lecture, satisfactory thesis defense by formal oral examination before the Thesis Committee including submission and acceptance of a (final bound copy) of the complete dissertation. It is the policy of the Graduate School of Molecular Medicine to withhold diplomas until all requirements for the degree of Doctor of Philosophy have been satisfactorily fulfilled and accepted by all members of the candidate's respective Thesis Committee and the Dean.

Academic Evaluations

Course Coordinators and instructors of the individual academic courses, together with the Dean, are responsible for program administration and assessment of academic competence based on the student's participation and performance. Students will be assessed at the end of each course. Academic assessments will be recorded on a pass/fail basis, along with instructor's comments, which will become part of the student's permanent graduate record. Copies will be made available to the student and the respective Graduate Advisory Committee. The basis of assessment depends on the individual instructor and may be based on examinations and/or on the student's participation and presentation of course topics. Students are evaluated on an individual basis. There is no conventional grading to evaluate

the academic progress of a student. Rather, each student is evaluated in conjunction with the meetings of the Graduate Advisory Committee. In preparing its annual report, the Graduate Advisory Committee will consider the written reports of faculty members who have conducted courses or seminars, supervised in research, or otherwise taken part in guidance and training of each student. These confidential reports are part of the student's permanent academic record, and are available for inspection by the student upon written request. The Graduate Advisory Committee also evaluates and approves the research proposal and oral defense that constitutes the Qualifying Examination.

In the unusual event that termination of a student's appointment must be considered for academic reasons, a special committee will be formed to review the student's performance for possible remedial action. This committee will include the Dean, a representative from the Graduate Advisory Committee, and one other faculty member from The Feinstein Institute for Medical Research. The student may choose the third member of the committee if they so wish. The student's performance will be reviewed and discussed and a written report issued to the student summarizing the committee's recommendations. Typically, a probationary period will be designated, during which the student will be expected to rectify the problems. At the end of this period, the committee will reconvene to assess the student's performance and reevaluate his or her status.

Redress of Grievances and Handling of Complaints

In the event that students have any complaints or grievances related to their academic program or the functioning of the Elmezzi Graduate School, the following steps should be taken to address the problem.

1. Discuss the problem with a member of the faculty or with the student's mentor. Resolve the problem in this way if possible.
2. If the problem cannot be resolved, or the student is uncomfortable discussing the problem with the faculty member, the problem should be brought to the attention of the Dean's office. This can be done verbally or in writing. A meeting will then be scheduled between the Dean and any individuals involved, including the student if they so wish, to investigate the problem and determine an appropriate solution.
3. If the problem remains, the student should bring it to the President of the Graduate School, who will meet with the Dean and any other appropriate individuals to resolve the situation.
4. If none of the steps defined above resolve the problem, students have access to the Human Resources department of the North Shore – LIJ Health System, which has a formal grievance process (see below).

In addition to the special policies and procedures that relate to the Ph.D. program, each student is also an employee of The Feinstein Institute for Medical Research, North Shore – LIJ Health System. Correspondingly, each student is subject to the Policies and Procedures of the North Shore – LIJ Health System and the Feinstein Institute for Medical Research, which stress excellence at all levels and adherence to the highest ethical principles in the conduct of research and the communication of results. For issues such as health care benefits, holidays and personal days, sick leave, short-term disability, and infractions of

personnel rules such as smoking regulations, use of alcohol on premises, harassment in any form, disciplinary action and grievance procedures, students should refer to the Policies and Procedures Guide of the North Shore – LIJ Health System.

Security and Crime Reporting

The Elmezzi Graduate School does not have a separate campus. The offices of the Elmezzi Graduate School and the offices of The Feinstein Institute for Medical Research are located on the grounds of North Shore University Hospital, with laboratories on the grounds of North Shore University Hospital and Long Island Jewish Medical Center. All aspects of security, including public order, safety and protection against crimes including assaults are provided by the Security Officers of the hospitals. As all graduate students are employees of the Feinstein Institute, they are governed by the Human Resources policies of the North Shore – LIJ Health System regarding bias crimes including harassment and discrimination, sexual harassment, and protection from sexual assault or violence in the workplace.

In the event that the student is a victim or, or a witness to verbal abuse, physical violence, sexual assault or any other crime or security incident, the student should report the incident immediately to the Security Officer in the Boaz Marks Building of the Institute, their supervisor, administration of the Institute, or to the main Security Office in the hospital. For information on crime statistics within the Institute facilities, students can contact the Director of the Institute, Dr. Kevin J. Tracey, at 516-562- 2813.