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Memorial Sloan Kettering Cancer Center

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Tri-Institutional Training Program in Laboratory Animal Medicine & Science
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ABOUT US

Our mission, vision & core values

Leadership

History

Equality, diversity & inclusion

Annual report

Give to MSK

- An understanding of animal resource facility operations and management
- Knowledge pertaining to laboratory animal care and use regulations
- Skills required to assess, manage, and oversee in vivo projects employing hazardous agents
- Technical and clinical skills used to handle and collect body fluids from laboratory animal species
- An understanding of clinical and anatomic pathologic tests and techniques and the interpretative methods used in laboratory animal medicine
- Skills needed to implement and interpret a rodent sentinel health monitoring program
- Knowledge of the components of and implementation of a comprehensive biosecurity program
- An understanding of cost accounting and recharge in an animal resource program
- Expertise in laboratory animal disease diagnosis, treatment, and control
- The skills necessary to anesthetize various laboratory animal species and manage complex experimental surgical procedures including pre- and postoperative care
- An understanding of the techniques used to produce hybridomas and generate monoclonal antibodies using in vitro techniques
- An understanding of human resource management and oversight
- Knowledge with regard to the types and operation of specialized equipment used in an animal resource program and scientific laboratories utilizing animal models
- An understanding of the techniques utilized to produce gene-targeted mouse models and breeding programs used in conjunction with their generation and maintenance

CMAT training consists of ten rotations, each totaling two to nineteen weeks. A member of the program faculty or senior animal resource program staff provides supervision, along with a recommended reading list, rotation goals, and when appropriate, a list of skills to be acquired during the rotation. Fellows are expected to devote at least 25 hours per week to each rotation. Rotation supervisors conduct an evaluation at the end of the rotation.

CMAT rotations are as follows: Small Animal Biology, Biosecurity, Medicine, and Surgery at Memorial Sloan Kettering and Weill Cornell; Laboratory Animal Biology, Medicine, & Surgery and Gene-Targeted Mouse Development and Breeding at Rockefeller University; Clinical and Anatomic Pathology; Aquatics Biology, Biosecurity, System Maintenance, and Research Techniques; Animal Facility Management and Operations; Large Animal Biology, Medicine, and Surgery at Memorial Sloan Kettering and Weill Cornell; Small Animal Imaging; Generation and Production of Monoclonal Antibodies; Rodent Colony Management, and Externships performed at other academic or industrial biomedical research centers.

Research training provides fellows with an opportunity to apply the scientific method to a basic or clinical research project and to develop an appreciation for the process of scientific discovery. Fellows are expected to work under the mentorship of a program faculty member or a research faculty member at one of the three participating institutions. Research training will expose fellows to the following topics: grantsmanship, the generation of hypotheses, experimental design, the selection of animal models, the analysis of data, and writing a manuscript suitable for publication.

Fellows may work as collaborators or engage in an independent project, but in either case they will be responsible for mastering a research technique and applying it to the collection of data. The research training experience will fulfill the first-author requirement needed to qualify for certification by the American College of Laboratory Animal Medicine .

Didactic Training

The didactic training offered through the program consists of the following:

Formal courses offered by the Weill Cornell Graduate School of Medical Sciences. Fellows are required to take Fundamental Immunology (four quarters), Molecular Genetics (two quarters), Grant Writing & Scientific Journalism (two quarters) and a web based ‘Writing for Science’ course. Fellows may choose to enroll in additional electives. Fellows may request exemption from required courses based on prior graduate-course enrollment. If exempted, the fellow must select an elective in place of the required course.

Clinical and Pathology Conference (CPC). During these weekly meetings, program faculty and fellows present and review clinical medicine, clinical pathology, and anatomic pathology of current and historical cases.

Laboratory Animal Medicine Seminar Series. During these biweekly seminars, program faculty, guest lecturers, and postdoctoral fellows present on topics related to biology, diseases, pathology, and experimental use of laboratory animal species.

Journal Club. During this biweekly meeting, a program faculty member or postdoctoral fellow reviews a topical research manuscript related to comparative medicine, laboratory animal medicine, or biomedical research.

Regulatory and Compliance Training Conference. During this weekly meeting, fellows are exposed to the various rules and regulations governing the care and use of animals in research. Fellows also participate in the activities of each of the Institutional Animal Care and Use Committees (IACUCs) at the three participating institutions. IACUC activity includes reviewing animal care and use proposals; reviewing and developing IACUC policies and procedures; attending monthly IACUC meetings; and participating in semiannual inspections of animal facilities and laboratories. Fellows are also introduced to the network of independent voluntary organizations involved in the field of laboratory

animal science and medicine and research animal use by reviewing their standards, policies, and informational brochures and newsletters. Additionally, fellows will participate in announced and unannounced site visits undertaken by regulatory and accrediting authorities.

Biosecurity Case Studies. Every six weeks, faculty and fellows meet to discuss current or historic biosecurity scenarios including atypical vendor importation, quarantine, infective agent outbreaks, and health-monitoring-program design and implementation. Case studies emphasize risk assessment, evaluation/interpretation of diagnostic test results, and solution development.

Histology Rounds. The purpose of these 1-hour weekly meetings is to give fellows basic training in the interpretation of histologic samples. In conjunction with board-certified pathologists, fellows review histologic lesions of laboratory animal species, and gain in-depth understanding of mechanisms of disease.

Gross Pathology Rounds. Pathology faculty and fellows meet during these monthly, 1-hour sessions that are intended to train fellows to recognize common gross lesions of laboratory animal species, formulate morphologic and etiologic diagnoses and review their differential diagnoses.

Postdoctoral fellows are also encouraged to take advantage of the active seminar programs at each of the participating institutions. In addition, the nearby Animal Medical Center offers a variety of seminars that may be of interest. Trainees will interact extensively with trainees completing the Fellowship in Comparative and Genomic Pathology.

Learn more about the Tri-Institutional Training Program in Laboratory Animal Medicine & Science.

Training Facilities
The Tri-Institutional Training Program provides trainees access to world-class biomedical research facilities.

Training Description
Learn about the training program at the Tri-Institutional Training Program in Laboratory Animal Medicine & Science. It consists of two main training components: clinical, management, and administrative training and research training.

Faculty
The faculty of the Tri-Institutional Training Program is composed of laboratory animal specialists, comparative pathologists, regulatory specialists, and veterinary scientists.

Program Duration & Completion
The duration of the Tri-Institutional Training Program is three years.

Postdoctoral Fellows
Current and prior trainees.

Admission Requirements & Process
Learn more about applying to the Tri-Institutional Training Program.

Contact Us: Tri-Institutional Training Program
Contact the Tri-Institutional Training Program in Laboratory Animal Medicine & Science at MSK.

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