Veterinary Pathology and Translational Research

A key component of the National Cancer Institute's (NCI) Center for Cancer Research (CCR) mission to reduce the burden of cancer includes the ability to translate research findings from animal models to the clinical setting.

The Comparative Molecular Pathology Training Program is designed to train translational research investigators by incorporating education in veterinary medicine and pathology with training in human biomedical research. The Program encompasses three distinct yet interrelated approaches toward training that are designed to answer the specific needs of individuals at different stages of training and laboratory experience. Two components of the program, NCI Graduate Scholars in Molecular Pathology (GSMP), Combined Residency and Ph.D. Training Support for DVMs, and NCI Molecular Pathology Graduate Fellowship (MPGF), Ph.D. Training Support for DVM Pathologists after Residency, are tailored for those with doctoral degrees in veterinary medicine and are intended to offer educational opportunity leading to a Ph.D. and eligibility for board certification as a medical specialist in veterinary pathology.

The programs utilize graduate partnerships to offer combined training at both a university and the NCI Center for Cancer Research. Following initial university training and graduate course work for up to two years at the university in either veterinary pathology or veterinary clinical pathology, students will transfer for an additional three years, training in pathology and research within the intramural laboratories of the NCI CCR. Opportunities for university faculty members to engage in collaborative research interactions with CCR scientists will be fostered whenever scientifically rational.

Multidisciplinary training in:
- Veterinary pathology, including rodent pathology
- Human cancer pathology
- Molecular biology
- Medical research

Funding support for trainees includes:
- Stipend
- Support for university tuition and fees
- Health insurance

NCI will determine other necessary expenditures as appropriate for a program.

Educational benefits for trainees include:
- Access to leading university clinical and graduate programs in comparative and experimental pathology
- National Cancer Institute molecular pathology training curriculum
- Research faculty and facilities of the National Cancer Institute, one of the largest combined basic and clinical cancer research facilities.

Graduate Partnership Program Universities:
- North Carolina State University – Program in Comparative Biomedical Sciences
  http://www.cvm.ncsu.edu/cbs/
- Michigan State University – Program in Pathobiology and Diagnostic Investigation
  http://cvm.msu.edu/vetpath/index.htm
- University of Illinois – Program in Comparative Pathology
  http://www.cvm.uiuc.edu/vp/
- University of Maryland – Program in Veterinary Medical Sciences
  http://www.gradschool.umd.edu/catalog/programs/VMSC.html
The third component of the NCI Comparative Molecular Pathology Research Training Program, NCI Molecular Pathology and Cancer Research Training Award Program (MP-CRTA), is a non-degree training program open to all outstanding candidates with interest or experience in comparative pathology.

Pathology Training Course Curriculum

Partnership university departments and graduate committees define required didactic graduate courses and initial diagnostic pathology training experiences. The NCI phase of the program begins with a comprehensive interdisciplinary six-month training curriculum focused on comparative and molecular pathology. This connecting centerpiece of the program draws upon the strengths of the many board-certified veterinary pathologists at the NIH, the anatomic pathology training program for physicians in the NCI Laboratory of Pathology, and the research technologies core laboratories program within the CCR.

Research opportunities in this program are diverse and encompass a variety of disciplines that impact cancer prevention and disease involving all organ systems. Disciplines include:

- cancer prevention
- carcinogenesis
- cell and developmental biology
- genetics, genomics and proteomics
- immunology
- metastasis
- molecular pathology
- molecular targets
- pathogenesis and animal models
- vascular biology, and
- virology

NIH Faculty Participating
http://ccr.nci.nih.gov/resources/training/mentors.asp

Application

Prospective Graduate Scholars in Molecular Pathology and Molecular Pathology Graduate Fellows are encouraged to apply for acceptance to the NIH Graduate Partnerships Program at http://gpp.nih.gov, and separately and individually to each University Partner Graduate School by which the student wishes to be considered for graduate admission and pathology training. To be admitted to the program, students must be accepted by both the NIH and a partnership university graduate school. Programs are designed to begin on July 1 and provide up to 5 years support. Candidates must be U.S. citizens or U.S. permanent residents and have less than five years postdoctoral experience.

Partnership Directors

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