

LABORATORY OF PATHOLOGY

National Cancer Institute (NCI)

The Laboratory of Pathology, based in the NCI, provides clinical service in anatomic pathology for the National Institutes of Health (NIH) and its Clinical Center, the world's largest hospital devoted to human subject research. Excelling in both clinical diagnosis and translational research, the Laboratory provides a stimulating intellectual environment for the resident or fellow interested in an academic career. The Laboratory emphasizes excellence in diagnosis and the use of modern technological tools to enhance accuracy and decipher disease mechanisms. Specimens are derived from patients registered on more than 1500 clinical research protocols at the NIH. Trainees work with internationally renowned physician investigators and basic scientists devoted to clinical research.



ACGME ACCREDITED TRAINING IN PATHOLOGY AT THE NATIONAL INSTITUTES OF HEALTH

Training the next generation of clinician-scientists

NATIONAL INSTITUTES OF HEALTH | National Cancer Institute

The Laboratory hosts an ACGME-accredited residency program in anatomic pathology, and fellowships in hematopathology and cytopathology. Graduates of the residency program, founded in 1955, have gone on to become leaders in the field. Residents in training gain expertise in the full breadth of anatomic pathology, molecular diagnostics, and cytogenetics through rotations at the NIH Clinical Center and at our affiliated teaching institutions. The program also fosters trainee participation in ground-breaking research taking place on the NIH campus.

For additional information, please visit the following websites:

<http://home.ccr.cancer.gov/LOP/Clinical/default.asp>

<http://www.cc.nih.gov/training/gme/programs.html>

<http://ccr.cancer.gov/labs/lab.asp?labid=106>



DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Cancer Institute, Center for Cancer Research

**CENTER FOR CANCER RESEARCH
LABORATORY OF PATHOLOGY
NATIONAL CANCER INSTITUTE
NATIONAL INSTITUTES OF HEALTH**

Introduction

The Laboratory of Pathology (LP) conducts an ACGME accredited AP3 program for residents in Anatomic Pathology at the National Institutes of Health (NIH). A fourth year of training is fully funded, and may be used for additional clinical training or research. The clinical material of the NIH affords a rich and diversified exposure to anatomic pathology. Residents gain diagnostic expertise on material derived from patients enrolled in protocols conducted by the 27 Institutes and Centers that constitute the NIH. Clinical protocols reflect a broad spectrum of disease, including oncology, infectious disease, digestive, hepatic and kidney diseases, autoimmune and immunodeficiency disorders, neurological disorders, among others. In addition, the LP receives more than 3,000 extramural consultation cases each year.

The philosophy of the training program is to provide broad and in-depth exposure to the subject matter of anatomic pathology, with an emphasis on clinical correlation, relationships to disease mechanisms, and exposure to investigational opportunities. Much of the strength of this residency training program comes from the internationally recognized reputation of the Anatomic Pathology staff. The staff conducts an integrated residency-teaching program in which didactic conferences amplify and extend the residents exposure to daily diagnostic case material to explore all aspects of Anatomic Pathology. Because our clinical programs are integrated with the research activities of the NIH, our residents are exposed on a regular basis to information regarding the pathogenesis and pathophysiology of diseases that they are learning to diagnose. This insight into the basic disease mechanisms of pathology enhances the residents' educational experience.

Structure of Clinical Training

Clinical training in the Anatomic Pathology Program includes three years of rotations and subspecialty training. The program provides for diversified experience in postmortem, surgical pathology, cytopathology, hematopathology, molecular pathology, and cytogenetics. Separate one-month subspecialty rotations in forensic pathology, surgical pathology pathology, and pediatric pathology offered at affiliated institutions broaden the training offered at the NIH. Integrated training in dermatopathology, neuromuscular pathology, pediatric pathology, flow cytometry, immunopathology, electron microscopy, informatics, management, quality improvement, and advanced diagnostic techniques are provided during all three years. Residents in the third year gain more authority in decision-making, while still operating under the supervision of attending staff. There are also further opportunities for clinical electives all three years.

Structure of Research Training

Residents are exposed to, and encouraged to participate in, clinical and laboratory research throughout the program in allocated elective time. The residency training program offers research-training opportunities virtually unmatched internationally. Each resident selects a research mentor and develops a research program with any of the world-renowned scientists at the National Cancer Institute (NCI). The type of project undertaken by residents has ranged from basic molecular genetics to translational clinical research. The residents are encouraged to choose exploratory projects, which can lead to new discoveries and open new fields of investigation. For those residents with a particular interest in, and commitment to a career in experimental pathology research, a competitive option will be available in which three additional years of research time and support are provided by the Department. Interested residents can apply for this option at any time during their second year of residency. It is anticipated that many of our residents will successfully choose this option. Residents have access to the most modern research facilities. LP hosts Core Facilities in laser capture dissection, proteomics, molecular diagnostics, research immunocytochemistry and flow cytometry. The NCI offers Cores in gene expression analysis, image analysis including confocal microscopy, DNA sequencing, FISH, and protein chemistry, among others.

Program Faculty and their Clinical or Research Interests

J. Carl Oberholtzer, MD, PhD Chief, Laboratory of Pathology; Acting Chief, General Surgical Pathology; Neuropathology/brain tumors/ auditory hair cells.

Elaine S. Jaffe, MD Program Director and Chief, Hematopathology; Pathogenesis and pathophysiology of malignant lymphomas.

Diane Arthur, MD Chief, Clinical Cytogenetics; Clinical applications of molecular cytogenetic techniques.

Carl Baker, MD, PhD Attending staff, autopsy service; Cellular regulation and transformation.

Sanford M. Dawsey, MD Cytopathology; Epidemiology of gastric and esophageal cancer.

Michael Emmert-Buck, MD, PhD Chief, Pathogenetics Section; Genetic alterations underlying tumor development and progression; technology/methodology development, prostate cancer, and multiple endocrine neoplasia.

Armando Filie, MD Acting Chief, Cytopathology; Cytology and immunocytochemistry.

Stephen Hewitt, MD, PhD Tissue array research program; high throughput technology development.

David Kleiner, MD, PhD Chief, Postmortem Pathology and Director of Clinical Operations; Medical pathology, including liver and renal pathology.

Chyi-Chia (Richard) Lee, MD, PhD
Dermatopathology, surgical pathology;
immunopathology of melanoma

David Levens, MD, PhD Chief, Gene Regulation Section; Transcriptional regulation of c-myc; gene regulation.

Susan Mackem, MD, PhD Developmental Biology; Regulation of patterning and morphogenesis; genomic approaches to identifying in vivo transcriptional targets.

Maria Merino, MD Chief, Translational Surgical Pathology Section; Prognostic tumor markers; renal tumors and hereditary cancer syndromes.

Martha Quezado, MD Surgical Pathology;
Neuropathology and gastrointestinal pathology.

Stefania Pittaluga, MD, PhD Hematopathology and in-situ hybridization, lymphoma diagnosis, pathogenesis, and pathophysiology.

Mark Raffeld, MD Chief, Specialized Diagnostics Unit; Molecular diagnostics/immunohistochemistry; immunophenotypic and molecular markers in lymphoma.

David Roberts, PhD Chief, Biochemical Pathology Section; Cell surface receptors and signal transduction pathways.

Mark Roth, MD Cytopathology; Epidemiology of cancer.

Jere Stern, MD Dermatopathology.

Maryalice Stetler-Stevenson, MD, PhD Chief, Flow Cytometry; Protein expression in hematolymphoid neoplasia; correlation of hematologic and biologic responses.

Maria Tsokos, MD Chief, Pediatric Tumor Biology/ Ultrastructural Pathology; Characterization of Ewing's sarcoma, primitive neuroectodermal tumors (PNET), and rhabdomyosarcoma; and the definition of histologic, biologic, and other factors to predict the biologic aggressiveness of tumors.

Constance Yuan, MD, PhD Hematopathology; Flow Cytometry.

Application Information/Eligibility Criteria

Qualified candidates must have completed at least an MD degree. Research experience, including other advanced degrees, is desirable. There are three to four positions available per year. We do not participate in the NRMP Match, and have a rolling admissions policy. Interested applicants are encouraged to apply by October 15. The application deadline is December 15.

Applicants should apply through the Association of American Medical Colleges, Electronic Residency Application Service:
<https://services.aamc.org/eras/myeras2010/>

For further information, the applicant should contact:

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AutoPix Laser Capture Microscope

