



National Institutes of Health  
National Institute of  
Environmental Health Sciences  
Mail Drop B3-06  
P. O. Box 12233  
Research Triangle Park, NC 27709

***Post-doctoral Fellowship in Toxicological Pathology  
National Institute of Environmental Health Sciences  
Research Triangle Park, North Carolina***

The positions are designed for individuals to participate in National Toxicology Program (NTP) and National Institute of Environmental Health Sciences (NIEHS) research projects, work to achieve accuracy of NTP pathology data, learn rodent pathology, and continue education towards achievement of board certification by the American College of Veterinary Pathologists (Clinical or Anatomic Pathology). At least one year, and preferably two years, of veterinary pathology residency training is required. The research performed can be thesis work in a graduate program toward the achievement of a PhD degree by arrangement with various universities.

The post-doctoral fellow will work with an NTP Study Pathologist to learn duties related to ensuring that pathology data generated in an assigned Toxicology/Carcinogenesis study are accurate, consistent, and appropriately reported. The person will also be involved in the design and review of protocols for study of specific chemicals/agents for the NTP as well as being a Pathology Working Group (PWG) member to evaluate and correct discrepancies within the pathology data of particular studies. The fellow will be closely involved in collaborative research and pathology support for NTP-sponsored initiatives and NIEHS intramural research investigators. Some of the projects are relevant to current NTP initiatives such as phenotypic anchoring of pathology with toxicogenomics, toxicity of dioxins, and other collaborative research efforts designed to understand the biology and public health relevance of toxic and carcinogenic endpoints. Some of the efforts will be in learning fundamental and toxicologic pathology in preparation for board certifying examination in veterinary pathology. We have a partnership with the pathology residency program at nearby North Carolina State University, College of Veterinary Medicine for access to training resources and participation in pathology conferences and rounds. Service in surgical, clinical, or necropsy pathology can also be arranged in some circumstances.

The NIEHS employs at least 10 veterinary pathologists, working in areas of toxicologic pathology and research. Research projects are ongoing in areas of molecular carcinogenesis, toxicological pathology, toxicogenomics utilizing investigative techniques such as microarray gene expression analysis, real time RT-PCR, magnetic resonance imagery (MRI) microscopy, in situ hybridization, electron microscopy, and immunohistochemistry. The Research Triangle Park

area is home to more than 70 veterinary pathologists who are employed at various institutions including academia (such as University of North Carolina, North Carolina State University, and Duke University), private industry (GlaxoSmithKline, Experimental Pathology Laboratories, Pathology Associates International/ Charles River Labs, and Integrated Laboratory Services), veterinary diagnostic laboratories (Rollins Animal Disease Diagnostic Labs and Antech Diagnostics), and other government agencies (such as the Environmental Protection Agency). In addition, the NIEHS has a strong program in laboratory animal medicine with five board certified (ACLAM) laboratory animal veterinarians and a recently established National Center for Toxicogenomics.

Some relevant web sites are:

National Toxicology Program <http://ntp-server.niehs.nih.gov/>  
Laboratory of Experimental Pathology <http://dir.niehs.nih.gov/dirlep/>

Contact information can be obtained from:

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### ***Veterinary student Externships at Lab of Experimental Pathology, NIEHS***

#### Overview:

The NIEHS extern/intern positions can be catered to meet the student's interests/goals and provide for experiences in research and diagnostic pathology of rodents. The NIEHS employs at least 12 veterinary pathologists, working in areas of toxicologic pathology and research. Research projects are ongoing in areas of molecular carcinogenesis, toxicological pathology, toxicogenomics utilizing investigative techniques such as microarray gene expression analysis, real time RT-PCR, magnetic resonance imagery (MRI) microscopy, in situ hybridization, electron microscopy, and immunohistochemistry. The RTP area is home to more than 70 veterinary pathologists who are employed at various institutions including academia (such as University of North Carolina, North Carolina State University, and Duke), private industry (GlaxoSmithKline, Experimental Pathology Laboratories, Pathology Associates International, and Integrated Laboratory Services), veterinary diagnostic laboratories (Rollins Animal Disease Diagnostic Labs and Antech Diagnostics), and other government agencies (such as Environmental Protection Agency). In addition, the NIEHS has a strong program in laboratory animal medicine with five board certified (ACLAM) laboratory animal veterinarians. We are able to host veterinary student externships for 4 to 12 weeks and offer exposure to a variety of pathology activities including participation in the National Toxicology Program, participation in pathology peer review, and visits to the North Carolina State University College of Veterinary Medicine, Glaxo-Smith-Kline pharmaceutical company, Chemical Industry Institute of Toxicology Centers for Health Research, Integrated Laboratory Systems, Inc., MRI facilities of the Duke Center for In Vivo Microscopy, and the Environmental Protection Agency research laboratories. Depending upon the duration of the externship and the interests of the extern, small research projects may be possible, possibly leading to a co-authorship. The goal is to be complete an appropriate, mutually agreeable project while also learning the variety of roles that veterinary pathologists play at NIEHS and various other RTP area institutions. Each extern will be assigned a senior staff primary mentor who will coordinate the activities of the externship.

Some relevant web sites are:

National Toxicology Program <http://ntp-server.niehs.nih.gov/>  
Laboratory of Experimental Pathology <http://dir.niehs.nih.gov/dirlep/>

Funding opportunities for externships:

1. ACVP Scholarship Money is awarded to veterinary students, the details of which can be found at ACVP Website ( <http://www.acvp.org/training/extern.php> )
2. NIEHS Summers of Discovery program ( <http://www.niehs.nih.gov/summers/> )  
Paid research positions for undergraduate, graduate, or professional students. Positions are also available at other NIH institutes in Bethesda. The Summers of Discovery Program here at NIEHS is well funded and provides an excellent research experience. Applications are due ~ March 1st (check website for exact date). There are ~ 60-70 positions available per summer at NIEHS.

The coordinator is:

Ms. Charle League

Coordinator, Summers of Discovery and Special Programs

NIEHS/NIH (B2-06)

P.O. Box 12233 -or- 111 T.W. Alexander Drive (Room B-234)

Research Triangle Park, NC 27709-2233

919-541-5741 (Ofc)

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E-mail: [league@niehs.nih.gov](mailto:league@niehs.nih.gov)

Contact information regarding externships can be obtained from:

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