Pathology

Chair
- Nitin J. Karandikar

Director, Clinical Functions
- Roseanne Meyer

Graduate degree: M.S. in pathology
Faculty: https://medicine.uiowa.edu/pathology/people
Website: https://medicine.uiowa.edu/pathology/

The Department of Pathology offers education and training for a broad range of students, from undergraduates through postgraduate fellows and researchers. It provides basic pathology courses to health sciences students, a clinical training program for medical laboratory scientists, a Master of Science program in pathology, residency training programs leading to American Board of Pathology certification in anatomic pathology and clinical pathology, fellowship training in pathology subspecialties, and postdoctoral research training in cellular and molecular pathology.

Undergraduate Education
Pathology courses are a major component of the University's program in Medical Laboratory Science, a Bachelor of Science program that trains medical laboratory scientists; see Medical Laboratory Science in the Catalog.

Postgraduate Training
The Department of Pathology offers postgraduate clinical fellowship programs in hematopathology, transfusion medicine, clinical microbiology, cytopathology, molecular genetic pathology, and surgical pathology for physicians who have completed residency training in pathology. These fellowships consist of one to two years of diagnostic work and research.

The department provides postdoctoral research training in immunology, neuropathology, apoptosis, cancer biology, and clinical microbiology as well as in other areas of cellular and molecular pathology. These positions are open to individuals who have earned a Ph.D. or an M.D.

Programs

Graduate Program of Study

Major
- Master of Science in Pathology

M.D. Training
The department provides five to seven 12-month fellowships for M.D. students (pathology externship), for students interested in careers as pathologists, and the Emory Warner Fellowship, a full-time research position in a facet of experimental pathology. It also offers clerkships for M.D. students in all areas of anatomical and clinical pathology.

Residency
The department offers 20 residency positions in pathology, which provide up to four years of training. Patients at University of Iowa Hospitals & Clinics and the Iowa City VA Health Care System are integral to the residency programs.

Residents gain experience in systematic rotation through the varied laboratory services, including surgical pathology, autopsy pathology, neuropathology, dermatopathology, cytology, clinical chemistry, clinical microbiology, hematology, immunopathology, molecular pathology, and transfusion medicine. They also have the opportunity to pursue one or two years of additional fellowship training in many pathology subspecialties. To learn more, see Education on the Department of Pathology website.

Facilities
The Department of Pathology is well-equipped to carry out the sophisticated technology of modern cellular and molecular pathology. It administers more than 90,000 square feet of clinical laboratories at University of Iowa Hospitals & Clinics and has individual research and core facility laboratories, including histopathology and laser capture microscopy for cellular and molecular pathology research, in the Medical Research Center, Medical Laboratories, and at the Iowa City VA Health Care System. Also available are Carver College of Medicine research facilities for nucleic acid chemistry, hybridoma production, flow cytometry, ultrastructural studies, protein structure, image analysis, electron spin resonance, mass spectroscopy, nuclear magnetic resonance, and laboratory animal care.

Courses

Pathology Courses

PATH:4151 MLS Program Registration 0 s.h.
Requirements: admission to Medical Laboratory Science Program.

PATH:5260 Translational Histopathology 3 s.h.
Didactic sessions on human comparative histology, molecular and cellular pathology, and animal model applications; laboratory sessions on microscopy, histology, histotechnology, and immunohistochemistry, with group discussions of model papers; experience in scientific writing and oral presentation skills; for students who plan to investigate experimental models of human disease.

PATH:5270 Pathogenesis of Major Human Diseases 3 s.h.
Critical analysis of pathogenesis models in a series of major human diseases; clinical presentation, analysis of cellular and molecular events leading to the disease, discussion of key papers. Offered spring semesters of even years. Same as IGPI:5270, MMED:5270.

PATH:6220 Seminar in Pathology 1 s.h.
Current research and literature. Requirements: pathology graduate standing.

PATH:7001 Molecular and Cellular Biology of Cancer 3 s.h.
Fundamental aspects of oncology at the cellular and molecular levels; mechanisms of cancer initiation and progression, oncogene action, DNA damage and repair, carcinogenesis by radiation, chemicals, viruses; tumor immunology, anticancer therapies. Offered fall semesters. Requirements: strong basic science background. Same as FRRB:7001.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits/Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>PATH:7211</td>
<td>Research in Pathology</td>
<td>arr.</td>
<td>Basic aspects of pathology or clinical patient material; emphasis on experimental design, methods, literature review, obtaining formal answers to specific questions. Requirements: M.D. enrollment or graduate standing.</td>
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<tr>
<td>PATH:8007</td>
<td>Medical Student Fellowships in Pathology (Externships)</td>
<td>0 s.h.</td>
<td>First-hand experience in autopsy, surgical and clinical pathology, teaching, and research to further understanding of disease mechanisms, normal and pathologic anatomy, laboratory use.</td>
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<td>PATH:8008</td>
<td>Warner Fellowship in Experimental Pathology</td>
<td>0 s.h.</td>
<td>One-year, full-time membership in established research laboratory in the Department of Pathology or collaborating laboratory. Requirements: M.D. enrollment.</td>
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<tr>
<td>PATH:8133</td>
<td>Introduction to Human Pathology for Graduate Students</td>
<td>4 s.h.</td>
<td>Human disease; basic disease processes, organ-related and multisystem diseases; case analysis. Offered fall semesters. Same as PTRS:8133.</td>
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<td>PATH:8301</td>
<td>Laboratory Medicine in Clinical Practice</td>
<td>arr.</td>
<td>Issues in appropriate use of clinical laboratory and pathology resources in the primary care setting; case-based approach. Requirements: third- or fourth-year M.D. enrollment.</td>
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<td>PATH:8401</td>
<td>Autopsy Pathology Clerkship</td>
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<tr>
<td>PATH:8402</td>
<td>Hematopathology Clerkship</td>
<td>arr.</td>
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<td>PATH:8403</td>
<td>Surgical Pathology Clerkship</td>
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<td>PATH:8404</td>
<td>Transfusion Medicine</td>
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<td>PATH:8405</td>
<td>Clinical Microbiology</td>
<td>2,4 s.h.</td>
<td>Students rotate through bacteriology, molecular microbiology, mycology, mycobacteriology, and virology while participating in clinical and technical activities.</td>
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<td>PATH:8497</td>
<td>Research in Pathology</td>
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<td>Medical research, clinical or laboratory projects; individual study with department approval.</td>
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<td>PATH:8498</td>
<td>Pathology On Campus</td>
<td>arr.</td>
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<td>PATH:8499</td>
<td>Pathology Off Campus</td>
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