

PATHOLOGY

Emeriti: (Professors) Margaret E. Billingham, Ronald F. Dorfman, Lysia K. Forno, David Glick, David Korn; *(Clinical Assistant Professor)* Charles T. Uyeda

Chair: Stephen J. Galli

Professors: Klaus G. Bensch, Eugene C. Butcher, Michael L. Cleary, Gerald R. Crabtree, Edgar G. Engleman, Luis F. Fajardo, Heinz Furthmayr, Stephen J. Galli, F. Carl Grumet, Michael R. Hendrickson, Richard L. Kempson, Joseph S. Lipsick, Richard K. Sibley, Howard H. Sussman, Teresa S. F. Wang, Roger A. Warnke, Irving L. Weissman
Associate Professors: Ellen Jo Baron, Gerald J. Berry, P. Joanne Cornbleet, Steven K. H. Foung, Susan A. Galel, Sharon Geaghan, Teri Longacre, Sara A. Michie, Kent W. Nowels, Donald P. Regula, Robert V. Rouse, Raymond A. Sobel, James L. Zehnder

Assistant Professors: Jeffrey Axelrod, Athena M. Cherry, Jeff Harvell, Peter Jackson, Sabine Kohler, Arend Sidow, J. Matthijs van de Rijn

Professor (Research): Lawrence F. Eng

Professors (Clinical): Dikran S. Horoupian, Jon C. Kosek

Courtesy Professor: Lucy Tompkins

Acting Assistant Professors: Vivek Bhargava, Lawrence Fong, Brent Harris

Visiting Professor: Alfreda Stadlin

Clinical Professors: James L. Bennington, Jerome S. Burke, Stephen S. Chen, John T. Differding, Barbara M. Egbert, Seth L. Haber, Maie K. Herrick, Paul L. Herrmann, John E. McNeal, Mahendra Ranchod
Clinical Associate Professors: Robert W. R. Archibald, Steven Levine, Charles M. Lombard

Clinical Assistant Professors: Claudia Greco, James E. Meeker, Thomas W. Rogers, Jon C. Ross, William W. Ruehl, Joshua Sickel, Sharon H. Van Meter

Staff Physicians and Clinical Instructors: David B. Bingham, Jim Malone

Clinical Lecturer: Glen B. Haydon

PROGRAMS OF STUDY

The Department of Pathology offers a sequence of basic courses in general and special pathology, including neuropathology, which is open to medical students only. Interested and qualified graduate students may petition the course director to audit the lecture portion of these courses. In addition, there are a number of advanced courses in selected aspects of pathology. The department does not offer advanced degrees in pathology, but qualified graduate students who are admitted to the Biophysics Program, the Cancer Biology Program, or other interdepartmental programs may elect to pursue their thesis requirements in the research laboratories of the Department of Pathology. The discipline of pathology has traditionally served as a bridge between the preclinical and clinical sciences and is concerned with the application of advances in the basic biological sciences, both to the diagnosis of disease in man and to the elucidation of the mechanisms of normal molecular, cellular, and organ structure and function that manifest themselves in clinical disease. Accordingly, the department's research interests encompass a broad range that extends from fundamental molecular biology to clinical-pathological correlations, with a primary emphasis on experimental oncology.

At present, investigation in the department includes basic studies in different areas utilizing molecular biological, biochemical, and genetic cell biological techniques: DNA replication in yeast and cultured eukaryotic cells, cell cycle control in animal cells and yeast, identification and pathogenetic role of chromosomal aberrations in human malignancies and mechanisms of activation of oncogenes in human and animal cells, lymphocyte and neutrophil-interactions with endothelial cells, cell type specification and signal transduction pathways leading to specific gene expression or modulation of cytoskeletal behavior; cytoskeletal architecture, cell-matrix interaction, developmental biology of hematopoietic stem cells and thymus, regulation of the immune system, and mechanisms of immune and other responses in the central nervous system. In addition, a variety of studies focus on the development of novel diagnostic and immunotherapeutic treatment modalities and techniques for solid

tumors, lymphomas, HIV, and genetic diseases. Research training in all of these areas is available for qualified medical and graduate students by individual arrangement with the appropriate faculty member. A summary of the research interests of the department faculty is available on request.

COURSES

Course work and lab instruction in the Department of Pathology conform to the Policy on the Use of Vertebrate Animals in Teaching Activities as stated in the front of this catalog.

211. Advanced Immunology I—(Enroll in Immunology 201.)
3 units, Win (Garcia, Staff)

212. Advanced Immunology II—(Enroll in Immunology 202.)
3 units, Spr (McDevitt, Staff)

213. Gross Autopsy Pathology Laboratory—Examine/discuss unfixed dissected organs from current autopsies and correlate morphologic findings with the clinical history. Students view postmortem examinations and may participate (in a small group) in one postmortem examination with the assistance of residents and staff, and present the case to the class. Class scheduling is flexible. Additional unit for participation in a postmortem examination. Pre- or corequisite: 230B or 230C.
2 units, Aut, Win (D. Regula, K. Bensch, Staff)

215. Molecular Mechanisms of Disease—Provides graduate students in the basic sciences with an exposure to current research topics in human disease. Each week, one scientist from academia or industry presents a seminar on the pathogenesis of a particular disease, with an emphasis on molecular approaches, followed by a discussion. A review article and one or two research papers from the current literature are assigned prior to each meeting.
1 unit, Win (Lipsick, Staff)

230A,B,C. General and Special Pathology—Three-quarter introduction to principles in general pathology and a detailed pathology of human disease based on the disordered structure and function of individual organ systems (special pathology). Lecture and lab discussion groups. Course director: Regula.

230A. General and Special Pathology
6 units, Spr (Regula, Rouse, Staff)

230B. Special Pathology
6 units, Aut (Regula, Lombard, Staff)

230C. Special Pathology
6 units, Win (Regula, Hendrickson, Horoupian, Staff)

290. Research in Experimental Neuropathology—Introduction to research methods in experimental neuropathology for students interested in a long-term project in this area. Participation in research is under the close supervision of a staff member in neuropathology. Facilities available include electron microscopy, tissue culture, neurochemistry, and immunocytochemistry with antibody and molecular probes. Prerequisite: consent of instructor.
1-18 units, Spr (Eng, Forno)

292. DNA Repair and Mutagenesis—(Enroll in Biological Sciences 205.)
3 units, Spr (Hanawalt)

299. Directed Reading—Prerequisite: consent of faculty member.
1-18 units, any quarter (Staff)

399. Research—Department faculty are involved in active research programs at the Stanford Medical Center. Students interested in research at the molecular, cellular, and clinical-pathologic levels are encouraged to seek out faculty advisers. The department is equipped for modern research and maintains an active and vigorous postdoctoral research training program. Prerequisite: consent of the instructor.
1-18 units, any quarter (Staff)