Biological Chemistry

Peter Kaiser, Department Chair
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Overview

The Department of Biological Chemistry provides advanced training to individuals who are interested in understanding the fine regulation of the biological processes, structural basis of the regulation, and the identification of targets for disease managements. Faculty research interests are diverse with emphases on several areas of basic and translational research: epigenetic regulation of gene expression; circadian rhythm and metabolism; chromatin structure and function; DNA repair and DNA damage responses; telomerase and telomere regulation; ubiquitin regulation in metabolism and cell cycle; signal transduction and transcription regulation in development and disease manifestation; molecular mechanisms of stem cell regulation and tumorigenesis; genomic and bioinformatics. Students are trained and exposed to technical expertise in all facets of current biological sciences. Established core research facilities are available in which students have access to a microarray and high-throughput sequencing core facility, electron microscopy, atomic force microscopy, confocal imaging center, mass spectroscopy, flow cytometry, transgenic core laboratories, biopolymer sequencing and synthesis laboratories, and other resources.

The Department offers training to graduate students under the auspices of the School of Medicine and in conjunction with the gateway program in Cellular and Molecular Biosciences (CMB) as well as the Mathematical, Computational, and Systems Biology (MCSB) program. Students are eligible to enter the Department program after meeting the specific requirements of the CMB gateway curriculum or by direct application to the Department. The Department program leads to the M.S. or Ph.D. degree in Biomedical Sciences, awarded after successful completion of all requirements. Students admitted into the combined program who select a research advisor in the Department begin thesis research in the second year. Students are required to attend and participate in the departmental research seminars. In addition, students are required to complete two advanced-level graduate courses subsequent to entering the Department’s Ph.D. concentration. In the third year, students take the advancement-to-candidacy examination for the Ph.D. degree by presenting and defending a proposal for specific dissertation research. The normative time for completion of the Ph.D. is five years; students who make exceptional progress on their thesis projects are encouraged to complete the Ph.D. sooner. The maximum time permitted is seven years.

Faculty

Bogi Andersen, M.D. University of Iceland, Professor of Medicine; Biological Chemistry

Stuart M. Arfin, Ph.D. Albert Einstein College of Medicine, Professor Emeritus of Biological Chemistry

Pierre F. Baldi, Ph.D. California Institute of Technology, UCI Chancellor's Professor of Computer Science; Biological Chemistry; Biomedical Engineering; Developmental and Cell Biology (bioinformatics, computational biology)

Phang-Lang Chen, Ph.D. University of California, San Diego, Associate Professor of Biological Chemistry

Xing Dai, Ph.D. University of Chicago, Professor of Biological Chemistry

Peter J. Donovan, Ph.D. University College London, Professor of Biological Chemistry; Developmental and Cell Biology (stem cell biology)

Angela G. Fleischman, M.D. Stanford University, Assistant Professor of Medicine; Biological Chemistry

Anand K. Ganesan, M.D. Medical College of Wisconsin, Associate Professor of Dermatology; Biological Chemistry

Lan Huang, Ph.D. University of Florida, Professor of Physiology and Biophysics; Biological Chemistry

Kenneth H. Ibsen, Ph.D. University of California, Los Angeles, Professor Emeritus of Biological Chemistry

Peter Kaiser, Ph.D. University of Innsbruck, Professor of Biological Chemistry

Kai Kessenbrock, Ph.D. Ludwig Maximilian University of Munich, Assistant Professor of Biological Chemistry

Eva Y. Lee, Ph.D. University of California, Berkeley, UCI Chancellor's Professor of Biological Chemistry

Wen-Hwa Lee, Ph.D. University of California, Berkeley, Donald Bren Professor Emeritus of Biological Chemistry

Ellis Levin, M.D. Thomas Jefferson University, Jefferson Medical College, Professor in Residence of Medicine; Biological Chemistry; Pharmacology

Haoping Liu, Ph.D. Cornell University, Professor of Biological Chemistry
Calvin S. McLaughlin, Ph.D. Massachusetts Institute of Technology, Professor Emeritus of Biological Chemistry

Frank L. Meyskens, M.D. University of California, San Francisco, Daniel G. Aldrich, Jr. Endowed Chair and Professor of Medicine; Biological Chemistry; Program in Public Health

Robert K. Moyzis, Ph.D. Johns Hopkins University, Professor Emeritus of Biological Chemistry

Daniele Piomelli, Ph.D. Columbia University, Louise Turner Arnold Chair in the Neurosciences and Professor of Anatomy and Neurobiology; Biological Chemistry; Pharmacology

Feng Qiao, Ph.D. University of California, Los Angeles, Assistant Professor of Biological Chemistry

Suzanne B. Sandmeyer, Ph.D. University of Washington, Grace Beekhuis Bell Chair in Biological Chemistry and Professor of Biological Chemistry; Chemical Engineering and Materials Science; Microbiology and Molecular Genetics (retroelements, metabolic molding, genomics)

Paolo Sassone-Corsi, Ph.D. University of Naples Federico II, Donald Bren Professor and Professor of Biological Chemistry; Microbiology and Molecular Genetics; Pharmaceutical Sciences

Robert E. Steele, Ph.D. Yale University, Professor of Biological Chemistry

Leslie M. Thompson, Ph.D. University of California, Irvine, Professor of Psychiatry and Human Behavior; Biological Chemistry; Neurobiology and Behavior

Richard A. Van Etten, M.D. Stanford University, Professor of Medicine; Biological Chemistry

Kyoko Yokomori, Ph.D. University of Tokyo, Professor of Biological Chemistry; Biological Chemistry

Michael V. Zaragoza, M.D. Case Western Reserve University, Assistant Professor of Pediatrics; Biological Chemistry; Genetic Counseling