

Biological Sciences faculty are leaders or collaborators in many research centers at Carnegie Mellon University:

Center for Neural Basis of Cognition

Center for the Mechanics and Engineering of Cellular Systems

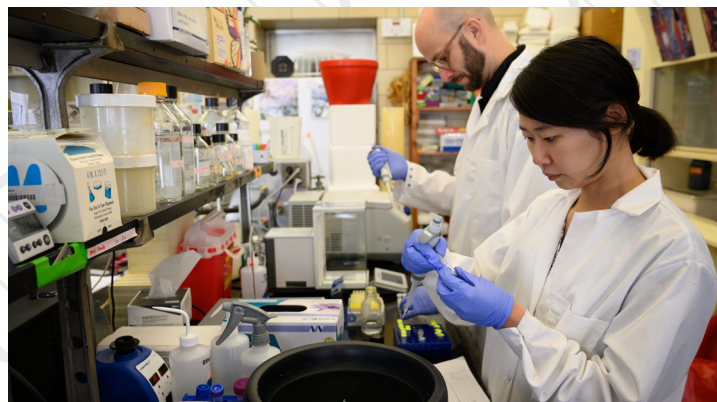
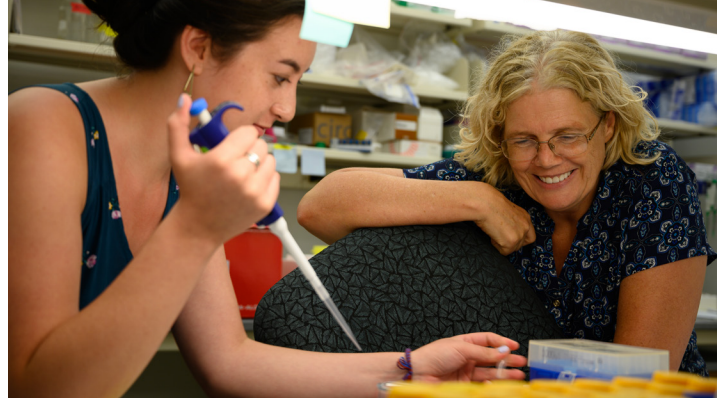
Center for Molecular Analysis

Center for Nucleic Acids Science and Technology

Molecular Biosensors and Imaging Center

Pittsburgh NMR Center for Biomedical Research

Pittsburgh Supercomputing Center



Molecular Biology & Genetics

Developmental Biology

**Biochemistry
& Biophysics**

Neuroscience



The department's tradition of interdisciplinary collaboration affords students opportunities in joint CMU graduate programs:

M.S. in Computational Biology

*Joint with the Computational Biology Department
Website: cmu.edu/ms-compbio*

M.S. in Biotechnology and Pharmaceutical Engineering

*Joint with the Department of Chemical Engineering
Website: cmu.edu/ms-biotech-pharma*

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Inquiries concerning the application of and compliance with this statement should be directed to the university ombudsman, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-1018.

Obtain general information about Carnegie Mellon University by calling 412-268-2000.

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 @CMU_Bio

Computational Biology

Genomics

Microbiology

Cell Biology

Carnegie Mellon University
Department of Biological Sciences

FACULTY RESEARCH INTERESTS



ALISON BARTH

Maxwell H. and Gloria C. Connan Professor of the Life Sciences

Activity-dependent gene expression in the CNS; the cellular and synaptic mechanisms that underlie learning and memory; the effect of behavioral training on neural excitability and anatomy



MARCEL BRUCHEZ

Professor and Director of the Molecular Biosensor and Imaging Center

Fluorescence; biological microscopy; imaging; light-harvesting structures; biosensors; single molecule biophysics; protein translation; protein folding; protein trafficking



DANNIE DURAND

Associate Professor

Computational molecular biology and computational genomics; evolution of genomic organization and function



CHARLES ETTENSOHN

Professor

Developmental biology, including gene regulatory networks; early patterning and cell fate specification; morphogenetic cell movements; cell signaling; biomineralization



ARYN GITTIS

Associate Professor

Synaptic physiology; optogenetics; behavior; mechanisms of circuit dysfunction in movement disorders



LUISA HILLER

Associate Professor

Bacterial pathogenesis; comparative genomics; intercellular communication; strain evolution; biofilms



VERONICA HINMAN

Professor and Department Head

Developmental biology, including gene regulatory networks; evolution of developmental mechanisms



JONATHAN JARVIK

Associate Professor

Functional genomics; proteomics; gene discovery; cd-tagging; drug target identification



SANDRA KUHLMAN

Associate Professor

Sensory development and perceptual learning; synaptic physiology and neuronal excitability of inhibitory versus excitatory neurons in intact circuits



FREDERICK LANNI

Associate Professor

Biophysics; cell motility, cytoskeleton; signal transduction; microscopy



TINA LEE

Associate Professor

Mammalian cell biology; organelle structure and dynamics



ADAM LINSTEDT

Professor

Mechanisms of membrane compartmentalization; trafficking and inheritance



JAVIER LÓPEZ

Associate Professor

RNA processing; alternative splicing; RNA-protein interactions; developmental genetics; molecular biology



BROOKE McCARTNEY

Associate Professor

Mechanisms of signal transduction and cytoskeletal organization during *Drosophila* development



JOEL McMANUS

Associate Professor

Genomics; evolution of gene expression; and RNA structural biology



JONATHAN MINDEN

Professor

Proteomics; developmental biology; cell biology; cell death; fluorescent reagent development



AARON MITCHELL

Professor

Signal transduction; genetics; microbial pathogenesis; biofilm formation



ROBERT MURPHY

Professor and Head, Computational Biology Department

Cell and computational biology; endocytosis; protein localization; proteomics; pattern analysis; fluorescence microscope image interpretation



GORDON RULE

Professor

Protein structure; molecular recognition; NMR spectroscopy; x-ray diffraction



RUSSELL SCHWARTZ

Professor

Computational biology; biological modeling



JOHN WOOLFORD

Professor

Yeast ribosome biogenesis; pre-ribosomal particles; RNA-protein interactions; dynamics of RNA processing and ribonucleoprotein complex assembly



ERIC YTTRI

Assistant Professor

Systems neuroscience, optogenetics, Parkinson's disease, behavior, motor system, computational neuroscience, network interactions, dopamine



HUAIYING ZHANG

Assistant Professor

Protein/ RNA phase transition; cancer cell biology; optogenetics; synthetic organelles



YONGXIN (LEON) ZHAO

Assistant Professor

Biological imaging; expansion microscopy; optogenetic reporters; biomolecular engineering; synapse typing; complex diseases

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for more information about our programs, news & events, and how to apply

CARNEGIE MELLON UNIVERSITY

The only top 25 university founded in the 20th century, Carnegie Mellon University has rapidly evolved into an internationally recognized institution with a distinctive mix of world-class educational and research programs. More than 8,000 undergraduate and graduate students enjoy exceptional opportunities for innovation and interdisciplinary research toward finding meaningful solutions to significant problems of society.

PITTSBURGH

Pittsburgh ranks in the top 10 on lists for liveability, jobs, and affordability, including ranking among the top 10 U.S. cities for millennials. The New York Times calls Pittsburgh "a tech hub." Excellence in education, healthcare, culture and environment lead to a #2 ranking in the U.S. by the Economist Intelligence Unit's report.