DEPARTMENT OF

BIOCHEMISTRY

Research Overview

The Department of Biochemistry is committed to basic research and training undergraduate and graduate students for careers in biochemistry, molecular biology, medicine, health sciences, and related life sciences. Our faculty, graduate students, and staff are located in the Biochemistry Building with additional offices and laboratories in the Hansen Life Science Research Building, Whistler Agricultural Research Building and Hockmeyer Hall of Structural Biology.

The research programs of the department include both agricultural and biomedical biochemistry.

Research Areas

- METABOLIC AND NATURAL PRODUCT BIOCHEMISTRY
- OMICS: GENOMICS, PROTEOMICS AND METABOLOMICS
- CANCER BIOCHEMISTRY
- EPIGENETICS AND GENE EXPRESSION
- STRUCTURE, DYNAMICS AND FUNCTION OF BIOLOGICAL MACROMOLECULES
- BIOINFORMATICS AND COMPUTATIONAL GENOMICS

Affiliated Units

- PURDUE CENTER FOR CANCER RESEARCH
- INSTITUTE OF DRUG DISCOVERY
- CENTER FOR PLANT BIOLOGY
- INSTITUTE FOR INTEGRATIVE NEUROSCIENCE
- BINDLEY BIOSCIENCES CENTER
- INSTITUTE FOR INFLAMMATION, IMMUNOLOGY AND INFECTIOUS DISEASE

Pictured at left from top: graduate student Mackenzie Chapman, postdoc Pan Liao, Dr. Joe Ogas with students, postdoc Mohd Saleem Dar, and Dr. Mark Hall's lab group

JOE OGAS
DEPARTMENT HEAD

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Faculty and Research Areas

Scott Briggs sdbriggs@purdue.edu
Role of histone methylation in gene expression and oncogenesis

Clint Chapple chapple@purdue.edu
Biochemistry and molecular biology of plant secondary metabolism

Kyle Cottrell cottrellka@purdue.edu
RNA editing, post-transcriptional regulation, and cancer

Brian Dilkes bdilkes@purdue.edu
Plant Genetics

Natalia Dudareva dudareva@purdue.edu
Plant biochemistry and molecular biology

James Forney forney@purdue.edu
Regulation of differentiation in protozoa

Barbara Golden barbgolden@purdue.edu
Structural basis for RNA function

Humaira Gowher hgowher@purdue.edu
Regulation of DNA methylation in development and disease

Mark Hall mchall@purdue.edu
Regulation of the cell cycle by ubiquitin-dependent proteolysis; protein mass spectrometry

Majid Kazemian kazemian@purdue.edu
Research area: Studying gene regulation in viral associated cancers, autoimmune disorders, and infectious diseases

Ann Kirchmaier kirchmaier@purdue.edu
Epigenetic processes that mediate heritable modifications to chromatin

Xing Liu xingliu@purdue.edu
Roles and regulations of ubiquitin-proteasome dependent protein degradation

Andrew Mesecar amesecar@purdue.edu
Gene-to Lead Drug Discovery

Joe Ogas ogas@purdue.edu
Regulation of cell identity, signal transduction, chromatin remodeling

Sujith Puthiyaveetil spveetil@purdue.edu
Genetic and molecular control of photosynthetic light utilization

W. Andy Tao watao@purdue.edu
Proteomics and biological mass spectrometry

Elizabeth Tran ejtran@purdue.edu
RNA helicases and Post-transcriptional gene regulation

Vikki Weake vweake@purdue.edu
Chromatin modifying complexes in Drosophila development as a model for neurodegenerative disease and cancer

Jen Wisecaver jwisecav@purdue.edu
The evolution of eukaryotic chemodiversity using genomics and phylogenetics

CLINICAL TEACHING FACULTY

Orla Hart ohart@purdue.edu
Clinical Teaching Assistant Professor

RESEARCH FACULTY

Hana Hall hallh@purdue.edu
Research Assistant Professor

JOINT/COURTESY APPOINTMENT FACULTY

Seema Mattoo smattoo@purdue.edu
(Biochemistry, Signal Transduction, and Microbiology) Investigation of Fic domain containing proteins in Cellular Signaling. Post-translational modification of proteins is a common theme in signal transduction.

John Morgan jamorgan@purdue.edu
Metabolic engineering of photosynthetic microbes and mathematical modeling of metabolism and transport of plant volatiles

Pete Pascuzzi ppascuzz@purdue.edu
Bioinformatics; research data management; chromatin organization; DNA replication