



**Robert Bambara, Ph.D.**

Human genome stability, DNA damage response, HIV replication and evolution



**Xin Bi, Ph.D.**

Chromatin-mediated regulation of gene expression in eukaryotes.



**Dirk Bohmann, Ph.D.**

Mechanisms and functions of signal transduction and gene regulation in higher organisms



**Paul Brookes, Ph.D.**

Mitochondria and free radicals in cardiac ischemia-reperfusion



**Michael Bulger, Ph.D.**

Chromatin domains and long-range activation by enhancers



**J. Butler, Ph.D.**

Post-transcriptional Regulation of mRNA Expression in the Nucleus of Eukaryotic Cells.



**Gloria Culver, Ph.D.**

Assembly of the *E. coli* 30S ribosomal subunit.



**Ian Dickerson, Ph.D.**

Molecular mechanisms of neuropeptide signal transduction



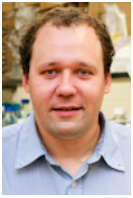
**Mark Dumont, Ph.D.**

Signal transduction; membrane protein structure, yeast molecular biology



**Thomas Eickbush, Ph.D.**

Retrotransposable elements, protein: RNA and protein: DNA interactions, sequence specific endonucleases.



**Dmitri Ermolenko, Ph.D.**

Structural dynamics of the ribosome and ribosomal ligands during proteins synthesis



**Philip Fay, Ph.D.**

Human factor VIII structure and function; enzyme-cofactor interactions.



**David Goldfarb, Ph.D.**

Molecular mechanisms that control the exchange of molecules and information between the nucleus and cytoplasm



**Vera Gorbunova, Ph.D.**

Mechanisms of aging and the role of DNA repair and genomic instability in the aging process.



**Martin Gorovsky, Ph.D.** *(No longer accepting*

*students)*  
Function of histones in chromatin; Tubulin genes and microtubule diversity.



**Elizabeth Grayhack, Ph.D.**

The role of the genetic code in translation in *Saccharomyces cerevisiae*



**Alan Grossfield, Ph.D.**

Investigating membranes and membrane proteins via computer simulation



**Jeffrey Hayes, Ph.D.**

DNA structure; chromatin; protein-DNA interactions



**Patricia Hinkle, Ph.D.** *(No longer accepting students)*

Molecular Mechanisms of Cell Regulation



**Craig Jordan, Ph.D.**

Cancer Stem cells in the hematopoietic system



**Clara Kielkopf, Ph.D.**

Structural and biophysical basis of normal and disease-associated pre-mRNA recognition



**Hartmut Land, Ph.D.**

Molecular Basis of Multi-Step Carcinogenesis



**Mahin Maines, Ph.D.**

Heme oxygenases and second messenger gases: CO and NO.



**Lynne Maquat, Ph.D.**

RNA metabolism in mammalian cells; Nonsense-mediated mRNA decay (mRNA surveillance); Influence of pre-mRNA splicing on mRNA translation



**David Mathews, M.D., Ph.D.**  
Predicting RNA Secondary Structure



**Joshua Munger, Ph.D.**  
Mechanisms of metabolic network manipulation induced by viral infection and oncogenic mutation.



**Regis O'Keefe, M.D., Ph.D.**  
Molecular Mechanisms of Lead in Chondrocyte Differentiation and Skeletal Development.



**Eric Phizicky, Ph.D.**  
tRNA Biogenesis, Function & Quality Control



**Randy Rosier, M.D., Ph.D.**  
Regulation of Endochondral Ossification.



**Fred Sherman, Ph.D.** *(No longer accepting students)*  
Yeast molecular biology and genetics; Gene expression; Cytochrome c biosynthesis and degradation



**Elaine Sia, Ph.D.**  
Mutagenesis and repair of the mitochondrial genome.



**Harold Smith, Ph.D.**  
The role of mRNA editing in health and disease



**Alan Smrcka, Ph.D.**  
Molecular Mechanisms of Signal Transduction



**Douglas Turner, Ph.D.**  
Biophysical Chemistry of RNA Folding and Therapeutics



**Joseph Wedekind, Ph.D.**  
Mechanisms of action of non-protein-coding (nc)RNAs



**Yisang Yoon, Ph.D.**  
Cell biology of mitochondria: Regulation of mitochondrial dynamics.



**Yi-Tao Yu, Ph.D.**  
RNA modification, pre-mRNA splicing, snPNP biogenesis



**Jiyong Zhao, Ph.D.**  
Cell Proliferation and Mammalian Cells