



**Robert Bambara, Ph.D.**

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



**William Bernhard, Ph.D.**

Physics & chemistry of DNA damage produced by ionizing radiation



**Kara Bren, Ph.D.**

Bioinorganic and Biophysical Chemistry of Metalloproteins



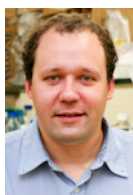
**Regine Choe, Ph.D.**

Diffuse optics for in vivo cancer detection, diagnosis and therapy monitoring



**Mark Dumont, Ph.D.**

Signal transduction; membrane protein structure, yeast molecular biology



**Dmitri Ermolenko, Ph.D.**

Structural dynamics of the ribosome and ribosomal ligands during proteins synthesis



**Thomas Foster, Ph.D.**

Photodynamic Therapy of Cancer and Microbial Infections



**Barry Goldstein, M.D., Ph.D.**

Crystallography and structural chemistry of enzyme-ligand interactions.



**Alan Grossfield, Ph.D.**

Investigating membranes and membrane proteins via computer simulation



**Karlene Gunter, Ph.D.** *(No longer accepting students)*

Role of mitochondria in calcium homeostasis, apoptosis and metabolic control



**Thomas Gunter, Ph.D.** *(No longer accepting students)*

Membrane transport, bioenergetics, calcium regulation



**Jeffrey Hayes, Ph.D.**

DNA structure; chromatin; protein-DNA interactions



**Paul Kammermeier, Ph.D.**

G protein coupled receptor signaling and modulation of ion channels in neurons



**Scott Kennedy, Ph.D.**

NMR imaging and spectroscopy; Tumor biology; RNA structure determination; anion transport



**Clara Kielkopf, Ph.D.**

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



**Todd Krauss, Ph.D.**

Understanding the fundamental properties of materials with a size in between individual molecules and macroscopic objects



**Thomas Krugh, Ph.D.**  
Structure Determination of Nucleic Acids by NMR



**Christopher Lawrence, Ph.D.**  
Molecular biology of DNA-damage induced mutagenesis



**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



**James McGrath, Ph.D.**  
Cell Motility, and Quantitative light microscopy



**Benjamin Miller, Ph.D.**  
Carbohydrate and protein recognition, molecular design, and biomolecular sensing



**Lukas Novotny, Dr. sc. Tecn.**  
The application of optical science and technology to the study of nanoscale phenomena



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



**Terry Platt, Ph.D.** *(No longer accepting students)*

Molecular mechanisms of gene expression; transcription termination and mRNA 3' and formation in Escherichia coli and yeast; protein-nucleic acid.



**Lewis Rothberg, Ph.D.**

Organic Electronics, Plasmon-enhanced Spectroscopy and Biomolecular Sensing



**Alan Senior, Ph.D.**

Multidrug-resistance in cancer; ATP synthesis in bacteria and mitochondria



**Peter Shrager, Ph.D.**

Neuron-neuroglia interactions



**Alan Smrcka, Ph.D.**

Molecular Mechanisms of Signal Transduction



**Harry Stern, Ph.D.**

Computational Chemistry



**Douglas Turner, Ph.D.**

Biophysical Chemistry of RNA Folding and Therapeutics



**Richard Waugh, Ph.D.**

Cell Adhesion, Mechanical and thermodynamic properties of biological membranes; cellular mechanics and function of cytoskeletal proteins



**Joseph Wedekind, Ph.D.**

Mechanisms of action of non-protein-coding (nc)RNAs



**David Yule, Ph.D.**

Mechanisms Underlying  $\text{Ca}^{2+}$  Signaling Events in Exocrine Cells