

2014 CBSD CoBRE Research Retreat Abstract Titles

Ekaterina Voronina, CoBRE Career Development Faculty | UM, Division of Biological Sciences
Department | Voronina Laboratory
Cellular cofactors of RNA regulator FBF-2

Baisen Zeng, Graduate Student | UM, Department of Chemistry & Biochemistry | Sprang Laboratory
A Mutational Study to Characterize a Putative RIC-8A Binding Site to Gia

Margaret Elmer-Dixon, Graduate Student | UM, Department of Chemistry & Biochemistry | Bowler
Laboratory
Characterizing the pH dependent, extended cytochrome c/cardiolipin interactions

Sundaresk Shankar, Graduate Student | UM, Division of Biological Sciences | Montana Biotechnology
Center
*Identification of the inhibitor binding site on the envelope glycoprotein of the Old World Lassa fever virus
(LASV)*

Eric Schultz, Postdoctoral Fellow | UM, Division of Biological Sciences | Ryckman Laboratory
The role of disulfide bond isomerization in herpesvirus entry

Mark Grimes, Faculty | UM, Division of Biological Sciences | Grimes Laboratory
Compartmentalization and collaboration in neuroblastoma tyrosine kinase signaling networks

Harmen Steele, Graduate Student | UM, Department of Chemistry & Biochemistry | BioSpectroscopy
Core Research Laboratory (BCRL) & Woodahl Laboratory
P-glycoprotein: Purification, Incorporation and Activity in Nanodiscs

Kristian Stipe, Undergraduate Student | UM, Department of Chemistry & Biochemistry |
BioSpectroscopy Core Research Laboratory (BCRL)
The Effect of Cardiolipin on Membrane Fluidity of DMPC Nanodiscs

Yizhi Sun, Graduate Student | UM, Department of Chemistry & Biochemistry | Briknarova Laboratory
Characterization of the PR domain from RIZ1 by NMR spectroscopy

Orion Berryman, CoBRE Project Investigator | UM, Department of Chemistry & Biochemistry |
Berryman Laboratory
Incorporating Halogen Bonding Interactions for Catalysis

Kasper Hansen, CoBRE Career Development Faculty and NEW CoBRE Project Investigator
Structural and functional analysis of GluN3-containing NMDA receptors | UM, Biomedical &
Pharmaceutical Sciences Department | Hansen Laboratory

Celine Beamer, NEW CoBRE Project Investigator | UM, Biomedical & Pharmaceutical Sciences Department | Beamer Laboratory

Defining how AhR ligands alter the phenotype and function of innate lymphoid cells.

Andrea Stierle, NEW CoBRE Project Investigator | Biomedical & Pharmaceutical Sciences Department | Stierle Laboratory

Synthesis of more potent inhibitors of molecular pathways associated with EMT.

Valeriy Smirnov, CoBRE Project Investigator | UM, Department of Chemistry & Biochemistry | Smirnov Laboratory

Catalysis of L-Tryptophan Dioxygenation by Indoleamine 2,3-Dioxygenase (IDO1) Proceeds via Random Binding of Substrates

Erica Woodahl, CoBRE Project Investigator | UM, Biomedical & Pharmaceutical Sciences Department | Woodahl Laboratory

Structural and Functional Analysis of Genetic Polymorphisms in the P-glycoprotein (ABCB1) Drug Transporter

Xi Chu, CoBRE Project Investigator | UM, Department of Chemistry & Biochemistry | Chu Laboratory

Catalytic mechanism of mammalian adenylyl cyclase: a theoretical investigation

Klara Briknarova, CoBRE Project Investigator | UM, Department of Chemistry & Biochemistry | Briknarova Laboratory

Structural studies of the envelope glycoprotein from Junín arenavirus

Suzanne Scarlata, CoBRE External Advisory Committee Member | Department of Physiology and Biophysics, Stony Brook University Medical Center

Keynote: Cells – the final frontier: A biophysicist’s journey into the unknown

Macromolecular X-ray Diffraction Facility: Stephen Sprang, Director & Tung-Chung Mou, Manager

BioSpectroscopy Core Facility: Sandy Ross, Director & Michelle Terwilliger, Manager

Molecular Computational Core Facility: William Knight, Interim Director and Systems Administrator

2014 CBSD CoBRE Research Retreat Poster Session Titles

Identification of the inhibitor binding site on the envelope glycoprotein of the Old World Lassa fever virus (LASV)

Sundaresh Shankar, Graduate Student | UM, Division of Biological Sciences | Montana Biotechnology Center

The role of disulfide bond isomerization in herpesvirus entry

Eric Schultz, Postdoctoral Fellow | UM, Division of Biological Sciences | Brent Ryckman Laboratory

Activation of Heterotrimeric G Proteins: A Dynamic Process

Labe Black, Graduate Student | UM, Dept. of Chemistry | BioSpectroscopy Core Research Laboratory (BCRL) & Stephen Sprang Laboratory

P-glycoprotein: Purification, Incorporation and Activity in Nanodiscs

Harmen Steele, Graduate Student | UM, Dept. of Chemistry | BioSpectroscopy Core Research Laboratory (BCRL) & E.Woodahl Laboratory

Dissection of molecular determinants of binding between Rift Valley fever virus nucleocapsid protein and its cognate RNA

Katie Hornak, Graduate Student | UM, Division of Biological Sciences | Stephen Lodmell Laboratory

The Effect of Cardiolipin on Membrane Fluidity of DMPC Nanodiscs

Kristian Stipe, Undergraduate Student | UM, Dept. of Chemistry | BioSpectroscopy Core Research Laboratory (BCRL)

The Role of Chromatin Modification in Germ Cell Specification and Development

Janessa Olson, Post-Baccalaureate | UM, Division of Biological Sciences | Ekaterina Voronina Laboratory

Characterization of the PR domain from RIZ1 by NMR spectroscopy

Yizhi Sun, Graduate Student | UM, Dept. of Chemistry | Klara Briknarova Laboratory

Expression, Purification, and Crystallization of Baculovirus Glycoprotein gp64

Marlene Warner, Undergraduate Student | UM, Dept. of Chemistry | Stephen Sprang Laboratory

A Mutational Study to Characterize a Putative RIC-8A Binding Site to Gia

Baisen Zeng, Graduate Student | UM, Dept. of Chemistry | Stephen Sprang Laboratory

Intracellular localization of SRC-family kinases FYN and LYN in response to receptor tyrosine kinase activation in neuroblastoma

Lauren Foltz, Graduate Student and Mark Grimes, Faculty* | UM, Division of Biological Sciences | Mark Grimes Laboratory

Characterization of ferryl species in indoleamine 2,3-dioxygenase (IDO): Implications for catalysis
Ian Chrisman, Graduate Student | UM, Dept. of Chemistry | Valeriy Smirnov Laboratory

Unfolding studies of the UBA(1) domain
Moses J. Leavens, Graduate Student | UM, Dept. of Chemistry | Bruce Bowler Laboratory

Synthesis, X-ray Structure and Preliminary Anion Binding Studies of Bis-Ethynyl Pyridinium Halogen Bonding Organocatalysts
Asia Riel, Graduate Student | UM, Dept. of Chemistry | Orion Berryman Laboratory

Self-Assembled Terpyridine Bimetallic Catalysts
Daniel A. Decato, Graduate Student | UM, Dept. of Chemistry | Orion Berryman Laboratory

A DFT study of catalytic synthesis of cyclic adenosine monophosphate by mammalian AC
Sanna Alabbad, Graduate Student | UM, Dept. of Chemistry | Xi Chu Laboratory

The Design, Synthesis and Study of a Terphenyl Halogen Bonding Organocatalyst
Nicholas Wageling & George Neuhaus, Graduate Students | UM, Dept. of Chemistry | Orion Berryman Laboratory

Expression of human indoleamine 2,3-dioxygenase (IDO) variants for studies of dynamics of disordered IDO region
Laura Dameron, Undergraduate Student | UM, Dept. of Chemistry | Valeriy Smirnov Laboratory

Stopped-Flow pH Jump Kinetics and the Importance of Human Cytochrome c Residue 72
Eric M. Nold, Graduate Student | UM, Dept. of Chemistry | Bruce Bowler Laboratory

Characterizing the pH dependent, extended cytochrome c/cardiolipin interactions
Margaret Elmer-Dixon, Graduate Student | UM, Dept. of Chemistry | Bruce Bowler Laboratory

His73 vs His 79 mediated cytochrome c alkaline conformational transitions proceed via different pathways
Levi McClelland, Graduate Student | UM, Dept. of Chemistry | Bruce Bowler Laboratory