

**BIOI Participating Faculty Members (2018)**

Name	Degree(s)	Rank	Primary Department or Program	Research Interest
Abdulnour-Nakhour, Solange	PhD, AGAF	Associate Professor of Medicine	Department of Medicine – Gastroenterology (BMS)	Gastroenterology, Reflux disease, Eosinophilic Esophagitis
Albert, Julie N.L.	PhD	Assistant Professor	Chemical and Biomolecular Engineering	Nano-and micro-structured materials; confined crystallization; solvent vapor processing to control polymer morphology
Bayer, Carolyn	PhD	Assistant Professor	Biomedical Engineering	Develops novel medical imaging methods to study the dynamics of molecular expression and physiological function
Betancourt, Aline M.	Phd	Research Assistant Professor	Microbiology and Immunology (BMS)	Oxygen Mechanisms, posttranscriptional control-regulated genes, RNA binding proteins, angiogenesis and cancer research
Blake, Diane A.	PhD	Professor	Microbiology and Immunology (BMS)	Antibody structure and function
Braun, Steven E.	PhD	Research Assistant Professor	School of Medicine (TNPRC Gene Therapy) (BMS)	Intersection of gene therapy, hematopoietic stem cells and the response of the immune system
Brown, Jonathon Quincy	PhD	Associate Professor	Biomedical Engineering	Application and translation of quantitative spectroscopy and imaging tools for the improvement of cancer management in the clinical setting.
Bull, Joseph L.	PhD	Professor	Biomedical Engineering	Biofluid mechanics and ultrasound
Bunnell, Bruce A.	PhD	Professor	Pharmacology (BMS)	Aging, Autoimmune diseases, Neurodegenerative disorders, Stem cells, Tissue engineering

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Burow, Matthew E.	PhD	Assistant Professor	Department of Medicine - Hematology and Medical Oncology (BMS)	Molecular mechanisms that control estrogen receptor mediated gene expression and anti-estrogen resistance in breast carcinoma cells
Chrisey, Douglas	PhD	Professor	Physics and Engineering	Materials Engineering
Collins-Burow, Bridgette	MD. PhD	Assitant Professor	Department of Medicine - Hematology and Medical Oncology (BMS)	Role of novel experimental agents and epigenetic therapy in the regulation of microRNA in breast cancer,
Cortez, Ricardo	PhD	Professor	Mathematics	Computational Fluid Dynamics, Numerical Methods and Scientific Computing, Biological Fluid Flow Applications
Deng, Hong-Wen	PhD	Center Director, Endowed Chair, Professor	Global Biostatistics and Data Science	Women's Health/Sex Differences; genomic technologies; statistical and bioinformatical methods; osteoporosis
Garry, Robert F.	PhD	Professor	Microbiology and Immunology (BMS)	Virology and Molecular mechanisms of viral pathogenesis
Gaver, III, Donald P.	PhD	Professor and Chair	Biomedical Engineering	Interrelationships between the mecganical and physicochemical behavior of biological systems
Gibb, Bruce C.	PhD	Professor	Chemistry	Development and study of novel supramolecular systems in aqueous solution
Grayson, Scott M.	PhD	Professor	Chemistry	Macromolecular architecture, Material applications, medical applications
Höner zu Bentrup, Kerstin	PhD	Assistant Professor	Microbiology and Immunology (BMS)	Microscopy, Bactererial Pathogenesis, Three-dimensional cell-culture systems
Jayawickramaraja, Janarthanan	PhD	Associate Professor	Chemistry	Nanobiotechnology, Molecular Recognition and Self-Assembly
John, Vijay T.	D. Eng. Sc.	Professor	Chemical and Biomolecular Engineering	Self-Assembly and Nanostructured Materials, Polymer/nanoparticle composites, biomolecular materlrs, microemulsion systems, clathrate hydrate thrmodynamics

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Khismatullin, Damir B.	PhD	Associate Professor	Biomedical Engineering	Investigation of the mechanical and transport properties of biomedical systems.
Lawson, Louise B.	PhD	Assistant Professor	Microbiology and Immunology (BMS)	Vaccine and Therapeutic Drug Delivery, Mucosal Vaccines
Machado, Heather L.	PhD	Assitant Professor	Biochemistry and Molecular Biology (BMS)	Mechanisms that drive mammary gland development
MacLean, Andrew G.	PhD	Assistant Professor	Microbiology and Immunology (TNPRC Pathology) (BMS)	Neuropathogenesis of AIDS with emphasis on blood-brain barrier disruption using ex vivo and in vitro techniques
Miller, Kristen S.	PhD	Assistant Professor	Biomedical Engineering	Extracellular matrix remodeling in response to various biochemomechanical stimuli including normal processes disease and injury
Moore, Michael J.	PhD	Associate Professor	Biomedical Engineering	Develop in vitro models of neural growth, physiology, and disease by manipulating the chemical and physical extracellular microenvironment
Morici, Lisa A.	Phd	Associate Professor	Microbiology and Immunology (BMS)	Novel vaccine platforms against intracellular bacteria, Naturally-derived antimicrobials to reat multidrug resistant organisms and In vitro and in vivo models of infection
Mostany, Richardo	PhD	Assistant Professor	Pharmacology (BMS)	Effects if aging & ischemia on the brain, In vivo imaging techniques, Neuronal synaptic plasticity in the cebral cortex, Stroke, Two-Photon laser microscopy
Murfee, Walter Lee	PhD	Associate Professor	Biomedical Engineering	Identification of Cellular Dynamics Involved in Angiogenesis, Identification of Lymphatic Structure and Funciton in Adult Microvascular Networks, The influence of Structural Remodeling Associated with Hypertention on Network Resistance
Navar, Luis Gabriel	PhD	Professor and Chair	Physiology (BMS)	Hypertension, Renal Disease, Renin-Angiotensin System
Pesika, Noshir	PhD	Associate Professor	Chemical and Biomolecular Engineering;	Fundamental understanding of the underlying physics before the development of applied “smart” materials
Pursell, Zachary F.	PhD	Assistant Professor	Biochemistry and Molecular Biology (BMS)	DNA polymerases, DNA replication, DNA damage and repair

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Reed, Wayne F.	PhD	Professor	Physics and Engineering	Polyelectrolyte physics
Robinson, Anne Skaja	PhD	Professor and Chair	Chemical and Biomolecular Engineering	Understanding the fundamental interactions between molecules, both in isolation and in the complex environment of the cell
Robinson, James E.	MD	Professor	Department of Pediatrics (BMS)	Pediatric Infectious Disease
Sandoval, Nicholas R.	PhD	Assistant Professor	Chemical and Biomolecular Engineering	Genome Engineering, Metabolic Engineering, Biofuels, biosensors, sequence-function elucidation
Sholl, Andrew B.	MD	Assistant Professor	Department of Pathology and Laboratory Medicine (BMS)	Pathology
Wang, Yu-Ping	PhD	Professor	Biomedical Engineering	Fundamental research on multiscale signal/image representation and analysis; Multiscale bioimaging analysis from organ and tissue levels to molecular and cellular levels; Bioinformatics in human genomics and cytogenetics
Wenk, Carola	PhD	Professor	Computer Science	Algorithms and Data Structures, in particular Computational Geometry and Shape Matching
Wimley, William C.	PhD	Professor	Biochemistry and Molecular Biology (BMS)	Fundamental principles of the folding and structure of peptides and proteins in membranes
Woods, Thomas Cooper	PhD	Associate Professor	Physiology (BMS)	Elucidate the impact of co-morbidities such as Diabetes Mellitus and Chronic Kidney Disease on the progression of cardiovascular disease