**2022**

**Targeted delivery of microbiome-modulating metabolites to the lower intestine to reduce systemic toxicities of cancer therapy.**
Robert Jenq, MD Anderson  
Kevin McHugh, Rice University

**Maternal high-fat diet-induced epigenetic reprogramming of offspring brain and behavior**
Shelley Buffington, University of Texas Medical Branch  
Cheryl Walker, Baylor College of Medicine

**Developing New Genetically Tractable Chassis for Pancreatic Bacterial Tumor Therapies**
George Lu, Rice University  
Florence McAllister, MD Anderson

**2021**

**Targeting Dysbiosis and Intestinal Barrier Dysfunction in Malnutrition**
Peter Melby, University of Texas Medical Branch  
Robert Britton, Baylor College of Medicine

**Decipher Electrophysiological and Transcriptomic Signatures of the Sinoatrial Node in Response to Aging**
Jun Wang, UT Health Science Center at Houston  
Xiaolong Jiang, Baylor College of Medicine

**Engineering Microenvironments to Enhance Direct Cardiac Reprogramming Efficiency**
Renita Horton, University of Houston  
Todd Rosengart, Baylor College of Medicine

**2020**

**An AI-Assisted Smart Wound Dressing for Expedited and Personalized Wound Healing**
Taiyun Chi, Rice University  
Swathi Balaji, Baylor College of Medicine

**CRISPR/Cas9-based epigenome editing to dissect the mechanistic causality between DNA methylation and immune phenotype**
Isaac Hilton, Rice University  
Andrew Dinardo, Baylor College of Medicine

**Region-specific and Brain-wide Gene Therapy for Neurodevelopmental Disorders**
MingShan Xue, Baylor College of Medicine  
Jerzy Szablowski, Rice University

**2019**

**Visualizing Cell and Molecular Transitions that Contribute to Abnormal Craniofacial Development**
George Eisenhoffer, MD Anderson  
Jacqueline Hecht, UT Health Science Center at Houston

**DNA Hydroxymethylation Signatures in Neonatal Opioid Addiction**
Jonathan Davies, Baylor College of Medicine
2009-2022 John S. Dunn Collaborative Research Award Program Recipients

Deqiang Sun, Institute of Biosciences and Technology

_Hormone Memory: Epigenomic Impacts of Estrogen Exposure on Later Life Metabolism_
Wenbo Li, UT Health Science Center at Houston
Zheng Sun, Baylor College of Medicine

2018

_Understanding Pathogenic Determinants in Enterococcus faecium_
Natasha Kirienko, Rice University
Barbara Murray, UT Health Science Center at Houston

_Unraveling How Gut Microbiota Influence Form and Function in the Developing Enteric Nervous System_
Rosa Uribe, Rice University
Anne Marie Krachler, UT Health Science Center at Houston

_Photo-induced Epigenetic Remodeling in Mammalian Cells_
Yubin Zhou, Institute of Biosciences and Technology
Han Xiao, Rice University

_An Auditory Virtual Reality to Illuminate Learning and Memory_
Caleb Kemere, Rice University
Matthew McGinley, Baylor College of Medicine

2017

_Development of High-Throughput Genetic Strategies to Dissect Microbiome Impact on Host Physiology_
Buck Samuel, Baylor College of Medicine
Joff Silberg, Rice University
Grant Hughes, University of Texas Medical Branch

_Developing and Deploying Genetically Encoded Indicators for Imaging Voltage Dynamics in the Mammalian Auditory System_
Robert Raphael, Rice University
Francois St-Pierre, Baylor College of Medicine

_Host Targeted Therapeutics to Combat Drug-Resistant Pathogens_
Ashok Chopra, University of Texas Medical Branch
Tor Savidge, Baylor College of Medicine/Texas Children's Hospital

_Event_
_Texas Medical Center Hematopoiesis and Inflammation Symposium_
Emily Mace, Baylor College of Medicine
Stephanie Watowich, MD Anderson
Pamela Wenzel, University of Texas Health Science Center, Houston

2016

_Quantitative Assessment of Liver-Directed In Vivo Genome Editing with CRISPR/Cas9_
Gang Bao, Rice University
William Lagor, Baylor College of Medicine
Monitoring Intracellular Temperature in Cancer Cells Using Metal Complexes
Angel A. Marti-Arbona, Rice University
Steven Curley, Baylor College of Medicine

Decoding the Gene Regulatory Mechanism Underlying Fate Determination of Hematopoietic Stem Progenitor Cells
José Onuchic, Rice University
Yun (Nancy) Huang, Institute for Biosciences and Technology, Texas A&M-HSC

Cellular Level, Functional Brain Imaging Using Multi-probe, Snapshot Image Spectroscopy
Tomasz Tkaczyk, Rice University
Kimberley Tolias, Baylor College of Medicine

Event
TMC-GCC Collaborative Symposium: Metabolism in Cancer
Pratip Bhattacharyya, MD Anderson
Dan Carson, Rice University
Arun Sreekumar, Baylor College of Medicine
Daniel Frigo, University of Houston

2015

Engineering E. coli for Temperature Independent and Light-activated Secretion of Colanic Acid to Enable Fundamental and Translational Studies of a Novel Gut Microbiota-mediated Longevity Pathway
Jeffrey Tabor, Rice University
Meng Wang, Baylor College of Medicine

Mini Mechanobiology: Mechanical Testing and Organ Culture of Rodent Heart Valves
Jane Grande-Allen, Rice University
Dianna Milewicz, University of Texas Health Science Center Houston

Linking Transcriptional Regulation of Signaling Pathway Components to Embryonic Patterning
Aryeh Warmflash, Rice University
Ido Golding, Baylor College of Medicine

Genes in Context: Using Genome Editing to Reveal how Molecular, Neural, and Social Factors Orchestrate Variation in Drosophila Aggressive Behavior
Julia Saltz, Rice University
Herman Dierick, Baylor College of Medicine

Event
Symposium on Membrane Biophysics
Michael Zhu, University of Texas Health Science Center Houston
James McNew, Rice University
Ted Wensel, Baylor College of Medicine
Jim Briggs, University of Houston

2014

Local Dual Delivery of Antifungals and Growth Factors for Treatment of Necrotizing Invasive Mold Infections
Antonios Mikos, Rice University
Dimitrios Kontoyiannis, University of Texas MD Anderson Cancer Center

**Nanoparticle Prophylaxis Protection from Chemotherapy Ototoxicity and Hearing Loss**
Fred Pereira, Baylor College of Medicine
James Tour, Rice University

**Identifying the Molecular Basis of CO₂chemosensitivity Via Microfluidic Characterization and Cell Sorting**
Jacob Robinson, Rice University
Russell Ray, Baylor College of Medicine

**Maximizing Therapeutic Gain from Metallic Nanoparticle-radiation Interaction Via Rational Design**
Eugene Zubarev, Rice University
Sunil Krishnan, University of Texas MD Anderson Cancer Center

Event
**TMC-GCC Collaborative Workshop: Regenerative Medicine in Neuroscience and Neuroengineering**
Charles S. Cox, Jr., University of Texas Health Science Center at Houston
Jane Grande-Allen, Rice University
Behnaam Aazhang, Rice University
Benjamin Deneen, Baylor College of Medicine

**2013**

**Enhanced Cancer Detection through Development of Novel Immunoprobes**
Kathleen Beckingham, Rice University
Robert Bast, University of Texas MD Anderson Cancer Center

**Non-invasive MR Colonoscopy and Early Detection of Colon Cancer by Targeted Hyperpolarized Silicon Nanoparticles**
Pratip Bhattacharya, University of Texas MD Anderson Cancer Center
Daniel Carson, Rice University

**High-content Quantitative Imaging and Flow-based Remodeling of in vitro Vascularized Engineered Tissues**
Jordan Miller, Rice University
Mary Dickinson, Baylor College of Medicine

**Imaging the Delivery and Therapeutic Response of Protease-activated Virus Nanotherapeutics**
Junghae Suh, Rice University
Eva Sevick, University of Texas Health Science Center-Houston

**Rapid Fungemia and Bacteremia Screening Via Ultraspecific Detection of Nucleic Acid Biomarkers**
David Zhang, Rice University
John Holcomb, University of Texas Health Science Center at Houston

Event
**Plasmon-hybrid Superstructures for Functionally Biomimetic Light-Driven Processes**
Christy Landes, Rice University
Stephan Link, Rice University
Neal Waxham, University of Texas Medical School-Houston
Richard Willson, University of Houston
2012

**New Antimicrobials Through MEP Pathway Inhibition**
Janet Braam, Rice University
Heidi Kaplan, University of Texas Medical School

**Multi-layered Cardiac Patches from Dynamic Surfaces**
Jeffrey Jacot, Rice University
Rafael Verduzco, Rice University
Iki Adachi, Baylor College of Medicine/Texas Children's Hospital

**Metabolic Signatures of Cancer Stem Cells**
Ching Lau, Baylor College of Medicine
Ka-Yiu San, Rice University

**Event**
*Telehealth Research Institute: Mission, Strategy, and Structure*
Robert Satcher, University of Texas MD Anderson Cancer Center
Jan Odegard, Rice University
Michael Twa, University of Houston
Cindy Farach-Carson, Rice University

2011

**Developing Split Protein Biocatalysts and Reporters for Translational Systems and Synthetic Biology**
Jonathan Silberg, Rice University
Lynn Zechiedrich, Baylor College of Medicine
Anthony Maresso, Baylor College of Medicine

**A Bio-Nano-Chip for Salivary Anticonvulsant Drug Assay in Epilepsy Patients**
Giridhar Kalamangalam, UT Health Science Center at Houston
John McDevitt, Rice University

**Engineered, Affordable Glycans as New Antimicrobials**
George Bennett, Rice University
Mary Estes, Baylor College of Medicine

**Event**
*Multicellular Self-Organization Meeting*
Amina Qutub, Rice University
Oleg Igoshin, Rice University
Gábor Balazsi, MD Anderson Cancer Center
Waleed Gaber, Texas Children's Hospital

2010

**Single Cell Dynamics of The White/Opaque Epigenetic Switch in Candida albicans**
Matthew Bennett, Rice University
Kresimir Josic, University of Houston
Michael Gustin, Rice University
Molecular Activated Stealth Chemotherapy (MASC) Nanoparticles for Cancer Treatment
Rebekah Drezek, Rice University
Liz Bikram, University of Houston

Structure Determination of Novel Targets Identified from a Multi-drug Resistant Pathogen
Yousif Shamoo, Rice University
Cesar Arias, University of Texas Health Science Center at Houston

Event
Planning a Center for NeuroEngineering
Peter Saggau, Baylor College of Medicine
Steven Cox, Rice University
Richard Baraniuk, Rice University
Nitin Tandon, University of Texas Health Science Center at Houston
Robert Raphael, Rice University

2009

T-cell Mediated Delivery of Gold Nanoparticles for Externally Triggered Photothermal Cancer Therapy
Rebekah Drezek, Rice University
Aaron Foster, Baylor College of Medicine

Synthetic Tuning of a Breast Cancer-controlling Network
Oleg Igoshin, Rice University
Michael Mancini, Baylor College of Medicine
Gabor Balazsi, UT M. D. Anderson Cancer Center

Development of High Resolution Endoscopes for In Vivo Imaging of the Inner Ear
Tomasz Tkaczyk, Rice University
John Oghalai, Baylor College of Medicine

Event
Early Disease Detection: Biomarker Discovery to Clinical Application
John McDevitt, Rice University
Christie Ballantyne, Baylor College of Medicine
David Gorenstein, UT Health Science Center at Houston