

## **NIH Progenitor Cell Biology Consortium (PCBC) Cardiovascular Tissue Engineering (CVTE) Symposium**

**Monday, March 28, 2016**  
**11:00 AM – 5:00 PM**

*The University of Alabama at Birmingham  
UAB National Alumni Society House  
1301 10th Avenue South, Birmingham, AL 35205*

### **Opening Remarks – 11:00 - 11:10 AM**



**Jianyi “Jay” Zhang, MD, PhD**  
Chair, Department of Biomedical Engineering  
T. Michael and Gillian Goodrich Endowed Chair of Engineering Leadership  
Professor of Medicine, of Engineering  
School of Medicine, School of Engineering  
UAB | The University of Alabama at Birmingham



**J. Iwan D. Alexander, PhD**  
Dean, School of Engineering  
Professor of Engineering  
UAB | The University of Alabama at Birmingham

### **Cell Therapy – 11:10 AM - 12:26 PM**

**MODERATOR: Timothy J. Kamp MD, PhD – University of Wisconsin**

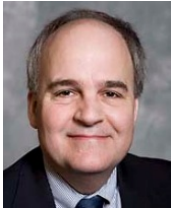
#### **11:10 - 11:22 AM**



*Endothelial Regeneration with Small Molecules*

**John P. Cooke, MD, PhD**  
Joseph C. “Rusty” Walter and Carole Walter Looke Presidential Distinguished Chair in  
Cardiovascular Disease Research, Department of Cardiovascular Sciences  
Professor of Cardiovascular Sciences, Institute for Academic Medicine  
Center for Cardiovascular Regeneration, DeBakey Heart & Vascular Center  
Houston Methodist Hospital, Weill Cornell Medical College

**11:22 - 11:35 AM**



*Chemical Genetics and Molecular Technologies for Rebuilding and Repairing the Injured Heart*

**Daniel J. Garry, MD, PhD**  
Professor of Medicine  
St. Jude Medical Endowed Chair in Cardiology  
Director, Lillehei Heart Institute  
University of Minnesota Medical School

**11:35 - 11:47 AM**



*Induced Cardiac Progenitor Cells: A New Tool for Cardiac Repair*

**Timothy J. Kamp MD, PhD**  
Professor of Medicine  
Co-director, Stem Cell and Regenerative Medicine Center  
Cellular and Molecular Arrhythmia Research Program  
UW-Madison School of Medicine and Public Health

**11:47 AM - 12:01 PM**



*Where are we with Cardiac Cell-Based Repair for Human Heart Failure?*

**Joshua M. Hare, MD**  
Senior Associate Dean for Experimental and Cellular Therapeutics  
Louis Lemberg Professor of Medicine, Molecular and Pharmacology, and BME  
Director, Interdisciplinary Stem Cell Institute  
University of Miami Miller School of Medicine

**12:01 - 12:14 PM**



*Cell Therapy with Embryonic Stem Cell-Derived Cardiomyocytes Encapsulated in Injectable Nanomatrix Gel Enhances Promotes Cardiac Repair*

**Young-sup Yoon, MD, PhD**  
Professor of Medicine and Biomedical Engineering  
Director of Stem Cell Biology  
Emory University School of Medicine

**12:14 - 12:26 PM**



*Redox Regulation of Cardiomyocyte Renewal*

**Hesham A. Sadek, MD, PhD**  
J. Fred Schoellkopf, Jr. Chair in Cardiology  
Associate Professor of Cardiology  
Associate Director for Cardiac Regeneration, Center for Regenerative Science & Medicine  
UT Southwestern Medical Center

**12:30 - 1:30 PM Lunch**

## **Tissue Engineering – 1:30 – 3:16 PM**

**MODERATOR: Joel L. Berry, PhD – Associate Professor, Department of Biomedical Engineering, UAB**

### **1:30 - 1:42 PM**



*Human Model Systems of Heart Disease using Tissue Engineering Technologies*

**Ibrahim Domian, MD, PhD**

Assistant Professor of Medicine  
Staff Cardiologist, Cardiovascular Research Center, Massachusetts General Hospital  
Harvard Medical School

### **1:42 - 1:54 PM**



*Vascularization Platform for Organ-on-a-Chip Engineering and Direct Surgical Anastomosis*

**Milica Radisic, PhD**

Professor & Canada Research Chair, Functional Cardiovascular Tissue Engineering  
Institute of Biomaterials & Biomedical Engineering  
University of Toronto

### **2:04 - 2:16 PM**



*Engineering a Platform for Enhanced Maturation and Evaluation of hiPSC-Derived Heart Tissue*

**Andrea Leonard, PhD**

Postdoctoral Researcher  
Cell Biomechanics Lab  
University of Washington

### **2:16 - 2:28 PM**



*Human Myocardial Patch for Heart Repair*

**Nenad Bursac, PhD**

Rooney Family Associate Professor of Biomedical Engineering  
Associate Professor of Medicine  
Duke University School of Medicine

### **2:28 - 2:40 PM**



*Stem Cell Differentiation and Fusion with Cardiomyocytes for Myocardial Repair*

**Brenda Ogle, PhD**

Associate Professor of Biomedical Engineering  
Department of Biomedical Engineering  
University of Minnesota

**2:40 - 2:52 PM**



*Functional Assays of Single hiPSC-CMs*

**Beth L. Pruitt, PhD**

Associate Professor of Mechanical Engineering, of Molecular and Cellular Engineering  
Stanford Microsystems Lab  
Stanford University

**2:52 - 3:04 PM**



*Epicardial FSTL1 Reconstitution Regenerates the Adult Mammalian Heart*

**Vahid Serpooshan, PhD**

Postdoctoral Research Fellow, Sean Wu Lab  
Stanford Cardiovascular Institute  
Stanford University School of Medicine

**3:04 - 3:16 PM**



*Smooth Muscle Cell and Endothelial Cells for Cardiovascular Tissue Engineering*

**Y. Eugene Chen, MD, PhD**

Frederick Huetwell Professor of Cardiovascular Medicine  
Professor of Cardiac Surgery, Physiology, and Pharmacology  
Vice-Chair for Basic and Translational Research, Department of Cardiac Surgery  
Director, Center for Advanced Models for Translational Sciences and Therapeutics  
University of Michigan Medical Center

**3:16 - 3:35 PM Break**

## **Cardiovascular Physiology – 3:35 – 4:36 PM**

**MODERATOR: Sumanth D. Prabhu, MD – UAB**

**3:35 - 3:47 PM**



*Optical Mapping of Cardiac Propagation and Deformation*

**Jack M. Rogers, PhD**

Professor of Biomedical Engineering  
Department of Biomedical Engineering  
School of Medicine, School of Engineering  
UAB | The University of Alabama at Birmingham

**3:47 - 4:00 PM**



*Cardiac Micro-Impedance Measurements between Grafts and Recipient Heart*

**Andrew E. Pollard, PhD**  
Professor of Biomedical Engineering  
Department of Biomedical Engineering  
School of Medicine, School of Engineering  
UAB | The University of Alabama at Birmingham

**4:00 - 4:12 PM**



*Mechanisms of Cardiac Remodeling and Stem Cell-Mediated Repair in Heart Failure*

**Sumanth D. Prabhu, MD**  
Professor of Medicine and Cell, Developmental and Integrative Biology  
Mary Gertrude Waters Chair of Cardiovascular Medicine  
Director of the Division of Cardiovascular Disease  
UAB | The University of Alabama at Birmingham

**4:12 - 4:24 PM**



*A Novel Role for the Apoptosis Inhibitor ARC in Suppressing TNF $\alpha$ -induced Regulated Necrosis*

**Richard N. Kitsis, MD**  
Professor of Medicine (Cardiology), Professor of Cell Biology  
The Dr. Gerald and Myra Dorros Chair in Cardiovascular Disease  
Director, Wilf Family Cardiovascular Research Institute  
Albert Einstein College of Medicine  
Yeshiva University

**4:24 - 4:36 PM**



*Mitochondria as Arbiters of Cardiomyocyte Fate*

**Gerald W. Dorn, II, MD**  
Philip and Sima K. Needleman Professor of Medicine  
Associate Chair for Translational Research  
Director, Center for Pharmacogenomics  
Washington University School of Medicine

**Concluding Remarks – 4:55 - 5:00 PM**

**MODERATOR: Jianyi “Jay” Zhang, MD, PhD – UAB**