



Alabama State University  
Boston University  
Bryn Mawr College  
New Jersey Institute of Technology  
University of Pennsylvania  
University of Texas at Austin  
Washington University in St. Louis

## **CEMB Summer Research Experience for Undergraduates (REU) Symposium**

**August 2, 2018**

**University of Pennsylvania  
Singh Center for Nanotechnology  
Glandt Forum (3<sup>rd</sup> floor)**

**9 – 9:30**

**Continental Breakfast**

**9:30**

**Welcome**

Rebecca Wells, MD  
CEMB Director of Education

Vivek Shenoy, PhD  
CEMB Director

### **Research Talks- Session 1**

**9:45 Sarah St. Pierre, Worcester Polytechnic Institute**

**Title:** Developing an in vitro System Mimicking the Facet Capsular Ligament: Effects of Fibroblasts & Collagen Alignment on Collagen Gel Mechanics

**Host: Winkelstein Lab**

**10:00 Whitney Schroeder, Clemson University**

**Title:** Force Detecting FRET Sensors in Cardiomyoblast Lamina

**Host: Prosser Lab**

**10:15 Deidre Lee, University of the Virgin Islands**

**Title:** Bile duct-on-a chip Device to study Cholangiocyte and Fibroblast interactions in the Peribiliary Extracellular Matrix

**Host: Wells Lab**

**10:30 Zachary Varley, University of Pennsylvania**

**Title:** Kinetic Monte Carlo Model of Cortical Actin Network Polymerization

**Host:** Shenoy Lab

**10:45 Grace Wu, University of Pennsylvania**

**Title:** Modeling Dynamic Actin and Microtubule-Based Cytoskeletal Networks Using Novel Nanofabrication Techniques

**Host:** Holzbaur Lab

**11:00 Jacob Maciel, University of Texas, Rio Grande Valley**

**Title:** Exploring the Role of Vimentin Intermediate Filaments in Cellular Mechanosensation

**Host:** Janmey Lab

**11:15 Amanda Martinez, University of California Merced**

**Title:** Distinct Stiffness Thresholds for ECM Gene Expression

**Host:** Assoian Lab

**11:30 – 11:45**

**Break**

## **Research Talks- Session 2**

**11:45 Dominic Demma, University of Illinois**

**Title:** In Situ Stiffness Sensing for Lung Fibrosis-on-a-chip

**Host:** Huh Lab

**12:00 Kiera Yankson, Oakwood University**

**Title:** Biophysical Regulation of Histone Modification and Chromatin Architecture in Mesenchymal Stem Cells

**Host:** Lakadamyali and Mauck Labs

**12:15            Thea Ornstein, University of Maryland College Park**

**Title:** The role of O-GlcNAcylation in YAP nuclear localization with increasing substrate stiffness

**Host: Mauck Lab**

**12:30            Niko DiCaprio, Temple University**

**Title:** Supramolecular Guest- Host Double Network Hydrogel for Modulating Cell Spreading and Focal Adhesion Size

**Host: Burdick Lab**

**12:45            Robert Brosnan, University of Pennsylvania**

**Title:** A Computational Approach to Tumor-Targeting Nanoparticles

**Host: Radhakrishnan Lab**

**1:00             Gabrielle Caponigro, Rutgers University**

**Title:** The Navigation of Dendritic Motor Proteins in an Antiparallel Microtubule Environment

**Host: Ostap Lab**

**1:15**

**Closing Remarks**

Ashley Wallace, PhD

CEMB Diversity and Education Coordinator



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