Dennis Discher, University of Pennsylvania, Subgroup Chair

Mechanobiology Subgroup 2015 Symposium
Saturday, February 7, 2015
Baltimore, Maryland

10:00 AM Introduction by Dennis Discher, Subgroup Chair

**Junior Investigator talks selected from submitted abstracts**

10:05 AM Rishita Changede, Mechanobiology Institute, Singapore
*Nanoscale Architecture of Integrin Clusters*

10:20 AM Masatoshi Morimatsu, Stanford University
*Visualizing the architecture of cellular adhesion complexes using fluorescent molecular force sensors*

10:35 AM Jerome Irianto, University of Pennsylvania
*Constricted cell migration damages DNA and drives lamin segregation*

"Lightning talks" on Mechanobiology

10:50 AM Joshua Francois, University of California, San Diego
*Mechanics of Neutrophil Migration in Three-Dimensional Matrices*

10:56 AM Chii J. Chan, Cambridge University, United Kingdom
*Unique Mechanical Properties of Cell Nuclei Regulated By Chromatin.*

11:02 AM Zhangli Peng, University of Notre Dame
*Modeling Transmigration of Malaria Infected Red Blood Cells Through Inter-Endothelial Slits in Human Spleens Using Dissipative Particle Dynamics.*

11:08 AM Jaime Agudo, Max Planck Institute, Germany
*Stability Regimes and Engulfment Patterns of Nanoparticles at Membranes.*

11:14 AM Katelyn M. Spillane, National Institute for Medical Research, United Kingdom
*Characterizing Mechanical Forces during B Cell Responses.*

11:20 AM Flori H. Yellin, Johns Hopkins University
*Electromechanical Model for Non-Excitable Cells.*

11:26 AM Yulia Artemenko, Johns Hopkins University
*Acute Mechanical Stimulation Activates the Chemotactic Signaling Network.*

11:32 AM Nazha Hamdani, Ruhr University Bochum, Germany
*Oxidative Stress Regulates Titin Elasticity By Affecting Ig-Domain Stability.*

11:38 AM Kinjal Dasbiswas, Weizmann Institute of Science, Israel
*Substrate Stiffness-Modulated Registry Phase Correlations In Cardiomyocytes Maps Structural Order To Coherent Beating.*

11:44 AM Charles D. Cox, Victor Chang Cardiac Research Institute, Australia
*Probing the Mechano sensitivity of PIEZO1 Channels.*

11:50 AM Julian Hassinger, University of California, Berkeley
*Role of Surface Tension in the Formation of Membrane Tubes.*

12:00 PM Lunch Break

1:05 PM Ewa Paluch, University College London, United Kingdom
*Actin Cortex Mechanics and Cell Shape Control in Migration and Division*

1:40 PM Ulrich Schwarz, Heidelberg University, Germany
*Stiffness Sensing Through Myosin II Minifilaments*

2:15 PM Kenneth Yamada, NIH
*Cell Migration*

2:50 PM Break
3:10 PM  Benoit Ladoux, Paris Diderot University, France
Adaptative Response of Cell Cytoskeleton Rheology and Ordering Governs Matrix Rigidity Sensing

3:45 PM  Douglas Robinson, Johns Hopkins University
Molecular Mechanisms of Contractility-Based Cellular Mechanosensing

4:20 PM  Roop Mallik, Tata Institute of Fundamental Research, India
Dynein Teams Assemble on Lipid Rafts to Generate Large Forces on Phagosomes

4:55 PM  Yong Hwee Foo, National University Singapore
Investigation of the EnvZ/OmpR Bacterial Signaling System Using Single Particle Tracking and Single Molecule Force Spectroscopy

5:15 PM  Subgroup Business Meeting

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