Symposium on Single Cell/Single Molecule Biology

Thursday, January 10, 2013

AGENDA

8:00 Breakfast

8:45 Welcome
9:05 Donna Arndt-Jovin, Max Planck Institute for Biophysical Chemistry
Determination of dynamic ErbB1 receptor (EGFR) conformations in living mammalian cells using TCSPC Fluorescence Lifetime Imaging Microscopy
9:45 Stephen Bunnell, Tufts University
The dynamic assembly of complexes linking the T cell antigen receptor to the actin cytoskeleton
10:15 Oscar Negrete, Sandia National Labs
RNA interference screening for virus-host interactions

10:45 Coffee break

11:15 Lev Tsimring, UCSD
Synchronization of synthetic gene oscillators
11:45 Adam Hoppe, South Dakota State University
Imaging membrane curvature dynamics during endocytosis
12:15 Taras Lyubchenko, University of Colorado Denver School of Medicine
Multifaceted signaling responses in B lymphocytes: roles of localized Ca2+ influx within the immune synapse and initial protein phosphorylation events in BCR signaling regulation

12:30 – 1:30 Lunch

1:30 Michelle Kovarik, UNC Chapel Hill
Microtechnology to Interrogate Signaling in Single Cells
2:00 Aaron Neumann, University of New Mexico
Organization and Dynamics of Membrane Receptor Domains for Anti-fungal Immunity
2:30 Sandra de Keijzer, Nijmegen Centre for Molecular Life Sciences
Spatiotemporal GPCR mobility constraints in the plasma membrane regulates cell signaling

2:45 Coffee break

3:15 Marcel Bruchez, Carnegie-Mellon University
Genetically Targeted and Activated Physiological Sensors
3:45 Jennifer Gillette, University of New Mexico
Regulation of hematopoietic stem cell communication with the bone marrow niche
4:15 W. E. Moerner, Stanford University
Recent Progress in WideField 3D Super-Resolution Imaging in Cells Using Single Molecules

5:00 – 7:00 Poster Session & Refreshments

UNM STMC SpatioTemporal Modeling Center New Mexico Cancer Nanotech Training Center Sandia National Laboratories New Mexico CONSORTIUM

Posters

Multifaceted signaling responses in B lymphocytes: roles of localized Ca2+ influx within the immune synapse and initial protein phosphorylation events in BCR signaling regulation
Taras Lyubchenko, University of Colorado Denver School of Medicine

Lysosome Mobility: Single Particle Tracking of Endo H Treated Cells
Austin J. Cyphersmith, Georgia Institute of Technology

Single Quantum Dot tracking reveals differences in receptor mobility and dimerization of EGFR harboring kinase domain mutations
Christopher C. Valley, University of New Mexico

Autophagy of ER-retained Mpl is linked to low expression levels of Jak2 and provides an unconventional route to cell surface
Cédric Cleyrat, Anza Darehshouri, University of New Mexico

Spatial relationships between clathrin-dependent and independent mechanisms for FcεRI internalization
Cédric Cleyrat, Anza Darehshouri, University of New Mexico

Multi-color Single Particle Tracking of QD-IgE-FcεRI: directly correlating oligomer size with receptor mobility and signaling
Patrick J. Cutler, University of New Mexico

Spatiotemporal GPCR mobility constraints in the plasma membrane regulates cell signaling
Sandra de Keijzer, Nijmegen Centre for Molecular Life Sciences

C-type lectin dynamics and recruitment at a fungal contact site
Matthew Graus, University of New Mexico

Imaging of Fcγ receptor signaling complexes dynamics by TIRF
Jia Lin, South Dakota State University

Shared Protein Complexes of Primary Cilia Link Craniofacial Disorders and Polycystic Kidney Disease
Stephanie Jerman, University of New Mexico

3-Dimensional Tracking of Blinking-Suppressed Quantum Dots in Live Cells
Aaron M. Keller, Los Alamos National Laboratory

Microfluidic Platform for Single and Multiple Pulse of Ligand Exposure on Single Cells or Multiple Cells
Mario J. Paz, University of New Mexico

The Regulation of β-catenin and N-cadherin by CD82
Kristopher D Marjon, University of New Mexico

Quantification of Receptor Co-Localization on Spherical Surfaces
Carolyn Pehlke, University of New Mexico

Regulation of VLA-4 mediated hematopoietic stem/progenitor cell adhesion by CD82
Christina M. Termini, University of New Mexico

GPER-mediated regulation of nuclear Akt/FOXO3a signaling
Erin Zekas, University of New Mexico

Using Single Particle Tracking to Probe ErbB3 Homo- and Hetero-interactions
Mara Steinkamp, University of New Mexico

Single Particle Tracking Using Fluorogen Activating Peptides to Investigate FcεRI Signalin Dynamics
Samantha Schwartz, University of New Mexico

Initiation and Regulation of Mast Cell Signaling through the FcεRI Pathway
Avanika Mahajan, University of New Mexico

Nano-Engineered, Ultra Stable Bio-Materials Containing Living Cells
Patrick Johnson, Univerisity of New Mexico