Cell Dynamics Symposium

Tuesday, March 13, 9 am - 5 pm

1103 Bioscience Research Building, University of Maryland

Movement of cells is key to life, from the collective motion of cells during development, to the migration of immune cells as they fend off invaders and deformations of neurons as they wire up the brain. Talks will feature both experiments and modeling of cell dynamics from multiple angles.

> 8:30 am Refreshments and on-site registration (no fee)

9:00 am Introductory Remarks

9:15 am Modeling cellular volume and pressure Sean Sun (Johns Hopkins University)

regulation: Implications for cell shape and

motility

10:00 am Mechanisms of actin-based force generation in

Rong Li (Stowers Institute) cell polarity and cell division

> Break 10:45 am

11:00 am Actin-driven dynamics of the neuronal

Thomas Blanpied (UMD Medical School) postsynaptic density

> Cytoskeletal dynamics during lymphocyte 11:45 am

Arpita Upadhyaya (University of Maryland) activation

> How cells crawl: a role for actin arcs in the 12:05 pm Dylan Burnette (NIH)

leading edge advance of migrating cells

12:25 pm Lunch and poster session*

Spontaneous waves and symmetry breaking of 2:00 pm

Anders Carlsson (Washington University) f-actin in cells

> 2:45 pm Excitable actin dynamics at the leading edge of

> > crawling cells

3:30 pm Break

3:45 pm

Cell shape dynamics: From waves to migration Wolfgang Losert (University of Maryland)

Molecular force productions, cell-shape changes, and tissue patterning during

Drosophila development

Reception

5:00 pm

4:05 pm

Dmitrios Vavylonis (Lehigh University)

Glenn Edwards (Duke University)

Presented by the Maryland Biophysics Program

Supported by IPST, & the Biology, Chemistry, and Physics Departments

Organizers: Wolfgang Losert, Arpita Upadhyaya

For more information: Caricia Fisher (cjfisher@umd.edu)



Please submit the title of your poster to Stephanie Noel at sjnoel@umd.edu by March 5th.