

**Interdisciplinary Research Seminar Series  
2014-2015**

Autumn, 2014

Tuesday, 30 September

**Abhishek Jha, PhD**

Agios Pharmaceuticals, Cambridge, MA  
*Metabolomics in Cancer Drug Discovery: Isocitrate  
Dehydrogenase (IDH) in cancer & macrophage  
polarization*

Host: Tobin Sosnick

Tuesday, 7 October

**Enrique De La Cruz, PhD**

Yale University  
*How cells use chemistry & physics to break the bones  
that power their movement*

Hosted by David Kovar and Ron Rock

Wednesday, 15 October 2014

Frederick Seitz Lecturer

**Stephen R. Quake, DPhil**

Stanford University  
*Single Cell Genomics*

Hosted by Chuan He

Tuesday, 22 October

**Nieng Yan, PhD**

Tsinghua University  
*The alternating access mechanism of the  
MFS glucose transporters*  
Hosted by Eduardo Perozo

Thursday, 23 October

**Alex Levine, PhD**

University of California, Los Angeles  
*Semiflexible networks with transient cross linkers:  
Bundling, rheology, ripping, & healing*  
BPHYS student-invited speaker, host: Samantha Stam

Tuesday, 28 October

**Sarah Veatch, PhD**

University of Michigan  
*Phases and fluctuations in biological membranes:  
functional roles & misregulation by general  
anesthetics*  
Host: Ka Yee Lee

Tuesday, 4 November

**James K. Chen, PhD**

Stanford University  
*I only have eye for ewe: genetic & chemical regulators  
of the Hedgehog*  
Host: Chuan He

Tuesday, 11 November 2014

**Mogens Jensen, PhD**

University of Copenhagen  
*Vorticity Patterns in Tissues induced by Cell Divisions*  
Host: Leo Kadanoff

Tuesday, 18 November 2014

**Joseph Loparo, PhD**

Harvard Medical School  
*Overcoming obstacles: Single-molecule visualization  
of DNA repair*  
Host: Andrei Tokmakoff

Winter 2015

Tuesday, 13 January

**Wei Dai, PhD**

National Center for Macromolecular Imaging,  
Biochemistry and Molecular Biology  
Baylor College of Medicine  
*Visualizing Molecular Assemblies inside Cells by  
Cryo-electron Tomography*  
Host: Eduardo Perozo

Tuesday, 20 January

**Gabriel Frank, PhD**

National Cancer Institute, National Institutes of Health  
*Paradigm Shift in the Mechanism of HIV-1 Core  
Biogenesis*  
Host: Eduardo Perozo

Tuesday, 24 February

**Alexander Dunn, PhD**

Department of Chemical Engineering  
Stanford University  
*The minimal cadherin-catenin complex forms a force-  
sensitive link to actin at cell-cell contacts*  
Host: Margaret Gardel

Tuesday, 10 March

**Joe Howard, PhD**

Department of Molecular Biophysics & Biochemistry  
Yale University  
*Ciliary and flagellar motility: From single molecules to  
collective motion*  
Host: Ed Munro

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Spring, 2015

Tuesday, 7 April

**Daniel K. Nomura, PhD**

University of California, Berkeley

*Mapping Metabolic Drivers of Disease using  
Chemoproteomic and Metabolomic Platforms*

Host: Chuan He

Tuesday, 14 April

**Martin A. Schwartz, PhD**

Departments of Medicine, of Cell Biology & of  
Biomedical Engineering  
Yale University

*Mechanotransduction in vascular health and disease:  
fluid shear stress sensing mechanisms*

Host: Greg Voth

Tuesday, 21 April

**Daniel Needleman, PhD**

Applied Physics and Molecular & Cellular Biolog,  
Harvard,

*Physical Aspects of Spindle Assembly*

Host: Margaret Gardel

Tuesday, 28 April

**Jeremy L. England, PhD**

Department of Physics

Massachusetts Institute of Technology

*Boltzmann's Dog & Darwin's Finch: The statistical  
thermodynamics of self-replication & evolutionary  
adaptation*

BPHYS student-invited speaker, host: Sean Gibbons

Tuesday, 5 May

**Régis Pomès, PhD**

Department of Biochemistry

University of Toronto

*The Liquid State of Protein Aggregates*

Host: Benoit Roux

Tuesday, 12 May

**John A. Rogers, PhD**

Materials Science and Engineering

Seitz Materials Research Laboratory

University of Illinois at Champaign-Urbana

*Soft, Bioresorbable Optoelectronic Interfaces to the  
Brain*

Host: Bozhi Tian

Wednesday, 20 May

Frederick Seitz Lecturer

**Nahum Sonenberg, PhD**

Department of Biochemistry

Goodman Cancer Research Center

McGill University

*Translational control of cancer and autism via the  
mTOR pathway*

Host: Chuan He

OTHER EVENTS OF INTEREST:

Science@theInterface: Frontiers in RNA Biology

3 October 2014, 1:15-5 PM

KCBD Auditorium

1:15-5

featuring:

**Douglas L. Black, PhD**

Dept of Microbiology, Immunology, and Molecular Genetics and HHMI

University of California, Los Angeles

Neuronal Regulatory Programs and Mechanisms of Alternative Pre-mRNA Splicing

**Melissa J Moore, PhD**

Dept of Biochemistry and Molecular Pharmacology and HHMI

University of Massachusetts Medical School

Assembly and Dynamics of Uber Complex RNPs

**Robert Singer, PhD**

Depts of Anatomy and Structural Biology, of Neuroscience and of Cell Biology

Albert Einstein College of Medicine

Following single cell mRNAs in a living cell

**Roy Parker, PhD**

Dept of Chemistry and Biochemistry

University of Colorado, Boulder

mRNP Granules in a simple eukaryote

Frederick Seitz Lecture

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