

# Keystone Symposia: Cell Biology of Virus Entry, Replication and Pathogenesis

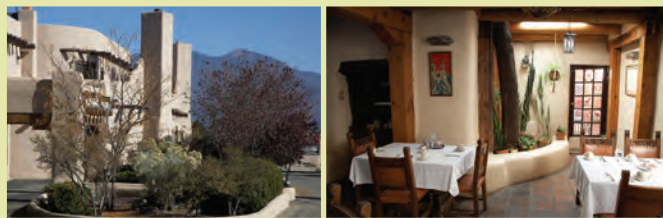
February 16–21, 2010 • Sagebrush Inn and Conference Center • Taos, New Mexico • USA

Scientific Organizers: Margaret Kielian, Peter Sarnow, Terence S. Dermody and Paul D. Bieniasz

## PROGRAM FACULTY & TALKS

- Paul D. Bieniasz**, Aaron Diamond AIDS Research Center, USA  
*Retrovirus Particle Assembly and Release*
- Kartik Chandran**, Albert Einstein College of Medicine, USA  
*Proteolysis and the Fusion Mechanism of Ebola Virus*
- Sara R. Cherry**, University of Pennsylvania, USA  
*Identification of Factors Involved in Virus Replication using RNAi Screens*
- Francis V. Chisari\***, The Scripps Research Institute, USA  
*Induction and Evasion of the Host Response to HCV*
- Terence S. Dermody**, Vanderbilt University, USA  
*Endocytic Uptake of Reovirus*
- Shou-Wei Ding**, University of California, Riverside, USA  
*RNAi-Mediated Innate Immunity*
- Matthew J. Evans**, Mount Sinai School of Medicine, USA  
*Cell Biology of Hepatitis C Virus Infection*
- Andrea Gamarnik**, Fundación Instituto Leloir, Argentina  
*Replication Initiation by RNA Circularization during Flavivirus Infection*
- Adolfo Garcia-Sastre**, Mount Sinai School of Medicine, USA  
*Pathogenesis of Influenza Virus*
- Kay Grunewald**, Max Planck Institute of Biochemistry, Germany  
*Study of Viruses using Electron Cryotomography*
- Edward C. Holmes**, Pennsylvania State University, USA  
*The Comparative Genomics of Dengue Virus*
- Thomas J. Hope**, Northwestern University, Feinberg School of Medicine, USA  
*Single Virus Tracking of HIV in vivo*
- Margaret Kielian**, Albert Einstein College of Medicine, USA  
*Mechanisms of Alphavirus and Flavivirus Membrane Fusion Proteins*
- Karla Kirkegaard**, Stanford University, USA  
*Autophagy and Virus Infection*
- Richard J. Kuhn**, Purdue University, USA  
*Dengue Virus Structure and Function during Assembly, Maturation and Entry*
- Beth Levine**, University of Texas Southwestern Medical Center, USA  
*Evasion of Autophagy during Virus Infection*
- Susana Lopez**, Instituto de Biotecnología, Mexico  
*Avoidance and Subversion of Stress Granules during Viral Infection*
- Harmit Singh Malik**, Fred Hutchinson Cancer Research Center, USA  
*Molecular Arms Races between Viruses and Primate Genomes*
- Juan Martin-Serrano**, King's College London School of Medicine, UK  
*Parallels between Viral Budding and Cytokinesis*
- Thomas C. Mettenleiter**, Friedrich-Loeffler-Institut, Germany  
*Assembly and Exit Pathway of Herpesvirus*
- Ian J. Mohr**, New York University, USA  
*Regulation of Translation during Virus Infection*
- Peter D. Nagy**, University of Kentucky, USA  
*A Systems Biology Approach to Dissect the Roles of Host Proteins in Tombusvirus RNA Replication*
- Nancy C. Reich**, Stony Brook University, USA  
*Innate Responses to Virus Infection*
- Erica Ollmann Saphire**, The Scripps Research Institute, USA  
*Structure of the Ebola Virus Glycoprotein*
- Peter Sarnow**, Stanford University School of Medicine, USA  
*Hepatitis C Virus RNA Replication*
- Anette Schneemann**, The Scripps Research Institute, USA  
*Assembly and RNA Particle Characteristics of Invertebrate Viruses*
- Billy Tsai**, University of Michigan Medical School, USA  
*Polyomavirus Entry Pathway*
- Sean Whelan**, Harvard Medical School, USA  
*Approaches to Characterizing the Entry of Vesicular Stomatitis Virus into Host Cells*
- Xiaowei Zhuang**, Harvard University, USA  
*Zoom in on Virus Entry – By Single-Particle Tracking and Super-Resolution Imaging*

\*Keynote speaker. Program subject to change. Current as of September 22, 2009



The Keystone Symposia meeting on the Cell Biology of Virus Entry, Replication and Pathogenesis emphasizes key aspects of virus infection pathways and cellular responses. A central goal is the identification of critical virus-cell crosstalk during these processes. Rather than dividing viruses into separate “categories” such as positive-sense RNA viruses and DNA viruses, the meeting highlights common aspects of virus lifecycles among different virus groups. The multi-disciplinary nature of the proposed meeting is important in bringing together investigators using structural, molecular, cell biological, immunological and epidemiological methods. This emphasis on shared themes and multiple experimental approaches will continue to be critical to future advances in virology. While there has been spectacular recent progress in our understanding of virus lifecycles, we are still very far from being able to design antiviral strategies, and unexpected novel aspects of virus cell biology are constantly being discovered. Plenary sessions will cover the most important aspects of virus interactions with cells. Day 1 will include cutting-edge structural virology studies and imaging methods to follow single virus particles during entry. Day 2 will focus on the entry mechanisms of enveloped and non-enveloped viruses and the roles of cellular proteins in virus infection. Day 3 will cover viral and cellular aspects of virus replication and cellular antiviral responses. The last day will focus on the important areas of virus assembly and pathogenesis. Late-breaking exciting developments in this fast-moving field will be incorporated by short presentations and afternoon workshop sessions drawn from the submitted abstracts.

## PROGRAM PLENARY SESSIONS & WORKSHOPS:

- Advances in Understanding Virus Structure and Function
- Workshop 1: Virus Entry and Assembly
- Approaches to Visualizing Virus Entry
- Virus Entry Pathways
- Cellular Genes and Virus Infection
- Virus Replication
- Workshop 2: Viral Pathogenesis and Host Interactions
- Immune Responses and Viral Evasion
- Virus Assembly and Exit
- Viral Pathogenesis

## DEADLINES:

Abstract & Scholarship: October 19, 2009  
Late-Breaking Abstract: November 16, 2009  
Early Registration: December 16, 2009

[www.keystonesymposia.org/10B5](http://www.keystonesymposia.org/10B5)

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