

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Positive-Strand RNA Viruses (E2)

June 9-13, 2019 • INEC-Ireland's National Events Centre • Killarney, Co. Kerry, Ireland

Scientific Organizers: Frank van Kuppeveld and Andrea Gamarnik

Supported by the Directors' Fund

Global Health Travel Award Deadline: January 8, 2019 / Abstract & Scholarship Deadline: February 7, 2019 / Abstract Deadline: March 6, 2019 / Discounted Registration Deadline: April 9, 2019

### SUNDAY, JUNE 9

#### Arrival and Registration

### MONDAY, JUNE 10

#### Welcome and Keynote Address

**Michael S. Diamond**, Washington University School of Medicine, USA  
*Host Immune Response to Flaviviruses, Therapeutic Antibodies and Vaccines*

#### The Virosphere and the Virome

**Eugene V. Koonin**, National Institutes of Health, USA  
*Evolution of the RNA Virosphere: Towards a Global Picture*

**Julie K. Pfeiffer**, University of Texas Southwestern Medical Center, USA

*Interactions between the Enteric Virome and the Microbiome*

**Marilyn J. Roossinck**, Pennsylvania State University, USA  
*Viruses as Symbionts*

#### Short Talk(s) Chosen from Abstracts

#### Workshop 1: Burning Questions and Issues in RNA Virology

**Ralf Bartenschlager**, Heidelberg University, Germany  
*Resolved and Future Research Challenges of Plus-Strand RNA Virus Replication Strategies*

**Peter Sarnow**, Stanford University School of Medicine, USA

**Ann Palmenberg**†, University of Wisconsin-Madison, USA

#### Virus Structure and Entry

**Susan Hafenstein**†, Pennsylvania State University, USA  
*Enterovirus Structure / Entry*

**David Veesler**, University of Washington, USA  
*Structural Studies of Coronavirus Spike Glycoproteins*

**Shee-Mei Lok**, Duke-NUS Medical School, Singapore  
*Structures of Zika Virus*

#### Short Talk Chosen from Abstracts

#### Poster Session 1

### TUESDAY, JUNE 11

#### RNA Structure and Function

**Andrea Gamarnik**, Fundación Instituto Leloir, Argentina  
*Dengue Virus RNA Structure and Function*

**Jeffrey S. Kieft**, University of Colorado School of Medicine, USA  
*Understanding Viral RNA Function by Linking Structural Biology to Virology*

**Stacy M. Horner**, Duke University Medical Center, USA  
*RNA Modifications Go Viral*

**Anna Marie Pyle**, Yale University, USA  
*Regulatory Structures in Viral RNA Genomes*

#### Short Talk(s) Chosen from Abstracts

#### Workshop 2

#### Short Talks Chosen from Abstracts

#### Virus Replication, Evolution and Virus-Cell Interactions

**Frank van Kuppeveld**, Utrecht University, Netherlands  
*Host Factors in Picornavirus Replication*

**Peter D. Nagy**, University of Kentucky, USA  
*Viral and Host Players in Tombusvirus Replication*

**Raul Andino**, University of California, San Francisco, USA  
*Virus Evolution: Math, Experiments and Consequences*

#### Short Talk Chosen from Abstracts

#### Poster Session 2

### WEDNESDAY, JUNE 12

#### Immunology of Infection and Viral Evasion Mechanisms

**Michaela U. Gack**, University of Chicago, USA  
*Intracellular Virus Sensing Pathways and Viral Evasion Strategies*

**Alexander Ploss**, Princeton University, USA  
*Model Systems to Study Immune Responses and Pathogenesis of HCV*

**Sujan Shresta**, La Jolla Institute For Allergy and Immunology, USA  
*Adaptive Immune Responses to DENV and ZIKA Virus Infection*

**Stephanie Karst**, University of Florida, USA  
*The Influence of the Intestinal Microbiota on Norovirus Infection and Immunity*

#### Short Talk(s) Chosen from Abstracts

#### Vaccines, Therapeutic Antibodies and Antiviral Drugs

**Davide Corti**, Humabs BioMed SA, Switzerland  
*Passive Antibody Therapies Against Endemic, Emerging and Re-Emerging Infectious Diseases*

**Scott C. Weaver**, University of Texas Medical Branch, USA  
*Vaccines Against Emerging Arboviruses*

**Bali Pulendran**, Stanford University School of Medicine, USA  
*Talk Title to be Announced*

#### Short Talk Chosen from Abstracts

#### Poster Session 3

### THURSDAY, JUNE 13

#### Virus Transmission, Tissue Tropism, and Pathogenesis

**Carolyn B. Coyne**, University of Pittsburgh, USA  
*Viral Transmission across the Placental Barrier*

**Christian Drosten**, Charité - Universitätsmedizin Berlin, Germany  
*Ecology, Inter-species Transmission, and Pathogenic Potential of Emerging Coronaviruses*

**Diane E. Griffin**, Johns Hopkins Bloomberg School of Public Health, USA  
*Pathogenesis of Neurovirulent Viruses*

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**Xiang-Jin Meng**, Virginia-Maryland College of Veterinary Medicine,  
Virginia Tech, USA

*Hepatitis E Virus: Animal Reservoirs and Cross-Species Infections*

**Short Talk(s) Chosen from Abstracts**

### Workshop 3

**Short Talks Chosen from Abstracts**

### Invertebrate Viruses and their Vectors

**Erol Fikrig**, Yale University, USA

*Arthropod-Virus Interactions*

**Maria-Carla Saleh**, Institut Pasteur, France

*Endogenous Viral Elements in Mosquito Genomes*

**Ronald P. van Rij**, Radboud University Medical Center, Netherlands

*Functions of Virus and Host-derived piRNAs in Antiviral Immunity*

*Against Arboviruses*

### Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

### FRIDAY, JUNE 14

Departure