



Join Keystone Symposia
for the 2016 conference on:

Nucleic Acid Sensing Pathways: Innate Immunity, Immunobiology and Therapeutics

May 8–12, 2016

Maritim Hotel & Conference Center | Dresden | Germany

Scientific Organizers:

Thomas Tuschl, Veit Hornung and Karl-Peter Hopfner

This meeting focuses on cytoplasmic DNA and RNA sensors and the function of their linear and circular oligonucleotide second messenger cGAMP and 2',5'-oligoadenylate produced upon activation. Substantial progress has been made in identification of the structures of these sensors, their nucleic acid ligands and second messenger molecules, as well as the underlying molecular pathways leading to transcriptional activation. Animal models inactivating various pathways of innate immunity have been developed. This progress has enabled targeted development of antagonists and agonists of cytokine and interferon production for therapeutic targeting of inflammatory diseases and vaccine adjuvant development, respectively. An international group of academic and industry scientists and clinicians with expertise in biochemistry and structural biology, nucleic acid chemistry, immunology, human genetics, virology, rheumatology and vaccine development will converge at this meeting to discuss the latest developments in this field.

Session Topics:

- Sensing of Microbial and Viral RNA and DNA by the Innate Immune System I & II
- Structural Biology of Innate Immune Sensing
- Virology and Innate Inflammatory Responses
- Inborn Genetic Defects in Nucleic Acid Sensing I & II
- Nucleic Acid Chemistry and Biology in Stress and Innate Immune Response
- Nucleic Acid Drug Developments and Strategies to Suppress Innate Immunity Responses



Submitting an abstract is a great way of participating in the conference through poster presentation and possible selection for a short talk.

Scholarship & Discounted Abstract Deadline: Jan 7, 2016

Abstract Deadline: Feb 9, 2016

Discounted Registration Deadline: Mar 8, 2016

For additional details, visit www.keystonesymposia.org/16E2.

KEYSTONE SYMPOSIA[™]
on Molecular and Cellular Biology
Accelerating Life Science Discovery

www.keystonesymposia.org/meetings | 1.800.253.0685 | 1.970.262.1230
a 501(c)(3) nonprofit educational organization

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Nucleic Acid Sensing Pathways: Innate Immunity, Immunobiology and Therapeutics (E2)

May 8-12, 2016 • Maritim Hotel & Conference Center Dresden • Dresden, Germany

Scientific Organizers: Thomas Tuschl, Veit Hornung and Karl-Peter Hopfner

Supported by the Directors' Fund

Abstract & Scholarship Deadline: January 7, 2016 / Abstract Deadline: February 9, 2016 / Discounted Registration Deadline: March 8, 2016

SUNDAY, MAY 8

Arrival and Registration

MONDAY, MAY 9

Welcome and Keynote Address

Zhijian James Chen, HHMI/University of Texas Southwestern Medical Center, USA
Biochemical Characterization of Mammalian Cyclic(GMP-AMP) Synthase

Sensing of Microbial and Viral RNA and DNA by the Innate Immune System

Shizuo Akira, Osaka University, Japan
Posttranscriptional Regulation in Innate Immunity

Kensuke Miyake, Institute of Medical Science, University of Tokyo, Japan
Innate Immune Sensing of Nucleic Acids by TLRs

Kate A. Fitzgerald, University of Massachusetts Medical School, USA
Role of Nucleic Acids in Innate Immune Response

Short Talk(s) Chosen from Abstracts

Poster Session 1

Sensing of Microbial and Viral RNA and DNA by the Innate Immune System II

Veit Hornung, Ludwig-Maximilians-University Munich, Germany
Molecular Mechanisms of Nucleic Acid Pattern Recognition

Speaker to be Announced

Russell E. Vance, University of California, Berkeley, USA
Cytosolic Immunosurveillance of Bacteria

Short Talk Chosen from Abstracts

TUESDAY, MAY 10

Structural Biology of Innate Immune Sensing

Karl-Peter Hopfner, Ludwig-Maximilians-University Munich, Germany
Structural Basis of Nucleic Acid Recognition

Sun Hur, Harvard Medical School, USA
Role of RNA Helicases in Interferon Signaling

Alexei Korennykh, Princeton University, USA
2',5'-Oligoadenylate and its Role in Innate Immunity

Dinshaw J. Patel, Memorial Sloan-Kettering Cancer Center, USA
Structure and Function of Innate Immunity Sensors and Adapters

Short Talk(s) Chosen from Abstracts

Virology and Innate Inflammatory Responses

Charles M. Rice, Rockefeller University, USA
New Insights into Innate Antiviral Effectors

Akiko Iwasaki, Yale University School of Medicine, USA
Innate Immunity Driving Adaptive Immunity to Influenza Virus Infection

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, MAY 11

Nucleic Acid Chemistry and Biology in Stress and Innate Immune Response

Thomas Tuschl, HHMI/Rockefeller University, USA
Intra- and Extracellular Diagnostic RNAseq Approaches and Their Use in Inflammatory Diseases

Speaker to be Announced

Charles E. Samuel, University of California, Santa Barbara, USA
Yin-Yang of the Interferon System - ADAR1 Adenosine Deaminase and PKR Protein Kinase as Counteracting Double-stranded RNA Sensors

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Poster Session 3

Nucleic Acid Drug Developments and Strategies to Suppress Innate Immunity Responses

Gunther Hartmann, Universitätsklinikum Bonn, Germany
Targeting RIG-I for the Immunotherapy of Cancer

Thomas W. Dubensky, Jr., Aduro Biotech, USA
Cyclic Dinucleotides and Cancer Vaccine Development

Regina Heidenreich, CureVac GmbH, Germany
mRNA Vaccination for the Immunotherapy of Infectious Diseases and Cancer

Short Talk Chosen from Abstracts

THURSDAY, MAY 12

Inborn Genetic Defects in Nucleic Acid Sensing I

Raphaella Goldbach-Mansky, NIAMS, National Institutes of Health, USA

Activated STING in a Vascular and Pulmonary Syndrome and Treatment Strategies Reducing Interferon Signaling

Yanick Crow, Institut Imagine, France
Human Genetics of Type I Interferonopathies

Speaker to be Announced

Virginia Pascual, Baylor Research Institute, USA
Expression Profiling and Interferon Signatures in Lupus Erythematosus Patients

Short Talk(s) Chosen from Abstracts

Inborn Genetic Defects in Nucleic Acid Sensing II

Gerald S. Shadel, Yale University, USA
Mitochondrial DNA Stress Primes the Antiviral Innate Immune Response

Daniel B. Stetson, University of Washington, USA
Endogenous Nucleic Acids that Drive Cell-Intrinsic Initiation of Autoimmune Diseases

Andrew Jackson, MRC Human Genetics Unit, UK
Aicardi-Goutieres Syndrome - A Genetic Mimic of Viral Infection

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

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Nucleic Acid Sensing Pathways: Innate Immunity, Immunobiology and Therapeutics (E2)

May 8-12, 2016 • Maritim Hotel & Conference Center Dresden • Dresden, Germany

Scientific Organizers: Thomas Tuschl, Veit Hornung and Karl-Peter Hopfner

Supported by the Directors' Fund

Abstract & Scholarship Deadline: January 7, 2016 / Abstract Deadline: February 9, 2016 / Discounted Registration Deadline: March 8, 2016

FRIDAY, MAY 13

Departure