



29th Annual Henry Kunkel Society Meeting

IN PARTNERSHIP WITH JOURNAL OF EXPERIMENTAL MEDICINE

Innate Immunity: from Basic Biology to Human Disease

Meeting Chair: Dusan Bogunovic, PhD

VIRTUALLY HOSTED*

APRIL 7-9, 2022

*ALL TIMES ARE EDT

Henry George Kunkel

1916 - 1983

Henry Kunkel received his B.S. degree from Princeton and his M.D. degree from Johns Hopkins University. He arrived at The Rockefeller Institute (now University) in 1945 where he spent his entire scientific career until his death in 1983. His contributions to the field of basic and clinical immunology are legendary. He made numerous seminal observations in liver disease, rheumatic diseases, and other allied disorders.

He was perhaps best known for his pioneering and extensive studies on the immunoglobulins. His recognition that myeloma proteins were a model for the study of the structure of normal immunoglobulins had a global impact on investigations of the structure, function, and inheritance of these molecules. The elucidation of the chain structure of gamma globulin and the recognition that immunoglobulins possessed individual antigenic specificity (idiotypes) were internationally recognized discoveries.

Dr. Kunkel was the recipient of many awards and honors, including membership in the National Academy of Sciences, honorary degrees from Universities of Uppsala and Harvard, and recipient of the Lasker and Gairdner Awards and the Kovalenko Medal of the National Academy of Sciences.

Henry Kunkel Society Executive Committee

President. Luigi D. Notarangelo
Past President. Jean-Laurent Casanova
Secretary. Helen C. Su
Treasurer. Dusan Bogunovic

Henry Kunkel Society Lecturers

| | | | |
|----------------|-------------------|----------------|-----------------------|
| 1992 | Louis Kunkel | 2007 | Antonio Lanzavecchia |
| 1993 | David Ho | 2008 | John Atkinson |
| 1994 | Benvenuto Pernis | 2009 | Thomas Tuschl |
| 1996 | Jeffrey Ravetch | 2010 | Frederick Alt |
| 1997 | Anthony Fauci | 2011 | Mark M. Davis |
| 1998 | Klaus Rajewsky | 2012 | Louis M. Staudt |
| 1999 | Peter Doherty | 2013 | Daniel L. Kastner |
| 2000 | Max D. Cooper | 2014 | Shigekazu Nagata |
| 2001 | Fritz Melchers | 2015 | Yanick Crow |
| 2002 | Tasuku Honjo | 2016 | Michel C. Nussenzweig |
| 2003 | Fred Rosen | 2017 | Carl Nathan |
| 2004 | Diane Mathis | 2018 | Michael Lenardo |
| 2005 | Charles Weissman | 2019 | Alain Fischer |
| 2006 | Ralph M. Steinman | 2021 | Tadatsugu Taniguchi |

THURSDAY, APRIL SEVENTH

COMMENCEMENT

- 12:00 PM *Welcome Remarks*
Dusan Bogunovic, PhD, Meeting Chair, Henry Kunkel Society
Jean-Laurent Casanova, MD, PhD, Past President, Henry Kunkel Society

AUTOINFLAMMATION AND INNATE IMMUNITY

Moderator: Luigi D. Notarangelo, PhD, President, Henry Kunkel Society

- 12:05 PM **Ivona Aksentijevich, MD**
National Human Genome Research Institute, National Institutes of Health, Bethesda, MD, USA
Genetics and Pathophysiology of Monogenic Autoinflammatory Diseases
- 12:35 PM **Sinisa Savic, PhD**
University of Leeds, Leeds, UK
Acquired Systemic Autoinflammatory Disorders
- 1:05 PM **Ivan Zanoni, PhD**
Harvard Medical School, Boston Children's Hospital, Boston, MA, USA
Innate Immune Control of Inflammation
- 1:35 PM **Vanessa Sancho-Shimizu, PhD**
Imperial College London, London, UK
Single Gene Defects of MIS-C
- 2:05 PM *BREAK UNTIL 2:35 PM*
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EVOLUTION IN INNATE IMMUNITY

Moderator: Jean-Laurent Casanova, MD, PhD, Past President, Henry Kunkel Society

- 2:35 PM **Lluis Quintana-Murci, PhD**
Institut Pasteur & Collège de France, Paris, France
Pasteur Meets Darwin: Human Immunology Through the Lens of Evolution
- 3:05 PM **Yuval Itan, PhD**
Icahn School of Medicine at Mount Sinai, New York, NY, USA
New Computational Approaches for Detecting the Genetic Heterogeneity Underlying Human Disease
- 3:35 PM **Richard Locksley, MD**
University of California, San Francisco & Howard Hughes Medical Institute, San Francisco, CA, USA
Innate Allergy
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FRIDAY, APRIL EIGHTH

ANNUAL MEMORIAL LECTURE

Introduction: **Jean-Laurent Casanova, MD, PhD**, Past President, Henry Kunkel Society

9:00 AM **Federica Sallusto, PhD**
University of Italian Switzerland, Bellinzona, Switzerland & Institute of Microbiology, ETH Zurich, Zurich, Switzerland
Clonal Analysis of the T and B Cell Responses to SARS-CoV-2

10:00 AM *BREAK UNTIL 10:30 PM*

CROSTALK OF INNATE AND ADAPTIVE IMMUNITY

Moderator: **Shachi Bhatt, PhD**, Executive Editor, JEM

10:30 AM **Michael Dustin, PhD**
University of Oxford, Oxford, UK
Supramolecular Attack Particles: An Innate Regulatory Layer in Cell Mediated Killing

11:00 AM **Marita Bosticardo, PhD**
National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, USA
The Growing Universe of Thymic Cell Types in Health and Disease: Lessons from Inborn Errors of Immunity

11:30 AM **Joshua D. Milner, MD**
Columbia University Irving Medical Center, New York, NY, USA
Atopy In Immune Regulation Disorders

12:00 PM **Shen-Ying Zhang, MD, PhD**
INSERM, University of Paris, Paris, France
Single Gene Inborn Errors of an IFN-Inducible Pathway in MIS-C

12:30 PM *BREAK UNTIL 1:30 PM*

INTERFERONS IN DISEASE

Moderator: **Shachi Bhatt, PhD**, Executive Editor, JEM

1:30 PM **Thomas Decker, PhD**
Max F. Perutz Laboratories, University of Vienna, Vienna, Austria
Transcriptional Responses to Interferons: Signals and Mechanisms

2:00 PM **Qian Zhang, MD**
The Rockefeller University, New York, NY, USA
Type I IFN Immunity in Patients with Life-Threatening COVID-19

2:30 PM **Yanick Crow, PhD**
University of Edinburgh, Edinburgh, UK & University of Paris, Institut Imagine, Paris, France
Human Type I Interferonopathies, Where Are We?

3:00 PM

Dusan Bogunovic, PhD

Icahn School of Medicine at Mount Sinai, New York, NY, USA

Broad Spectrum Antivirals via Inborn Errors of Immunity

3:30 PM

Brad Rosenberg, MD, PhD

Icahn School of Medicine at Mount Sinai, New York, NY, USA

Inducible CRISPR Activation Strategies for Interrogating Interferon-Stimulated Gene Functions



SATURDAY, APRIL NINTH

GENETICS OF IMMUNITY THROUGH HUMAN PRISM

Moderator: Dusan Bogunovic, PhD, Meeting Chair, Henry Kunkel Society

- 9:30 AM **Petter Brodin, MD, PhD**
Imperial College London, London, UK; Karolinska Institutet, Solna, Sweden
Human Immune Variation and Development
- 10:00 AM **Isabelle Meyts, MD, PhD**
KU Leuven, Leuven, Belgium
More to ADA2
- 10:30 AM **Emily Mace, PhD**
Columbia University, New York, NY, USA
Helicase Variants that Cause Immunodeficiency Alter the Trajectory of Human Natural Killer Cell Development from Earliest Precursors

11:00 AM *BREAK UNTIL 11:30 AM*

Moderator: Dusan Bogunovic, PhD, Meeting Chair, Henry Kunkel Society

- 11:30 AM **Sophie Hambleton, PhD**
Newcastle University, Newcastle upon Tyne, UK
Lost in Translation – Crossed Wires in Interferon Signaling
- 12:00 PM **Cem Gabay, MD**
University of Geneva, Geneva, Switzerland
The Role of IL-18 in Autoinflammatory Diseases

CONCLUSION

- 12:30 PM *Closing Remarks*
Luigi D. Notarangelo, PhD, President, Henry Kunkel Society
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