

THE ROCKEFELLER UNIVERSITY



27th Annual Henry Kunkel Society Meeting

in partnership with *Journal of Experimental Medicine* and
the Rockefeller University Friday Lecture Series

Inborn errors of immunity: from gene discovery to disease modeling
and new therapies

The Rockefeller University
New York, NY
March 21–23, 2019

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.

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Deceased

Thursday, March 21, 2019

Location: Carson Family Auditorium

- 1:00 p.m. **Welcoming Remarks**
Jean-Laurent Casanova, President, Henry Kunkel Society
- 1:05 p.m.–3:35 p.m. **Session I: Immune system development and function in health and disease**
Chair: Alexander Rudensky, JEM Academic Editor
- 1:05 p.m. **Federica Sallusto**
IRB, Università della Svizzera Italiana, Bellinzona, Switzerland
The development of human Th cells
- 1:35 p.m. **Stuart Tangye**
Garvan Institute of Medical Research, Sydney, Australia
Learning human immunology from the study of PIDs-CIRCA 2019
- 2:05 p.m. **Rafi Ahmed**
Emory University, Atlanta, GA, USA
JEM Lecture: *Harnessing T cell memory and effector function*
- 2:35 p.m. **Christophe Benoist**
Harvard Medical School, Boston, MA, USA
Errors of tolerance
- 3:05 p.m. **Pamela Schwartzberg**
National Institutes of Health, Bethesda, MD, USA
Cell-autonomous and cell-extrinsic mechanisms of immune dysregulation in APDS Insights from mice
- 3:35 p.m. **Afternoon break until 4:00 p.m.**
- 4:00 p.m.–6:00 p.m. **Session II: Modeling human disease with induced pluripotent stem cells**
Chair: Teodoro Pulvirenti, JEM Executive Editor
- 4:00 p.m. **Rudolf Jaenisch**
MIT, Cambridge, MA, USA
Human stem cell and disease modeling
- 4:30 p.m. **Vittorio Sebastiano**
Stanford University, Stanford, CA, USA
Unraveling faulty thymic development of DiGeorge syndrome with patient-derived iPS cells
- 5:00 p.m. **Gregory Smith**
Northwestern University Feinberg School of Medicine, Chicago, IL, USA
Cellular mechanisms of faulty control of HSV in herpes simplex encephalitis: A virology view with iPS-derived neurons
- 5:30 p.m. **Frederic Geissmann**
Memorial Sloan Kettering Cancer Center, New York, NY, USA
Efferocytosis Deficiency in Familial Lupus

Friday, March 22, 2019

Location: Carson Family Auditorium

8:00 a.m.–9:00 a.m.

Breakfast

9:00 a.m.–3:00 p.m.

Session III: Novel inborn errors of immunity

Chair: Carl Nathan, JEM Editorial Board Co-Chair

9:00 a.m.

Helen Su

National Institute of Allergy and Infectious Diseases,
NIH, Bethesda, MD, USA

*Elucidating the molecular pathogenesis of a novel
immunodeficiency- immunodysregulation disease*

9:30 a.m.

Carrie Lucas

Yale School of Medicine, New Haven, CT, USA

*A new PI3K gene defect with immunodeficiency and tissue
immunopathology*

10:00 a.m.

Morning Break until 10:30 a.m.

Chair: Michel Nussenzweig, JEM Editorial Board Co-Chair

10:30 a.m.

Richard Cornall

MRC Human Immunology Unit, University of Oxford, Oxford, UK

Modelling a new B cell immunodeficiency syndrome

11:00 a.m.

Luigi D. Notarangelo, 2019 HKS Program Chair

National Institute of Allergy and Infectious Diseases,
NIH, Bethesda, MD, USA

A novel and unexpected cause of SCID

11:30 a.m.

Nada Jabado

McGill University, Montreal, Canada

*Unleashing the immune system: an experiment of nature
highlights TIM3 inhibitory function*

12:00 p.m.

Lunch until 1:30 p.m.

Chair: David Tuveson, JEM Academic Editor

1:30 p.m.

Jean-Laurent Casanova

Rockefeller University & Howard Hughes Medical Institute,
New York, NY, USA

Severe infections as inborn errors of immunity

2:00 p.m.

Stephanie Boisson-Dupuis

Necker Hospital for Sick Children, Paris, France

A monogenic and common cause of human tuberculosis

2:30 p.m.

Anna Villa

San Raffaele Telethon Institute for Gene Therapy & CNR-IRBG,
Milan Italy

Leakage in mucosal barriers: a novel player in Omenn syndrome

3:00 p.m.

Afternoon break until 3:45 p.m.

Friday, March 22, 2019

Location: Carson Family Auditorium

3:45 p.m.

**Introduction for Inaugural Memorial Lecture
Jean-Laurent Casanova**

Alain Fischer

Collège de France, Paris, France

Inaugural Memorial Lecturer

Twenty years of gene therapy for children with SCID

5:30 p.m.

Dinner (for purchase)

Saturday, March 23, 2019

Location: Carson Family Auditorium

8:00 a.m.–9:00 a.m.

Breakfast

9:00 a.m.–10:00 a.m.

Session IV: Systems biology and single-cell genomics

Chair: Gaia Trincucci, JEM Scientific Editor

9:00 a.m.

Naresha Saligrama

Stanford University School of Medicine, Stanford, CA, USA

From T cell receptor to antigen; Systems approaches to discovering T cell antigen(s) in neurological diseases

9:30 a.m.

Alexandra-Chloé Villani

Massachusetts General Hospital, Boston, MA, USA

The power of ONE: solving biomedical challenges through single cell genomics approaches

10:00 a.m.–12:00 p.m.

Session V: Novel therapeutic approaches

Chair: Stephanie Houston, JEM Scientific Editor

10:00 a.m.

Juan Carlos Zúñiga-Pflücker

University of Toronto, Toronto, Canada

Speeding up immune reconstitution with in vitro generation of human pro-T cell in a cell-free system

10:30 a.m.

Morning Break until 11:00 a.m.

11:00 a.m.

Judith Shizuru

Stanford University, Palo Alto, CA, USA

Novel approaches to open the stem cell niche: in vivo experience in SCID children

11:30 a.m.

Matthew Porteus

Stanford University School of Medicine, Stanford, CA, USA

Genome editing for the treatment of genetic diseases of the blood and immune system

12:00 p.m.

Closing Remarks

Jean-Laurent Casanova

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