

NIEHS Inflammation Faculty Workshop: Inflammation and the Environment: The Role of the Mitochondrion and Energy Metabolism

http://tools.niehs.nih.gov/conference/inflammation_2016/index.cfm

NIEHS

Building 101, Rodbell Auditorium

Research Triangle Park, NC

June 20, 2016

7:45 a.m. NIEHS Shuttle departs DoubleTree hotel for NIEHS

8:00 – 8:30 a.m. Registration

8:30 – 8:40 a.m. Welcome
Richard Woychik, Ph.D.

8:40 – 8:50 a.m. Opening Remarks
Frederick Miller, M.D., Ph.D.

Morning Session: The Mitochondrion in Inflammation

Moderator: Jean Harry, Ph.D.

8:50 – 9:30 a.m. Keynote Lecture: “Roles for Mitochondria in Activation of the Inflammasome”
Augustine Choi, M.D. – Weill Cornell Medicine

9:30 – 9:55 a.m. “Metabolic Effects of Air Pollution Exposure”
Sanjay Rajagopalan, M.B.B.S. – University of Maryland School of Medicine

9:55 – 10:20 a.m. “Metformin Prevents Particulate Matter Air Pollution Induced Thrombosis”
Scott Budinger, M.D. – Northwestern University

10:20 – 10:35 a.m. **Break**

10:35 – 11:00 a.m. “Known Unknowns of Mitochondrial Cardiolipin Signaling”
Valerian Kagan, Ph.D., D.Sc. – University of Pittsburgh

11:00 – 11:25 a.m. “Neutrophils and Mitochondrial DNA in Inflammation and Autoimmunity”
Keith Elkon, M.D. – University of Washington

- 11:25 – 12:25 p.m. Panel Discussion
Moderator: Jean Harry, Ph.D.
- Question 1: What are the key mechanisms by which mitochondria regulate inflammation and in what diseases are these pathways enacted?
Question 2: Which environmental factors impinge on mitochondria to induce or modify inflammation?
Question 3: What knowledge gaps in this field are most critical, and how might they be leveraged to advance insight into environment-induced human disease?
- 12:25 – 1:30 p.m. **Lunch** – NIEHS Cafeteria
- Afternoon Session: Metabolic Programming of Inflammation**
Moderator: Michael Fessler, M.D.
- 1:30 – 2:10 p.m. Keynote Lecture “Nuclear Receptors and Lipid Homeostasis in Programming of Inflammation”
Peter Tontonoz, M.D., Ph.D. – University of California, Los Angeles
- 2:10 – 2:35 p.m. “Metabolism and T Cell Fates”
Jeff Rathmell, Ph.D. – Vanderbilt University
- 2:35 – 3:00 p.m. “Mitochondrial DNA Stress in Innate Immunity and Type I Interferon Responses”
A. Philip West, Ph.D. – Southern Methodist University
- 3:00 – 3:15 p.m. **Break**
- 3:15 – 3:40 p.m. “Metabolic Calibration of Macrophage Activation”
Tiffany Horng, Ph.D. – Harvard University
- 3:40 – 4:05 p.m. “Fueling the Fire: Mitochondria and Metabolism in Autoinflammatory Disease”
Richard Siegel, M.D., Ph.D. – NIAMS
- 4:05 – 5:00 p.m. Panel Discussion
Moderator: Michael Fessler, M.D.
- Question 1: What are the key cellular regulators and metabolites that regulate inflammation, and in what diseases do they contribute to pathogenesis?
Question 2: Which environmental factors impinge on cellular metabolism to induce or modify inflammation?
Question 3: What knowledge gaps in this field are most critical, and how might they be leveraged to advance insight into environment-induced human disease?
- 5:00 – 5:05 p.m. Closing Remarks and Charge for Next Day
Michael Humble, Ph.D.
- 5:10 p.m. NIEHS Shuttle to Doubletree Hotel (2515 Meridian Pkwy, Durham, NC 27713)