



Colorado State University Symposia Series on Emerging Concepts and Trends in Infectious Diseases Research

2018 Symposium Topic “The Metabolism of Infectious Diseases”

Symposium Rationale and Objectives

The wealth of transcriptomics, proteomics and metabolomics data generated for a wide range of infectious diseases reveal that small molecule metabolism is an integral part of disease progression. This includes manipulation of host metabolic processes by pathogens; pathogen metabolic adaptation to the hosts' environments; and interspecies communication and signaling via small molecules; as well as the emergence of immunometabolism as a key aspect of host responses that lead to protection or pathogenesis.

The Metabolism of Infectious Diseases Symposium will bring together scientists representing a breadth of infectious diseases and immunology research, with a collective interest in studying the metabolism of pathogens and their hosts. The goals are:

- Provide a current and comprehensive understanding of the role of metabolism in infectious diseases.
- Highlight emerging technologies and approaches important for studying infectious disease metabolism.
- Understand how information and knowledge gained through the study of metabolism can be translated into interventions to prevent or control infectious disease.
- Create an opportunity for the formulation of new hypotheses and collaborations.

Specific topics that will be addressed:

- The role of immunometabolism in infectious diseases
- Pathogen and host interactions leading to adaptation of metabolic states and processes
- Communication and signaling via small molecule metabolites
- Emerging technologies and translation

Sponsored by Colorado State University:

Infectious Diseases Research and Response Network (IDR²N) Program of Research and Scholarly Excellence (PRSE)

Infectious Disease Research Center (IDRC)

Department of Microbiology, Immunology and Pathology

Confirmed Speakers

Keynote Address

Alan Aderem – [About](#)

Center for Infectious Disease Research,
Seattle, WA

Plenary Speakers

Thomas Weicchart, PhD. - [About](#)

Institute of Medical Genetics
Medical University of Vienna

Hyungjin Eoh, DVM, PhD – [About](#)

Molecular Microbiology and
Immunology
Keck School of Medicine
University of Southern California

Edana Cassol, Ph.D. - [About](#)

Faculty of Science
Department of Health Sciences
Carleton University, Ottawa

Shuzao Li, PhD – [About](#)

Division of Pulmonary, Allergy,
Critical Care and Sleep Medicine
Emory Univ. School of Medicine

Catherine Lozupone, PhD – [About](#)

Division of Biomedical Informatics
Department of Medicine and
Personalized Medicine
University of Colorado, Denver

Jason Mackenzie, PhD – [About](#)

School of Biomedical Sciences,
University of Melbourne

Joshua C. Munger, PhD – [About](#)

School of Medicine and Dentistry
University of Rochester Medical
Center

Gary Patti, PhD – [About](#)

Department of Chemistry,
Washington University in St. Louis

Cristina Pessolani, PhD – [About](#)

Cellular Microbiology,
FIOCRUZ
Oswaldo Cruz Institute
Rio de Janeiro

Kathleen Stringer, PharmD – [About](#)

Department of Clinical Pharmacy
College of Pharmacy
University of Michigan

Agenda

Jun 12, 2018 (Tuesday)

Opening Session

4:00 pm – Registration opens, packet pickup (LSC Theatre)

5:00 pm – Welcome and opening remarks

5:15 – 6:15 pm - Keynote Address: Dr. Alan Aderem (Professor and President Emeritus, Center for Infectious Disease Research, Seattle, WA)

6:15-7:15 pm – Opening reception with cocktails, appetizers

Jun 13, 2018 (Wednesday)

7.00-8.00 am Networking and Coffee

Session 1. We Should Talk – *Immunometabolism... from protection to pathology*

8.00-8:30 am Plenary Presentation -

8:30-8:50 am Abstract Selected Presentation

8:50-9:10 am Abstract Selected Presentation

9:10-9:40 am Plenary Presentation -

9:40-10:10 am Morning coffee break

Session 2. Building a Home – *Pathogen manipulation of host metabolism*

10:10-10:40 am Plenary Presentation

10:40-11.00 am Abstract Selected Presentation

11:00-11:20 am Abstract Selected Presentation

11:20-11:50 am Plenary Presentation

11:50 - 1:20 pm Lunch (Rams Horn café) or (Speaker-Student Lunches)

Session 3. Not Lost in Translation – *Targeting metabolism for therapeutics and biomarkers*

1:20-1:50 pm Plenary Presentation

1:50-2:10 pm Abstract Selected Presentation

2:10-2:30 pm Abstract Selected Presentation

2:30-3:00 pm Plenary Presentation

3:00-3:30 pm Afternoon coffee break

Student Presentations

3:30-3:45 pm Student Presentation

3:45-4:00 pm Student Presentation

4:00-4:15 pm Student Presentation

4:15-4:30 pm Student Presentation

4:30-4:45 pm Student Presentation

4.30-6.30 pm Happy Hour, Networking, Posters Presentations

Jun 14, 2018 (Thursday)

7:00-8:00 am Networking and Coffee

Session 4. Dumpster Diving - *Metabolic adaptation by pathogens*

8.00-8:30 am Plenary Presentation

8:30-8:50 am Abstract Selected Presentation

8:50-9:10 am Abstract Selected Presentation

9:10-9:40 am Plenary Presentation

9:40-10:10 am Morning coffee break

Session 5. Bytes and Goodies - *Technologies that drive infectious disease metabolism research*

10:10-10:40 am Plenary Presentation

10:40-11.00 am Abstract Selected Presentation

11:00-11:20 am Abstract Selected Presentation

11:20-11:50 am Plenary Presentation

11:50 - 1:20 pm Lunch (Rams Horn café) or (Speaker-Student Lunches)

Session 6. Just Passing Through...Maybe – *Metabolism that promotes disease transmission and persistence*

1:20-1:50 pm Plenary Presentation

1:50-2:10 pm Abstract Selected Presentation

2:10-2:30 pm Abstract Selected Presentation

2:30-3:00 pm Plenary Presentation

3.00-3.30 pm Afternoon coffee break

Student Presentations

3:30-3:45 pm Student Presentation

3:45-4:00 pm Student Presentation

4:00 -4:15 pm Student Presentation

4:15-4:30 pm Student Presentation

4:30-6:00 pm Networking and Poster Presentations

6:30-9:00 pm Dinner and Networking (Cooppersmiths)

Jun 15, 2018 (Friday)

7:30-8:00 am Networking and Coffee

Session 7. State-of-the-Art to State-of-Funding

8:00-8:30 am State-of-the-Art Presentation -

8.30-9.00 am State-of-the-Art presentation

9:00-9:30 am Metabolism of Infectious Diseases as a Research Priority

9.30-10.00 am Morning coffee break

Session 7. Continued

10:00-10:30 am Metabolism of Infectious Diseases as a Target of Therapeutics

10.30-11:15 am Round Table Discussion

11:15-11:45 am Awards for Student Presentations and Posters

11:45-12:00 pm Closing remarks