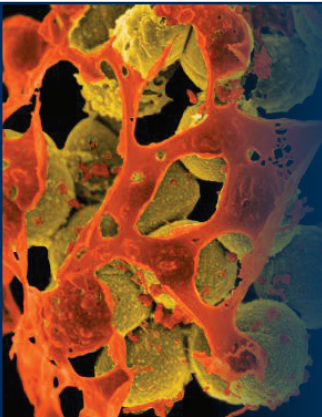




Antimicrobials and Resistance: Opportunities and Challenges

October 29– November 1, 2017 | Eldorado Hotel | Santa Fe, New Mexico | USA

Scientific Organizers:

Gautam Dantas, Washington University School of Medicine, USA

Jennifer A. Leeds, Novartis Institutes for BioMedical Research, USA

Antimicrobial-resistant (AMR) infections claim hundreds of thousands of lives around the globe annually. This problem is exacerbated by a steady increase in global antimicrobial use and abuse in the clinic and agriculture, and a dearth of novel antimicrobials making it to market. If these scenarios continue unchecked, AMR will cumulatively cost the global economy at least 100 trillion dollars by 2050. This conference focuses on the latest work understanding and combatting AMR, including clinical perspectives on AMR diagnostics and management, translational academic perspectives on design of drug regimens and combinations that suppress AMR, pharma perspectives on recent successes and failures in novel antimicrobial development and clinical trials, and basic science perspectives on the ecology and transmission of evolving AMR determinants. While these stakeholders are similarly motivated to identify and develop therapies to treat the exceptional, unmet medical need of worsening AMR, their spheres rarely overlap at scientific conferences, leading to communication barriers between subject matter experts. This conference attempts to address this challenge by engaging diverse global perspectives on these topics, including speakers and attendees from academic research, industrial drug development, and healthcare practice and policy.

Session Topics:

- Surveillance and Treatment of Resistant Bacterial Infections in Clinical Practice
- Workshop 1: Novel Therapeutic Strategies
- Fate and Lessons Learned from Recent Drug Development Programs Focused on Resistant Pathogens or Narrow-Spectrum Agents
- Alternative Approaches to Tackling Resistant Infections
- Multidrug Evolutionary Strategies to Invert Resistance Selection
- Ecology and Evolution of AMR Transmission Dynamics Across Habitats
- Workshop 2: Novel Strategies for AMR Discovery, Diagnostics and Modeling
- Tackling AMR – Challenges in Drug Development

Scholarship Application & Discounted Abstract Deadline: June 27, 2017

Abstract Deadline: July 27, 2017

Discounted Registration Deadline: August 29, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Upper image of methicillin-resistant *Staphylococcus aureus* (MRSA) bacteria courtesy of NIAID.

Meeting Hashtag: #KSAMR

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Antimicrobials and Resistance: Opportunities and Challenges (T4)

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Supported by the Directors' Fund

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SUNDAY, OCTOBER 29

Arrival and Registration

MONDAY, OCTOBER 30

Welcome and Keynote Address

Ramanan Laxminarayan, Center for Disease Dynamics, Economics and Policy, India

Antimicrobial Resistance: Managing a Shared Global Resource

Surveillance and Treatment of Resistant Bacterial Infections in Clinical Practice

Michael J. Satlin, Weill Cornell Medicine, USA

Talk Title to be Announced

Carey-Ann D. Burnham, Washington University School of Medicine, USA

Next-Generation Diagnostics: Translating Rapid Pathogen and Resistance Detection to Optimal Antibiotic Prescription

Jean Patel, Centers for Disease Control and Prevention, USA
Combating Antibiotic Resistant Bacteria: CDC's Implementation of the National Action Plan

Short Talk(s) Chosen from Abstracts

Poster Session 1

Workshop 1: Novel Therapeutic Strategies

Short Talks Chosen from Abstracts

Fate and Lessons Learned from Recent Drug Development Programs Focused on Resistant Pathogens or Narrow-Spectrum Agents

Lorraine D. Hernandez, Merck Research Laboratories, USA
Monoclonal Antibody Therapy for the Prevention of Recurrent Clostridium Difficile Infection

Paul Ambrose, Institute for Clinical Pharmacodynamics, USA
PK/PD and Choosing Clinical Doses to Suppress Resistance

Lynn Connolly, Achaogen, USA
Late-Stage Drug Development: Lessons Learned from Running Resistant Pathogen Focused Clinical Trials

Short Talk Chosen from Abstracts

TUESDAY, OCTOBER 31

Alternative Approaches to Tackling Resistant Infections

Helen I. Zgurskaya, University of Oklahoma, USA
Synergistic Interplays between Active Drug Efflux and Low Permeability Barrier of the Outer Membrane in Antibacterial Activities and Inhibition of Multidrug Efflux Pumps

Paolo Ruggerone, Università degli studi di Cagliari, Italy
Dynamical Structure-Function Relationship in RND Transporters

Aileen Rubio, Spero Therapeutics, USA
Challenges with Animal Models in Advancing Novel Anti-Infectives

Scott Hultgren, Washington University School of Medicine, USA
Discovery and Development of Anti-Virulence Therapeutics against UTI Adhesins

Short Talk(s) Chosen from Abstracts

Multidrug Evolutionary Strategies to Invert Resistance Selection

Pamela Yeh, University of California, Los Angeles, USA

Higher-Order Drug Combinations and Suppressive Interactions

Gavin Barlow, Hull and East Yorkshire Hospitals NHS Trust and University of York, UK

Treating Patients with Infections in the 21st Century - Are Antibiotic Cycling and Novel Combinations a Viable Clinical Option?

Karen Bush, Indiana University, USA

Enzymatic Antimicrobial Resistance and the Search for New Inhibitors
Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, NOVEMBER 1

Ecology and Evolution of AMR Transmission Dynamics Across Habitats

Gautam Dantas, Washington University School of Medicine, USA
Networks of Exchanging Antibiotic Resistance Between Commensal, Environmental, and Pathogenic Bacteria

Ilana L. Brito, Cornell University, USA
Horizontal Gene Transfer of Antibiotic Resistance in the Gut Microbiome

Gerry D. Wright, McMaster University, Canada
The Resistome and Antimicrobial Discovery

Kathryn E. Holt, University of Melbourne, Australia
Klebsiella as a Key Trafficker of Antibiotic Resistance Genes

Short Talk(s) Chosen from Abstracts

Workshop 2: Novel Strategies for AMR Discovery, Diagnostics and Modeling

Short Talks Chosen from Abstracts

Tackling AMR – Challenges in Drug Development

Thomas F. Durand-Reville, Entasis Therapeutics, USA
New Compound Uptake Tools to Confront the Challenges of MDR Gram-Negative Antibiotic Discovery

Folkert Reck, Novartis Institutes for Biomedical Research, USA
LYS228, A Novel Monobactam to Treat Infections Caused by Multi-Drug Resistant Enterobacteriaceae

Danica Galonic Fujimori, University of California, San Francisco, USA
Peptidyl Transferase Center Methylation in Antibiotic Resistance

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

THURSDAY, NOVEMBER 2

Departure