

Keystone Symposia: Antibiotics and Resistance: Challenges and Solutions

part of the Keystone Symposia Global Health Series

February 14–19, 2010 • Hilton Santa Fe/Historic Plaza • Santa Fe, New Mexico • USA

Scientific Organizers: Gerry Wright, Deborah Hung and Stewart L. Fisher

PROGRAM FACULTY & TALKS

- Chris Abell**, University of Cambridge, UK
New Antibiotic Leads from Fragment Based Compound Screening
- Frederick M. Ausubel**, Massachusetts General Hospital, USA
*Whole Organism Antibiotic Screening in *C. elegans**
- Mike Barbachyn**, AstraZeneca Pharmaceuticals LP, USA
The Natural History of the Oxazolidinones
- Helen E. Blackwell**, University of Wisconsin-Madison, USA
Expanding the Language of Bacterial Quorum Sensing with Synthetic Ligands
- Patricia Bradford**, Novartis Institutes for Biomedical Research, USA
Difficulties and Success in Bringing the 3rd Generation Tetracyclines to Market
- Eric D. Brown**, McMaster University, Canada
New Activities through Non-Obvious Drug Combinations
- Patrice Courvalin***, Institut Pasteur, France
Talk Title to be Determined
- Julian Davies**, University of British Columbia, Canada
Where Will New Antibiotics Come From?
- Vincent A. Fischetti**, Rockefeller University, USA
Controlling Gram-Positive Pathogens with Phage Lytic Enzymes
- Stewart L. Fisher**, AstraZeneca R&D Boston, USA
DNA Replication, Opportunities and Challenges
- Sylvie Garneau-Tsodikova**, University of Michigan, USA
New Approaches to Combinatorial Biosynthesis of Antibiotics
- Robert E.W. Hancock**, University of British Columbia, Canada
Modulation of Host Immunity as an Anti-Infective Strategy
- Scott Hultgren**, Washington University School of Medicine, USA
Bacterial Adhesion and Motility – A Source of Alternate Antibiotic Targets
- Deborah Hung**, Massachusetts General Hospital, USA
Antivirulence Therapy
- Vincent T. Lee**, University of Maryland, USA
Are Type 3 Secretion Systems Good Targets?
- Mark Macielag**, Johnson & Johnson Pharmaceutical Research & Development, USA
What Makes a Good Antibiotic?
- Valerie Mizrahi**, University of the Witwatersrand – MMRU, South Africa
M. tuberculosis: A Pathogen Re-Emerging with a Vengeance
- Robert C. Moellering**, Beth Israel Deaconess Medical Center, USA
Bacterial Pathogens in the Clinic and Community: The Need for New Antibiotics
- Dana Philpott**, University of Toronto, Canada
The Nod Pathway as a Novel Target for Anti-Infectives
- David A. Relman**, Stanford University, USA
The Microbiome: Antibiotic Perturbation, Response and Human Health
- Thomas A. Steitz**, Howard Hughes Medical Institute, Yale University, USA
From the Structures of Ribosome-Antibiotic Complexes to New Antibiotics
- Michael G. Surette**, University of Calgary, Canada
The Clinical Challenge of Microbial Communities
- Peter J. Tonge**, Stony Brook University, USA
Novel Inhibitors of Menaquinone and Fatty Acid Biosynthesis: Slow Onset Inhibition and in vivo Activity
- Jose Miguel Trevejo**, Draper Laboratory/Beth Israel Deaconess Boston, USA
Novel Sensors for Rapid Determination of Drug Resistance
- Michael Tyers**, University of Edinburgh, UK
Cellular Networks and Drug Discovery
- Suzanne Walker**, Harvard Medical School, USA
Approaches to New Antibiotics
- Christopher T. Walsh**, Harvard Medical School, USA
Post-translational Maturation of Thiazolyl Peptide Antibiotics
- Gerry Wright**, McMaster University, Canada
Antibiotic Resistance: Where Does It Come From and What Can We Do About It?



In the face of a growing crisis in antibiotic resistance and the emergence of new bacterial pathogens, there is a pressing clinical need for new antibiotics. Paradoxically, this call for new drugs comes at a time when investment in antibiotic development in the pharmaceutical industry is at historically low levels. Despite the promise of the genomic revolution to inform drug development and innovations in drug discovery and the fundamental biology that underpins it, modern control of infectious disease with antibiotics is perilously fragile. This meeting brings together researchers from medicine, academe and industry and from across scientific disciplines to discuss the challenges of antibiotic development in the 21st century. What is the scope of the problem? What are possible solutions? What are the imperatives for the short and long term and is the traditional antibiotic paradigm in need of an overhaul? These questions will be the focus of the meeting that will help to define the problems and solutions in antibiotic development.

PROGRAM PLENARY SESSIONS & WORKSHOPS:

- The Problem of Antibiotic Resistance and the Need for New Drugs
- Success and Barriers in Modern Antibacterial Drug Discovery
- Mining Known Pathways as Targets for New Antibiotics
- New Molecules for New (and Old) Challenges
- New Antibiotic Targets – Virulence and Quorum Sensing
- New Technology – Systems and Synthetic Biology
- New Technology – Real-Time Diagnostics and Narrow vs. Broad Spectrum Agents
- Workshop
- What about the Host?

DEADLINES:

Global Health Travel Award: September 8, 2009
Abstract & Scholarship: October 14, 2009
Late-Breaking Abstract: November 13, 2009
Early Registration: December 14, 2009

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*Keynote speaker. Program subject to change. Current as of September 15, 2009