

Keystone Symposia in Berlin

21st-Century Drug Discovery and Development for Global Health

Hotel Palace Berlin | Berlin, Germany | October 17–20, 2018

Scientific Organizers:

Ken Duncan, Bill & Melinda Gates Foundation, USA

Elizabeth Winzeler, University of California, San Diego, USA

Lluís Ballell, GlaxoSmithKline, Spain

Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

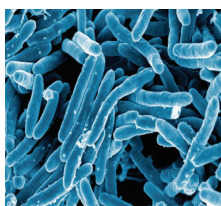
Infectious diseases cause substantial morbidity and mortality in the developing world. The medicines available today are often inconvenient to use or result in side effects, and many are being lost to emerging drug resistance. There remains an urgent need to discover and develop the next generation of transformative medicines that are more efficacious, more highly targeted, and have a better safety profile. This will only be achieved through the application of state-of-the-art drug discovery tools, technologies and approaches. This conference will focus on diseases caused by parasitic organisms and bacteria, including malaria, neglected tropical diseases, diarrheal disease and tuberculosis. The goals of the conference are to improve understanding of the disease burden and challenges faced in developing new therapies, to highlight examples of progress towards new drug candidates, and to foster communication and collaboration among communities of researchers working in global health across the spectrum from research to the clinic. The symposium will be of interest to basic scientists as well as drug discovery and development experts seeking to gain a better understanding of the challenges and opportunities in global health.

Plenary Session Topics:

- New Therapeutics for Global Health
- Robust Target Validation – What Does it Mean?
- Importance of Chemical Diversity in Seeking New Leads
- Workshop 1: Novel Clinical Trial Design
- Alternative Approaches to Drug Delivery – Opportunities and Challenges
- Improving Target and Phenotypic-Based Approaches
- Workshop 2: Opportunities for Repurposing to Discover New Candidates or Mature Starting Points
- Translational Tools for Predicting Efficacy and Resistance

Global Health Travel Award Deadline: May 15, 2018; Scholarship/Discounted Abstract Deadline: Jun 19, 2018; Abstract Deadline: Jul 17, 2018; Discounted Registration Deadline: Aug 16, 2018

Visit www.keystonesymposia.org/18S3 for more details.



KEYSTONE SYMPOSIA™
on Molecular and Cellular Biology
Accelerating Life Science Discovery
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WEDNESDAY, OCTOBER 17

Arrival and Registration

THURSDAY, OCTOBER 18

New Therapeutics for Global Health

***Ken Duncan**, Bill & Melinda Gates Foundation, USA

Nathalie Strub Wourgaft, Drugs for Neglected Diseases Initiative, DNDi, Switzerland

Transformative New Therapies for Human African trypanosomiasis

Thierry T. Diagana, Novartis Institute for Tropical Diseases, USA
Progress with the Clinical Development of Cipargamin (KAE609) and Ganaplacide (KAF156) for the Treatment of Malaria

Lluís Ballell, GlaxoSmithKline, Spain

Global Health GSK R&D in Tres Cantos – Introducing GSK701 and GSK286 as Novel Preclinical Candidates against Malaria and TB

Joseph D. Turner, Liverpool School of Tropical Medicine, UK

Short Talk: Novel Anti-Wolbachia Drugs as Short-Course Macrolaricides for Onchocerciasis

Robust Target Validation – What Does it Mean?

***Tanya Parish**, Infectious Disease Research Institute, USA

Elizabeth A. Winzeler, University of California, San Diego, USA
Multidisciplinary Approaches to the Discovery of Chemoprotective Drugs and Targets for Malaria

Dirk Schnappinger, Weill Cornell Medical College, USA
Combining Chemical Probes and Genetic Knockdowns to Validate Drug Targets in Mycobacterium tuberculosis

Boris Striepen, University of Pennsylvania, USA
Using Molecular Genetics to Understand and Combat Cryptosporidium

Andrew Fraser, University of Toronto, Canada

Short Talk: Dissecting the Pathway for Rhodoquinone Biosynthesis in C. elegans: It all Starts at the Beginning

Joint Keynote Session and Panel Discussion with Grand Challenges: Innovation in Drug Discovery

FRIDAY, OCTOBER 19

Importance of Chemical Diversity in Seeking New Leads

***Courtney Cortez Aldrich**, University of Minnesota, USA

Xiaopeng Bai, GlaxoSmithKline, USA
Experience with DNA-Encoded Libraries in Search for New Leads against TB and Malaria

E. Paige Stout, Sirenas, USA

Sirenas Biochemometrics Platform: Transforming the Search for New Medicines

Judy A. Sakanari, University of California, San Francisco, USA
Identifying Anti-Filarial Candidates using a Multifaceted Screening Funnel

Charles E. Mowbray, Drugs for Neglected Diseases Initiative, Switzerland

A New Era of Orally Active Treatments for Leishmaniasis Patients

Jennifer Elizabeth Collins, University of Central Florida, USA

Short Talk: Novel Antiplasmodial Compounds from Fungi

Alternative Approaches to Drug Delivery – Opportunities and Challenges

***Anna Upton**, TB Alliance, USA

Paul L. Feldman, Intarcia Therapeutics, USA

Application of the Intarcia Medici Drug Delivery System™ for Long-Acting HIV Prevention for Global Health

Andrew Martin Bellinger, Lyndra, USA

Development of Oral, Ultra Long-Lasting, Sustained Release Therapies in the Fight against Malaria and HIV

Arnab Chatterjee, Calibr, USA

Chemoprophylaxis for Prevention of Malaria Infection

Daniel Greenwood, Francis Crick Institute, UK

Short Talk: Subcellular Antibiotic Visualisation Reveals a Dynamic Drug Reservoir in Mycobacterium tuberculosis-Infected Macrophages

Poster Session 1

SATURDAY, OCTOBER 20

Improving Target and Phenotypic-Based Approaches

***Anil Koul**, Institute of Microbial Technology, India

Leann M. Tilley, University of Melbourne, Australia
The Proteasome as a Target for New Antimalarial Drugs

Kirsten Hanson, University of Texas at San Antonio, USA
Profiling Compounds against Liver Stage Malaria

Beatriz Baragana, University of Dundee, UK

Short Talk: Lysyl tRNA Synthetase as a Drug Target in Apicomplexan Parasites

Nyssa Drinkwater, Monash University, Australia

Short Talk: Rational Design of a Multi-Target Antimalarial Compound with in vivo Activity

Deborah T. Hung, Broad Institute of MIT & Harvard, USA
Multiplex Screening of an M. tuberculosis Hypomorph Library Simultaneously Identifies Lead and Target

Marc Gitzinger, BioVersys AG, Switzerland

A SMART Approach to Reversing Drug Resistance in TB and Deploying the Hidden Potential of Current TB Drugs

Bryan J. Berube, Infectious Disease Research Institute, USA

Short Talk: MenA Inhibitors Are Bactericidal against Mycobacterium tuberculosis Alone and in Combination with Electron-Transport Chain Inhibitors

Poster Session 2

Workshop: Opportunities for Repurposing to Discover New Candidates or Mature Starting Points

***Elnaz Menhaji-Klotz**, Bill & Melinda Gates Medical Research Institute, USA

***Khisimuzi E. Mdluli**, Bill & Melinda Gates Medical Research Institute, USA

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Oluyomi S. Adeyemi, Landmark University, Nigeria

Drug Repurposing and Screening of Libraries of Chemical Compounds to Identify New Anti-Parasitic Agents

Samuel Arnold, University of Washington, USA

A Second Chance for Your Favorite Protozoan Target: Repositioning Opportunities for Treatment of Cryptosporidiosis

Giancarlo Biagini, Liverpool School of Tropical Medicine, UK

Antimalarial Pharmacology of Primaquine: Attempting to Solve a 70-Year-Old Puzzle

Elena Fernandez Alvaro, GlaxoSmithKline, Spain

Repurposing Opportunities for the Treatment of MDR Bacterial Enteric Infections

Malkeet Kumar, University of Cape Town, South Africa

Repositioning the Antihistamine Drug Astemizole as an Anti-Plasmodial Agent

Rob Leurs, Vrije Universiteit Amsterdam, Netherlands

Parasite-Specific Cyclic Nucleotide Phosphodiesterase Inhibitors to Target Neglected Parasitic Diseases (PDE4NPD)

Rose C. Lopeman, Aston University, UK

Faropenem and Clavulanate Exhibit Synergy against Mycobacterium abscessus in vitro

Translational Tools for Predicting Efficacy and Resistance

***Robert S. Wallis**, Aurum Institute, South Africa

Wesley C. Van Voorhis, University of Washington, USA

Pharmacodynamic Modeling of Anti-Cryptosporidium Drug Efficacy

Yingda L. Xie, NIAID, National Institutes of Health, USA

Improving Phase 2a TB Drug Development Models through PET/CT Imaging (NexGen EBA)

Cristina Donini, Medicines for Malaria Venture, Switzerland

Role of Volunteer Infection Studies in Prioritizing the Next Generation of Clinical Candidates in Malaria

Thomas Spangenberg, Merck, Switzerland

Short Talk: Evaluation of the Pharmacokinetic-Pharmacodynamic Relationship of Praziquantel in the Schistosoma mansoni Mouse Model

Short Talk Chosen from Abstracts

SUNDAY, OCTOBER 21

Departure