



Challenges and new concepts in antibiotics research
March 19 – 21, 2018
 Institut Pasteur
 Conference Center (C. I. S.)
<http://www.amr-2018.org/>



Programme

MONDAY, MARCH 19	
12h00 – 18h00	Registration
15h00 – 15h25	Welcome addresses and opening Philippe Glaser , Institut Pasteur, Paris France Stewart Cole , General Director, Institut Pasteur, Paris France Philippe Sansonetti , LabEx IBEID, Institut Pasteur, France
15h25 – 16h00	Introductory lecture Chair: Philippe Glaser Marc Sprenger, Director, Antimicrobial Resistance Secretariat, WHO "The AMR Crisis: a WHO perspective"
16h05 – 16h40	Key note speaker Sharon Peacock (London School of Hygiene and Tropical Medicine, UK) "Are bacterial pathogens isolated from animals a common cause of drug-resistant infection in humans?"
16h45 - 17h15	Coffee break
17h15 – 19h15	Antibiotic resistance – a one health context Chair: Kathleen Victoir & Arnaud Fontanet
17h15 – 17h40	Kamini Walia (Indian Council of Medical Research, India) "AMR in India: understanding drivers and opportunities for action"
17h45 – 17h57	Philip Supply (Institut Pasteur de Lille, FR) "Deep amplicon sequencing for surveillance and diagnostics of drug resistant tuberculosis directly from primary specimens"
18h00 – 18h25	Frank Møller Aarestrup (Technical University of Denmark, Lyngby, DK) "Global surveillance of antimicrobial resistance"

18h30 – 18h42	Niyaz Ahmed (ICDDR, Dhaka, BG) "Comparative genomics and molecular epidemiology of multiple drug resistant bacteria in India and Bangladesh"
18h45 – 19H10	Tim Walsh (Cardiff University, Cardiff, UK) "One health approach to AMR in LMICs: reality or fantasy?"
19h15	Welcome Reception at Institut Pasteur

TUESDAY, MARCH 20	
8h45 – 10h30	Resistance and virulence Chair: Lulla Opatowski and Jan Maarten van Dijk
8h45 – 9h10	Sophie Helaine (Imperial College London, UK) "Salmonella persists during infection"
9H15 – 9h27	Lejla Imamovic (Technical University of Denmark, Lyngby,DK) "Phenotypic convergence in response to drug exposure supports collateral sensitivity to counter drug resistance"
9h30 – 9h42	Tim Stinear (University of Melbourne, AU) "Increasing tolerance of hospital <i>Enterococcus faecium</i> to hand-wash alcohols"
9h45 – 10h10	Nassos Typas (EMBL, Heidelberg, DE) "Drugs & Bugs: unexplored relationships"
10h15 – 10h27	Meriem El Karoui (University of Edinburgh, UK) "DNA repair and antibiotic tolerance in <i>Escherichia coli</i> "
10h30 – 11h00	Coffee break
11h00 – 12h30	Antibiotics, microbes and models Chair: Carmen Buchrieser and Bruno Coignard
11H00 – 11H25	Sebastian Bonhoeffer (ETH Zürich, CH) "An old challenge and some new concepts: a dynamical perspective on antibiotic resistance evolution"
11h30 – 11H42	Alan Mcnally (University of Birmingham, UK) "Signatures of selection in colonisation factors and the evolution of a multi-drug resistant lineage of <i>Escherichia coli</i> "
11h45 – 12h10	Martin Blaser (NYU School of Medicine, New York, US) "The antibiotic paradox"
12h15 – 12h27	Audrey Duval (Université Versailles Saint-Quentin, FR) "Between-human proximity networks support transmission of ESBL-producing <i>Klebsiella pneumoniae</i> but not <i>Escherichia coli</i> "

12h30 – 15h00	Lunch Poster Session – Cafe and dessert
15h00 – 16h30	Dissemination of antibiotic resistance Chair: Eliora Ron and Didier Mazel
15h00 – 15h25	Marie-Cécile Ploy (INSERM, Limoges, FR) "Antibiotic resistance: the necessary balance between expression and acquisition?"
15h30 – 15h42	Arnaud Gutierrez (U1001, INSERM, Paris, FR) "Antibiotic activity, the environment matters. High-throughput killing assay for screening antibiotic lethality"
15h45 – 16h10	Dan Andersson (Uppsala University, SE) "Unstable antibiotic resistance"
16h15 – 16h27	Birge Ozel Duygan (University of Lausanne, CH) "Microbial degradation of antibiotics: the necessity for micromolar concentration studies"
16h30 - 17h00	Coffee break
17h00 – 19h10	Developing new drugs: academic and industrial innovations Chair: Laura Marin and George Griffin
17h00-17h35	Key note speaker Stewart Cole (Institut Pasteur, Paris FR & EPFL, Lausanne, CH) "Towards a new combination therapy for tuberculosis"
17h40 – 19h10	Round table: Public-private partnership for New Antibiotics Manica Balasegaram (GARDP, Geneva, CH) Laurent Fraise (SANOFI, Lyon, Fr) Marc Lemonnier (Antabio, Toulouse, Fr) Laura Marin (JPI AMR, Stockholm, SW) Sarah Paulin (WHO, Geneva, CH) Kim Lewis (Northeastern University, Boston, US)
20h00	Conference Diner at Maison des Polytechniciens
WEDNESDAY MARCH 21	
8h45 – 10h30	Mechanisms of resistance Chair: Anne-Brit KOLSTØ and Frédéric Barras
8h45 – 9h10	Jean-Marc Ghigo (Institut Pasteur, Paris, FR) "Biofilm tolerance to antibiotics"
9h15 – 9h27	Magdalena Bielecka (University of Southampton, UK)

9h30 – 9h42	<p>“Developing a novel 3-dimensional cell culture platform for studying antimicrobial resistance”</p> <p>Frederic Béquet (Bioaster, Paris, FR)</p>
9h45 – 10h10	<p>“Met-SAMoA®: an automated metabolic screening platform for the prediction of new antimicrobials mechanism of action.”</p> <p>Nathalie Balaban (The Hebrew University; Jerusalem, IL)</p>
10h15 – 10h27	<p>“Evolution under intermittent antibiotic exposure: interplay between tolerance and resistance”</p> <p>Kristin Baker (RUSVM, St. Kitts and UCPH, DK)</p> <p>“Peptidomimetics induce azithromycin and rifampicin susceptibility against multidrug resistant Gram-negative pathogens”</p>
10h30 - 11h00	Coffee break
11h00 – 12h50	<p>Molecular machines and new targets</p> <p>Chair: Nathalie Balaban and Ivo Boneca</p>
11h00 – 11h25	<p>Nora Vazquez-Laslop (University of Illinois, Chicago, US)</p> <p>“Context specific mode of action of ribosomal antibiotics”</p>
11h30 – 11h55	<p>Michel Arthur (INSERM, Paris, FR)</p> <p>“Non-conventional strategies to fight β-lactam-resistant bacteria”</p>
12h30 – 12h50	<p>Breakthrough session - Poster talks (5’)</p> <p>Maya Nadimpalli (Institut Pasteur, Paris, FR)</p> <p>Damien Thiry (Liège University, BE)</p> <p>Ana Elena Perez Cobas (Institut Pasteur, Paris, FR)</p> <p>Romain Guerillot (University of Melbourne, AU)</p> <p>Agnes Jousset (Université Paris-Sud, Bicêtre, FR)</p> <p>Richard Allen (ETH Zürich)</p> <p>Petra Eva Szili (Hungarian Academy of Sciences, HU)</p> <p>André Mateus (EMBL, Heidelberg, DE)</p> <p>Benoit Marteyn (Institut Pasteur, Paris, FR)</p>
12h50 – 15h05	<p>Lunch at Institut Pasteur</p> <p>Poster session – Cafe and dessert</p>
15h05 – 16h30	<p>Finding new antibiotics</p> <p>Chair: Ariel Blocker and Thierry Naas</p>
15h05 – 15h40	<p>Key note speaker</p> <p>Kim Lewis (Northeastern University, Boston, US)</p> <p>“The Antibiotic Discovery Challenge”</p>

15h45 – 15h57	Brice Felden (U1230 Inserm, Rennes, FR) "New antibiotics active on multi-resistant bacteria"
16h00 – 16h25	Pei Zhou (Duke University, Durham, US) "Novel Antibiotics Targeting Lipid A Biosynthesis in Gram-negative Pathogens"
16h30 - 17h00	Coffee break
17h00 – 19h00	Conventional and non-conventional strategies to fight resistant bacteria Chair: Hilde de Reuse and Nassos Typas
17h00 – 17h25	Priscile Brodin (Institut Pasteur, Lille, Fr) "Phenotypic screenings for the discovery of first-in-class small-molecules against tuberculosis"
17h30 – 17h42	Bruno Gonzalez-Zorn (Universidad Complutense de Madrid, SP) "Reversion of intrinsic antibiotic resistance through aerial interbacterial communication mediated by H2S"
17h45 – 18h10	David Bikard (Institut Pasteur, Paris, FR) "CRISPR tools to study and fight pathogenic bacteria"
18h15 – 18h40	Roy Kishony (TECHNION, Haifa, IL) "Predicting antibiotic resistance"
18h45 – 18h57	Laurent Debarbieux (Institut Pasteur, Paris, FR) "Driving the success of phage therapy with insights into host immune responses "
19h00	Closing remarks Pascale Cossart, LabEx IBEID, Institut Pasteur, France Closing Cocktail