

Antimicrobial Resistance Course (AMR) – A OneHealth Challenge

1st edition

Co-organized by the Mérieux Foundation & the University Paris-Diderot

Les Pensières Center for Global Health Veyrier-du-Lac - France

November 4th to 8th, 2019



Background

Antimicrobial resistance (AMR) is a growing global public health menace that threatens the prevention and treatment of bacterial diseases. The AMR-Global Action Plan (GAP) by WHO (World Health Organization) and One Health global strategy consider fostering awareness and understanding on antimicrobial resistance to be a priority and essential for the adoption, deployment and implementation of country AMR-National Action Plans (AMR-NAPs). To support this critical effort, the Mérieux Foundation and the University Paris-Diderot (UPD) have joined their expertise and capacities to support the AMR-GAP by designing a course to address concretely – from plan to action – the five objectives of the AMR-WHO-GAP. Together, the Mérieux Foundation and UPD propose a residential intensive training course on AMR in a One Health perspective, principally targeting audiences from low- and middle-income countries.

The course advocates for the value of the One Health approach to fight against AMR, and builds capacity for critical decision-making in the developing world through education, partnerships and networks.

The program is based on the five WHO-AMR-GAP objectives (one objective per day):

- Day 1: The role of antibiotics and the current challenges improving awareness and understanding of antimicrobial resistance
- Day 2: Strengthening knowledge and evidence through monitoring & surveillance
- Day 3: Interventions to tackle AMR
- Day 4: Optimizing the use of antimicrobial medicines in human and animal health
- Day 5: Policy-regulation-governance and the economic case for global sustainable investment to tackle AMR.

International Scientific Committee (alphabetic order)

Antoine Andremont Course Director, Emeritus Professor, Université Paris Diderot France Laurence Armand Université Paris Diderot France

Oxford University **United Kingdom** Juan Carrique-Mas **Didier Dreyfuss** Université Paris Diderot France

Hubert Endtz Course Co-Director, Fondation Mérieux France **Xavier Lescure** Université Paris Diderot France

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University of Amsterdam's Faculty of Medicine Constance Schultsz The Netherlands

Sophie Touze France Vetagrosup Université Paris Diderot France Yasdan Yasdanpanah

Jaap Wagenaar **Utrecht University** The Netherlands

Timothy Walsh Cardiff University United Kingdom

Steering Committee (alphabetic order)

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Faculty & Chairs (alphabetic order)

Emilie Alirol Global Antibiotic R&D Partnership Jocelyne Arquembourg Université Sorbonne Nouvelle World Health Organization (WHO) Hanan Balkhy Oxford University Juan Carrique-Mas

Alessandro Cassini World Health Organization (WHO)

Peter Collignon Medical School, Australian National University Delfy Gochez World Organisation for Animal Health (OIE) Africa Centres for Disease Control and Prevention Benjamin Djoudalbaye Jorge Pinto Ferreira World Organisation for Animal Health (OIE) Cecilia Ferreyra Foundation for Innovative New Diagnostics (FIND)

Ian Gray Sanofi Pasteur

Olga Jonas Harvard global health institute

Helen Lambert **Bristol University** Xavier Lescure Université Paris Diderot

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Constance Schultsz University of Amsterdam's Faculty of Medicine

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Sophie Touze Vetagrosup Alex Van Belkum BioMérieux

Johan Vekemans World Health Organization (WHO)

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Switzerland

Switzerland

Switzerland

Switzerland

United Kingdom

Australia

Ethiopia

France

France

France

France

France

France Sweden

Denmark

Burkina Faso

United Kingdom

Italy

USA

United Kingdom

France

	Monday, November 4 th , 2019 Charles Mérieux Conference Room	
08:00 - 08:30	Registration	
08:30 - 09:00	Opening & Welcome addressesFondation MérieuxUniversité Paris Diderot	Hubert Endtz Antoine Andremont

Session 1

The role of antibiotics & the current challenges - Improving awareness and understanding of antimicrobial resistance

Chairs: Carmen Pessoa & Jean-yves Madec

<u>Session objective</u>: To provide an overview on the role and use of antibiotics in global health.

Master Lectures			
9:00-9:45	Keynote lecture: past and present situation of AMR & future challenges	Hanan Balkhy	
9:45-10:15	The onehealth perspective on AMR	Peter Collignon	
10:15-10:45	Impact of AMR in human health and the environment	Alessandro Cassini	
10:45-11:00	Discussion		
11:00 - 11:30	Coffee Break		
11:30-12:00	Underlaying the genetic resistance transmission	Jean-Yves Madec	
12:00 - 12:30	Role of the environmental resistome	Patrick Munk	
12:30-12:45	Discussion		
12:45 - 14:00	Lunch		
	Group Work Group activity coordinators: Damien Roux & Valentina Picot		
	Group work:		
14:00 - 17:00	• What is the most urgent target of AMR control in LMICs: humans, animals, environment?		
	• What are the main differences in AMR control between LMICs and HIC?	Facilitator: TBD Reporteur: TBD	
	• How to conciliate local, national, regional and global policies for AMR control?		
	(Afternoon Coffee Break: from 15h30 to 16h30 for groups to take as it suits their work progress)		
17:00 - 17:10	Day 1 - Evaluation		
19:00	Welcome dinner & Evening Lecture Evening Lecture: (starts at 19:30) An overview of the GAP (Global Action Plan)-AMR and the Countries NAP (National Action Plan)	Marc Sprenger	

Tuesday, November 5th, 2019 Charles Mérieux Conference Room

Session 2

Strengthen the knowledge and evidence through monitoring & surveillance

Chairs: Constance Schultsz & Juan Carrique-Mas

Session objectives:

- To become familiar with the methodologies for measuring and reporting AMU and AMR in commensal organisms and pathogens from humans and animals for research and surveillance purposes.
- To become familiar with existing international AMU/AMR surveillance initiatives. To critically evaluate AMU/AMR surveillance systems.

	Master Lectures		
9:00-9:30	Surveillance in Humans for AMU, AMR (incl.GLASS)	Carmen Pessoa	
9:30-10:00	Surveillance in animals for AMU, AMR including surveillance of AMR in food-borne pathogens	Jaap Wagenaar	
10:00-10:30	Metrics of antimicrobial use in humans and animals, including the case of the EU monitoring system	Juan Carrique-Mas	
10:30-10:45	Discussion		
10:45 - 11:15	Coffee Break		
11:15-11:45	Limitations in data generated by surveillance systems & data sharing regional / global – Solutions	Constance Schultsz	
11:45 - 12:15	How to use monitoring and surveillance to improve care	Damien Roux	
12:15-12:30	Discussion		
12:30 - 14:00	Lunch		
	Group Work Group activity coordinators: Damien Roux & Valentina Picot		
14:00 - 17:00	Group work: Steps in developing/enhancing a national surveillance system		
	 Evaluate the current AMR surveillance system for one country of the group's choice – indicate what, who, how and where surveillance is done for this country, from a One Health perspective. Describe strengths and weaknesses of this 	Facilitator: TBD Reporteur: TBD	
	system.		
	• Propose solutions to the main weaknesses that you encountered in this evaluation.		
	(Afternoon Coffee Break: from 15h30 to 16h30 for groups to take as it suits their work progress)		
17:00 - 17:10	Day 2 - Evaluation		
19:00	Dinner		

Wednesday, November 6th, 2019 Charles Mérieux Conference Room

Session 3

Intervention to tackle AMR

Chairs: Abdoul Salam Ouedraogo & Antoine Andremont

<u>Session objective</u>: To understand the role of better hygiene and infection prevention measures and other critical interventions as essential to limit the development and spread of antimicrobial-resistant infections and multidrug-resistant bacteria.

infections and m	ultidrug-resistant bacteria.	
	Master Lectures	
9:00-9:30	Infection, prevention and control (IPC) and WASH Interventions at hospital Inpatient level (Reducing the incidence of infection through IPC and effective sanitation, hygiene and other preventive measures)	Jean-Christophe Lucet
9:30-10:00	Electronic algorithms and point-of-care tests to manage febrile children and reduce antibiotic prescription	Rainer Tan
10:00-10:30	AMR interventions at the environment level	Heike Schmitt
10:30-10:45	Discussion	
10:45 - 11:15	Coffee Break	
11:15-11:45	AMR interventions at the animal level – veterinary	Delfy Gochez
11:45 - 12:15	AMR interventions at the food production level for human and animals - agriculture	Alice Green
12:15 - 12:45	AMR community sensibilization and Public Engagement campaigns	Jocelyne Arquembourg
12:45-13:00	Discussion	
13:00 - 14:30	Lunch & Group Picture	
	Group Work Group activity coordinators: Damien Roux & Valentina Pi	cot
14:30 - 17:30	Group work: : Infection prevention and control core components for national and local IPC programs (draft questions) • What should be the primary target of interventions: professionals, patients? • Where should be the focus of the interventions: community, hospitals, others? • Should interventions be primary curative, preventive? (Afternoon Coffee Break: from 15h30 to 16h30 for groups to take as it	Facilitator: TBD Reporteur: TBD
	suits their work progress)	
17:30 - 17:40	Day 3 - Evaluation	
19:00	Dinner	

Thursday, November 7th, 2019 Charles Mérieux Conference Room

Session 4

Optimize the use of antimicrobial medicines in human and animal

Chairs: Sophie Touzé & Xavier Lescure

Session objective: To understand how to optimize the use of antimicrobial medicines in human and

animal health.		
Master Lectures		
9:00-9:30	Role of the microbiotas and impact of antibiotics	Etienne Ruppe
9:30-10:00	Antibiotic stewardship in veterinary medicine	David Speksnijder
10:00-10:30	Infection prevention measures – The role of vaccines	Johan Vekemans
10:30-10:45	Discussion	
10:45 - 11:15	Coffee Break	
11:15-11:45	Role of diagnostics in AMR	Cecilia Ferreyra
11:45 - 12:15	Antibiotic stewardship in human medicine	Xavier Lescure
12:15 - 12:45	Behavioral / Social Sciences of AMR in LMICs	Helen Lambert
12:45-13:00	Discussion	
13:00 - 14:00	Lunch	
	Group Work	
	Group activity coordinators: Damien Roux & Valentina Pio	
14:00 - 15:30	Rapid fire lectures & Roundtable: AMR Industry perspective in LMICs	Alex Van Belkum Emilie Alirol Ian Gray
15:30 - 17:30	 Group work: How to conciliate ATB prescription & ecological approach in LMICs? What kind of AMS implementation for veterinary medicine in LMICs? What kind of AMS implementation for Human medicine in LMICs? (Afternoon Coffee Break: from 15h30 to 16h30 for groups to take as it suits their work progress) 	Facilitator: TBD Reporteur: TBD
17:30 - 17:40	Day 4 - Evaluation	
19:00	Dinner & Evening Lecture Evening Lecture (starts at 19:30) Fleming Fund - AMR activities	Charles Penn

Friday, November 8th, 2019 Charles Mérieux Conference Room

Session 5

Policy -Regulation- Governance & the Economic case for global sustainable investment to tackle AMR Chairs: Jaap Wagenaar & Benjamin Djoudalbaye

<u>Session objective</u>: To recognize that a through economic impact assessments is needed in health and broader socioeconomic burden of antimicrobial resistance, including the investment in the development of new antimicrobial medicines, as well as in diagnostic tools and vaccines, to build our case.

case.		
Master Lectures		
8:30 - 9:00	Governance need it for an implementable NAP- National Action Plan on AMR	Benjamin Djoudalbaye
9:00-9:30	How to translate WHO-CIA-list , OIE and EU prioritization and other information / data into advocacy and Policy	Jean-Yves Madec
9:30-10:45	Lectures & Panel Discussion on the various lists of antibiotics currently available	Peter Collignon Jorge Pinto Ferreira
10:45 - 11:15	Coffee Break	
11:15-11:45	EU Policy and regulation on AMR	Laura Marin
11:45 - 12:15	Economics of AMU in animal production	Jonathan Rushton
12:15 - 12:45	AMR in LMICs a complex economic business model?	Olga Jonas
12:45-13:00	Discussion	
13:00 - 14:00	Lunch	
Course Evaluation & Diploma Ceremony		
14:00 - 14:30	Day 5 & Global Course Evaluation	
14:30 - 15:30	Diploma Ceremony & Diplomas Group Picture	
15:30	Closure of the course	