

## Programme

# Innovations to reduce the use of antimicrobials in food producing animals in LMICs

Wednesday 11 – Friday 13 April 2018 | WP1615

### Context

In 2016, the UN General Assembly recognised antimicrobial resistance (AMR) as a global threat which disproportionately impacts people in low-and middle-income countries (LMICs). The international community was called upon to rise to the complex challenge of AMR and take urgent action. This included further research and development of innovative solutions to reduce the therapeutic use and prevent the inappropriate and non-therapeutic use of antimicrobials in food-producing animals, as well as to improve global collaboration transcending disciplines and sectors.

This workshop will bring together experts from the global South and North across academia, industry, the public and private sector to discuss, identify, prioritise and further understand key issues and opportunities for new and improved vaccines and other alternative solutions to reduce the inappropriate use of antimicrobials in livestock production and aquaculture. With a particular focus on emerging and developing economies, the workshop will additionally look to understand how to build effective and successful partnerships to better coordinate global research, development and future funding calls.

The Global Antimicrobial Resistance Innovation Fund (GAMRIF) programme managed by the UK Department of Health and Social Care, in partnership with Canada's International Development Research Center (IDRC) have organised this Wilton Park workshop in order to:

- Gather evidence to identify the research gaps surrounding AMR in food-producing animals in LMICs which could inform the scope of potential future research calls;
- Gather evidence on AMR research capacities globally and in LMICs and understand what constitutes successful partnerships;
- Raise awareness and provide information for the sector to help direct future research.

In 2015, at the request of several countries and organisations, the World Organisation for Animal Health (OIE) assembled an *ad hoc* group to prioritise diseases and pathogens for which vaccines could significantly reduce antimicrobial use in animals<sup>1</sup>. With the current and projected growth in global production for swine, poultry and aquaculture, particularly in relation to their intensive rearing, the *ad hoc* group identified opportunities for several new

<sup>1</sup> World Organisation for Animal Health (OIE). *Report of the meeting of the OIE ad hoc group on prioritisation of diseases for which vaccines could reduce antimicrobial use in animals*. Paris, April 2015.

vaccines as well as improving existing ones. In 2017, the Pew Charitable Trusts published a comprehensive overview of different approaches to alternatives to antibiotics in animal agriculture, including vaccines, which can help reduce the inappropriate use of antimicrobials and enable infection prevention via other means<sup>2</sup>. Building on these important publications, looking through the LMIC lens, the workshop programme will focus on critical topics related to the reduction of the therapeutic use and prevention of the inappropriate and non-therapeutic use of antimicrobials, as defined by the G7 Chief Veterinary Officers (CVOs)<sup>3</sup>, including:

- The reduction of the therapeutic use of antimicrobials; the prevention of the inappropriate therapeutic use of antimicrobials for control and metaphylaxis and prevention and prophylaxis; and the prevention of the non-therapeutic use of antimicrobials for growth promotion;
- The specific needs relating to swine, poultry and aquaculture and how this focus fits into the wider fields of agriculture, livestock keeping and food safety;
- The specific needs, gaps and approaches for the successful development of vaccines and alternatives to antibiotics;
- The identification of specific key drivers of AMR in food-producing animals in LMICs and the evaluation of the specific needs across different diseases and pathogens; geographical areas; and agricultural systems;
- The evaluation of good practice in project implementation, and frameworks for successful collaborative partnerships;
- The assessment of the impact of social and economic factors on research projects to promote successful implementation and support sustainable agricultural and aquacultural development.

**In association with the Department of Health and Social Care (UK) and the International Development Research Centre (IDRC) (Canada).**

(Speakers invited and themes proposed: ^ denotes expected to participate but not yet confirmed in speaking role)

## Wednesday 11 April

**1600-1645**

Participants arrive. Welcome tea/coffee.

**1645-1700**

Photograph

**1700-1720**

### **Welcome and introduction**

**Sharmila Nebhrajani**

Chief Executive, Wilton Park

<sup>2</sup> The Pew Charitable Trusts. *Alternatives to antibiotics in animal agriculture*. Washington, D.C., July 2017.

<sup>3</sup> Common approach of G7 CVOs on the definitions of therapeutic, responsible and prudent use of antimicrobials in animals, 2<sup>nd</sup> G7 Chief Veterinary Officers Forum, Italy, 5 October 2017. URL:

[http://www.salute.gov.it/imgs/C\\_17\\_notizie\\_3118\\_listaFile\\_itemName\\_0\\_file.pdf](http://www.salute.gov.it/imgs/C_17_notizie_3118_listaFile_itemName_0_file.pdf)

**Louise Norton-Smith**

Head of International Antimicrobial Resistance Strategy and Delivery, Department of Health and Social Care (DHSC), London

**Dominique Charron**

Director of Agriculture and Environment, International Development Research Centre (IDRC), Ottawa

1720-1830

**1. AMR and the use of antimicrobials in food-producing animals: the scale of the issue and need for action in LMICs**

This opening session will address the wider links and importance of tackling the use of antimicrobials in food-producing animals, whether therapeutic or non-therapeutic. Positioning the issue area within the wider discussion on AMR this session will ask: what is the scale of the problem in LMICs? What work is already being undertaken that targets this issue? What have been the successes and failures in the field to date? What is needed to move forward?

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

**Jorge Pinto Ferreira**

Head of Mission, Science and New Technologies Department, World Organisation for Animal Health (OIE), Paris

**Mary J. Gordoncillo**

AMR Regional Surveillance Coordinator, Food and Agriculture Organization (FAO), Bangkok

**Mark Rweyemamu**

Executive Director of Southern African Centre for Infectious Disease Surveillance, Sokoine University of Agriculture, Morogoro

1830

Reception followed by dinner

2030

Keynote speakers

**Sally Davies (by video)**

Chief Medical Officer for England, Department of Health and Social Care (DHSC); Co-convenor, UN Ad Hoc Inter-agency Coordination Group on AMR, London

**Jean Lebel**

President, International Development Research Centre (IDRC), Ottawa

and

**Peter Borriello**

Chief Executive Officer, Veterinary Medicines Directorate (VMD), Addlestone

**Hosted by Robin Hart**

Senior Programme Director, Wilton Park, Steyning

**Thursday 12 April**

0800-0845

Breakfast

0900-0910

**2. Introduction and overview of the day**

**Robin Hart**

Senior Programme Director, Wilton Park

0910-1015

### 3. Overview of the AMR field globally and in LMICs

This session will highlight priority areas in the field and will set the scene for the following more detailed discussions. This session will ask: what are the high level challenges and opportunities when it comes tackling the use of antimicrobials in livestock and aquaculture? How can vaccines reduce emergence and spread of AMR and what is the relevance of alternatives to antibiotics for infection treatment, prevention and growth promotion? How do challenges and opportunities differ in LMICs across the globe?

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

**Glen Gifford**

Head of Mission, Science and New Technologies Department, World Organisation for Animal Health (OIE), Paris

**Kathy Talkington**

Project Director, Antibiotic Resistance Project, The Pew Charitable Trusts, Washington DC

**Panel Discussion**

**Thuy Thi Bich Nguyen**

Deputy Director General, National Institute of Veterinary Research, Hanoi

**Guy Gerard Kouame**

Epidemiologist, Africa Centre for Disease and Control (CDC), Addis Ababa

**Suzana Bresslau**

Federal Veterinarian Officer, Ministry of Agriculture, Livestock and Food Supply, Brasilia

1015-1030

Tea/coffee

1030-1210

### 4. Breakout groups: identifying key issue areas

Participants will break into four smaller groups to discuss priority areas in detail. The discussion groups will address the benefits and challenges of research focusing on specific animal groups, diseases and pathogens, and geographical areas.

The groups will be categorised by animal species and will discuss a range of questions for example:

- What is the AMR situation in LMICs for each animal species and how do the challenges and opportunities impact other animal species?
- Do the species-specific challenges and needs differ across the global South?
- How do the agricultural and aquaculture farming systems impact the specific challenges on AMR?
- What are the challenges and opportunities to reduce the therapeutic use of antimicrobials; to prevent inappropriate (metaphylaxis and prophylaxis) and non-therapeutic (growth promotion) use of antimicrobials?

The potential problems and benefits of focusing interventions on poultry, swine and aquaculture in LMICs.

**Group 1 - Poultry**

**Facilitator: Callum Harvey**

Knowledge Transfer Manager – AgriFood, Knowledge Transfer Network, Edinburgh

**Expert contributors:**

**Juan Jose Carrique-Mas**

Veterinary Epidemiologist, Oxford University, Ho Chi Minh City

**Lisa Bielke**

Assistant Professor, The Ohio State University, Wooster

## **Group 2 - Swine**

**Facilitator: Charles Vander Broek**

Knowledge Transfer Manager, Knowledge Transfer Network, Edinburgh

**Expert contributors:**

**Poul Baekbo**

Senior Veterinary Adviser, SEGES, Aarhus

**Beibei Li**

Associate Professor, Chinese Academy of Agricultural Sciences (CAAS), Beijing

## **Group 3 – Aquaculture**

**Facilitator: Santiago Alba-Coral**

Associate Director Agriculture and Food Security, International Development Research Centre (IDRC), Ottawa

**Expert contributors:**

**Alexandra Adams**

Professor, Head of Fish Health, Institute of Aquaculture, University of Stirling

**Thuy Thi Bich Nguyen**

Deputy Director General, National Institute of Veterinary Research, Hanoi

## **Group 4 – Ruminants**

**Facilitator: Kevin Tiessen**

Program Leader, Livestock Health, International Development Research Centre (IDRC), Ottawa

**Expert contributors:**

**Bryan Charleston**

Director, Pirbright Institute, Woking

**Kassahun Asmare**

Professor, Hawassa University

1215-1300

## **5. Plenary feedback**

Short feedback from the discussion groups into plenary, followed by roundtable discussion. Feedback will aim to identify key priorities to feed into the next round of discussion groups.

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

1300-1400

Lunch

1430-1530

## **6. Setting the scene: R&D opportunities and challenges for interventions in LMICs**

This session will discuss the opportunities and challenges faced in R&D for vaccines and alternatives for antibiotics. Do these differ for LMICs? The session will also discuss some examples of interventions or products that are being researched to tackle AMR in food-producing animals.

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

**Frédérique Clusel**

General Manager, Phileo Lesaffre, Marcq-en-Baroeul

**Nick Nwankpa**

Director, Pan-African Veterinary Vaccine Centre of African Union (AU-PANVAC), Debrezeit

1530-1545

Tea/coffee

1545-1730

## 7. Breakout groups: identifying key issues on interventions

The second round of breakout discussions will consider key and/or neglected areas of research and development of vaccines and alternatives to antibiotics to tackle the use of antimicrobials in food-producing animals.

The groups will be categorised by animal species and will discuss a range of questions for example:

- What are the specific R&D challenges and opportunities for development of vaccines and/or alternatives to antibiotics to reduce the therapeutic use and prevent the inappropriate use (metaphylaxis, prophylaxis) of antimicrobials? Do they differ in LMICs?
- What are the specific R&D challenges and opportunities for development of alternatives to antibiotics to prevent the non-therapeutic use (growth promotion) of antimicrobials? Do they differ in LMICs?
- What are the key research areas for the manufacture and delivery of vaccines and/or alternatives to antibiotics? Are there particular challenges faced in LMICs?
- What are the regulatory challenges, including licensing and market entry? Are different challenges faced in LMICs and where do the opportunities lie?

### Group 1 – Poultry

**Facilitator: Callum Harvey**

Knowledge Transfer Manager – AgriFood, Knowledge Transfer Network, Edinburgh

### Group 2 - Swine

**Facilitator: Charles Vander Broek**

Knowledge Transfer Manager, Knowledge Transfer Network, Edinburgh

### Group 3 – Aquaculture

**Facilitator: Santiago Alba-Coral**

Associate Director Agriculture and Food Security, International Development Research Centre (IDRC), Ottawa

### Group 4 – Ruminants

**Facilitator: Kevin Tiessen**

Program Leader, Livestock Health, International Development Research Centre (IDRC), Ottawa

1730-1830

## 8. Plenary feedback and discussion

Short feedback from the discussion groups into plenary, followed by roundtable discussion.

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

1900

Reception followed by dinner

## Friday 13 April

0800-0900

Breakfast and checkout

0900-0915

## 9. Reflective session

A short overview of the workshop so far, key themes and areas of discussion.

**Chair: Robin Hart**

Senior Programme Director, Wilton Park

**Callum Harvey**

Knowledge Transfer Manager – AgriFood, Knowledge Transfer Network, Edinburgh

0915-1015

## 10. Partnerships for successful project implementation

Discussion on the characteristics of sustainable project partnerships will be facilitated to assess the specific needs of AMR collaborations. Existing partnerships will be shared as case studies and the merits of making partnerships/consortia mandatory in research and project proposals will be evaluated. The session will also explore the capacity within the global South to develop vaccines and alternatives to antibiotics locally and the capacities and strengths its researchers can bring to partnerships and what can be expected from consortia.

**Chair: Santiago Alba Corral**

Associate Director Agriculture and Food Security, International Development Research Centre (IDRC), Ottawa

**Delia Grace**

Programme Leader, International Livestock Research Institute (ILRI), Nairobi

**Carel du Marchie Sarvaas**

Executive Director, HealthforAnimals, Brussels

1015-1045

Tea and coffee

1045-1200

## 11. Sustainable solutions and scaling-up

This session will look at sustainable and transformative change on AMR that can only be achieved by adapting to the local realities faced by farmers and farms in the global South. For technological innovations to be effective and sustainable, there must be an understanding that LMIC end-users often have divergent needs and interests from Northern actors. Meaningful and sustainable solutions to curb the central drivers of antimicrobial use must be informed by the significant geographic variation and local operating contexts of LMIC farming systems.

**Chair: Amit Khurana**

Senior Programme Manager Food Safety and Toxins, Centre for Science and the Environment, New Delhi

**Tabitha Kimani**

Regional Socio-economist, Food and Agriculture Organization (FAO) Representation in Kenya, Nairobi

**Beth Miller**

President, International Goat Association, Little Rock

1200-1215

## 12. Evaluation Survey

Completion of online survey

1215-1300

## 13. Conclusions and next steps

**Chair: Christopher Egerton-Warburton**

Partner, Lion's Head Global Partners, London

**Callum Harvey**

Knowledge Transfer Manager – AgriFood, Knowledge Transfer Network, Edinburgh

**Charles Vander Broek**

Knowledge Transfer Manager, Knowledge Transfer Network, Edinburgh

Including contributions from IDRC and DHSC

1300

Lunch

1400

Participants depart

