International Symposium
Alternatives to Antibiotics (ATA)
Challenges and Solutions in Animal Production
The World Organisation for Animal Health (OIE)
12 Rue de Prony, 75017
Paris, France
25-28 September, 2012

Conclusions and Next Steps

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www.ars.usda.gov/alternativestoantibiotics

OBJECTIVES

The objectives of this symposium is to highlight promising research results and novel technologies that provide alternatives to antibiotics, assess challenges associated with their commercialization and use, and provide actionable strategies to support their development.

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EXPECTED OUTCOMES FROM ATA SYMPOSIUM

- Publications of manuscripts in the journal of Veterinary Microbiology
- Publications of panel discussion outcomes (problems, solutions)
- Posting of posters and presentations on the ATA website
- Continue to build the ATA website as a resource center
- OIE Global Conference on the Prudent Use of Antimicrobial Agents

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 1

Alternatives to Antibiotics from Nature

- Wide variety of product categories: drugs, biologics, drug-biologic
  - host antimicrobials, defensins, probiotics, prebiotics, competitive exclusion, quorum sensing, bacteriocins, phytochemicals, acidifying agents, minerals, bacteriophages, bacteriophage lysins, naturally occuring antibacterial lytic enzymes

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 1

Alternatives to Antibiotics from Nature

- What is the mechanism(s) of action!!!
- Are these products effective?
- Are these products safe?
- What is the product profile (label claims): treatment, prevention, growth promotion?
- Can these products be manufactured in a cost effective manner?
- How will these products be administered?

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 2

Immune Modulation Approaches to Enhance Disease Resistance and Treat Animal Infections

- Wide variety of product categories: host antimicrobials, probiotics, phytochemicals, immune enhancers, Toll-like receptor agonists, therapeutic antibodies, cytokines.
- What is the mechanism(s) of action!!!
- Need veterinary immunological reagents to characterize function
- What is the product profile (label claims): treatment, prevention, or disease resistance, or health?
- Need more basic research

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 3

The Gut Microbiome and
Immune Development, Health and Disease

- Wide variety of product categories: most of the products discussed during this symposium can impact the gut microbiome
- Do we need to culture and characterize gut microorganisms or do we just need to identify them?
- Do we need to just shift specific populations that are associated with beneficial effects or do we need to characterize the mechanisms by which gut microorganisms modulate disease and health traits
- Need to integrate nutrition, health, and disease research

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 4

Alternatives to Antibiotics to Promote Growth in Livestock, Poultry, and Aquaculture Production

- Need to understand mechanisms of action to maximize the effect of alternatives to antibiotics for growth promotion in the field
- The active ingredients needs to be defined to ensure quality and reproducibility of expected effect of the product under field condition
- Current knowledge of mechanisms of action for growth promotion of certain alternatives to antibiotics may be greater than what we knew about antibiotics used for production

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SOME CONCLUSIONS FROM THE ATA SYMPOSIUM

SESSION 5

Regulatory Pathways to Enable the Licensing of Alternatives to Antibiotics

- Alternatives to antibiotics will be regulated as a drug, a biologic, a feed additive, or possibly all of the above
- Alternatives to antibiotics must be developed according to national and international standards and meet requirements for efficacy, safety, and quality
- Regulatory processes are in place to enable and facilitate the licensing of alternatives to antibiotics
- Need to engage regulatory agencies early in the process

STAR-IDAZ

"Global **St**rategic **A**lliances for the Coordination of **R**esearch on the Major **I**nfectious **D**iseases of **A**nimals and **Z**oonoses"

A global initiative to address the coordination of research programmes at international level in the area of animal health and in particular infectious animal diseases including zoonoses.

STAR-IDAZ - Windows Internet Explorer

http://www.star-idaz.net/

Google

STAR-IDAZ

Page

STAR-IDAZ

Global Network for Animal Disease Research

"Global Strategic Alliances for the Coordination of Research on Infectious Diseases of Animals and Zoonoses"

OIE GLOBAL CONFERENCE ON THE RESPONSIBLE AND PRUDENT USE OF ANTIMICROBIAL AGENTS FOR ANIMALS

International Solidarity to Fight against Antimicrobial Resistance

Paris (France), 13–15 March 2013

http://www.oie.int/eng/A_AMR2013/introduction.htm

OIE Global Conference on the Prudent Use of Antimicrobial Agents for Animals

International Solidarity to Fight against Antimicrobial Resistance

Paris (France) 13 – 15 March 2013

FIRST ANNOUNCEMENT

BACKGROUND

Antimicrobial agents are essential tools for protecting animal health and welfare. They also contribute to satisfying the increasing world demand for safe food of animal origin, such as milk, meat and eggs. To ensure sustainability of livestock production, the efficacy of antimicrobial agents must be preserved through their responsible and prudent use.

Antimicrobial resistance is a global human and animal health concern that is influenced by both human and non-human usages of antimicrobial agents. The human, animal and plant sectors therefore have a shared responsibility to minimise antimicrobial resistance selection pressures on human and non-human pathogens and to contain antimicrobial resistance illustrating the One Health approach.

The OIE has worked actively for more than a decade on veterinary products, including antimicrobial agents, and developed a strategy for its activities in this area. Given that antimicrobial resistance is often an animal and human health issue, the OIE works closely with all its Member Countries, as well as with international organisations such as WHO, FAO and the Codex Alimentarius Commission.

The OIE has developed international standards and promotes the responsible and prudent use of antimicrobial agents in terrestrial and aquatic animals, as it is crucial to safeguard their therapeutic efficacy for both animals and humans.

The OIE's standards also address the surveillance of antimicrobial resistance and the monitoring of quantities of antimicrobial agents used in food producing animals. The OIE standards provide guidance for OIE Member Countries to appropriately address the risk of the emergence or spread of resistant bacteria.

Several of these OIE standards and the OIE list of antimicrobials of veterinary importance, already adopted by all Member Countries, are currently under revision to incorporate recent scientific developments with the participation of WHO and FAO.

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OBJECTIVES

The conference will in particular:

- present an overview of the current situation regarding antimicrobial use in animals and antimicrobial resistance;
- inform on initiatives taken by the OIE and other international organisations to promote prudent and responsible use of antimicrobial agents in animals at a national, regional and international level;
- promote good governance practices including national legislation and regulatory frameworks for import, registration, distribution and use of quality veterinary drugs worldwide, by using the OIE PVS Pathway in evaluating and strengthening national Veterinary Services and their compliance with OIE standards.
- encourage international cooperation to help all Member Countries to effectively implement measures for responsible and prudent use of antimicrobial agents in animals;
- foster and strengthen cooperation with Veterinary Statutory Bodies and the veterinary profession for the respect of OIE standards on prudent use in animals worldwide;
- explore the opportunities to improve data collection in animal antimicrobial usage and antimicrobial resistance;
- present research on new molecules and scientific findings on the alternatives that could be used in animal production replacing antimicrobial agents.

Contact: scientific.dept@oie.int

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GOING FORWARD

- Need to link academia, government researchers, feed industry, pharmaceutical industry, regulatory agencies, and livestock industries
- ATA scientific committee to define the scope of the research, development, and applications of alternatives to antibiotics
- Publications of manuscripts from scientific presentations and panel discussions
- Continue to build the ATA website as a resource center
- Establish an ATA research alliance/society
- STAR-IDAZ: gap analyses (scope), national and international research collaborations, public-private partnerships
- OIE Global Conference on the Prudent Use of Antimicrobial Agents
- Second International ATA conference in 2-3 years?

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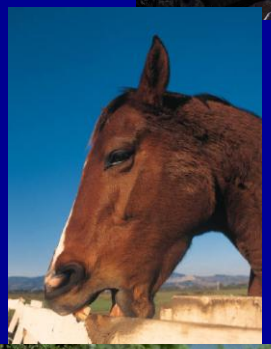
Thank you!

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