



## CAHI “Clippings”

December 11, 2015 to January 6, 2016

### Contents

1. [Stakeholders group seeks engagement on antimicrobial resistance](#)
2. [The Importance of Pets to Human Health](#)
3. [New Executive Director for Farm & Food Care Ontario](#)
4. [FDA Withdraws Approval of Arsenic in Animal Feed](#)
5. [Animal medicines sector responds to Lord O’Neill on Antimicrobials in Agriculture Report](#)
6. [Canadian Research Team Wins \\$7.3M to Develop New Vaccines for Cattle](#)
  
7. [Education, research wanted on antimicrobials](#)
8. [Brave New Food: GEs and Clones are Heading to the Dinner Table](#)
9. [Pigs That Are Resistant to PRRS Virus Developed at University of Missouri](#)

## Stakeholders group seeks engagement on antimicrobial resistance

Pork Network

By John Maday, Editor, Bovine Veterinarian

January 05, 2016

<http://www.porknetwork.com/news/industry/stakeholders-group-seeks-engagement-antimicrobial-resistance>

Formed by the Infectious Diseases Society of America, the U.S. Stakeholder Forum on Antimicrobial Resistance (SFAR) now lists over 100 health-related organizations that have joined the partnership. Those groups include the American Veterinary Medical Association and the American Association of Bovine Practitioners.

According to the SFAR website, the group was convened on the principle that any U.S. government strategy to address antimicrobial resistance should involve sustained and meaningful engagement with non-government experts and stakeholders throughout the policy development and implementation process. For more on this article, go to:

<http://www.porknetwork.com/news/industry/stakeholders-group-seeks-engagement-antimicrobial-resistance>

## The Importance of Pets to Human Health

CBC News

January 5, 2016

<http://www.cbc.ca/news/health/pets-patients-medical-research-1.3388598>

## New Executive Director for Farm & Food Care Ontario

January 2016

Farm & Food Care Ontario is pleased to announce the hiring of Tracy Hussey to the role of Executive Director. Hussey replaces Crystal Mackay who has transitioned to the new national Chief Executive Officer (CEO) position for Farm & Food Care Canada.

Hussey has over 20 years of experience working in food and health-related roles, with 10 years in senior leadership positions. A registered dietitian by training, Hussey has a Masters of Health Sciences degree from McMaster University. She comes to Farm & Food Care Ontario with experience in the food industry, a hospital environment as well as family medicine.

In addition to serving as Executive Director of Farm & Food Care Ontario, Hussey will also represent Ontario on Farm & Food Care's national senior management team with representatives from Farm & Food Care Canada and Farm & Food Care Saskatchewan.

## FDA Withdraws Approval of Arsenic in Animal Feed

Food Poisoning Bulletin

Linda Larsen

December 31, 2015

The FDA has announced it has withdrawn approval of all applications for nitarstone (an arsenic-based drug) in animal feed as of December 31, 2015. There are now no FDA-approved, arsenic-based drugs for use in food producing animals.

RoosterLast April, the FDA announced it received a letter of commitment from Zoetis Animal Health that the company will suspend sales of Histostat, the commercial name for nitarstone. This was the only arsenic-based animal drug used in

food animals. It is used for the prevention of disease in turkeys and chickens. Studies have found that organic arsenic, the less toxic form of the chemical used in these drugs, can transform into inorganic arsenic, which is a known carcinogen. For more on this article, go to: <https://foodpoisoningbulletin.com/2015/fda-withdraws-approval-of-arsenic-in-animal-feed-2/>

## **Animal medicines sector responds to Lord O'Neill on Antimicrobials in Agriculture Report**

Politics.co.uk

Tuesday, 22 December 2015

The UK, European and global animal medicines sector associations have joined forces to respond to Lord O'Neill's recent Report on Antimicrobials in Agriculture, through a letter and expert critique of his Report.

NOAH chief executive Dawn Howard says: "We agree with Lord O'Neill that antimicrobial resistance is an important global issue that must be addressed with sound evidence-based policies. Whilst we recognise the need for us to play our part in working to maintain the effectiveness of these vital medicines, we believe that there are numerous flaws in the Report".

Commenting on the recommendation of a global target to reduce use, Mrs Howard said: "Rather than the global target to reduce use suggested, we believe the full commitment of all countries to implementing the global WHO Antimicrobial Resistance Action Plan would be more effective in actually addressing the resistance issue. There are a number of reasons, set out in our critique document, why we believe an arbitrary global reduction target is dangerously counterproductive. Different circumstances within different countries mean that one size very definitely does not fit all - as local disease, animal husbandry, economic and climate conditions will impact on countries abilities to change existing practices". For more on this article, go to: <http://www.politics.co.uk/opinion-formers/national-office-for-animal-health-noah/article/animal-medicines-sector-responds-to-lord-o-neill-on-antimicr>

## **Canadian Research Team Wins \$7.3M to Develop New Vaccines for Cattle**

Justin Petrone

December 17, 2015

NEW YORK (GenomeWeb) – A team of Canadian researchers has been awarded \$7.3 million to support the development of vaccines for bovine tuberculosis and Johne's disease in cattle.

Backed by Genome British Columbia, Genome Canada, and other funding agencies, the team, which includes investigators from the University of British Columbia and the University of Saskatchewan, will employ reverse vaccinology coupled with high-throughput genomics to deliver the new vaccines to an animal health company for commercialization within four years.

Unlike the trial-and-error approach of traditional vaccinology, reverse vaccinology examines the genomic sequences of the infective organisms in an animal model and predicts the antigens that would raise immunity by looking for any protein that is secreted on the surface of the bacteria.

There is a need for the vaccines. According to Genome Canada, Johne's disease and bovine tuberculosis cause losses of more than \$86 million and \$10 million, respectively, in Canada. According to the US National Institute for Animal Agriculture, Johne's disease, an often fatal infection of the small intestine, results in losses of \$250 million in the American dairy cattle industry, where the typical remedy is to slaughter the herd containing infected animals. Estimates for the annual losses caused by these diseases to the worldwide cattle industry number in the billions.

## Education, research wanted on antimicrobials

By Greg Cima

December 16, 2015

Two associations of universities and colleges want more education and research on antimicrobial resistance connected with agriculture.

A task force of the Association of American Veterinary Medical Colleges and the Association of Public and Land-grant Universities published a report Oct. 29, 2015, advocating those goals as well as increased collaboration and advocacy by the associations on the education and research goals. The task force members included representatives from the two parent organizations and from the agriculture and pharmaceutical industries, according to the report.

Dr. Lonnie King, a professor and former dean at The Ohio State University College of Veterinary Medicine and co-chair of the task force, said the recommendations are aimed mostly at colleges and universities. Those institutions, he said, can help federal agencies implement the National Action Plan for Combating Antibiotic-resistant Bacteria, which President Obama's administration published in March 2015.

But the report also is intended for the federal agencies, whose officials could learn about the recommendations as well as the expertise and skills available from academic institutions, Dr. King said.

The AAVMC-APLU report, "Addressing antibiotic resistance," states that antibiotic drug discovery has slowed while use has risen, and achievements in controlling infectious disease "could be reversed with catastrophic consequences." And the speed and volume of international travel give microbes opportunities to share genetic material and spread.

The task force recommendations include developing a model antimicrobial resistance curriculum for animal science or health programs, training veterinarians and others working in agriculture, communicating with the public, improving understanding of how antimicrobial resistance develops and spreads, identifying alternatives to antimicrobials, promoting development of new antimicrobials, improving methods for metagenomic analysis and risk assessments, collaborating in diagnostic test development, and evaluating antimicrobial use and changes in use.

Education, outreach, and research are the three main mission areas for universities and colleges, Dr. King said, noting that the report carries another group of recommendations on how to meet the mission area goals.

"This report's a little different in that it stresses the execution and the implementation of the other recommendations," he said.

Dr. Chase Crawford, director of the Antimicrobial Resistance Initiative, which is trying to implement the report's recommendations, said he has been working with government agencies, agriculture, and public health and consumer organizations to create a combined approach to antimicrobial resistance with representation from animal health and agriculture industries.

The initiative plans to participate in existing meetings, such as this past November's antibiotics symposium by the National Institute for Animal Agriculture, as well as plan its own events, such as an antibiotics summit that Dr. Crawford expects will occur early this year.

"Right now, we are organizing a working group to look at developing the common baseline of knowledge around antibiotic resistance, so we're putting together a working group of experts from universities that will take a look at how this issue is being relayed currently in universities, and in veterinary colleges specifically, and what the core competencies of a graduate should be relating to antibiotic resistance."

He has heard anecdotes indicating to him that lessons in universities on antimicrobial resistance can vary, depending on the expertise and specializations of instructors.

“So, we are bringing together a diverse set of representatives from universities to try and come together and say what are the overall competencies, regardless of who teaches it, that schools and programs can look at to say ‘Are we covering those core competencies?’” he said.

The report also calls for creation of a national organization, to be named the University Research Organization, to coordinate research among universities and private companies.

“It would try to put together the best experts around the country to apply for grants so that you wouldn’t duplicate efforts, and you would bring the right experts to bear,” Dr. King said.

That would include selecting partners in business and government to work together on research and educational projects, he said.

Such an organization likely would be based at one university but established as a separate institution, he said, and he expects the funding eventually would come from grants or private organizations and industry.

## **Brave New Food: GE and Clones are Heading to the Dinner Table**

by Martha Rosenberg  
December 16, 2015

Consumers, safety activists, Big Food, biotech companies and many of the US’s importing and exporting partners have been closely watching to see if the FDA would approve the genetically engineered AquAdvantage Salmon, which it did last month. Of course unlabeled GE crops are eaten by millions and GE animals have been created to make human drugs largely under the public radar. Still the AquAdvantage Salmon is the first approved GE animal destined for the US dinner table.

The AquAdvantage Salmon is not the only GE food animal in the works. Scientists at the Roslin Institute at the University of Edinburgh in Scotland, where Dolly the cloned sheep was created, have spent years creating chickens that can be used as “biofactories” to make eggs with interferon and other disease-fighting substances.

“Once you’ve made the transgenic birds, then it’s very easy,” enthused scientist Helen Sang, PhD. “You can breed up hundreds of birds from one cockerel [young male]—because they can be bred with hundreds of hens and you can collect an egg a day and have hundreds of chicks in no time. For more on this article, go to:

<http://www.counterpunch.org/2015/12/16/brave-new-food-ges-and-clones-are-heading-to-the-dinner-table/>

## **Pigs That Are Resistant to PRRS Virus Developed at University of Missouri**

University of Missouri news release  
December 9, 2015

Porcine Reproductive and Respiratory Syndrome (PRRS) virus was first detected in the U.S. in 1987. Pigs that contract the disease have extreme difficulty reproducing, don't gain weight and have a high mortality rate. To date, no vaccine has been effective, and the disease costs North American farmers more than \$660 million annually. Now, a team of researchers from the University of Missouri, Kansas State University, and Genus plc have bred pigs that are not harmed by the disease.

"Once inside the pigs, PRRS needs some help to spread; it gets that help from a protein called CD163," said Randall Prather, distinguished professor of animal sciences in the College of Agriculture, Food and Natural Resources. "We were able to breed a litter of pigs that do not produce this protein, and as a result, the virus doesn't spread. When we exposed the pigs to PRRS, they did not get sick and continued to gain weight normally."

For years, scientists have been trying to determine how the virus infected pigs and how to stop it. Previously, researchers believed that the virus entered pigs by being inhaled into the lungs, where it attached to a protein known as sialoadhesin on the surface of white blood cells in the lungs.

However, two years ago Prather's group showed that elimination of sialoadhesin had no effect on susceptibility to PRRS. A second protein, called CD163, was thought to "uncoat" the virus and allow it to infect the pigs. In their current study, Prather's team worked to stop the pigs from producing CD163. For more on this article, go to: [Pigs That Are Resistant To PRRS Virus Developed At University Of Missouri](#)