

The Paratuberculosis Newsletter

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Note from the Editor

A few months ago, over a million scientists and supporters of science (as well as 5 penguins at Monterey Bay Aquarium) participated in the *March for Science* in more than 600 cities around the world to champion the role of science to benefit everyone. The organisers advocate taking science into the community so that we do not ignore scientific evidence and encourage the application of science into government policies.

Articles in the current newsletter highlight issues I believe are important discussion points in relation to the state of paratuberculosis globally to which we as members of the IAP could contribute. Can an outbreak of the disease be 'resolved' after a single investigation? What is your position on

MAP and Crohn's disease? Do we really need regulations to control the spread of disease? We don't need to agree on a single solution to these questions but our expert knowledge would be invaluable towards the common good.

We are now almost a year away from the next ICP and we have some important information about the upcoming colloquium too.



Kumi de Silva

IAP business



The host of the 14th ICP Gilberto Chávez Gris would like to announce with great pleasure that from June 15 information regarding the meeting in Mexico (Cancun - Riviera Maya), as well as the first announcement for the submission of abstracts (oral and poster) will be available through the link <http://www.14thicp.mx>.

Philadelphia Conference Focuses on Diagnosis and Treatment of Bacterial Pathogens in Crohn's Disease

Human Paratuberculosis Foundation reports that researchers and scientists convene to discuss the pathogen *Mycobacterium avium* subspecies *paratuberculosis* (MAP) in animal and human disease.

Investigators from around the world gathered in Philadelphia at the end of March to present results on the diagnosis and treatment of the pathogen *Mycobacterium avium* subspecies *paratuberculosis*, or MAP. MAP is known to cause Johne's disease, a Crohn's-like condition in ruminants. Convincing evidence has been accruing that MAP is the most likely infective cause of Crohn's disease. The primary purpose of the meeting was to gather researchers for face-to-face discussions, and to seek consensus about diagnostic tests and therapeutic options for detection and control of MAP in Crohn's disease. Presentations were given over two days by 23 researchers studying different aspects of MAP science. A more detailed consensus statement will be forthcoming.

By USDA estimates, the prevalence of MAP in the dairy herds has increased from 21.6% in 1996 to 91.1% in 2007. In comparison, the incidence of Crohn's disease has increased 12-15% since 2011. Animals with Johne's disease spread MAP into the environment through manure where it can survive for roughly one year and infect

numerous animals. Viable MAP in milk is not completely inactivated by current pasteurization methods, and live MAP has been found in rivers, treated municipal water, milk, cheese and other dairy products, including commercial infant formula. MAP infects humans as live MAP can be cultured from the blood and milk of Crohn's disease patients and also from some asymptomatic individuals. Studies have shown that MAP can be eliminated from dairy herds, but the USDA interest in doing so is low

because, to date, MAP has not been formally recognized as causing human disease.

Based on the data presented at the conference, the scientists and physicians in attendance agreed the pendulum has swung and

implicates MAP as a zoonosis: a disease transmitted from animals to humans.

Dr. Thomas Borody, Dr. William Chamberlin, Dr. David Graham and Dr. J. Todd Kuenstner agree that "Crohn's disease is simply human Johne's disease. We can never absolutely prove causality but at some point we must act. We must limit the spread of MAP in the barnyard, impede its transmission to humans and treat it when associated with human chronic inflammatory diseases."

As discussed at the conference, diagnostic methods have become increasingly more refined and reliable, which will enable

Human Paratuberculosis Foundation is a recently formed non-profit organization which seeks to sponsor innovative human MAP research and educate patients and health care providers about the science of MAP.

further studies to elucidate the complex role that MAP plays in human disease.

"It is now possible for researchers to culture, identify and confirm the presence of MAP in tissues and peripheral blood of Crohn's patients. This shows great promise for the development of newer methods of novel, timely and clinically relevant diagnostic techniques to accompany the new therapeutic options," says John Aitken of Otakaro Pathways. Importantly, a Phase III FDA trial (NCT01951326) of a specific combination of antibiotics began in 2014, which is actively recruiting patients with Crohn's disease with the goal of showing that treatment of the MAP infection is at least as effective as standard

therapy and to date has resulted in long term profound remission/functional cure in a small number of patients. Still, further research funding must be made available to provide definitive answers to questions about MAP. Full recordings of the presentations from the Philadelphia Crohn's Conference and additional information can be found at HumanPara.org.

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This article was first published on 4 April 2017

<http://www.prweb.com/releases/2017/04/prweb14208973.htm>

Paratuberculosis Outbreak in Liechtenstein

In March 2017, the World Association for Animal Health (OIE) reported an outbreak of paratuberculosis in the Principality of Liechtenstein.

A 10-year old Holstein cow in the Unterland region of Liechtenstein was found to have diarrhoea, rapid weight loss and decreased milk production following calving. The animal was PCR positive for MAP and was 'disinfected' and euthanised. The authorities report that three calves which had been given milk from this cow were also similarly disposed. Although they report 191 cows were 'susceptible' there is no indication whether these animals were also tested. The outbreak is now considered to be resolved with no other control or follow up measures to be applied. Paratuberculosis was previously detected in Liechtenstein in 2009.

Full details of the report can be found at

http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=23051



Johne's disease in cattle: the next phase

The next phase of the new, national approach to Johne's disease (JD) in cattle [in Australia] is now approaching, with transitional arrangements for the Johne's Beef Assurance Score (J-BAS) ending on 30 June 2017.



Most state jurisdictions have removed regulation for JD in cattle, with Western Australia and the Northern Territory having interim arrangements in place at the request of their respective industry bodies.

Producers wanting to sell cattle need to be aware of the current restrictions as well as their J-BAS and Dairy Score requirements, said Animal Health Australia's (AHA) Executive Manager of Biosecurity and Product Integrity Services, Mr Duncan Rowland.

"Whilst the new approach to managing JD in cattle has significantly less regulation surrounding it, producers wanting to send their cattle to WA or the NT need to monitor entry requirements via their websites, which are updated regularly. Requirements include having a biosecurity plan in place as well as testing your cattle for JD, and other diseases, prior to selling into these markets," said Mr Rowland.

An ideal way to ensure you are helping meet the trading obligations across all states and territories is through the voluntary risk profiling tool for beef cattle – the J-BAS, and the revised Dairy Score for dairy herds.

The ceasing of transitional J-BAS requirements on 30 June is a timely reminder for all Australian beef and dairy producers to finalise integrating JD into their disease management and on-farm biosecurity planning. Producers can visit the Farm Biosecurity and Livestock Biosecurity Network websites for biosecurity planning information.

"Both beef and dairy producers can maintain market advantage by using either the J-BAS or Dairy Score tools, to assure buyers of the JD status of their herds. These scoring systems allow producers and buyers to assess their JD risk, and make informed purchasing decisions," said Mr Rowland.

The new, national approach to JD in cattle – the Framework – focuses on managing on-farm biosecurity risk rather than controlling disease through regulation, and treats JD as just one of many diseases that producers must manage as a business risk.

As with all the changes stemming from the implementation of the new approach to JD in cattle, AHA will continue to update and inform Australian producers throughout the reform process.

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This article was first published on 19 April 2017

<https://www.animalhealthaustralia.com.au/news/johnes-disease-cattle-next-phase/>

Upcoming events

- The 14th ICP will be held in Cancun, Mexico from **June 4-8 2018**



- The 15th ICP will be held Dublin, Ireland in 2020
- The first African Society for Paratuberculosis meeting will be held at the Animal Reproduction Research Institute, Giza, Egypt, March 5-7, 2018



This organization which was formed in February 2017 will serve as a platform for cooperation, to share and to knowledge, experiences, materials on Paratuberculosis among African Researchers and stakeholders on Paratuberculosis control.

- The 30th World Buiatrics Congress will be held in Sapporo, Japan from 28 Aug – 1 Sept 2018. The Scientific program will cover issues on cattle health and reproduction. Topics will include a wide range of production diseases, major infectious diseases, calves and new-born diseases, tropical epidemiology, public health and food security and other animal health and management problems.



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Deadline for next issue: 15 August 2017

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