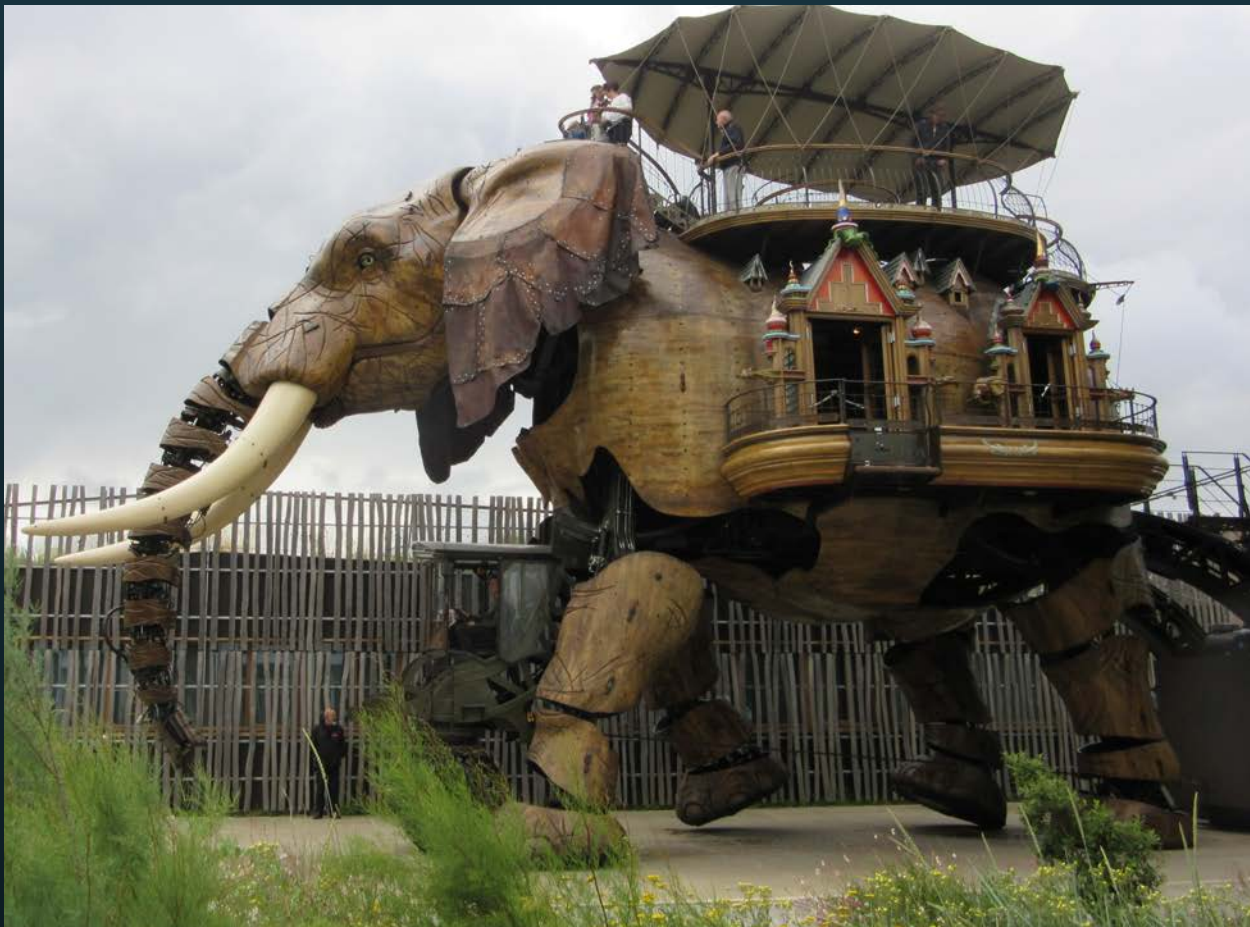


The Paratuberculosis Newsletter

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Note from the Editor

If you are wondering what an elephant is doing on the cover of this edition of the IAP newsletter, it is to celebrate the success of the recent 13th ICP in Nantes, France.

Congratulations to Christine Fourichon and her team who hosted a memorable meeting with a fantastic mix of excellent science and social interactions.

There was some discussion at the Annual General Meeting regarding strategies which could be used to ensure the success of the Association. I am seeking your input to maintain this newsletter as a vibrant and interactive part of the IAP. I am happy to consider any ideas you have on the type of content you would like to see in the newsletter in relation to paratuberculosis.

Finally, I would like to encourage you to submit articles for the newsletter! Since taking over from the previous Editor Soren Neilsen, I now understand first-hand what a difficult job it is to create a newsletter without much content – many thanks for your contribution over the past years Soren.

So, I hope you enjoy reading this edition and once you are done, start thinking about how you can contribute to the next one!

Kumi de Silva



Hosts of the 12th, 13th and 14th ICP (Norma Arrigoni, Christine Fourichon and Gilberto Chavez)

IAP business

The 13th ICP was hosted by Christine Fourichon and held in Nantes, France from 20-24 June 2016. The program focused on the following five sessions

- Infection course
- MAP genomics and diversity
- Diagnostics and detection
- Exposure and transmission
- One health and control plans

and included a workshop on modeling for non-modelers. A stakeholder's meeting conducted in French was held on the final day of the conference.

There were 256 attendees at this ICP from 29 countries. The IAP presented two Richard S. Merkel awards and five Helping Hands awards this year.

The Open Access subsidy has been discontinued and the IAP Board will be investigating a new initiative to provide a subsidy to foster international collaboration in research.

**Conference
dinner venue
Château des ducs
de Bretagne,
Nantes**



Reflections of the 13th ICP by the Richard Merkel awardees



Hannah Pooley and Caroline Ritter

Caroline Ritter (University of Calgary)

If I had to describe the ICP this year I would say that the colloquium was characterized by great presentations, inspiring professional conversations and lots of food during the days. The evenings were defined by even more food and conversations whose professionalism decreased quickly with the number of bottles of wine shared at our table, and occasionally ended in non-official adoption of foreign graduate students.

My supervisor, Dr. Herman Barkema, had offered me a PhD position almost three years ago at the University of Calgary after I graduated from vet school in Germany. I have always been interested in research and especially human behavior. Therefore, after vet school, I started

working on basic depression research in Germany but quickly realized that I wanted to do something that is more immediately applicable. In my PhD I now focus on how we can more effectively motivate dairy farmers to adopt recommended practices for Johne's disease prevention and control. This "health behavior" research has been applied for decades in the human sector (for example, what motivates people to exercise regularly or make healthy food choices). However, in veterinary medicine, the importance of taking psychosociological factors into account when motivating on-farm management changes or developing control programs has only been acknowledged in recent years. The decision of the scientific committee to give

me the opportunity to present my research at the ICP is a reflection of this shift in mindset.

Although my own research deals with a very particular aspect of Johnes's disease control, I always enjoy the presentations about different facets of the same disease. I find that listening to these sessions immensely broadens my horizon

Hannah Pooley (University of Sydney)

The 13th International Colloquium on Paratuberculosis from my view was like the Oscars for research. I remember the first night drinks at a small Irish pub (who would have thought Irish pubs would be so popular in a medieval French town) standing there with fellow students from my lab looking around the room at all the heavyweights of paratuberculosis research. People whose work I had read and had informed my own, the great minds behind the great discoveries on paratuberculosis. I half expected a camera crew and red carpet, flashing lights and maybe fireworks.

The first day was like a blur for me, not only was I fighting back an increasing swarm of butterflies in my stomach, again I was face to face with the celebrities of our field. Once announced each one walked the red carpet in their finery and presented the most interesting and important findings

and occasionally provides ideas for my own research. Besides the presentations, this year I especially enjoyed the short workshop on modelling. The organized events highlighted by the student tour around Nantes, the wine and cheese tasting or the gala dinner allowed for plenty of social time and networking.

they had been working on since the last colloquium, many of these people who have shaped the field we work in today. Then came the end of the first day and my presentation, I was glad we had a podium I could hide my shaking knees behind! After my presentation it suddenly occurred to me that I had shared my work with paratuberculosis celebrities, and they were interested in what I had done, they wanted to ask questions and talk to me after my presentation. They were actually really genuine and lovely people! This became, for me, one of the most striking factors of ICP – all of the attending researchers were down to earth people who only wanted to help you in your endeavours.

I have been involved in paratuberculosis research since 2013 when I completed my undergraduate Honours project. I was then lucky enough to be

offered a PhD continuing and extending my Honours work, on examining the immune profiles of vaccinated livestock exposed to MAP. As such, I have read my fair share of research on paratuberculosis and to finally meet the people behind this work and be able to ask them questions was an amazing experience. I have always made it my mission to work hard but also immerse myself in as many different experiences and opportunities as I can. Being a recipient of the Richard Merkai Fellowship which allowed me to attend this meeting gave me the opportunity to immerse myself in one of the most beneficial and exciting experiences of my PhD thus far.

Throughout the next few days I got to hear from renowned researchers working in a wide spread of areas related to paratuberculosis, from work done on cells and genes all the way up to prevalence studies in an entire country. Amidst all of this we had copious amounts of coffee, a three course French lunch every day and a cheese and wine tasting event. To top off an exhilarating week I got to attend my first international conference dinner in a castle, a truly magical experience and well suited to the calibre of celebrities who were in attendance at the ICP.

Staying in touch

The success of our Association depends heavily on the continued involvement of its members; we need to interact not just at the biannual meetings but also in the years in-between. I would like to encourage you to engage in these discussions via the [website](#).

Paratuberculosis news

Would you like to let others know about the work your organisation does in relation to paratuberculosis? Send information or photos for the next edition of the newsletter by clicking [here](#) or interact with other members of the Association via the [website](#).

Upcoming events

The 14th ICP will be held in Cancun, Mexico from June 3-7 2018



The 15th ICP will be held Dublin, Ireland in 2020

Are there any other events you are aware of that could be of interest to other members of the IAP? Click [here](#) to let us know.

At the 13th ICP



Recent publications

- Ahlstrom, C., Barkema, H.W., De Buck, J., 2016. [Relative frequency of 4 major strain types of *Mycobacterium avium* ssp. paratuberculosis in Canadian dairy herds using a novel single nucleotide polymorphism-based polymerase chain reaction.](#) *Journal of dairy science*.
- Al-Mamun, M.A., Smith, R.L., Schukken, Y.H., Grohn, Y.T., 2016. [Modeling of *Mycobacterium avium* subsp. paratuberculosis dynamics in a dairy herd: An individual based approach.](#) *J Theor Biol* 408, 105-117.
- Alajmi, A., Klein, G., Grabowski, N.T., Fohler, S., Akineden, O., Abdulmawjood, A., 2016a. [Evaluation of a Commercial Real-Time PCR Kit for the Detection of *Mycobacterium avium* subspecies paratuberculosis in Milk.](#) *Curr Microbiol*.
- Alajmi, A., Klein, G., Greiner, M., Grabowski, N.T., Fohler, S., Campe, A., Scheu, T., Hoedemaker, M., Abdulmawjood, A., 2016b. [Potential role of real-time PCR for detecting *Mycobacterium avium* subsp. paratuberculosis in chronically diseased milking cows: a case control study.](#) *Berl Munch Tierarztl Wochenschr* 129, 304-309.
- Alcedo, K.P., Thanigachalam, S., Naser, S.A., 2016. [RHB-104 triple antibiotics combination in culture is bactericidal and should be effective for treatment of Crohn's disease associated with *Mycobacterium paratuberculosis*.](#) *Gut Pathog* 8, 32.
- Arango-Sabogal, J.C., Cote, G., Pare, J., Labrecque, O., Roy, J.P., Buczinski, S., Dore, E., Fairbrother, J.H., Bissonnette, N., Wellemans, V., Fecteau, G., 2016. [Detection of *Mycobacterium avium* subspecies paratuberculosis in tie-stall dairy herds using a standardized environmental sampling technique and targeted pooled samples.](#) *PLoS One* 80, 175-182.
- Arrazuria, R., Molina, E., Garrido, J.M., Perez, V., Juste, R.A., Elguezabal, N., 2016. [Vaccination sequence effects on immunological response and tissue bacterial burden in paratuberculosis infection in a rabbit model.](#) 47, 77.
- Bode, J.F., Thoen, C.O., 2016. Short communication: Survival of [Mycobacterium avium ssp. paratuberculosis in tissues of cows following low-dose exposure to electron beam irradiation.](#) *Journal of dairy science* 99, 6134-6136.
- Chaubey, K.K., Gupta, R.D., Gupta, S., Singh, S.V., Bhatia, A.K., Jayaraman, S., Kumar, N., Goel, A., Rathore, A.S., Sahzad, Sohal, J.S., Stephen, B.J., Singh, M., Goyal, M., Dhama, K., Derakhshandeh, A., 2016. [Trends and advances in the diagnosis and control of paratuberculosis in domestic livestock.](#) *The Veterinary quarterly*, 1-25.

Cossu, D., Yokoyama, K., Sechi, L.A., Otsubo, S., Tomizawa, Y., Momotani, E., Hattori, N., 2016. [Humoral response against host-mimetic homologous epitopes of Mycobacterium avium subsp. paratuberculosis in Japanese multiple sclerosis patients](#). Sci Rep 6, 29227.

de Farias Brito, M., Dos Santos Belo-Reis, A., Barbosa, J.D., Ubiali, D.G., de Castro Pires, A.P., de Medeiros, E.S., de Melo, R.P., de Albuquerque, P.P., Yamasaki, E., Mota, R.A., 2016. [Paratuberculosis in buffaloes in Northeast Brazil](#). Tropical animal health and production.

Facciuolo, A., Gonzalez-Cano, P., Napper, S., Griebel, P.J., Mutharia, L.M., 2016. [Marked Differences in Mucosal Immune Responses Induced in Ileal versus Jejunal Peyer's Patches to Mycobacterium avium subsp. paratuberculosis Secreted Proteins following Targeted Enteric Infection in Young Calves](#). Clinical and experimental vaccine research 11, e0158747.

Fecteau, M.E., 2016. [Dysbiosis of the Fecal Microbiota in Cattle Infected with Mycobacterium avium subsp. paratuberculosis](#). Vet Res 11, e0160353.

Fernandez, M., Benavides, J., Castano, P., Elguezabal, N., Fuertes, M., Munoz, M., Royo, M., Ferreras, M.C., Perez, V., 2016. [Macrophage Subsets Within Granulomatous Intestinal Lesions in Bovine Paratuberculosis](#). Vet Pathol.

Frau, J., Cossu, D., Sardu, C., Mameli, G., Coghe, G., Lorefice, L., Fenu, G., Tranquilli, S., Sechi, L.A., Marrosu, M.G., Cocco, E., 2016. [Combining HLA-DRB1-DQB1 and Mycobacterium Avium Subspecies Paratuberculosis \(MAP\) antibodies in Sardinian multiple sclerosis patients: associated or independent risk factors?](#) BMC neurology 16, 148.

King, D.N., Donohue, M.J., Vesper, S.J., Villegas, E.N., Ware, M.W., Vogel, M.E., Furlong, E.F., Kolpin, D.W., Glassmeyer, S.T., Pfaller, S., 2016. [Microbial pathogens in source and treated waters from drinking water treatment plants in the United States and implications for human health](#). The Science of the total environment 562, 987-995.

Mameli, G., Cocco, E., Frau, J., Arru, G., Caggiu, E., Marrosu, M.G., Sechi, L.A., 2016. [Serum BAFF levels, Methypredsinolone therapy, Epstein-Barr Virus and Mycobacterium avium subsp. paratuberculosis infection in Multiple Sclerosis patients](#). Sci Rep 6, 29268.

Mameli, G., Cossu, D., Caggiu, E., Arru, G., Niegowska, M., Cocco, E., Frau, J., Marrosu, M.G., Sechi, L.A., 2016. [Soluble BAFF Level Is Not Correlated to Mycobacterium avium Subspecies Paratuberculosis Antibodies and Increases After Interferon-beta Therapy in Multiple Sclerosis Patients](#). Journal of molecular neuroscience : MN 60, 91-93.

Narnaware, S.D., Periasamy, S., Tripathi, B.N., 2016. [Studies on pathology, cytokine gene expression and molecular typing of Mycobacterium avium subsp. paratuberculosis of naturally occurring Johne's disease in bullocks](#). Res Vet Sci 106, 74-80.

Niegowska, M., Rapini, N., Biet, F., Piccinini, S., Bay, S., Lidano, R., Manca Bitti, M.L., Sechi, L.A., 2016. [Seroreactivity against Specific L5P Antigen from Mycobacterium avium subsp. paratuberculosis in Children at Risk for T1D](#). PLoS One 11, e0157962.

Niegowska, M., Rapini, N., Biet, F., Piccinini, S., Bay, S., Lidano, R., Bitti, M.L., Sechi, L.A., 2016. Correction: [Seroreactivity against Specific L5P Antigen from Mycobacterium avium subsp. paratuberculosis in Children at Risk for T1D](#). PLoS One 11, e0161516.

Park, H.T., Shin, M.K., Park, H.E., Cho, Y.I., Yoo, H.S., 2016. [PCR-based detection of Mycobacterium avium subsp. paratuberculosis infection in cattle in South Korea using fecal samples](#). J Vet Med Sci.

Pitta, D.W., Vecchiarelli, B., Indugu, N., Kumar, S., Gallagher, S.C., Fyock, T.L., Sweeney, R.W., Park, H.T., 2016. [Development of vaccines to Mycobacterium avium subsp. paratuberculosis infection](#). PLoS One 5, 108-116.

Pooley, H.B., de Silva, K., Purdie, A.C., Begg, D.J., Whittington, R.J., Plain, K.M., 2016. [A rapid method for quantifying viable Mycobacterium avium subsp. paratuberculosis in cellular infection assays](#). Applied and environmental microbiology.

Qin, X., 2016. [Increased Milk Consumption but Decreased Risk of Crohn's Disease \(CD\): Critical Evidence Negated Causative Role of Mycobacterium avium Subspecies paratuberculosis \(MAP\) in CD](#). Inflamm Bowel Dis 22, E37-38.

Swift, B.M., Huxley, J.N., Plain, K.M., Begg, D.J., de Silva, K., Purdie, A.C., Whittington, R.J., Rees, C.E., 2016. [Evaluation of the limitations and methods to improve rapid phage-based detection of viable Mycobacterium avium subsp. paratuberculosis in the blood of experimentally infected cattle](#). BMC Vet Res 12, 115.

Verin, R., Perroni, M., Rossi, G., De Grossi, L., Botta, R., De Sanctis, B., Rocca, S., Cubeddu, T., Crosby-Durrani, H., Taccini, E., 2016. [Paratuberculosis in sheep: Histochemical, immunohistochemical and in situ hybridization evidence of in utero and milk transmission](#). Res Vet Sci 106, 173-179.

Deadline for next issue: 15 November 2016

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