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MedVetNet Association Travel Grant

### **Attendance at the International Dairy Federation Mastitis Conference**

Between the 14th-16th May 2019, I attended the International Dairy Federation Mastitis Conference in Copenhagen, Denmark. The conference was attended by leading experts in dairy health and welfare from over 25 countries worldwide. The International Dairy Federation advocates the prudent and responsible use of antimicrobials and recommends that dairy veterinarians and farmers follow the standards set out by the World Organisation for Animal Health (OIE). They realise, however, that such changes in prescribing practices are not easy. For this reason, they included a congress stream on the topic of "Social sciences and Antimicrobial use", where I was able to present my research on dairy farmers' and veterinarians' use of antibiotics in dairy cattle.

There were a variety of interesting presentations covering the behaviour of veterinarians and farmers in their use of antimicrobials to treat mastitis, and what can be done to reduce this use and change traditional mindsets with regard to blanket dry cow therapy (i.e. using antibiotics at dry off in all cows regardless of udder health). Dr Kristen Reyher from the University of Bristol and Valerie-Beau Pucken from the University of Bern both presented talks on how participatory action groups can change farmers and veterinarians' behaviour with respect to antimicrobial use. The OIE was represented by Dr Jorge Pinto Ferreira who presented his organisation's social media presence and campaigning tools to involve all stakeholders (farmers, vets, pharmaceutical companies and consumers) in prudent antimicrobial use. Dr Rama Falk from the Israeli Dairy Board reported the investigation of the source of an extreme outbreak of MRSA among dairy cows in Israel, where 4/12 farm staff were determined to be nasal carriers of the bacterium.

From a global perspective, Snorri Sigurdsson presented Arla's cooperation with the Chinese dairy industry, where small farms are classed as having less than 1000 cows and mega dairies have more than 5000, employing up to 600 people! The excessive use of antimicrobials is a huge problem in the livestock industry in China and the

Swedish-Danish Arla cooperative is working hard to promote prudent use in this market, as they have already done in Europe. At the opposite end of the spectrum, Ylva Persson from Sweden reported on a small development project in improving udder health, milk quality and reducing antimicrobial use on small farms in Bangladesh. Presenting the link between dairy udder health research and human health, Clare Phythian reported interesting transcription factor (STAT) links between human breast cancer research and pathological changes in sheep udder tissue from researchers at the University of Cambridge.

In the poster session, I was able to present our work on the social science aspects influencing farmers and veterinarians' decision-making behaviour regarding antimicrobial use in the form of two posters (see attached). In Austria, we have a very positive situation in that more than 50% of the farmers questioned in our surveys regularly sent milk samples to the lab for bacteriological culture. This acceptance of advanced diagnostic methods allows the herd veterinarians to be much more prudent in their use of antimicrobial treatments. This high level of diagnostic use is rare in many countries and through our posters we were able to promote this aspect of proactive animal health and treatment plans. At the gala dinner, my poster entitled "What are Austrian cattle veterinarians' priorities when choosing antimicrobials to use on farm?" received one of three awards for Best Poster from the IDF Scientific Committee based on the abstract, my presentation of the poster and its scientific content.

On Friday 17<sup>th</sup> May 2019, we were also given the opportunity to visit an organic Jersey farm and a conventional Holstein farm in the southern part of the island of Zealand. This provided us with a fascinating insight into dairy production in Denmark, particularly with respect to antibiotic use and the fact that the farmer on the organic farm was not permitted to administer any antibiotics at all to his cows, but was always required to call his herd veterinarian for treatment.

I would like to thank the MedVetNet Association for the travel grant which enabled me to attend the IDF Mastitis Conference, allowing me the chance to meet many experts in this field and discuss current research and possible future collaborations in the areas of antibiotic use and antimicrobial resistance with colleagues in the UK, Switzerland, Ireland, Finland and Norway, amongst others.

Best regards

Clair Firth