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Med-Vet-Net Association Travel Grants

Report from the 55th Interagency Botulism Research Coordinating Committee Meeting (IBRCC)

On October 21-24, 2018 I attended the 55th Interagency Botulism Research Coordinating Committee Meeting (IBRCC) in Chicago, Illinois, USA. The meeting gathers the top researchers in the field for presentations and discussions on botulism. The program covered the whole spectrum of topics from clinical use, epidemiology, food safety and countermeasures to basic science of both the clostridia bacteria and their genetic diversity and the structure and function of the different serotypes and subtypes of the botulinum neurotoxins (BoNTs). Finally, the challenges to detect the toxins were also covered, the area in which I work.

I found it very interesting to hear about the epidemiology and the last years' confirmed botulism cases in USA, Canada, and Japan. During 2017 there were 181 laboratory confirmed botulism cases in the USA, 82 of these cases occurred in California, 140 of the cases were infant botulism, 19 cases food borne botulism, 19 wound botulism and 3 were categorized as "other". The wound botulism cases were all due to usage of black tar heroin, but it could not be confirmed whether the spores of *C. botulinum* were present in the heroin, in the needles, or elsewhere. The largest outbreak of food borne botulism, where 10 people got sick, was due to contaminated nacho cheese at a gas station in California.

In clinical use, BoNTs are important pharmaceuticals with constantly increasing indications of use. During the meeting a study where BoNT had been used to treat women with severe depression was presented, and the results were quite promising.

In the research field of countermeasures for botulism a few different approaches were presented. One of the most interesting ones in my opinion was a new inhibitor that could pass the cell membrane and inhibit BoNTs



that were already inside the neurons, and hence efficiently reduce the effect of the toxin.

In the detection section I was happy to listen to a very nice presentation of the validation of the Endopep-MS method in buffer, human serum and stool, and culture supernatants (the same method that I am working with but in animal botulism applications). The method is in my opinion the most promising confirmatory laboratory method and I think that the results presented were very convincing.

During the poster sessions I got the opportunity to present my work (see poster attached). Most of the people attending IBRCC work with human botulism, and I was happy to see so many of them being interested to hear me talk about the disease in animals, and the work that we do in detection of BoNTs in animal botulism cases. I also met with a few people working with animal botulism in USA and Canada. I am very thankful for these new research contacts and hope that we can find collaborations in the future.

I would very much like to thank the MedVetNet Association for the Travel grant.

Kind regards,
Annica Tevell Åberg