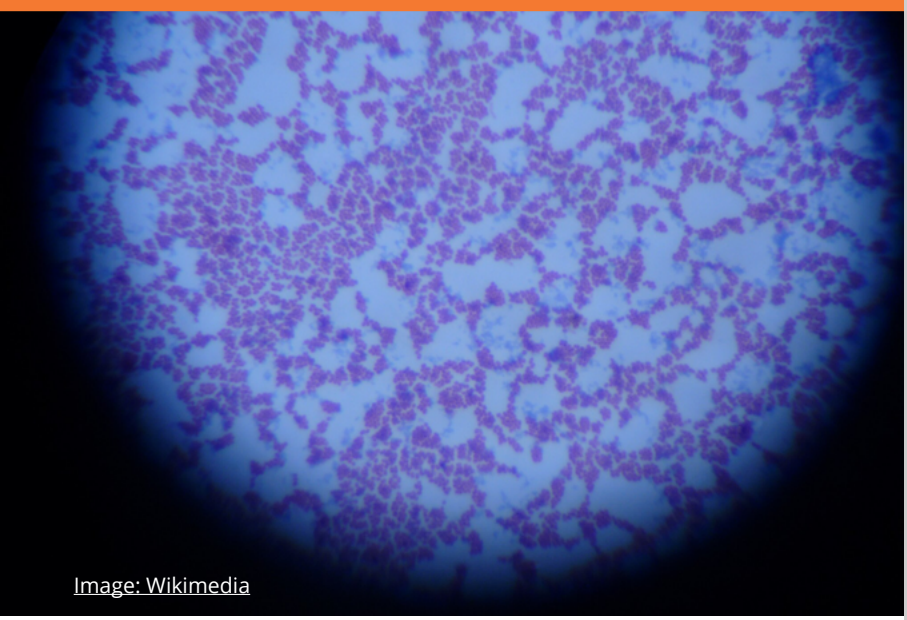

Image: Wikimedia

SHORT TERM MISSIONS

Short Term Missions (STMs) are small travel grants with the aim of:

- Sharing scientific expertise, methodologies, equipment and facilities to harmonise the existing approaches and methodologies within the large
- OHEJP European network
  Driving the research forward in a collaborative and non-duplicative fashion to strengthen both the scientific capacity within the OHEJP
- Contributing to the future prevention, preparedness, detection and response of the EU to foodborne and other emerging threats across human-animal-environmental sectors.

Understanding Zoonotic Transmission of Group B Streptococci in Camels through a multi-collaborative approach

Theme: One Health, Skills Development Missions
Home Institute: National Veterinary Institute SVA, Sweden
Mission Hosting Institute: University of Glasgow Scotland
Duration of Mission: 3 weeks

> ***"The STM allowed me to work with experienced colleagues within my field of research which really developed my skills in molecular epidemiology and molecular typing methods. I would like to extend my unreserved gratitude to the University of Glasgow, the OHRBID Laboratory for giving me so many opportunities to grow and learn professionally."***
>
> *Dinah Deborah Seligsohn*
> *SVA, Sweden*

The Short-Term Mission (STM) aimed to collaborate and share knowledge between the National Veterinary Institute in Sweden and the University of Glasgow in the UK, to better understand transmission dynamics in potential zoonotic reservoir species, with a specific focus on Group B Streptococci. The STM researcher collaborated with the One Health Research into Bacterial Infectious Diseases Laboratory (OHRBID), University of Glasgow to train in a range of molecular microbiology and bioinformatic techniques, including whole genome sequencing (i.e., DNA extraction, Library preparation, Quantitative real-time PCR (qPCR)), UNIX command line coding, and SeaView) through a One Health lens.

The STM produced four scientific outputs that advanced the researcher's skills, these were: i) Determining the sequence type of sequenced GBS by annotating genomes (Prokka) and creating multiple core genomes (Parsnp, Snippy, PRANK); ii) Evaluating genes present related to antibiotic resistance, virulence, and evolutionary adaptions to environmental niches using UNIX command line coding; iii) Assessing the variability in gene content among isolates (i.e., core vs. accessory genes); and iv) Designing species-specific primers and probes for qPCR using Primer BLAST and Primer 3 using SeaView to align short sequences. Through the development of these skills, the researcher contributed to elucidating the potential public health risks of Group B Streptococci, expanding the current knowledge regarding the transmission dynamics and molecular epidemiology of the group.

The STM has improved the relationship between the One Health EJP and the University of Glasgow, enhancing both current and future collaborations between participating institutions. The STM has supported collaborative research amongst research groups at the Institute of Biodiversity, Animal Health and Comparative Medicine, University of Glasgow, where further collaborative opportunities may develop in the future.

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