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## 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.

## Microbiological and molecular techniques for *Brucella* identification

Theme:

Home Institute:

Mission Hosting Institute:

Duration of Mission:

STM Researchers:

One Health missions

[NDVRI](#), Bulgaria

[ANSES](#), France

1 week

Albena Dimitrova Angelova

Gergana Mateva

Mihail Vladimirov Milanov

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***The STM was an amazing experience and has provided newfound knowledge regarding the skill and requirements for microbiological manipulation and molecular diagnostics, especially when working with potentially infectious bacteria, such as *Brucella*. Disseminating this knowledge to other colleagues will further help and enhance everyday tasks in our laboratories”***

Albena Dimitrova Angelova,  
NDVRI, Bulgaria

The aim of this mission was for the three researchers to learn standardised microbiological and molecular techniques, including DNA extraction and real-time PCR, for the identification of *Brucella* spp. As Brucellosis is the among the leading lab-acquired infections, learning effective biosafety/ biosecurity whilst working with the causative agent is paramount. This STM enabled the researchers to complete objectives in the [OHEJP IDEMBRU](#) project, which studies the zoonotic potential, virulence and persistence markers in isolated strains of *Brucella* spp.

During this mission, theoretical training was provided by the host institute on the critical steps for *Brucella* culture followed by principles of molecular approaches. Prior to the researchers undertaking any laboratory activities, practical demonstrations on bacterial isolation, culture and typing were provided, followed by demonstrations of molecular techniques including DNA extraction, real-time PCR protocols, gel electrophoresis and High-Resolution Melting PCR. Each day, round table discussions provided additional insight into each step of the training. A final presentation on molecular epidemiology afforded further knowledge on applications, perspectives and interpretation of data. The researchers strengthened existing and developed new laboratory skills that will assist their future research.

The STM provided valuable training, allowing for the isolation and identification of *Brucella* spp.; further experimentation will be performed on *Brucella* spp. strains, under rigorous biosafety standards, at the NDVRI laboratories in Bulgaria.

One Health EJP has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773830.



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