

COST Action TD1303

European Network for Neglected Vectors and Vector-Borne Infections

(EurNegVec)

STSM Report

Molecular and serological diagnosis of canine leishmaniasis

8th-22nd September 2014

BASIC DATA

STSM applicant: Mirabela Oana Dumitrache

Ref code: COST-STSM-ECOST-STSM-TD1303-010914-048134

Host institution: Koret School of Veterinary Medicine, Hebrew University, Rehovot, Israel

STSM Coordinator: Prof. Gad Baneth

Working Group: WG5, Rare and emerging vector-borne pathogens

PURPOSE OF THE STSM

The scientific mission was carried out according to the Work Plan previously provided. Canine leishmaniasis is probably an emerging disease in Romania and certainly a neglected one. No data are available regarding its epidemiology and its local zoonotic impact is completely unknown. Moreover there is no experienced lab or personnel for diagnosis of canine leishmaniasis in Romania. One year ago, in our clinic of dermatology, a dog originating from Vâlcea County was diagnosed with canine leishmaniasis, being the first clinical case of autochthonous canine leishmaniasis in the last 80 years. In this frame, the aim of this STSM was to perform an epidemiological study in Vâlcea County and to approach the diagnostic methods that are used, with the cooperation of a team of scientists experienced in this field. The study was framed into the TD1303 COST Action objectives of WG5 (studies on rare and emerging vector-borne pathogens). This STSM aimed at strengthening the collaboration and networking between scientists from other participating COST countries. In addition, the STSM to the Koret School of Veterinary Medicine (Israel), allowed the applicant to learn new laboratory techniques and to gain experience in laboratory and field research.

DESCRIPTION OF THE ACTIVITIES CARRIED OUT DURING THE STSM

Preliminary sample collection (serum, blood in EDTA, conjunctival swabs) from Romanian dogs was performed. All samples were collected in the area where the autochthonous case was reported (Vâlcea County). All samples were collected according to a plan that was previously established for

this collection session. For each dog, a questionnaire that contains identification data and other essential information was filled. We collected samples from 81 dogs. DNA extraction was performed from all blood samples by using the phenol chloroform extraction method, and we will also perform a new extraction by using a commercial kit. All serum samples were tested using an in house ELISA method. All samples were processed in triplicate and all positive samples were rechecked three times. Real-time PCR was performed on all DNA from blood samples. The STSM was an excellent opportunity to learn and acquire the knowledge and practical skills on laboratory diagnostic on canine leishmaniasis and other related topics.

MAIN RESULTS

During the STSM period, 6 out of 80 samples tested for *Leishmania* spp. were found positive by ELISA serology. All samples tested by Real-time PCR were negative. Currently, a new DNA extraction is performed at USAMV Cluj-Napoca, DNA extraction from conjunctival swabs and Real-time PCR is currently in progress at the Koret School of Veterinary Medicine in Israel.

FORESEEN PUBLICATIONS/ARTICLES RESULTING FROM THE STSM

The results of this STSM will be published as a paper in a peer-reviewed journal.

CONFIRMATION BY THE HOST INSTITUTION OF THE SUCCESSFUL EXECUTION OF THE STSM

I herein confirm the present report regarding the COST-STSM-ECOST-STSM-TD1303-010914-048134 in Israel.

Gad Baneth, DVM, PhD

05.10.2014

Gad Baneth