

**07.07.2014**

**COST STSM short scientific report.**

Applicant: Dr. Renate Ranka, Latvian Biomedical Research and Study Centre, Riga, Latvia.

COST Action: TD1303

STSM title: Phylogeographic studies on Lyme borreliosis group spirochetes.

Reference : ECOST-STSM-TD1303-300614-044128

STSM dates: from 30-06-2014 to 04-07-2014

Location: Institute of Parasitology, Biology Centre ASCR, 370 05 České Budejovice, Czech Republic

Host: Dr Natasha Rudenko, Institute of Parasitology, Biology Centre ASCR

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- Purpose of the STSM

The discussion of several points of the field of phylogenetics and phylogeography of ticks and tick-borne pathogens and the establishment of the collaboration.

- Description of the work carried out during the STSM

The work was done accordingly to the proposed work plan. The applicant participated in the all work flow stages required for the successful borrelia cultivation for the phylogenetic analysis: field tick collection, preparation of cultivation media, tick samples preparation, microscopy of spirochaetes, recultivation and storage of samples. Further, the methodology of phylogenetic analysis of *B. burgdorferi* based on the *OspC* gene and multilocus sequence typing (MLST) was explored and the phylogeography of *Borrelia* in Latvia and the Czech Republic was discussed. In addition, the future research plans were discussed.

- Description of the main results obtained

Main results: the expertise in cultivation of *Borrelia* from environmental samples and clinical samples in liquid and solid cultivation media was shared; cultivation technique and *Borrelia* handling was learned; collaboration between laboratories is established; the phylogeography of *Borrelia* in Latvia and the Czech Republic was discussed.

- Future collaboration with the host institution (if applicable)

Collaboration between laboratories was established and the preparation of a proposal for EU grant was discussed; the possibility of the sample exchange and implementation of databases existing at partner institutions for a collaborative research was agreed.

Sincerely yours,

Renate Ranka, PhD

Head of the Laboratory of Molecular microbiology

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# BIOLOGY CENTRE ASCR

## Institute of Parasitology

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### **Evaluation of visit of Dr. Ranka Renate to Biology Centre, Institute of Parasitology, Czech Republic**

Location: Biology Centre ASCR, Institute of Parasitology, 370 05 České Budejovice, Czech Republic

Host: Dr Natasha Rudenko, Biology Centre ASCR, Institute of Parasitology

natasharudenko@hotmail.com

Visitor: Dr. Renate Ranka, Latvian Biomedical Research and Study Centre, Riga, Latvia.

COST Action: TD1303

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The main purpose of STSM of Dr. Ranke was to establish collaboration with Laboratory of Molecular Ecology of Vectors and Pathogens in Biology Centre of Czech Academy of Sciences in a field of study of phylogenetics and phylogeography of ticks and various tick-borne pathogens.

I am pleased to confirm that in a rather short time frame of this visit Dr. Ranka participated in a field tick collection and learned all following steps for successful cultivation of *Borrelia* from environmental samples: preparation of cultivation media, tick samples preparation, microscopy of spirochetes, cultivation, re-cultivation and storage of samples. She was introduced to methodology of phylogenetic analysis of *B. burgdorferi* based on the *OspC* gene and technique of multilocus sequence typing (MLST). The work was done accordingly to the proposed work plan and was extended accordingly to visitor's needs and interests.

I would like to confirm that visit of Dr. Ranke was successful as well in term of establishment of further collaboration between our Institutions, discussion of possible participation in EU grant proposal, exchange of samples and "know-how".

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