EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator.

Action number: CA16107
STSM title: Short Term Scientific Mission (STSM) of the COST Action EuroXanth
STSM start and end date: 11/11/2018 to 16/11/2018
Grantee name: Judit Kolozsváriné Nagy

PURPOSE OF THE STSM

The aim of the STSM was to participate at the international advanced course on "Plant diseases caused by *Xylella fastidiosa*: detection, identification, monitoring and control" in Zaragoza, Spain, 12-16 November 2018.

X. fastidiosa, a plant pathogenic bacterium being widely distributed in America, has been recently introduced into Asia and Europe and today, having hundreds of host plant species it implies a worldwide threat for agricultural crops and the natural environment.

Our research group is carrying out studies on *Xanthomonas arboricola* pv. *pruni*, another important member of the family *Xanthomonadaceae*, therefore it was a great opportunity for me to acquire sound knowledge on this related, quarantine bacterial pathogen, especially regarding that *Xylella fastidiosa* blissfully has not been detected so far in Hungary.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSM

I took part in a 29 hours in-class training held by international professional and leading experts of the given scientific fields, according to the official programme.

During the 5-day long course I was able to attend inspiring lectures providing advanced knowledge on the biology and ecology of *Xylella fastidiosa* in host plants, the biology and ecology of its insect vectors and *X. fastidiosa* transmission, the main ongoing EU research programmes, the current situation of *X. fastidiosa* worldwide, the survey methodology from statistical basis to implementation according to IPPC, EU, and EPPO standards, guidelines for sampling and sample preparation, EPPO protocol for *X. fastidiosa* diagnosis, molecular methods for on-site detection, proximal and remote sensing, subspecies and sequence-type identification based on MLST, epidemiology of the diseases caused by *X. fastidiosa* from modelling to pest risk assessment, strategies for *X. fastidiosa* control, the legislative measures in EU from the EU decision 2015/789 and its amendments to its implamentation in the affected countries, an example of a contingency plan in Spain. As participant of the lectures I also got the opportunity to attend the presentations of practical group (team) works and the final discussion and closure of the course.

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DESCRIPTION OF THE MAIN RESULTS OBTAINED

During this course I have acquired sound knowledge on the biology and ecology of *X. fastidiosa* and its interactions with host plants and vectors, including the relevant biological processes of *X. fastidiosa* transmission.

I have now become familiar with the current worldwide status of this pathogen and the main diseases it causes along with its significant socioeconomic impacts.

I have obtained theoretical and partly practical (laboratory) knowledge on the survey methodology, sampling and advanced diagnostic procedures, especially molecular methods for on-site detection, proximal and remote sensing, and subspecies and sequence-type identification.

I have gained knowledge on the epidemiology of the diseases caused by the bacterium and possible strategies for its control besides and based on the current EU legislation, official protocols and guidelines of monitoring related to this pathogen.

I have now obtained an extended and broad competence to perform pest risk assessment studies and develop diverse management tools adapted to different scenarios in relation to the control of *X. fastidiosa*.

I have got acquainted with numerous collegues and experts worldwide enabling the establishment of international scientific cooperations in the future.

FUTURE COLLABORATIONS (if applicable)

This advanced course has promoted interaction among participants and with the lecturers, and its international nature has fostered the exchange of experiences and points of view according to the official course announcement.

I have got acquainted with a Hungarian researcher (Ambrus, Á., NÉBIH NTAI PBL, Pécs) and several other collegues and plant protection experts from different countries i.e. Ivanović, M., Belgrade Univ., Serbia; Jakomin, T., NIB, Ljubljana, Slovenia; Puławska, J., INHORT, Skierniewice, Poland; Robledo Garrido, M., UNICAN, Santander, Spain; Winter Verdú, B., Ministry of Agri., Las Palmas de Gran Canaria, Spain; Bernard, F-M., VIGNEVIN, Beaume, France; Collado, J., Ministry of Agri., Valencia, Spain; Dostalova, L., CISTA, Olomouc, Czech Republic.; Mernke, D., LTZ Augustenberg, Karlsruhe, Germany; Pucci, N., CREA-DC, Roma, Italy.

Although actual common research projects with the colleagues mentioned above have not (yet) been initiated, the course has definitely created the possibility of future collaborations with these experts.

Read and approved

Maite Aquinaco

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IAM ZARAGOZA

Signed: Maite Aquinaco
Course coordinator