



European Network for the durable exploitation of crop protection strategies

IA3 Activity: Human resource exchange

ENDURE – PhD Scholarship

Final activity report

(The form has to be filled in and sent to the activity leader – message should be sent to his p.a. elisa.scanzi@ibaf.cnr.it – within 15 days after the end of the visit)

Topic of the visit

1. Information about researcher and sending partner

Name and surname: Anna Agnieszka Przetakiewicz

Professional status: *(PhD student, post-doc, junior or senior scientist)* senior scientist

Sending partner: Plant Breeding and Acclimatization Institute (IHAR)

Institute/Department/Research Unit: Department of Phytopathology

Address: *(street, postal code, city)* Radzikow, 05-870 Blonie

E-mail and phone number of the researcher: a.przetakiewicz@ihar.edu.pl

Supervisor name*:

Supervisor e-mail*:

Supervisor phone number*:

*Supervisor information only for PhD student, post-doc and junior researchers

2. Information about hosting partner

Hosting partner: Plant Research International

Institute/Department/Research Unit: Biointeraction and Plant Health

Address: *(street, postal code, city):* Droevendaalsesteeg 1, 6708 PB Wageningen

Supervisor name*: dr. ir. Rene van der Vlugt

Supervisor e-mail*: rene.vandervlugt@wur.nl

Supervisor phone number*:

* For senior scientist indicate the name of the collaborating colleague

3. Information about the visit

Duration: (*number of weeks or months*) 3 month

Starting date: 01.09.2008

Ending date: 30.11.2008

4. Description of the activities and outcomes

Background and context: *maximum 10 lines*

Laboratory of Virology in Plant Research International in Wageningen is focused on viral plant pathogens, mainly on understanding virus-vector interaction, epidemiology, identification and characterisation of viruses such as pepino mosaic virus (PEPMV) and potato virus Y (PVY). Team of dr Rene van der Vlugt carry on investigations under infection symptoms on host and indicator plants, prepare biological and structural characteristics of viruses and optimize methods of pathogen purification. Most efforts are put on development and production of polyclonal antisera, positive control, tests and virus specific PCR primer sets necessary to genomic and molecular characterisation of viruses.

Objective: *maximum 10 lines*

Main aim of research was serological and molecular characterisation of PVY recombinants - NTN and Wilga using ELISA technique, RT-PCR and SEQAM reactions. Comparison of sequencing results was prepared with the aid of EditSeq, SeqMan and MegAlign programs. On basis highly homologous consensus sequences of all tested recombinants a new primer was designed.

Activities carried out: *maximum 20 lines*

Investigation carried out in PRI laboratory was focused on:

- observation of disease symptoms on indicator plants;
- purification of potato virus Y from tobacco plant tissue;
- set up of RT-PCR reaction, purification of PCR products and estimation of its weight;
- set up of SEQAM reaction and sequencing;
- alignment of consensus sequences creating on basis of 16 primers and distinguish of differences between NTN and Wilga recombinants.

5. Links between visit activity and ENDURE

Describe links and relevance of your visit in relation to a specific ENDURE activity(ies) and sub-activity(ies) – maximum 15 lines

My research activities in ENDURE network is strictly connected with identification and characterisation of nematodes contains to Globodera species using molecular methods. The

techniques I've learned in Bointeraction and Plant Health Laboratory in PRI is common both for viruses and nematodes. With the use of RT-PCR and sequencing reaction there is possible to distinguish between pathotype of *Globodera rostochiensis* and *G. pallida* and looking for differences inside of species.

6. Impact

Added value for the researcher: *maximum 10 lines*

The main advantage of 3 month scholarship in Wageningen was learning and understanding of use of molecular and serological techniques such as RT-PCR, ELISA and SEQAM. Work with sequencing of virus recombinants and comparison of obtained data with the aid of sophisticated computer programs learn me how to set up all steps in turn to get promising results. The most value for me personally was meeting friendly people working with me who help me to understanding how to work with viruses and postpone this knowledge on my scientific work with nematodes.

Added value for sending partner and hosting partner: *maximum 10 lines*

For sending partner: Improvement in understanding and using of RT-PCR and sequencing reaction to recognition of differences of tested samples.

For hosting partner: Estimation of differences between 17 recombinants of PVY virus on basis sequencing reaction with the use of 16 specific primers.

Date of submission

2008-12-09



Dr. Maurizio Sattin
IA3 activity leader

Approved

