



European Network for the durable exploitation of crop protection strategies

IA3 Activity: Human resource exchange

ENDURE - Internal Mobility

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

Practical aspects of microbial selections for control of main through the release of antagonists

1. Information about researcher and sending partner

Name and surname: Emilio Guerrieri

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

Sending partner: CNR

Institute/Department/Research Unit: IPP

Address: *(street, postal code, city)* Via Università 133 80055 Portici Italy

E-mail and phone number of the researcher: guerrieri@ipp.cnr.it, +390817753658

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: John A. Pickett

Institute/Department/Research Unit: Rothamsted Research

Address: *(street, postal code, city)* Harpenden Herts AL5 2JQ UK

Supervisor name*: John A. Pickett

Supervisor e-mail*:john.pickett@bbsrc.ac.uk

Supervisor phone number*:+441582 763133

* For senior scientist indicate the name of the collaborating colleague

3. Information about the visit

Duration: (*number of weeks or months*) 1 month

Starting date: 10.5.2008

Ending date: 7.6.2008

4. Description of the activities and outcomes

Background and context: The attractiveness of antagonists of herbivore insects is regulated by the emission of volatile compounds by herbivore-infested plants

Objective: - learning and use of the most updated techniques to collect and analyse the volatile compounds released by plants that regulate the multitrophic interactions with herbivore insects and their natural enemies, including: single leaf air entrainment, gas chromatography and mass spectrometry

- preparation and use of standard solutions to be tested in wind tunnel bioassay for their attractiveness towards natural enemies of aphids

- learning and use of the most updated techniques for the analysis of parasitoid antennal response towards plant-derived compounds, including: electroantennogram, coupled EAG and gas chromatography, single cell EAG.

Activities carried out:

- collection and analysis of volatile compounds from TOMATO plants infested by aphids
- electroantennogram test for assessing the responsiveness of *Aphidius ervi* (a parasitoid of tomato aphids) to compounds identified from tomato plants

5. Links between visit activity and ENDURE

The activity has been carried out in the framework of the case study TOMATO

6. Impact

Added value for the researcher:

Contacts have been established with researchers at BCH for the submission of research projects within the 7FP in the topic of the sustainable defense of agricultural crops from insect pests (push and pull; augmentation of bio-control agents; augmentation of the fitness of bio-control agents)

A paper has been prepared and submitted to Journal of Chemical Ecology

Added value for sending partner and hosting partner:

Re-enforcement of a long dated collaboration that has been extremely fruitful in term of publications and production of results that have of immediate application in the sustainable control of aphid pests

Date of submission
June 2008



Dr. Maurizio Sattin
IA3 activity leader

Approved

