



***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. [denise.barreiro@ibaf.cnr.it](mailto:denise.barreiro@ibaf.cnr.it) – within 15 days after the end of the visit)*

**Topic of the visit**

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**1. Information about researcher and sending partner**

**Name and surname:** Raffaele Sasso

**Professional status:** Postdoc

**Sending partner:** CNR

**Institute/Department/Research Unit:** Institute for Plant Protection (IPP)

**Address:** Via Università 133 80055 Portici – Napoli – Italy

**E-mail and phone number of the researcher:** [salellosso@libero.it](mailto:salellosso@libero.it) +390817753658

**Supervisor name\*:** Emilio Guerrieri

**Supervisor e-mail\*:** guerrieri@ipp.cnr.it

**Supervisor phone number\*:** +390817753658 ext. 11

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

**2. Information about hosting partner**

**Hosting partner:** dr Michael Birkett

**Institute/Department/Research Unit:** Rothamsted Research, Biological Chemistry Division

**Address:** Harpenden, Herts., AL52JQ, UK

**Supervisor name\*:** dr Michael Birkett

**Supervisor e-mail\*:** mike.birkett@bbsrc.ac.uk

**Supervisor phone number\*:** +44-1582-76133 ext. 2205

\* For senior scientist indicate the name of the collaborating colleague

### **3. Information about the visit**

**Duration:** 1 month

**Starting date:** 26 January 2009

**Ending date:** 26 February 2009

### **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 *Vicia faba* plants infested by aphids

- electroantennogram test for assessing the responsiveness of *Aphidius ervi* (a parasitoid of *Vicia faba* aphids) to compounds identified from *Vicia faba* plants

### **5. Links between visit activity and ENDURE**

The activity has been carried out in the framework of the activities R2 and R4

### **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 care of immediate application in the sustainable control of aphid pests

**Date of submission**

March, 09 2009



Dr. Maurizio Sattin  
IA3 activity leader

Approved