





## COST Action FA1404 – COREMI Improving current understanding and research for sustainable control of the poultry red mite (RPM)

## **International Training School**

# Molecular and Morphological Identification of Mites <u>Associated with the Red Poultry Mite</u>

## 11-16 September 2016

at the

R.H. Smith Faculty of Agriculture, Food and Environment The Hebrew University of Jerusalem, Rehovot, Israel

#### **Organizers**

**Prof. Yuval Gottlieb**, Koret School of Veterinary Medicine, Israel; <a href="mailto:yuvalgd@yahoo.com">yuvalgd@yahoo.com</a>

**Dr. Eric Palevsky**, Newe Yaar, Research Center, <u>Agricultural Research</u> Center, Israel; palevsky@volcani.agri.gov.il

Ms. Noa Schwarzwald, International School of Agricultural Sciences, The Hebrew University of Jerusalem; noapl@savion.huji.ac.il

#### **Trainers**

**Prof. Eddie Ueckermann** - <a href="https://www.researchgate.net/profile/Eddie\_Ueckermann">https://www.researchgate.net/profile/Eddie\_Ueckermann</a>

**Prof. Maria Moraza** - <a href="https://www.researchgate.net/profile/Maria\_Moraza/publications">https://www.researchgate.net/profile/Maria\_Moraza/publications</a>

**Prof. Lise Roy** - https://www.researchgate.net/profile/Lise\_Roy/publications

#### Rationale

Predatory mites are widely used for the control of plant feeding mites. However, information on the ecology of acarine predators and alternative prey found in association with mites attacking poultry and their potential for biological control is very limited. Studies conducted at the end of the last century and the beginning of this century have demonstrated that mites of the families Cheyletidae and Laelapidae prey on the red poultry mite, *Dermanyssus gallinae*. As these were pioneering studies, it can be expected that additional species from





these families and others will be identified as biocontrol agents of *D. gallinae*.

#### **Objective**

The Training School is aimed at enhancing our skills in the identification of mite communities associated with poultry mites, by utilizing an integrated approach where morphological and molecular tools are combined. The training school will include slide preparation and species identification with a prepared key using phase contrast light microscopy coupled with SEM imaging and DNA barcoding.

#### **Dates and Venue**

From Sunday, 11<sup>th</sup> until Friday, 16<sup>th</sup> of September 2016.

The Training School will be held in Rehovot on the campus of the R.H. Smith Faculty of Agriculture, Food and Environment (<a href="http://www.agri.huji.ac.il/english/index.html">http://www.agri.huji.ac.il/english/index.html</a>) of the Hebrew University of Jerusalem (<a href="http://new.huji.ac.il/en">http://new.huji.ac.il/en</a>). The campus is centrally located, with easy access by public bus and train transportation to many attractions throughout the country. Modern, fully equipped lecture hall and teaching laboratories will be available for the school.

#### **Contact persons**

**Dr. Eric Palevsky**, Newe Yaar, Research Center, <u>Agricultural Research Center</u>, Israel; <u>palevsky@volcani.agri.gov.il</u>; Tel: 972-506220111

**Ms. Noa Schwarzwald**, International School of Agricultural Sciences, The Hebrew University of Jerusalem; <a href="mailto:noapl@savion.huji.ac.il">noapl@savion.huji.ac.il</a>; P.O.B. 12, Rehovot 76100 Israel Tel: +972-8-9489344; Fax: +972-8-9470171

#### **Participants**

A COST grant will cover most of the participation costs of 20 trainees arriving from countries participating in this COST Action.

#### **Eligibility**

In general, applicants may be MSc students, PhD students, post-docs, early career researchers, or researchers interested to become more acquainted with mites associated with poultry mites and especially for those focused on the integrated control of red poultry mite with acarine biocontrol agents. Applicants must be enrolled in or affiliated with an Institution or a business located in a country participating in this COST Action. Selection of trainees from all eligible applicants will be based on: (i) applicant's background that will allow him/her to benefit from the training; (ii) the degree wherein the trainee will promote the objectives of the COST Action (i.e., Improving current understanding and research for sustainable control of RPM), (iii) the ability/opportunity of the trainee to use the acquired knowledge in the near future in one of the COST countries/institutes participating in this Action; (iv) applicant achievement record





(application material), and (v) our strive to maintain a reasonable country and gender balance among participants.

#### **Financial Support**

COST Action FA1404 is offering a trainee grant of 960 Euros for participants coming from the European continent. Note that this sum will be paid after the participant attends the training school. A registration fee of 370 Euros covering five nights of accommodations, lunches, coffee breaks and a welcome dinner will be paid by the participant in cash or credit upon arrival to the campus. Note the remaining 590 Euros is intended to cover plane fare, local transport and suppers. Local trainee grants for Israeli participants will be determined on a one to one basis according to their home address in Israel.

#### **Medical Insurance**

It is the responsibility of each participant to provide adequate insurance coverage (personal, travel and medical) for the duration of the training course and travel period.

#### **Travel**

Ben Gurion Airport (TLV; <u>click here to Ben Gurion airport website</u>), the main International airport in the country, is located about 15 km from the TS venue in Rehovot. From the airport, the HU campus could be reached by taxi (ca €42), or by train and bus (<u>Click here to Israel Railways website</u> and <u>click here to Egged buses website</u>, respectively). Information concerning Visa requirements is found at: <u>click here to visa information</u>.

Other travel information could be found at: <u>click here to travel information</u>.

#### How to apply

Send a letter of application stating your interest in participating in this training school to **Eric Palevsky** (palevsky@volcani.agri.gov.il). The letter must be accompanied by the following documents:

1) A short CV (maximum 2 pages) that includes your personal information, current home and university/institution mailing addresses, e-mail, Skype name (if possible), university qualifications, current enrolment status, training/work experience, list of recent publications, etc.





- 2) <u>For MSc and PhD students</u>: contact details of your advisor or any other academician who may be contacted for information about your capabilities and experience.
- 3) <u>For non-students only</u>: contact details of a relevant professional who may be contacted for information about your capabilities and experience.
- 4) <u>Application form</u>: <a href="https://docs.google.com/forms/d/1Y4CQ-aonzZoZPnj8sWrQGYusa18">https://docs.google.com/forms/d/1Y4CQ-aonzZoZPnj8sWrQGYusa18</a> XXaoCR34XN3HsRE/viewform?usp=send\_form

All application materials must be received by  $7^{th}$  July 2016

By 14<sup>th</sup> July 2016, you will hear from Eric Palevsky whether you are selected for participation







#### **Program** (subject to changes)

# Sunday, 11th September

**13:00-19:00** Arrival, registration, and room assignment

Monday, 12<sup>th</sup> September, 08:30-17:30; 20:00 - Welcome Dinner

Overview on a) acarology; b) integrated mite taxonomy using morphological and molecular tools and c) ecology and control the red poultry mite. d) Collection techniques and specimen preparation. e) Overview of the parasitic mite families Macronyssidae, Dermanyssidae (Order Mesostigmata), Analgestidae, Cytoditidae, Dermoglyphidae, Knemidokoptidae, Laminositoptidae, Syringophilidae and Epidermoptidae (Order Sarcoptiformes), Trombiculidae (Chiggers) (Order Trombidiformes) (biology, ecology). c) Familiarization and hands-on use of keys for these families.

# Tuesday, 13<sup>th</sup> September, 08:30-17:30

Presentation of identification manual to the <u>genera and species</u> of parasitic mite families associated with poultry belonging to the families Macronyssidae, Dermanyssidae (sub-Order Mesostigmata), Analgestidae, Cytoditidae, Dermoglyphidae, Knemidokoptidae, Laminositoptidae, Syringophilidae and Epidermoptidae (Order Sarcoptiformes), Trombiculidae (Chiggers) (Order Trombidiformes). b) Familiarization and hands-on use of keys for the genera and species.

Wednesday, 14<sup>th</sup> September, All day field trip to poultry houses and some historical sites

Thursday, 15<sup>th</sup> September, 08:30-17:30

Overview of the predatory mite families associated with poultry: Anystidae, Bdelidae, Cheyletidae, Cunaxidae (Order Trombidiformes), Blattisociidae, Laelapidae, Macrochelidae, Parasitidae and Rhodacaridae (Order Mesostigmata) (biology, ecology). b) Familiarization and hands-on use of keys for families, genera and species.

# Friday, 16<sup>th</sup> September, 08:00-12:30

Overview of diverse mite families found in association with poultry: Erythaeidae, Tydeidae and Scutacaridae (Order Trombidiformes), Oribatei, Acaridae, Glyciphagidae and Histiostomatidae (Order Sarcoptiformes), Uropodoidea (Order Mesostigmata). b) Familiarization and hands-on use of keys for families and genera. c) Questions, comments and course evaluation.