

Curriculum vitae

PERSONAL
INFORMATION

Ottati Sara

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RESEARCH INTEREST

Genetic diversity of viruses infecting insect, with a special focus on insect vector of plant pathogens. Exploitation of latent/persistent viral infections in interfering with insect-plant pathogen relationships. Development of new infectious clones suitable for virus-induced gene silencing (VIGS) to transiently silence insect genes involved in acquisition/transmission of plant pathogens. RNA-mediated interference in hampering spread of crop pathogens *via* the vector.

RESEARCH
ACTIVITIES

01/09/2022- 01/09/2023

PostDoc contract (Academic tutor: Prof Domenico Bosco)

Università degli studi di Torino , Entomology department, DISAFA, Torino (Italy).

Research grant funded under the European project H2020 "BeXyl". **My contribution** is provided to WP 5.2, by identifying new viral species infecting Italian and French populations of *Phlaenus spumarius* (Aphrophoridae), vector of the generalist bacterium *Xylella fastidiosa*. Synergic or antagonistic interaction between the newly identified viruses and other biotic stressors (WP5.1) will be evaluated on *P. spumarius* fitness parameters. Duties: Laboratory analyses and Reports writing (deliverables and milestones).

1/09/2019- 10/03/2023

Doctoral school of the University of Torino (Academic tutors: Prof. Domenico Bosco & Dr. Cristina Marzachi)

Ph.D Course in Agricultural, Forest and Food Sciences. Università degli studi di Torino , DISAFA, Torino (Italy).

My Ph.D. project, entitled "Discovery and characterization of viruses infecting insect vectors of plant pathogens", aimed at unrevealing the unknown virosphere of i) the phytoplasma-vector *Scaphoideus titanus* (Hemipteran) and ii) two plant-virus vectors, *Thrips Tabaci* and *Frankliniella occidentalis* (Thysanoptera), which represent two of the major threats for European agriculture. Duties: Laboratory and data analyses, dissemination activities at national/international conference and scientific papers writing.

15/08/2018- 15/08/2022

Research scholarship (Supervisors: Dr. Cristina Marzachi & Dr. Massimo Turina)

Consiglio Nazionale delle Ricerche, Istituto per la Protezione Sostenibile delle Piante (IPSP), Torino (Italy)

Research grant funded under the European project H2020 "VIROPLANT". **My contribution** consisted in applying NGS technologies and empirical biological experiment to discover new insect viruses and develop novel environmental friendly virus-based control strategies for crop protection. Duties: Laboratory analyses, data analysis, and reports (deliverables and milestones) writing.

1/01/2022- 1/06/2022

Research internship abroad (Supervisor: Dr. Emilyn Matsumura)

Wageningen University and Research (WUR), Laboratory of Virology, Wageningen (The Netherlands)

Research exchange financed under the European project Erasmus Traineeship. Traineeship title: "Biotechnologies and Insect viruses", the collaboration aimed at the synthesis of an infectious viral clone based on the sequence of a Picorna-like virus naturally infecting *Diaphorina citri* populations (Hemipteran virus). The study of a viral protein, named p16, putatively involved in host-interaction and in virus replication was also part of the collaboration. Duties: Laboratory analyses, data analysis, and dissemination activities.

8/03/2021 – 01/07/2021

Research internship (Supervisor: Dr. Carla Divieto)

Istituto Nazionale di Ricerca Metrologica (INRIM), Torino (Italy)

Transfection tests of insect viruses in insect cell lines, aimed at the biosynthesis of recombinant insect viral particles. Duties: Laboratory analyses, data analysis.

01/09/2016–01/07/2017

Research internship abroad (Supervisor: Dr. Dirk Arhens)

Zoologisches Forschungsmuseum Alexander Koenig, Bonn (Germany)

Research for Master thesis project: Barcode data Meta-analysis of central European beetles reveal link with species ecology but also to data pattern and gaps. Duties: Laboratory analyses, data analysis.

EDUCATION

- 01/10/2019 –10/03/2023 **Ph.D Programme in Agricultural, Forest and Food Sciences**
Università degli studi di Torino, Torino (Italy). The PhD degree was obtained **with honors** on 10th March 2023 defending a final thesis entitled: "DISCOVERY AND CHARACTERIZATION OF VIRUSES INFECTING INSECT VECTORS OF PLANT PATHOGENS".
Attended courses: Advanced statistics; Bioinformatics and R language; Bibliometric and bibliographic for research; Good practice in the work environment; Better safe than sorry (BSTS): good laboratory practice; Scientific English.
- 01/09/2014–17/07/2017 **Master Degree in Environmental Biology (LM-6)**
Università degli studi di Torino, Torino (Italy). Final grade: 110 **with honors** (out of 110)
Attended courses: Plant biotechnology; Genetics and functional genomics; Evolutionary genetics; Applied Entomology; Phylogenetics and Genetics of evolution; Biological sampling methodologies; IELTS (Certificate gained in 2017, attested level: 7).
- 01/09/2011–01/09/2014 **Bachelor Degree in Biology (L-13)**
Università degli studi di Urbino Carlo Bo, Urbino (Italy). Final grade: 107 (out of 110)
Attended courses: Microbiology and Virology; Cytology and Histology; Anatomy; Plant biology; Botany; Zoology and advanced Zoology; Molecular biology and advanced Molecular biology; Genetics; Chemistry (inorganic and organic compounds); Physics; Mathematics; Statistics and informatics.
- 01/09/2006–01/07/2011 **Diploma**
Liceo scientifico G. Galilei, Potenza (Italy)

SUPERVISED STUDENTS (Co-tutor)

- MSc Candidate Luca Condio *English title: The poorly-known world of viruses associated with insect vectors of plant pathogens and the case study of Euscelidius variegatus iflavirus 1*
Academic year: 2020/2021; MSc in Plant biotechnology, Università di Torino
- Msc Candidate Stefano Carniel *English title: Combined effects of pesticide and nutritional stress on solitary bee survival, behavior, and viral infection.*
Academic year: 2021/2022; MSc in Plant biotechnology, Università di Torino
- MSc Candidate Gianina Forestello *English title: Investigating the potential of RNA interference for the containment of Tomato Spotted Wilt Virus infection.*
Academic year: 2021/2022; MSc in Plant biotechnology, Università di Torino

TEACHING and ORGANIZATION ACTIVITIES

- (Upcoming) 2023 **Invited speaker to ICPP conference August 20-25, 2023.** Session 20 - Insect vectors - 20.02: Plant protection potential of persistent (cryptic) viruses in fungi, plants and insect vectors of plant disease. Presenting: " *Latent virus infection in insect pests: the case study of iflaviruses and phytoplasma vectors*"
- 2020-2022 Lectures in the course "Plant defense", for the subdivision "**Entomology and biotechnology applied to arthropods**" coordinated by Prof. Domenico Bosco. MSc course "Plant biotechnology", Università di Torino.
- 2021 Member of the Organizing Committee for the Conference INF2021 (VIII Incontro Nazionale sui Fitoplasmii e le malattie da fitoplasmii) held on October 14-15 2021 in Catania, Italy.

PERSONAL SKILLS

English language

Comprehension		Speaking		writing
listening	reading	interaction	communication	
C2	C2	C1	C1	C1

Certificate IELTS (Overall Score: 7)

Levels: A1 and A2: Basic user - B1 and B2: autonomous user - C1 and C2: advanced user

Quadro Comune Europeo di Riferimento delle Lingue

Italian language

Mother tongue

Driving license

Patente B

Computer skills

Data analysis	Statistics	Problem solving	Bioinformatics
Expert user	Expert user	Autonomous user	Autonomous user

Software used

- MS Office, Excel, PPT, Word
- R software, Sigma Plot
- SnapGene
- ArcGIS, CAD e Adobe.

PUBLISHED PAPERS

- **Ottati S.** Chiapello M, Galetto L, Bosco D, Marzachi C, Abbà S. New Viral Sequences Identified in the Flavescence Dorée Phytoplasma Vector *Scaphoideus titanus*. *Viruses*. 2020; 12(3):287.
- **Ottati S.** Persico A, Rossi M, Bosco D, Vallino M, Abbà S, Molinatto G, Palmano S, Balestrini R, Galetto L, Marzachi C. Biological characterization of *Euscelidius variegatus* iflavivirus 1. *J Invertebr Pathol*. 2020 Jun;173:107370. doi: 10.1016/j.jip.2020.107370.
- Chiapello M, Bosco L, Ciuffo M, **Ottati S.** Salem N, Rosa C, Tavella L, Turina M. Complexity and local specificity of the virome associated with tospovirus-transmitting thrips species. *J Virol*. 2021 Jul 7:JV10059721. doi: 10.1128/JVI.00597-21.
- Vallino M, Rossi M, **Ottati S.** Martino G, Galetto L, Marzachi C, Abbà S. Bacteriophage-Host Association in the Phytoplasma Insect Vector *Euscelidius variegatus*. *Pathogens*. 2021; 10(5):612. <https://doi.org/10.3390/pathogens10050612>
- Meregalli M, Borovec R, Cervella P, Santovito A, Toševski I, **Ottati S.** & Nakládal O. (2021). The Namaini, a new weevil tribe with six new genera from South Africa (Coleoptera: Curculionidae: Entiminae). *Zoological Journal of the Linnean Society*.
- Ripamonti M, Cerone, L, Abbà S, Rossi M, **Ottati S.** Palmano S, Marzachi C, Galetto L. Silencing of ATP Synthase β Impairs Egg Development in the Leafhopper *Scaphoideus titanus*, Vector of the Phytoplasma Associated with Grapevine Flavescence Dorée. *Int. J. Mol. Sci.* 2022, 23, 765.
- **Ottati S.** Eberle J, Rulik B, Köhler F, & Ahrens, D. (2022). From DNA barcodes to ecology: Meta-analysis of central European beetles reveal link with species ecology but also to data pattern and gaps. *Ecology and Evolution*, 12(12), e9650.
- Rossi M., **Ottati S.**, Buccì L., Fusco A., Abbà S., Bosco D., Marzachi M., Galetto L. (2023). A laboratory method for plant-mediated delivery of dsRNAs to phloem feeding leafhoppers. *Journal of Pest Science (accepted for publication)*.

CONTRIBUTES TO CONFERENCES

- S. Abbà; M. Chiapello; **S. Ottati**; L. Galetto; L. Tavella; M. Turina; C. Marzachi. First results of the virome of *Scaphoideus titanus*, *Frankliniella occidentalis* and *Thrips tabaci*. SIP/IOBC Congress 2019, 28 luglio - 1 agosto 2019 Valencia (Spagna). Poster.
- M. Turina, M. Chiapello, C. Marzachi, S. Abbà, **S. Ottati**, M. Vallino, G. Martino, M. Forgia, and M. Ciuffo. Beneficial viruses to protect plants from biotic and abiotic stress: a holistic approach. SIV/ISV Congress, September 10-12, 2019 Padova (Italy). Oral presentation.

- **S. Ottati**, A. Persico, S. Abbà, M. Rossi, L. Galetto, M. Vallino, M. Turina, C. Marzachi. Towards the production of an infectious viral clone to interfere with phytoplasma transmission by the leafhopper *Euscelidius variegatus*. SIV/ISV Congress, September 10-12, 2019 Padova (Italy). Oral presentation.
- C. Marzachi; S. **Ottati**; A. Persico; S. Abbà; M. Rossi; M. Vallino; M. Turina; L. Galetto. Virus biology of *Euscelidius variegatus* iflavivirus 1: towards the production of an infectious viral clone. Presented at the Society for Invertebrate Pathology, SIP/IOBC, 28 July - 1 August 2019. Valencia, (Spain). Oral presentation.
- **S. Ottati**; A. Persico; S. Abbà; M. Rossi; L. Galetto; M. Vallino; M. Turina; C. Marzachi; D. Bosco 2019. Towards the production of an infectious viral clone to interfere with phytoplasma transmission by the leafhopper vector. X EUROPEAN PhD NETWORK "INSECT SCIENCE" 4-6 December 2019, Genova (Italy). Oral presentation.
- M. Turina; L. Bosco; **S. Ottati**; M. Chiapello; M. Ciuffo; C. Rosa; N. Salem; L. Tavella. The virome associated to Thrips tabaci and Frankliniella occidentalis: source of new virus vectors for a VIGS strategy to limit thrips populations and tospovirus transmission. The XIth International Symposium on Thysanoptera and Tospoviruses September 21–25, Kunming, (China). Oral presentation.
- S. Daghino, **S. Ottati**, G. Forestello, M. Ciuffo, L. Tavella, M. Turina. TSWV-targeted VIGS in plants and thrips as possible virus control strategy: preliminary results. SIV/ISV Congress, July 5-6 2021, online. Oral presentation.
- S. Abbà, M. Rossi, **S. Ottati**, G. Martino, M. Turina, L. Galetto, C. Marzachi, M. Vallino. Identification of a bacteriophage in the phytoplasma insect vector *Euscelidius variegatus*. SIV/ISV Congress, July 5-6 2021, online. Poster.
- M. Chiapello, L. Bosco, M. Ciuffo, **S. Ottati**, L. Tavella and M. Turina. A complex virome associated to tospovirus-transmitting thrips species offers new approaches to contain the damage they cause. SIV/ISV Congress, July 5-6 2021, online. Poster.
- **S. Ottati**, S. Abbà, M. Rossi, L. Galetto, M. Vallino, M. Turina, A. Persico, D. Bosco, C. Marzachi. Leafhoppers and Iflaviruses: new insights in virus-host interactions and their potential application. CNIE, 7-11 June 2021. Torino, (Italy). Oral presentation.
- L. Galetto; **S. Ottati**; S. Abbà; M. Ripamonti; D. Bosco; M. Rossi; S. Palmano; C. Marzachi. Transcriptional profile of "flavescence dorée" phytoplasma during different infection stages of host plants and insect vectors. VIII Incontro Nazionale sui Fitoplasmi e le Malattie da Fitoplasmi (INF-2021) October 14-15 2021, Catania (Italy). Oral presentation.
- **S. Ottati**; S. Abbà; L. Galetto; M. Rossi; M. Vallino; D. Bosco; C. Marzachi. Discovering insect viral resources and modelling their potential for biocontrol of phytoplasma vectors. INF-2021 October 14-15 2021, Catania (Italy). Oral presentation.
- **S. Ottati**; N. Bodino; M. Rossi; L. Galetto; S. Abbà; C. Marzachi. Effects of *Euscelidius variegatus* Iflavivirus 1 on fitness parameters and transmission ability of the phytoplasma vector *E. variegatus*. ICE-2022 July 16-22, Helsinki (Finland). Oral presentation.
- N. Bodino; S. Fogliatto; S. Demichelis; M. Saladini; **S. Ottati**; F. Vidotto; D. Bosco. Spittlebugs in vineyards: influence of plant community characteristics on the abundance of *Xylella fastidiosa* vectors. ICE-2022 July 16-22, Helsinki (Finland). Poster.
- **S. Ottati**, S. Abbà, L. Galetto, N. Bodino, D. Bosco, C. Marzachi. Virome of Hemiptera: the case of three insect vectors of plant pathogens. CNIE, June 12-16 2023. Palermo, (Italy). Poster.

Il candidato è consapevole delle sanzioni penali previste in caso di dichiarazioni mendaci, falsità negli atti e uso di atti falsi. (ART. 76 D.P.R. 445/28.12.2000)

Luogo e data

Torino 21/06/2023

Firma

