

PERSONAL INFORMATION

Eva Veronesi



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WORK EXPERIENCE

June 2014 – Now

Senior Scientist (Swiss National Centre for Vector Entomology, Institute of Parasitology, University of Zürich, Switzerland)

Pathogen-vector interaction mechanisms, vector competence studies for vector-borne diseases (Bluetongue, Schmallenberg, Lumpy skin, West-Nile, Zika, Chikungunya, Dengue, Sindbis) within exotic and indigenous population of Swiss mosquitoes and *Culicoides* biting midges. Ecology and bionomics of mosquitoes and *Culicoides* species potentially involved on pathogens transmission. Mosquitoes monitoring and surveillance.

March 2017 – March 2021

Stakeholder Networking Coordinator for Infravec2 project funded by the EC under the Horizon2020 research and innovation programme grant agreement.

Developing relationships with relevant stakeholders including governmental and non-governmental policy makers, commercial sector, and international funding bodies in research and public health. Assuring fullest utilization of our resources in public health mission for surveillance and prevention of vector-borne diseases (VBD) and for response to epidemic outbreaks including non-European partners in endemic countries that are on the front line of vector surveillance, disease emergence and outbreak control. This also includes transfer of new tools and technologies to appropriate partners and stakeholders.

October 2002 – June 2014

Research Scientist (The Pirbright Institute – former Institute for Animal Health, Pirbright, United Kingdom)

Developing a safe, efficacious bluetongue virus vaccination strategy for Europe, investigating bluetongue virus re-assortment and overwintering in the *Culicoides* biting midges, thermal requirement for bluetongue virus transmission among *Culicoides*, transmission pathways of Schmallenberg virus for *Culicoides*.

Projects delivered:

“Bluetongue virus reassortment and overwintering in the *Culicoides* host” funded by DEFRA, UK (2006-12);

“Implicating vectors of Schmallenberg virus in Europe” funded by DEFRA, UK (2008);

“Epidemiology and control of Orbiviral diseases in the UK, with particular reference to Bluetongue and African horse sickness” funded by the BBSRC, UK (2002-06);

“Development of a safe, efficacious bluetongue virus vaccination strategy for Europe” funded by the European Commission, 5th RTD Framework (2002-05).

March 1995 – October 2002

Research Entomologist (Centro Agricoltura Ambiente Giorgio Nicoli S.r.l. – Bologna, Italy)

Surveillance, identification and rearing of mosquitoes and other arthropods of veterinary and medical interest (sand flies and *Culicoides*). Development of new techniques for controlling blood-sucking arthropods and applying the most advanced integrated environment-friendly biological area wide pest control technologies aimed to controlling mosquito populations. Setting up of projects, technical reports and articles connected to the activities carried out, to the data and results obtained.

EDUCATION AND TRAINING

2006 – 2012

Royal Veterinary College – University of London (UK)

PhD in Entomology (in-post working as Researcher Scientist at The Pirbright Institute – BBSRC – UK). **Thesis title:** “Temperature and strain related variation in the infection and dissemination of bluetongue virus in *Culicoides* (Diptera: Ceratopogonidae)”.

1989 - 1996 **Alma Mater Studiorum – Università degli studi di Bologna.**
 BSc Bachelor's degree in Natural Science Score 105/110
 Thesis on Ornithology – Title: "Studies on the breeding decisions in Cormorant bird population and consequences for their development"

ONGOING PROJECTS

2018 - 2022 **Principal investigator** for "Aedes invasive mosquitoes (AIM) COST ACTION" (COST European Cooperation in Science & Technology, Horizon 2020 EC grant);

2018 - 2020 **External expert** for the "Regional project on develop strategies for enhancing national capabilities for early and rapid detection of priority vector borne diseases of animals (including zoonoses) (funded by the Atomic Energy Agency, IAEA, AU);

2018 – 2020 **Principal investigator** on the "Lumpy skin disease: improvement of diagnostic methods and assessment of the vector potential of insects of Switzerland" (funded by BLV, CH grant agreement 1.18d);

2017 - 2021 **Principal investigator** on Infravec2 project, "Research Infrastructures for control of vector-borne diseases" (Research and Innovation Programme, Horizon 2020, EC Grant agreement n. 731060);

2016 - 2019 **Principal investigator** for ZikAlliance, 3 year project "A global alliance for Zika virus control and prevention" (Research and innovation programme, Horizon 2020, EC grant agreement 734548);

COMPLETED PROJECTS

2016 **External expert and Principal Investigator** for the project "Assessment of Aedes aegypti WB2-BR line vector competence against Zika virus" (funded by International Atomic Energy Agency, IAEA, AU);

2015 – 2017 **Principal investigator** on "Vector capacity of (pre)-alpine biting midges (Ceratopogonidae, Culicoides spp.) for Orbiviruses" (funded by BLV, CH);

2015 – 2017 **Coordinator** on the project "AMSAR Arbovirus Monitoring, Surveillance and Research – capacity building on mosquitoes and biting midges" (Funded by SNF, CH);

2015 - 2017 **Principal investigator** on the project "Experimental evaluation of infection, dissemination and transmission rates for two strains in Aedes japonicus under a fluctuating temperature regime" (funded by BLV, CH);

2015 – 2017 **External expert** for the "European network for sharing data on the geographic distribution of arthropod vector, transmitting human and animal disease agents (VectorNet)" (funded by EFSA, ECDC, Avia-GIS).

2014 – 2015 **External expert and Principal Investigator** on the project "Investigating vector competence for chikungunya and dengue viruses among irradiated Aedes females" (funded by International Atomic Energy Agency, IAEA, AU)

TEACHING EXPERIENCES

External lecturer at the "Arthropods: invertebrates – facilities and handling" course organized by the European Biosafety Association (EBSA) Copenhagen, 17th April 2018;

Organizer and trainer of the Two-day training course at the European Society for Vector Ecology (E-SOVE), Lisbon (Portugal, October 2016);

External lecturer at the "Arthropods: invertebrates – facilities and handling" course organized by the European Biosafety Association (EBSA) Vienna, 21st April 2015;

Organizer and trainer of the Two-day training course at the European Society for Vector Ecology (E-SOVE), Thessaloniki (Greece, October 2014);

Lecturer at the Medical and Veterinary Entomology course for biologist at the University of Zürich (2014 – ongoing);

External lecturer on "Mosquitoes transmitted diseases", "ecology, bionomics and control of mosquitoes." MSc in Veterinary Microbiology, University of Surrey

Trainer at the "BTV diagnostic course for foreign scientists" - The Pirbright Institute (Pirbright, UK) (2008-2010);

External lecturer on "Arthropod-borne diseases and vector control "Emerging diseases" for Veterinary organized by Emilia-Romagna Region (Italy) (2008).

LIST OF SELECTED PUBLICATIONS

- Morales-Hojas R., Hinsley M., Armean I.M., Silk R., Harrup L.E., Gonzalez-Uriarte A., **Veronesi E.**, Campbell L., Nayduch D., Saski C., Tabachnick W.J., Kersey P., Carpenter S., Fife M. (2018). The genome of the biting midge *Culicoides sonorensis* and gene expression analyses of vector competence for Bluetongue virus. *BMC Genomics*
- Paslaru A., Mathis A. Torgerson P., **Veronesi E.** (2018). Vector competence of pre-alpine *Culicoides* (Diptera: Ceratopogonidae) for bluetongue virus serotypes 1, 4 and 8. *Parasite&Vectors* (Accepted for publication).
- Veronesi E.**, Paslaru A., Silaghi C., Tobler K., Glavinic U., Torgerson P., Mathis A. (2018). Experimental evaluation of infection, dissemination and transmission rates for two West Nile virus strains in European *Aedes japonicus* under a fluctuating temperature regime. *Parasitology Research*, Jun; 117(6):1925-1932.
- Barber J., Harrup L., Silk R., **Veronesi E.**, Gubbins S., Bachanek-Bankowska K., Carpenter S. (2018). Blood-feeding, susceptibility to infection with Schmallenberg virus and phylogenetics of *Culicoides* (Diptera: Ceratopogonidae) from the United Kingdom. *Parasites&Vectors* Feb 27; 11(1):116.
- Wagner S., Mathis A., Schönenberger A.C., Becker S., Schmidt-Chanasit J., Silaghi C., **Veronesi E.** (2018). Vector competence of field populations of *Aedes japonicus japonicus* and *Culex pipiens* from Switzerland for two West Nile virus strains. *Med. & Vet. Entomology* Mar; 32(1):121-124.
- Mills MK., Michel K., Pfannenstiel RS., Ruder MG., **Veronesi E.**, Nayduch D. (2017). *Culicoides* –virus interactions: infection barriers and possible factors underlying vector competence. *Current opinion in insect science* 22:7-15.
- Kohl A.I, Pondeville E., Schnettler E., Crisanti A., Supparo C., Christophides GK., Kersey PJ., Maslen GL., Takken W., Koenraad CJ., Oliva CF., Busquets N., Abad FX., Failloux AB., Levashina EA., Wilson AJ., **Veronesi E.**, Pichard M., Arnaud Marsh S., Simard F. and Vernick F. (2016). Advancing vector biology research: a community survey for future directions, research applications and infrastructure requirements. *Pathogen and Global health* Jun-Jul 110(4-5):164-72.
- Balestrino F., Mathis A., Lang S., **Veronesi E.** (2016). Sterilization of *Hulecoeteomyia japonica japonica* (= *Aedes japonicus japonicus*) (Theobald, 1901) by high energy photon irradiation: implication for a sterile insect technique approach in Europe. *Med. & Vet. Entomology* Sep. 30(3):278-85.
- Darpel K., J. Barber, A. hope, A. J. Wilson, S. Gubbins, M. Henstock, L. Frost, C. Batten, **Veronesi E.**, K. Moffat, S. Carpenter, C. Oura, P. S. Mellor, P.P.C. Mertens (2016). Using shared needles for subcutaneous inoculation can transmit bluetongue virus mechanically between ruminant hosts. *Sci. Rep.* 6, 20267; doi: 10.1038/srep20627.
- Balestrino F., F. Schaffner, D. La Forgia, A.I. Paslaru, P. Torgerson, A. Mathis, **Veronesi E.** (2016). Field evaluation of baited traps for surveillance of *Aedes japonicus japonicus* in Switzerland. *Medical & Veterinary Entomology*. 30, 64-72.
- Manley R. , Harrup L., **Veronesi E.** Stubbins F., Stoner J., Gubbins S., Wilson A., Batten C., J.M. Koenraad C., Henstock M., Barber J., Carpenter S. (2015). Testing of UK Populations of *Culex pipiens* L. for Schmallenberg Virus Vector Competence and Their Colonization. *PLoS ONE* 10(8) DOI: 10.1371/journal.pone.0134453
- Carpenter S., **Veronesi E.**, Mullens B., Venter G. (2015). Vector competence of *Culicoides* for arboviruses: three major periods of research, their influence on current studies and future directions. Special issue of the *OIE Scientific and Technical Review* Vol. 34 (1), April 2015. *Revue scientifique et technique* (International Office of Epizootics) 01/2015; *Rev. Sci. Tech. Off. Int. Epiz.*, 2015, 34 (1), 97-112(34 (1)):97-112.
- Batten C., Darpel K., Henstock M., Fay P., **Veronesi E.**, Gubbins-S., Graves S., Frost L., Oura C. (2014). Evidence for transmission of Bluetongue virus serotype 26 through direct contact. *PLoS ONE* 05/2014; 9(5):e96049. DOI:10.1371/journal.pone.0096049.
- Veronesi E.**, Antony F., Gubbins S., Golding N., Blackwell A., Mertens P.P.C., Brownley J., Darpel K., Mellor P., Carpenter S. (2013). Measurement of the infection and dissemination of bluetongue virus in *Culicoides* biting midges using a semi-quantitative RT-PCR assay and isolation of infectious virus. *PLOS ONE* 08/2013; 8(8):e70800.
- Veronesi E.**, Henstock M., Gubbins S., Batten C., Manley R., Barber J., Hoffmann B., Beer M., Attoui H., Mertens P.P.C., Carpenter S. (2013). Implicating *Culicoides* Biting Midges as Vectors of Schmallenberg Virus Using Semi-Quantitative RT-PCR. *PLOS ONE* 03/2013; 8(3):e57747.

Shaw A*, **Veronesi E***, Maurin G., Ftaich N., Guiguen F., Rixon F., Ratinier M., Mertens P., Carpenter S., Palmarini M., Terzian C., Arnaud F. (2012). *Drosophila melanogaster* as a model organism for bluetongue virus replication and tropism. *Journal of Virology* 06/2012; 86(17):9015-24

*these authors have equally contributed