

LAPO RAGIONIERI



CURRICULUM VITAE

WORK EXPERIENCE

ORCID <https://orcid.org/0000-0003-0099-2719>

- Period (from – to) 01/11/2023 -
 - Name and address of work Free University of Bozen-Bolzano, Italy
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Post-Doc - AR
- Period (from – to) 01/01/2019 - 18/05/2023
 - Name and address of work University of Cologne, Germany
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Post-Doc
- Period (from – to) 01/01/2016 - 31/12/2018
 - Name and address of work University of Cologne, Germany
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Post-Doc – Novel biocontrol agents for insect pests from neuroendocrinology
- Period (from – to) 01/01/2012 - 31/12/2014
 - Name and address of work University of Aveiro, Portugal
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Post-Doc – Elucidating the role of the translation machinery on gene evolution
- Period (from – to) 16/05/2011 - 31/12/2011
 - Name and address of work University of Aveiro, Portugal
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Post-Doc - Targetting protein synthesis in the apicoplast and citoplast of *Plasmodium*
- Period (from – to) 18/10/2010 - 18/11/2010
 - Name and address of work University of Milan, Italy
 - Business or sector University
 - Type of employment Fixed-term contract
 - Job description Caratterizzazione genetica dei loci MHC del fagiano comune (*Phasianus colchius*)
- Period (from – to) 01/01/2010 - 30/06/2010
 - Name and address of work University of Florence, Italy
 - Business or sector University

- Type of employment Fixed-term contract
- Job description Genetic studies on natural populations for conservation purposes.

EDUCATION AND TRAINING

- Period (from – to) 2006 - 2009
- Name and type of education or training institution University of Florence, Italy
- Main subjects/professional skills covered by the study Genetic analyses / Title: "Population genetics, larval dispersal and settlement in mangrove crabs from the east African coast "
- Qualification achieved **Dottorato di Ricerca in Etologia ed Ecologia Animale**
- Level in national classification (if appropriate) **Dr. / PhD**

- Period (from – to) 1999 - 2005
- Name and type of education or training institution University of Florence, Italy
- Main subjects/professional skills covered by the study Genetic analyses / Title: "Population genetics of the shore crabs *Pachygrapsus marmoratus* and the effects of anthropogenic on its population genetics structure"
- Qualification achieved **Laurea/degree in Scienze Naturali**
- Level in national classification (if appropriate) Vote 110/110

Research and scholarships	Date granted	Award Holder(s)	Funding Body	Title
	2012	Lapo Ragonieri	DAAD	Research fellowship
	2012	Lapo Ragonieri	Fundação para a Ciência e a Tecnologia	Research fellowship

**PERSONAL SKILLS AND SKILLS
ACQUIRED OVER THE COURSE OF
LIFE AND CAREER BUT NOT
NECESSARILY RECOGNIZED BY
OFFICIAL CERTIFICATES AND
DIPLOMAS.**

NATIVE LANGUAGE

ITALIANO

OTHER LANGUAGES

- Reading ability
- Writing skills
- Ability of oral expression

English

C1

C1

C1

German

A2

A2

A2

Portuguese

Good

Basic

Good

RELATIONAL SKILLS

I have participated in numerous scientific research projects collaborating with colleagues from various European and international universities and companies.

ORGANIZATIONAL SKILLS

During my last contracts I was deeply involved in the administrative part and organizational tasks of the research group. I dealt with equipment such as mass spectrometers and workstations. Furthermore, I managed the research group's website and the necessary laboratory orders for both protein analyzes, transcriptome and genome sequencing.

TECHNICAL SKILLS

I have experience with numerous molecular biology methods:

- Sequencing of mitochondrial and nuclear genes (Sanger)
- Cloning and heterologous expression of recombinant proteins
- RNA and DNA extractions for sequencing both with Illumina and PacBio
- Analysis of proteins and peptides with mass spectrometers (MALDI and Orbitrap)
- Transcriptome and genome analysis (bash command language)
- Phylogenetic and population genetic analyses
- Analysis for the identification of proteins and peptides
- Immunohistochemistry for the identification of Neuropeptides

EDITORIAL ACTIVITY

International peer review journals:

Associated editor for Frontiers in Neuroscience and Frontiers in Genetics
Reviewer for: Systematic Entomology; PeerJ; Journal of Biogeography; Estuaries and Coasts; Crustaceana; PlosOne; Insects; Genes; Computational and Structural Biotechnology Journal; Biology; Wellcome Open Research; International Journal of Molecular Sciences; Insect Science.

MEMBERSHIPS Deutschen Zoologischen Gesellschaft (DZG)
 Società Entomologica Italiana (SEI)

DRIVER'S LICENSE A e B

BREVETTO SUB CMAS - Advance

Peer-Reviewed Journal Articles, Book Chapters and Conference Proceedings

1. **Ragionieri L.**, Štarhová Serbina L., Corretto E., Howie J.M. Cruz F., Alioto T.S., Zadra N., Anfora G., Stauffer C., Ometto L., Rota-Stabelli O., Schuler H (**under review**) Evolutionary genomics and divergence of *Cacopsylla* species with a special focus on the Apple Proliferation Vectors: *Cacopsylla melanoneura* and *C. picta*. *BMC Genomics* DOI: [10.21203/rs.3.rs-7518317/v1](https://doi.org/10.21203/rs.3.rs-7518317/v1)
2. Enciso Garcia J.S., Corretto E., **Ragionieri L.**, Palmieri L., Perez-Lopez E., Dietrich C., Lombaert E., Janik K., Schuler H. (2025) Phylogenetic analysis of *Scaphoideus* reveals new insights into the invasion history of *Scaphoideus titanus* (Hemiptera, Cicadellidae) in Europe. *Ecology and Evolution*. 15, no. 8: e71976. <https://doi.org/10.1002/ece3.71976>.
3. Enciso Garcia J.S., Chignola M., **Ragionieri L.**, Rey F., Fluch M., Borruso L., Corretto E., Schuler H. (2025). High-Throughput Amplicon Sequencing for Analyzing Microbial Communities of Insects. In: Bonizzoni M. and Ometto L. (eds) *Insect Genomics: Methods and Protocols*, https://doi.org/10.1007/978-1-0716-4583-3_10
4. **Ragionieri L.** (2025) Neuropeptide profiling of *Bombus terrestris* (Hymenoptera, Apidae) and comparative analysis across hymenopteran specie. *Insect Biochemistry and Molecular Biology*, 182: 104347. DOI:10.1016/j.ibmb.2025.104347
5. Chowański S., Lubawy J., Pacholska-Bogalska J., **Ragionieri L.**, Urbański A., Szymczak-Cendlak M., Walkowiak-Nowicka K., Marciniak P. (2025) FMRFamide-like peptides (FaLPs) – an overview of diverse physiological roles in insects and other arthropods. *International Journal of Biological Sciences*, 21(6): 2725-2746. DOI: 10.7150/ijbs.106382
6. **Ragionieri L.**, Fierro A., Penna-Díaz M.A., Schubart C.D., Thiel M. (2025) Phylogeography of the kelp-dwelling isopod *Amphoroidea typa* along the coast of continental Chile. *Estuarine costal and Shelf Science*, 317: 109168. DOI: 10.1016/j.ecss.2025.109168
7. Corretto E., **Ragionieri L.**, Schuler H. (2024) Caratterizzazione genetica della psilla del biancospino in Europa. *Relazione agraria & forestale* 2024.
8. **Ragionieri L.**, Cannicci S., Fratini S. (2024) Distinct phylogeographic and population genetic patterns of decapod species across mediterranean biogeographic barriers. *Crustaceana*, DOI: 10.1163/15685403-bja10399.
9. **Ragionieri L.***, Zúñiga-Reinoso A.*, Blaeser M, Predel R. (2023) Phylogenomics of darkling beetles (Coleoptera: Tenebrionidae) from the Atacama Desert. *PeerJ*, 11:e14848. DOI: 10.7717/peerj.14848.

10. Marciniak P, Pacholska-Bogalska J, **Ragionieri L.** (2022) Neuropeptidomes of *Tenebrio molitor* L. and *Zophobas atratus* Fab. (Coleoptera, Polyphaga: Tenebrionidae). *Journal of Proteome Research*, 21(10), 2247–2260.
11. Blenau W, Bremer AS, Schwietz Y, Friedrich D, **Ragionieri L.**, Predel R, Balfanz S, and Baumann A (2022) PaOct β 2R: Identification and Functional Characterization of an Octopamine Receptor Activating Adenylyl Cyclase Activity in the American Cockroach *Periplaneta americana*. *International Journal of Molecular Sciences* 23(3), 1677. DOI: 10.3390/ijms23031677
12. **Ragionieri L.**, Verdonck R, Verlinden H, Marchal E, Broeck JV, and Predel R (2022) Schistocerca neuropeptides—An update. *Journal of Insect Physiology* 136, 104326. DOI 10.1016/j.jinsphys.2021.104326
13. **Ragionieri L** and Predel R (2020) The neuropeptidome of *Carabus* (Coleoptera, Adephaga: Carabidae). *Insect Biochemistry and Molecular Biology* **118**, 103309.
14. Ly A*, **Ragionieri L***, Liessem S, Becker M, Deininger SO, Neupert S, and Predel R (2019) Enhanced coverage of insect neuropeptides in tissue sections by an optimized mass-spectrometry-imaging protocol. *Analytical Chemistry* **91**:1980-1988.
15. Pandit AA*, **Ragionieri L***, Marleya R, Yeoha JGC, Inward DJG, Davies SA, Predel R and Dow JAT (2018) Coordinated RNA-Seq and peptidomics identify neuropeptides and G-protein coupled receptors (GPCRs) in the large pine weevil *Hylobius abietis*, a major forestry pest. *Insect Biochemistry and Molecular Biology* **101**, 94-107.
16. Liessem S, **Ragionieri L**, Neupert S, Büschges A and Predel R (2018) Transcriptomic and Neuropeptidomic Analysis of the Stick Insect, *Carausius morosus*. *Journal of Proteome Research* **17**(6), 2192-2204.
17. **Ragionieri L**, Ozbagci B, Neupert S, Salts Y, Davidovitch M, Altstein M, Predel R (2017). Identification of mature peptides from pbm and capa genes of the moths *Heliothis peltigera* and *Spodoptera littoralis*. *Peptides* 94, 1-9.
18. Fratini S, **Ragionieri L**, Deli T, Harrer A, Marino IAM, Cannicci S, Zane L, Schubart CD (2016) Unravelling population genetic structure with mitochondrial DNA in a notional panmictic coastal crab species: sample size makes the difference. *BMC Evolutionary Biology*, **16**, 150.
19. Deli T, Fratini S, **Ragionieri L**, Said K, Chatti N, Schubart CD (2016) Phylogeography of the marbled crab *Pachygrapsus marmoratus* (Decapoda, Grapsidae) along part of the African Mediterranean coast reveals genetic homogeneity across the Siculo-Tunisian Strait versus heterogeneity across the Gibraltar Strait. *Marine Biology Research*, **12**(5), 471-487.
20. Fratini S, **Ragionieri L.**, Cannicci S. (2016) Demographic history and reproductive output correlates with intraspecific genetic variation in seven species of indo-pacific mangrove crabs. *PLoS ONE* **11**(7), e0158582.
21. **Ragionieri L**, Fratini S, Cannicci S (2015) Temporal patterns of megalopal settlement in different areas of an East African mangrove forest (Gazi Bay, Kenya). *Hydrobiologia*, **749** (1), 183-195.
22. **Ragionieri L**, Vitorino R, Frommlet J, Oliveira J, Gaspar P, Ribas de Pouplana L, Santos M and Moura G (2015) Improving the accuracy of recombinant protein production through integration of bioinformatics, statistical and mass spectrometry methodologies. *FEBS Journal*, **282** (4), 769-787.
23. **Ragionieri L** & Schubart CD (2013) Population genetics, gene flow, and biogeographical boundaries of *Carcinus aestuarii* (Crustacea: Brachyura: Carcinidae) along the European Mediterranean coast. *Biological Journal of the Linnean Society*, 109(4), 771-790.
24. **Ragionieri L**, Cutuli G, Sposimo P, Spano G, Navone A, Capizzi D, Baccetti N, Vannini M and Fratini S (2013). Establishing the eradication unit of Molara Island: a case of study from Sardinia, Italy. *Biological Invasion* **15**(12), 2731-2742.
25. Fratini S, **Ragionieri L**, Cutuli G, Vannini M, Cannicci S (2013) Pattern of genetic isolation in the crab *Pachygrapsus marmoratus* within the Tuscan Archipelago (Mediterranean Sea). *Marine Ecology Progress Series* **478**, 173-183.
26. Sposimo P, Spano G, Navone A, Fratini S, **Ragionieri L**, Putzu M, Capizzi D, Baccetti N, Lastrucci B (2012) Rat eradication at Yelkouan Shearwater Puffinus yelkouan colonies on NE Sardinian islets: success followed by unexplained re-appearance. In P. Yésou, N. Baccetti and Joe Sultana (Eds.) Ecology and conservation of Mediterranean seabirds and other bird species under the Barcelona convention, *Proceedings of the 13th*

27. Sposimo P, Spano G, Navone A, Fratini S, **Ragionieri L**, Putzu M, Capizzi D, Baccetti N (2012). Rodent eradication on Molar Island and surrounding islets (NE Sardinia): from success to the riddle of reinvasion. *Aliens: the Invasive Species Bulletin*, 32, 33-38.
28. Baratti M, Dessi-Fulgheri F, Ambrosini R, Bonisoli-Alquati A, Caprioli M, Goti E, Matteo A, Monnanni R, **Ragionieri L**, Ristori E, Romano M, Rubolini D, Scialpi A, Saino N (2012) MHC genotype predicts mate choice in the ring-necked pheasant *Phasianus colchicus*. *Journal of Evolutionary Biology* **25**(8), 1531-1542.
29. **Ragionieri L**, Fratini S, Schubart CD (2012) Revision of the *Neosarmatium meinerti* species complex (Decapoda: Brachyura: Sesamidae), with descriptions of three pseudocryptic Indo-West Pacific species. *Raffles Bulletin of Zoology* **60**(1), 71–87.
30. Fratini S, Schubart CD, **Ragionieri L** (2011) Population genetics in the rocky shore crab *Pachygrapsus marmoratus* from the western Mediterranean and eastern Atlantic: complementary results from mtDNA and microsatellites at different geographic scales In: Phylogeography and Population Genetics in Crustacea. Stefan Koenemann, Christoph D. Schubart, Christoph Held. (eds) Crustacean Issues. CRC Press. **19**, 191-213
31. **Ragionieri L.**, Cannicci S., Schubart C.D. and S. Fratini (2010). Gene flow and demographic of the mangrove crab *Neosarmatium meinerti* (de Man 1887): a case of study from the East Africa Coast and Seychelles. *Estuarine Coastal and Shelf Science* **86**(2), 179-188.
32. Fratini S., **Ragionieri L.**, and S. Cannicci (2010). Stock structure and demographic history of Indo-Pacific mud crab *Scylla serrata*. *Estuarine, Coastal and Shelf Science* **86**(1) 51-61.
33. **Ragionieri L.**, Fratini S., Vannini M. and Schubart C.D (2009). Phylogenetic and morphometric differentiation reveals geographic radiation and pseudo-cryptic speciation in a mangrove crab from the Indo-West Pacific. *Molecular Phylogenetics and Evolution* **52**(3), 825-834.
34. Fratini S, Zane L, **Ragionieri L**, Vannini M Cannicci S (2008). Relationship between heavy metal accumulation and genetic variability decrease in the intertidal crab *Pachygrapsus marmoratus* (Decapoda; Grapsidae) *Estuarine, Coastal and Shelf Science* **79**(4), 679-686.
35. Fratini S, **Ragionieri L**, Papetti C, Pitruzzella G, Rorandelli R, Barbaresi S, and Zane L (2005). Isolation and characterization of microsatellites in *Pachygrapsus marmoratus* (Grapsidae; Decapoda; Brachyura). *Molecular Ecology notes*. **6**(1), 179-181. DOI: 10.1111/j.1471-8286.2005.01184.x

* Authors contributed equally

Selected Presentations at Scientific Conferences

1) **INVITED SPEAKER** at The Crustacean Society Summer Meeting jointly held with the Annual Meeting of Carcinological Society of Japan in Tokyo. (20–24/09/2009, Tokyo, Japan)

Title: **Comparative phylogeography of crabs from East African mangroves: different dispersal strategies and their potential for endemism**

Presenting author: **Lapo Ragionieri**

2) EMBO Conference From Functional Genomics to Systems Biology (08- 11/11/2014 Heidelberg, Germany)

Title: **A new genome belonging to the Saccharomycotina subphylum to study the role of the translational machinery on gene evolution.**

Authors: Lapo Ragionieri, Rita Bezerra, Hugo Araújo, José L. Oliveira, Jean-Luc Souciet, Manuel A. Santos and Gabriela Moura.

Presenting author: **Lapo Ragionieri**

2) 29th Conference of European Comparative Endocrinologists from (19-22/08/2018 Glasgow, UK)

Title: **Mass spectrometry imaging reveals distinct compartmentalization in neuroendocrine tissue of an insect**

Authors: L Ragionieri, A Ly, S Liessem, M Becker, S-O Deininger, S Neupert, R Predel

Presenting author: **Lapo Ragionieri**

3) DZG 2018 - Meeting of the German Zoological Society (10-15/09/2018 Greifswald, Germany)

Title: **First neuropeptidome of Adephaga – Data from *Carabus problematicus* (Carabidae) shed new light on the evolutionary trends of neuropeptides in Coleoptera**

Authors: Lapo Ragionieri and Reinhard Predel

Presenting author: **Lapo Ragionieri**

4) DZG 2019 - Meeting of the German Zoological Society (10-13/09/2019 Jena, Germany).

Title: **Neuropeptidome of *Bombus terrestris* shed new light on hymenopteran peptidomics**

Authors: Lapo Ragionieri and Reinhard Predel

Presenting author: **Lapo Ragionieri**

5) DZG 2022 - Meeting of the German Zoological Society (13/16/09/2022 Bonn, Germany).

Title: **Neuropeptidomes and mimetics in Coleoptera**

Authors: Lapo Ragionieri and Reinhard Predel

Presenting author: **Lapo Ragionieri**

6) 83° Congresso Nazionale dell'Unione Zoologica Italiana (11-14/09/2024, Pisa, Italy)

Title: **Genetic basis of reproductive host plant preferences in *Cacopsylla melanoneura* (Hemiptera, Psyllidae).**

Authors: Ragionieri L., Corretto E., Stauffer C., Feder J., Schuler H. - Talk.

Presenting author: **Lapo Ragionieri**

7) BG24, Biodiversity Genomics 24 Conference (October 2024 Online – Poster)

Title: **Population genomics and invasion history of a Nearctic Leafhopper in Europe *Scaphoideus titanus*.**

Ragionieri L., Enciso Garcia J.S., Corretto E., Lombaert E., Klopp C., Urso I., Buonanno S., Gissi C., Arpellino A., Alma A., Gonella E., Foissac X., Schuler H.

Presenting author: **Lapo Ragionieri**

8) Entomology congress 2025 DGaE. (17-20/03/2025 Geisenheim, Germany).

Title: **Unraveling host-specific genetic divergence in *Cacopsylla melanoneura* (Hemiptera, Psylloidea, Psyllidae).** Lapo Ragionieri, Erika Corretto, Liliya Serbina, Christian Stauffer, Hannes Schuler

Presenting author: **Lapo Ragionieri**

9) 28° edizione del Congresso Nazionale Italiano di Entomologia (16 – 20/06/2025, Siena, Italy).

Title: **Unraveling host-specific genetic divergence in *Cacopsylla melanoneura* (Hemiptera, Psylloidea, Psyllidae).**

Authors: Lapo Ragionieri, Erika Corretto, Liliya Serbina, Christian Stauffer, Hannes Schuler

Presenting author: **Lapo Ragionieri**

Participation in the activities of a research group engaged in international collaborations

1) **Mephitis** – Targeting protein synthesis in the apicoplast and cytoplasm of Plasmodium. University of Aveiro (Portugal), from 15-05-2011 to 31-12-2011. The main tasks consisted of using bioinformatic methods to optimize gene sequences for expression in bacteria.

2) **Neurostresspep** – <https://neurostresspep.eu/>. University of Cologne (Germany), from 01-01-2015 to 31-12-2018. The work involved the dissection of the central nervous system from various insect species, as well as the extraction of RNA/DNA and peptides for the identification of species-specific neuropeptides.

Teaching or research appointments (fellowships) at reputable foreign or international universities and research institutions

1) Title: **Mastermodule: Essentials in Neuroscience**

Module Leader: Prof. Reinhard Predel

Teaching Assistant: **Lapo Ragionieri**

Dates: September 15, 2019 – November 15, 2019

Module Objectives:

Acquire knowledge of phylogenetic analyses and taxonomic methods in insects

Develop skills in presenting scientific results, both orally and in written form, and critically discussing them

2) Title: **Biology of Insects (Biologie der Insekten)** (MN-B-WP I (Neuro 2))

Module Leader: Prof. Reinhard Predel

Teaching Assistant: **Lapo Ragionieri**

Dates: October 10, 2019 – November 30, 2019

Module Objectives:

- In-depth knowledge of the fascinating biology of insects
- Understanding of various neuroanatomical, neurochemical, phylogenetic features, and taxonomic methods learned from scratch and applied accordingly
- Skills in presenting scientific results both orally and in writing in an appropriate manner, with the ability to critically discuss them

3) Title: **Biology of Insects (Biologie der Insekten)** (MN-B-WP I (Neuro 2))

Module Leader: Prof. Reinhard Predel

Teaching Assistant: **Lapo Ragionieri**

Dates: October 10, 2021 – November 30, 2021

- Module Objectives:
- In-depth knowledge of the fascinating biology of insects
- Understanding of various neuroanatomical, neurochemical, phylogenetic features, and taxonomic methods learned from scratch and applied accordingly
- Skills in presenting scientific results both orally and in writing in an appropriate manner, with the ability to critically discuss them

4) Title: **Neuropeptidomes in Insects** (MN-B-EM 6)

Module Leader: **Lapo Ragionieri**

Dates: August 22, 2022 – September 9, 2022

Module Content:

The course includes an introduction to neuropeptides, practical laboratory work, and bioinformatics analyses. Each student analyzes the neuropeptidome of a single insect species by combining RNA sequencing and proteomic analysis. The typical workflow involves:

- Dissection of the central nervous system (CNS) of an insect species
- Extraction of RNA and proteins from CNS tissues (wet lab)
- RNA assembly (bioinformatics)
- Search for gene sequences within the transcriptome assembly (bioinformatics)
- Identification of neuropeptides in the complete proteome (bioinformatics)