LINO OMETTO

Department of Biology and Biotechnology – University of Pavia – Via Ferrata 9 – 27100 Pavia

Associate Professor
University of Pavia, Italy.

My research activity focuses on the genetic basis of biodiversity, which I investigate with a combination of computational and experimental approaches in both model and non-model systems. I use population genetics to disentangle demographic and selective processes, as well as molecular evolution to identify the genetic basis of phenotypic and adaptive traits in insects and other organisms.

HIGHER EDUCATION

2006	**Ph.D. in Natural Sciences** (*summa cum laude*) LMU–University of Munich, Germany. Advisor: Prof. W Stephan. "The selective and demographic history of *Drosophila melanogaster*".
1999	**Laurea Degree in Biological Sciences** University of Padova, Italy. Advisor: Prof. P Cardellini. "Teratogenic and toxic effects of Alcohol Ethoxylate and Alcohol Ethoxy Sulfate surfactants on *Xenopus laevis* embryos and tadpoles".
1997-98	**Maîtrise studies** (Erasmus student) University of Paris XI, France. Specialized courses on evolutionary biology, entomology, developmental biology.

SCIENTIFIC CAREER

2021-…	**Associate Professor in Zoology** Department of Biology and Biotechnology, University of Pavia, Italy.
2018-21	**Assistant Professor (RTDb)** Department of Biology and Biotechnology, University of Pavia, Italy.
2020	Habilitation as Full Professor ("Abilitazione Scientifica Nazionale", Professore di I fascia) in Zoology (05/B1).
2018	Habilitation as Associate Professor ("Abilitazione Scientifica Nazionale", Professore di II fascia) in Zoology (05/B1) and in Genetics (05/I1).
2014-16	**Researcher/PostDoc** Agricultural Entomology Unit, Department of Sustainable Ecosystems and Bioresources, Research and Innovation Centre, Fondazione Edmund Mach, Italy. PI: Dr. G Anfora. Genomics and molecular evolution in the insects *Cacopsylla melanoneura* and *C. picta*.
2009-13	**Researcher/PostDoc** Department of Biodiversity and Molecular Ecology, Research and Innovation Centre, Fondazione Edmund Mach, Italy. PI: Dr. C Varotto. Genomics, molecular evolution and population genetics in *Cardamine resedifolia* and *C. impatiens*. NGS data analysis in Aquilegia. Molecular evolution in *Drosophila suzukii* and *Propionibacterium acnes*.
2006-09	**PostDoc**

	Department of Ecology and Evolution, University of Lausanne, Switzerland. Supervisor: Prof. L Keller. Study of the contribution of sex, caste and developmental stage in the evolution of gene expression in the ants *Solenopsis invicta*, *S. richteri*, and their hybrids. Molecular evolution of caste-biased genes.
2002-06	**Ph.D. Student** Department of Biology II, LMU–University of Munich, Germany. Supervisor: Prof. W Stephan. Multi-locus analysis of DNA variation in *Drosophila melanogaster*. Development of a maximum-likelihood approach to distinguish effects of demography from selection on patterns of DNA variation. Evolution of non-coding DNA.
2001-02	**Research internship** (10 months) Department of Biology II, LMU–University of Munich, Germany. Supervisor: Dr. B Nürnberger. Kin-recognition-mediated behaviour in tadpoles of the hybridizing toads *Bombina variegata* and *B. bombina*. Identification of species-specific genetic markers.
2000-01	**Research internship** (6 months) Zoology Department, Canterbury University, Christchurch, New Zealand. Supervisor: Prof. B Waldman. Role of chemical cues in behaviour of the frog *Leiopelma hamiltoni*. Assessment of the species' genetic variation.
2000	**Research internship** (4 months) Max Plank Institute for Ornithology, Seewiesen, Germany. Supervisor: Prof. Y Winter. Spatial ecology of nectarivorous bats.
1999-00	**Research internship** (6 months) Department of Biology, University of Padova, Italy. Supervisor: Prof. A Minelli. Intraspecific variation of morphological traits in the genus *Tygarrup* (Chilopoda).

PAST APPOINTMENTS

2014-18	**Adjunct Professor** University of Padova, Italy.
2016-18	**Mathematics and Science teacher** High School (I.I.S. M. Martini, Mezzolombardo, Trento, Italy) and Middle school (IC Mezzocorona, Mezzocorona, Trento, Italy).
2010-12	Scientific adviser for Genetics and Evolution for the science museum MuSe–Museo delle Scienze, Trento.

ATTENDED COURSES/OTHER HABILITATIONS

2017	Course (100 h) on Content and Language Integrated Learning (CLIL) for middle schools, and Cambridge CLIL Teaching Knowledge Test (TKT), IPRASE, Rovereto – Trento (Italy).
2015	Teaching habilitation (TFA A28, Mathematics and Sciences for middle school; 55 CFU), University of Trento, Italy.
2007	Course (21 h) on university teaching practice, University of Lausanne, Switzerland.

ONGOING COLLABORATIONS

- O Rota-Stabelli (U. of Trento, Italy): population genetics and evolutionary genomics of invasive insects.
- A Luchetti, F Ghiselli (U. of Bologna, Italy): population genomics in *Formica* ants.
- S Tiozzo (CNRS- Sorbonne University, France): genomics and evolutionary developmental biology in ascidians.
- G Attardo (Yale, USA): genomics and molecular evolution in tse-tse flies.
- Member of the European Drosophila Population Genomics consortium (DrosEU, www.droseu.net).

Member of the European COST action EuroScitizen (http://www.euroscitizen.eu).

Member of the European Reference Genome Atlas consortium (https://www.erga-biodiversity.eu).

(CO-)INVESTIGATOR IN THE FOLLOWING GRANTS

ANR (French National Research Agency) 2024, "Testing evolution via accumulation of somatic mutations using modular chordates" (consortium partner – co-PI).

PRIN 2022, "Genome plasticity in tiger mosquitoes: biological significance and relevance for pest management" (co-PI).

P.N.R.R. Centro Biodiversità (Spoke 4), "Population genomics in *Formica paralugubris*" (PI).

Deutsche Forschungsgemeinschaft (DFG grant STE 325/6 to W Stephan).

Swiss National Science Foundation (to L Keller).

ACE-SAP project of the Autonomous Province of Trento (to C Varotto).

Scopazzi project (to G. Anfora).

AWARDS AND RESEARCH GRANTS

2008 Roche Research Foundation stipend grant (12 months).

2008 Award for the best lay-summary, Italian Society for Evolutionary Biology.

2008 PostDoctoral researcher Travel Award, Society for Molecular Biology and Evolution.

2006 Travel grant, American Genetics Association.

2006 Travel grant, "Fondation du 450eme anniversaire" – University of Lausanne.

2005 "G. Canestrini" award for the best communication by a young scientist, Italian Society for Evolutionary Biology.

2005 Travel grant, Italian Society for Evolutionary Biology.

2001 Outgoing pre-doctoral fellowship, University of Padova (10 months).

1996 EU Erasmus Fellowship, exchange program at the University of Paris XI, France (10 months).

PUBLICATIONS

ORCiD: 0000-0002-2679-625X
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ResearcherID: C-3609-2008
Scholar: https://scholar.google.com/citations?user=RVjMHWgAAAAJ&hl=en

RESEARCH ARTICLES

* SHARED FIRST AUTHORSHIP; # CORRESPONDING AUTHOR

[39] McCartney, AM, [...], L Ometto, [...], and CJ Mazzoni. *In press*. 2024. The European Reference Genome Atlas: piloting a decentralised approach to equitable biodiversity genomics. *npj Biodiversity*, DOI (bioRxiv): https://doi.org/10.1101/2023.09.25.559365

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[37] Fuselli, S, S Greco, R Biello, S Palmitessa, M Lago, C Meneghetti, C McDougall, E Trucchi, O Rota-Stabelli, MA Biscotti, DJ Schmidt, DT Roberts, T Espinoza, JM Hughes, L Ometto, M Gerdol, and G Bertorelle. 2023. Relaxation of natural

selection in the evolution of the giant lungfish genomes. *Mol Biol Evol*, 40:msad193, DOI: https://doi.org/10.1093/molbev/msad193

[36] Pirri, F, L Ometto, S Fuselli, FAN Fernandes, L Ancona, N Perta, D Di Marino, C Le Bohec, L Zane, and E Trucchi. 2022. Selection-driven adaptation to the extreme Antarctic environment in the Emperor penguin. *Heredity* 129:317-326, DOI: https://doi.org/10.1038/s41437-022-00564-8 (Journal cover+podcast)

[35] Valerio, F, N Zadra, O Rota-Stabelli and L Ometto#. 2022. The impact of fast radiation on the phylogeny of *Bactrocera* fruit flies as revealed by multiple evolutionary models and mutation rate-calibrated clock. *Insects* 13:603, DOI: https://doi.org/10.3390/insects13070603

[34] Luchetti, A, L Ometto, and O Rota-Stabelli. 2021. The complete mitogenome of the European mantis, *Mantis religiosa* Linneus (Mantodea, Mantidae), from Italy: implications for the origin of North American mantis population. *Bullettin of Insectology* 74:253-257.

[33] Savini, G, F Scolari, L Ometto, O Rota-Stabelli, D Carraretto, LM Gomulski, G Gasperi, AMM Abd-Alla, S Aksoy, GM Attardo, and AR Malacrida. 2021. Viviparity and habitat restrictions may influence the evolution of male reproductive genes in tsetse fly (*Glossina*) species. *BMC Biology* 19:211, DOI: https://doi.org/10.1186/s12915-021-01148-4

[32] Feuda, R, M Goulty, N Zadra, T Gasperetti, E Rosato, D Pisani, A Rizzoli, N Segata, L Ometto, and O Rota-Stabelli. 2021. Phylogenomics of opsin genes in Diptera reveals lineage-specific events and contrasting evolutionary dynamics in *Anopheles* and *Drosophila*. *Genome Biol Evol* 13:evab170, DOI: https://doi.org/10.1093/gbe/evab170

[31] Kapun, M, JCB Nunez, M Bogaerts-Márquez, J Murga-Moreno, M Paris, J Outten, M Coronado-Zamora, C Tern, O Rota-Stabelli, MP García Guerreiro, S Casillas, DJ Orengo, E Puerma, M Kankare, L Ometto, V Loeschcke, BS Onder, JK Abbott, SW Schaeffer, S Rajpurohit, EL Behrman, MF Schou, TJS Merritt, BP Lazzaro, A Glaser-Schmitt, E Argyridou, F Staubach, Y Wang, E Tauber, SV Serga, DK Fabian, KA Dyer, CW Wheat, J Parsch, S Grath, M Savic Veselinovic, M Stamenkovic-Radak, M Jelic, AJ Buendía-Ruíz, MJ Gómez-Julián, ML Espinosa-Jimenez, F D Gallardo-Jiménez, A Patenkovic, K Eric, M Tanaskovic, A Ullastres, L Guio, M Merenciano, S Guirao-Rico, V Horváth, DJ Obbard, E Pasyukova, VE Alatortsev, CP Vieira, J Vieira, JR Torres, I Kozeretska, OM Maistrenko, C Montchamp-Moreau, DV Mukha, HE Machado, TF Paulo, A Barbadilla, D Petrov, P Schmidt, J Gonzalez, T Flatt, and AO Bergland. 2021. *Drosophila* Evolution over Space and Time (DEST) - A New Population Genomics Resource. *Mol Biol Evol* 38:5782-5805, DOI: https://doi.org/10.1093/molbev/msab259

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[28] Rota-Stabelli, O, L Ometto, G Tait, S Ghirotto, R Kaur, F Drago, J Gonzales, VM Walton, G Anfora, and MV Rossi-Stacconi. 2020. Distinct genotypes and phenotypes in European and American strains of *Drosophila suzukii*: implications for biology and management of an invasive organism. *J Pest Sci* 93:77-89, DOI: https://doi.org/10.1007/s10340-019-01172-y

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[26] Wan, F, C Yin, R Tang, M Chen, Q Wu, C Huang, W Qian, O Rota-Stabelli , N Yang, S Wang, G Wang, G Zhang, J Guo, L Gu, L Chen, L Xing, Y Xi, F Liu, K Lin, M Guo, W Liu, K He, R Tian, E Jacquin-Joly, P Franck, M Siegwart, L Ometto, G Anfora, M Blaxter, C Meslin, P Nguyen, M Dalíková, F Marec, J Olivares, S Maugin, J Shen, J Liu, J Guo, J Luo, B Liu, W Fan, L Feng, X Zhao, X Peng, K Wang, L Liu, H Zhan, W Liu, G Shi, C Jiang, J Jin, X Xian, S Lu, M Ye, M Li, M Yang, R Xiong, JR Walters, and F Li. 2019. A chromosome-level genome assembly of *Cydia pomonella* provides insights into

chemical ecology and insecticide resistance. *Nature Communications* 10:4273, DOI: https://doi.org/10.1038/s41467-019-12175-9

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[22] Tait, G, S Vezzulli, F Sassù, G Antonini, A Biondi, N Baser, G Sollai, A Cini, L Tonina, L Ometto, and G Anfora. 2017. Genetic variability in Italian populations of *Drosophila suzukii*. *BMC Genetics* 18:87, DOI: https://doi.org/10.1186/s12863-017-0558-7

[21] Conner, WR, ML Blaxter, G Anfora, L Ometto, O Rota-Stabelli, and M Turelli. 2017. Genome comparisons indicate recent transfer of *w*Ri-like *Wolbachia* between sister species *Drosophila suzukii* and *D. subpulchrella*. *Ecology and Evolution* 7:9391-9404, DOI: https://doi.org/10.1002/ece3.3449

[20] Palatini, U, P Miesen, R Carballar-Lejarazu, L Ometto, E Rizzo, Z Tu, R van Rij, and M Bonizzoni. 2017. Comparative genomics shows that viral integrations are abundant and express piRNAs in the arboviral vectors *Aedes aegypti* and *Aedes albopictus*. *BMC Genomics* 18:512, DOI: https://doi.org/10.1186/s12864-017-3903-3

[19] Crava, MC, S Ramasamy, L Ometto, G Anfora, and O Rota-Stabelli. 2016. Evolutionary insights into taste perception of the invasive pest *Drosophila suzukii*. *G3:Genes, Genomes, Genetics* 6:4185-4196, DOI: https://doi.org/10.1534/g3.116.036467 (F1000Prime recommended)

[18] Ramasamy, S, L Ometto, MC Crava, S Revadi, R Kaur, D Horner, D Pisani, T Dekker, G Anfora, and O Rota-Stabelli. 2016. The evolution of olfactory gene families in Drosophila and the genomic basis of chemical-ecological adaptation in *Drosophila suzukii*. *Genome Biol Evol* 8:2297-2311, DOI: https://doi.org/10.1093/gbe/evw160

[17] Rossi-Stacconi, V, K Rupinder, V Mazzoni, L Ometto, A Grassi, A Gottardello, O Rota-Stabelli, and G Anfora. 2016. Multiple lines of evidence for reproductive winter diapause in the invasive pest Drosophila suzukii: useful clues for control strategies. *J Pest Sci* 89:689-700, DOI: https://doi.org/10.1007/s10340-016-0753-8

[16] De Groeve, J, N Van de Weghe, T Neutens, L Ometto, O Rota-Stabelli, N Ranc, and F Cagnacci. 2016. Extracting spatio-temporal patterns in animal trajectories: an ecological application of sequence analysis methods. *Methods Ecol Evol* 7:369-379, DOI: https://doi.org/10.1111/2041-210X.12453

[15] Ometto, L, M Li, L Bresadola, E Barbaro, M Neteler, and C Varotto. 2015. Demographic history, population structure, and local adaptation in Alpine populations of *Cardamine impatiens* and *Cardamine resedifolia*. *PLoS ONE* 10:e0125199, DOI: https://doi.org/10.1371/journal.pone.0125199

[14] Campisano, A, L Ometto, S Compant, M Pancher, L Antonielli, C Varotto, G Anfora, I Pertot, A Sessitsch, and O Rota-Stabelli. 2014. Interkingdom transfer of the acne causing agent, *Propionibacterium acnes*, from human to grapevine. *Mol Biol Evol* 31:1059-1065, DOI: https://doi.org/10.1093/molbev/msu075

[13] Ometto, L, A Cestaro, S Ramasamy, A Grassi, S Revadi, M Moretto, P Fontana, C Varotto, D Pisani, T Dekker, N Wrobel, R Viola, I Pertot, D Cavalieri, M Blaxter, G Anfora, and O Rota-Stabelli. 2013. Linking genomics and ecology to investigate the complex evolution of an invasive *Drosophila* pest. *Genome Biol Evol* 5:745-757, DOI: https://doi.org/10.1093/gbe/evt034 (Journal cover)

[12] Fior, S, M Li, B Oxelman, R Viola, S Hodges, L Ometto, and C Varotto. 2013. Spatiotemporal reconstruction of the *Aquilegia* rapid radiation through next-generation sequencing of rapidly evolving cpDNA regions. *New Phytologist* 198:579-592, DOI: https://doi.org/10.1111/nph.12163

[11] Werzner, A, P Pavlidis, L Ometto, W Stephan, and S Laurent. 2013. Selective sweep in the Flotillin-2 region of European *Drosophila melanogaster*. *PLoS ONE* 8:e56629, DOI: https//doi.org/ 10.1371/journal.pone.0056629.s003

[10] Hunt, BG, L Ometto, L Keller, and MAD Goodisman. 2013. Evolution at two levels in fire ants: the relationship between patterns of gene expression and protein sequence evolution. *Mol Biol* Evol 30:263-271, DOI: https://doi.org/10.1093/molbev/mss234

[9] Ometto, L, M Li, L Bresadola, and C Varotto. 2012. Rates of evolution in stress-related genes are associated to habitat preference in two *Cardamine* lineages. *BMC Evol Biol* 12:7, DOI: https://doi.org/10.1186/1471-2148-12-7

[8] Ometto, L#, KG Ross, DD Shoemaker, and L Keller. 2012. Disruption of gene expression in hybrids of the fire ants *Solenopsis invicta* and *Solenopsis richteri*. *Mol Ecol* 21:2488-2501, DOI: https://doi.org/10.1111/j.1365-294X.2012.05544.x

[7] Hunt, BG*, L Ometto*, Y Wurm, DD Shoemaker, SV Yi, L Keller, and MAD Goodisman. 2011. Relaxed selection is a precursor to the evolution of phenotypic plasticity. *Proc Natl Acad Sci USA* 108:15936-15941, DOI: https://doi.org/10.1073/pnas.1104825108

[6] Ometto, L#, DD Shoemaker, KG Ross, and L Keller. 2011. Evolution of gene expression in fire ants: the effects of developmental stage, caste, and species. *Mol Biol Evol* 28:1371-1380, DOI: https://doi.org/10.1093/molbev/msq322

[5] Ometto, L#, D De Lorenzo, and W Stephan. 2006. Contrasting patterns of sequence divergence and base composition between *Drosophila* introns and intergenic regions. *Biol Lett* 2:604-607, DOI: https://doi.org/10.1098/rsbl.2006.0521

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[1] Cardellini, P, and L Ometto. 2001. Teratogenic and toxic effects of Alcohol Ethoxylate and Alcohol Ethoxy Sulfate surfactants on *Xenopus laevis* embryos and tadpoles. *Ecotox Environ Safe* 48:170-177, DOI: https://doi.org/10.1006/eesa.2000.2005

MEDIA COVERAGE

- The results of my research have been covered by news media at both national (Repubblica, L'Adige, Corriere del Trentino, Il Trentino, Corriere del Veneto, ADNKronos, Libero, Rai, …) and international level (ScienceDaily, Herald Scotland, LA Times, USA Today, CNN, Nature, Science, Time, …).

BOOK CHAPTERS

Ometto, L. 2011. Genetica di popolazioni. *In*: Ferraguti M, Castellacci C, editors. Evoluzione: Modelli e Processi. Pearson Italia, Milano, Italy.

SELECTED ABSTRACTS TO CONFERENCES (TOTAL: 66)

*MY** ORAL/POSTER PRESENTATION

P* Ometto, L, G Forni, J Martelossi, A Masoni, G Mercati, D Pistone, S Maretti, G Santini, A Olivieri, A Luchetti and F Ghiselli. 2024. A population genomics approach to study the structure and evolution of native and introduced populations of the mountain wood ant *Formica paralugubris*. *In*: Abstracts of the International Congress of Entomology, 25–30 August 2024, Kyoto, Japan.

P	Martelossi, J, A Silverj, C Albertini, A Luchetti, O Rota-Stabelli, and L Ometto. 2024. The adaptive and variable transposable elements landscape of mosquitoes (Culicidae). *In*: Abstracts of the International congress on transposable elements 2024, 20–23 April 2024, Saint Malo, France.
P	Bergland, A, J Nunez, M Coronado-Zamora, M Gautier, M Kapun, S Steindl, L Ometto, P Margot, K Hoedjes, J Beets, R. Axel Wiberg, G Mazzeo, D Bass, D Petrov, P Schmidt, T Flatt, and J Gonzalez. 2024. DEST 2.0: an expanded genomic resource reveals new insights on fly phylogeography and adaptation. *In*: Abstracts of The Allied Genetics Conference 2024, 6–10 March 2024, Washington DC, USA.
P*	Carretta, E, G Mercati, and L Ometto. 2023. Evolutionary dynamics of opsin genes in Brachycera flies. *In*: Abstracts of the Congress of the Society for Molecular Biology and Evolutionary, 23-28 July 2023, Ferrara, Italy.
P	Macchia, A, and L Ometto. 2022. Evolution of mechanoreceptor genes in Diptera. *In*: Abstracts of the 8th Congress of the Italian Society for Evolutionary Biology, 4-7 September 2022, Ancona, Italy.
P	Carretta, E, and L Ometto. 2022. The evolutionary history of opsin genes in *Bactrocera* fruit flies. *In*: Abstracts of the 8th Congress of the Italian Society for Evolutionary Biology, 4-7 September 2022, Ancona, Italy.
P	Howie, JM, E Corretto, LS Serbina, J Dittmer, L Ometto, O Rota-Stabelli, C Stauffer, and H Schuler. 2022. Population genomics and phylogenetics of Phytoplasma transmissibility by Psyllids and their coevolving endosymbionts. *In*: Abstracts of the 8th Congress of the Italian Society for Evolutionary Biology, 4-7 September 2022, Ancona, Italy.
P	Anfora, G, G Tait, A Grassi, A Cabianca, C Crava, F Pfab, L Ometto, MV Rossi-Stacconi, S Mermer, and V Walton. 2022. Exploitation of population dynamics and chemical communication for integrated management of *Drosophila suzukii*. *In*: Abstracts of the 26th International Congress of Entomology, 17-22 July 2022, Helsinki, Finland.
O	Pirri, F, L Ometto, S Fuselli, L Zane, and E Trucchi. 2020. Natural selection in the evolutionary divergence between two penguin species. *In*: Abstracts of the 1st Italian Congress on Marine Evolution, 23-25 November 2020, online conference.
O	Valerio, F, F Scolari, L Gomulski, M Bonizzoni, and L Ometto. 2018. "Melons and mangos for my friend and just olives for me, please": the evolution of food choice in *Bactrocera* fruit flies. *In*: Abstracts of the 8th Congress of the Italian Society for Evolutionary Biology, 1-4 September 2019, Padova, Italy.
P*	Ometto, L, and F Valerio. 2018. Multi-locus phylogeny of *Bactrocera* fruit flies. *In*: Abstracts of the 8th Congress of the Italian Society for Evolutionary Biology, 1-4 September 2019, Padova, Italy.
O*	Rota-Stabelli, O, R Kaur, MC Crava, V Rossi-Stacconi, V Mazzoni, M Turelli, M Blaxter, G Anfora, and L Ometto. 2018. The genome of *Drosophila subpulchrella* and the evolution of fresh fruit feeding in *Drosophila suzukii*: a comparative genomics approach. *In*: Abstracts of the XI European Congress of Entomology, 2-6 July 2018, Naples, Italy.
P	Rizzi, S, S Celestini, G Menegus, F De Giorgi, F Failla, S Pernechele, M Salvatori, A Silverj, E Barbazza, P Bisaccia, C Bonaldi, L Dal Borgo, L De Biasio, L Drago, G Fabbri, J Fabrello, A Franceschini, S Gallo, S Gionfriddo, J Grego, C Leonardi, GM Menti, L Molinaro, S Monteforte, C Ottocento, A Paiola, P Panizzon, BB Savasci, F Zancanella, G Fusco, O Rota-Stabelli, and L Ometto. 2017. 404 error: (evolutionary) page not found. *In*: Abstracts of the 7th Congress of the Italian Society for Evolutionary Biology, 28-31 August 2017, Rome, Italy.
O*	Ometto, L, and O Rota-Stabelli. 2016. Codon usage and phylogenetic analyses elucidate the recent evolutionary history of *Zika* virus. *In*: Abstracts of the International Conference "Facing the invasion of alien arthropods species: ecology, modeling and control of their economic impact and public health implications", 7-9 November 2016, Trento, Italy.
O	Rota Stabelli, O, F Drago, G Anfora, and L Ometto. 2016. Towards a molecular clock of *Wolbachia*. *In*: Abstracts of the 9th International Wolbachia Conference: in the rain forest, 28 June-3 July 2016, Queensland, Australia.
P*	Ometto, L, O Rota-Stabelli, A Cestaro, MC Crava, and G Anfora. 2015. Genome sequencing galore: what, how and why. *In*: Abstracts of the 6th Congress of the Italian Society for Evolutionary Biology, 31 August-3 September 2015, Bologna, Italy.
P*	Ometto, L, M Li, and C Varotto. 2013. The draft genome of *Cardamine resedifolia*: genomic tools to investigate plant adaptation to high altitude. *In*: Abstracts of the 5th Congress of the Italian Society for Evolutionary Biology, 28-31 August 2013, Trento, Italy.

P*	Ometto, L, M Li, L Bresadola, and C Varotto. 2012. Combining genome and candidate genes approaches to study the evolution of stress-related genes in *Cardamine resedifolia* and *C. impatiens*. *In*: Abstracts of the EMBO Workshop "Evolution in the Time of Genomics", 7-9 May 2012, Venice, Italy.
O	Hunt, BG, L Ometto, Y Wurm, DD Shoemaker, SV Yi, L Keller, and MAD Goodisman. 2011. Relaxed selection is a precursor to the evolution of phenotypic plasticity. *In*: Abstracts of the Evolution 2011 meeting, 17-21 June 2011, Norman, Oklahoma, USA.
P*	Ometto, L, L Bresadola, M Li, and C Varotto. 2010. Altitude adaptation in *Cardamine*. *In*: Abstracts of the 4th Congress of the Italian Society for Evolutionary Biology, 2-4 September 2010, Milano, Italy.
P*	Ometto, L, DD Shoemaker, KG Ross, and L Keller. 2009. Molecular evolution of caste-biased genes in fire ants (*Solenopsis*). *In*: Abstracts of the 12th Congress of the European Society for Evolutionary Biology, 24-29 August 2009, Torino, Italy.
O*	Ometto, L, KG Ross, DD Shoemaker, and L Keller. 2008. The evolution of gene expression in fire ants. *In*: Abstracts of the Annual Meeting of the Society for Molecular Biology and Evolution, 5-8 June 2008, Barcelona, Spain.
O*	Ometto, L, KG Ross, DD Shoemaker, and L Keller. 2007. Evolution of gene expression across castes in fire ants. *In*: Abstracts of the J. Monod Conference "Evolutionary Genomics", 2-6 May 2007, Roscoff, France.
O*	Ometto, L, D De Lorenzo, and W Stephan. 2006. Selective constraints in non-coding DNA of *Drosophila melanogaster*. *In*: Abstracts of the 2nd Congress of the Italian Society for Evolutionary Biology, 4-7 September 2006, Firenze, Italy.
P*	Ometto, L, KG Ross, DD Shoemaker, and L Keller. 2006. Gene expression profile across castes in two fire ant species and their hybrids. *In*: Abstracts of the American Genetics Association Annual Symposium on "Genetics of Speciation", 21-24 July 2006, Vancouver, Canada.
O*	Ometto, L, S Glinka, W Stephan, and D De Lorenzo. 2005. Demographic and selective history of *Drosophila melanogaster* inferred by a multilocus scan of DNA variation. *In*: Abstracts of the 1st Congress of the Italian Society for Evolutionary Biology, 24-26 August 2005, Ferrara, Italy.
P*	Ometto, L, S Glinka, L Mueller, W Stephan, and D De Lorenzo. 2005. Distinguishing demographic and selective footprints in the X chromosome of *Drosophila melanogaster*. *In*: Abstracts of the 10th Congress of the European Society for Evolutionary Biology, 15-20 August 2005, Kraków, Poland.
P*	Ometto, L, S Glinka, S Mousset, W Stephan, and D De Lorenzo. 2003. A multi-locus survey of *Drosophila melanogaster* X chromosome: Demography and natural selection shaped genetic variation. *In*: Abstracts of the 9th Congress of the European Society for Evolutionary Biology, 18-24 August 2003, Leeds, UK.

POPULAR PRESS

Series of 13 popular/scientific articles for the Italian inflight magazine "Nelblu" (Volare-AirEurope air company), appearing between 2001 and 2003.

OTHER PUBLICATIONS

- Contribution to the Italian translation of the book "Learning evolution through socioscientific issues" (Sá-Pinto, X, A Beniermann, T Børsen, M Georgiou, A Jeffries, P Pessoa, B Sousa, and DL Zeidler (Eds.). 2022.).
- Contribution to the Italian translation, adaptation, and distribution of the document "Evoluzione, Scienza e Società – Evolution, Science and Society" (supported and prepared by, among others, the Society for the Study of Evolution and the Society for Molecular Biology and Evolution).
- Ometto L, and B Waldman. 2001. Chemical cues in Maud Island frogs, *Leiopelma hamiltoni*. Report for the Department of Conservation of New Zealand.

INVITED SEMINARS

2021	"Phenotypic plasticity and why it matters in evolution", Department of Biology, University of Padova, Italy.
2019	"Being a gene is not enough: phenotypic plasticity and evolution", Department of Biology, University of Padova, Italy.

2013	"Genomic and candidate gene approaches to investigate altitudinal adaptation in *Cardamine*", Department of Biology, University of Konstanz, Germany.
2013	"Evolution seen through the genomes of plants and flies", Institute for Integrative Biology, ETH Zurich, Switzerland.
2012	"Genomic approaches to study adaptive evolution in plants and flies", Symposium of the Italian Society for Evolutionary Biology, Ferrara, Italy.
2012	"Evolutionary genomics: tales from ants and plants", Department of Biology, University of Modena and Reggio Emilia, Italy.
2010	"Gene expression in ants", Department of Evolutionary Biology, LMU–University of Munich, Germany.
2006	"Demography and selection in *Drosophila melanogaster*", Department of Ecology and Evolution, University of Lausanne, Switzerland.
2006	"Demography and selection in *Drosophila melanogaster*: an X-chromosome tale", Volkswagenstiftung Conference in Evolutionary Biology, LMU–University of Munich, Germany.
2001	"Homing and olfaction in New Zealand native frogs", Department of Biology, University of Padova, Italy.
2000	"Orientamento nei pipistrelli nettarivori", Department of Biology, University of Padova, Italy.

TEACHING AND ACADEMIC ROLES

Academic Courses

2019-…	"Zoologia" ("Zoology"; BSc course; 9 CFUs), University of Pavia, Italy.
2020-…	"Biologia delle popolazioni e delle comunità" ("Population and Community Biology"; MSc course; 4-6 CFUs), University of Pavia, Italy.
2023-…	"Genomics and evolution of emerging infectious diseases" (MSc course; 6 CFUs), University of Pavia, Italy.
2018-19	"Anatomia comparata" ("Comparative Anatomy"; BSc course; 1 CFU), University of Pavia, Italy.
2018-19	"Biotecnologie degli Insetti" ("Insects Biotechnology"; MSc course; 4 CFUs), University of Pavia, Italy.
2018-19	Zoologia" ("Zoology"; BSc course; 2 CFUs), University of Pavia, Italy.
2014-18	"Evoluzione e Filogenesi" ("Evolution and Phylogenetics"; MSc course; 2-3 CFUs), University of Padova, Italy.
2006-08	Co-instructor, "Experimental Design" (MSc course; principal instructor: L Keller), University of Lausanne, Switzerland.

Other Courses

2021	"Rate of molecular substitution in coding genes" (PhD course "Exploring evolution using tree based methods: phylogenetics, molecular clocks, barcoding, and phylogenomics"), 22-24 February 2021, University of Trento and SIBE.
2019	"Population genetics and molecular evolution" (summer school "Bridging Phylogeny and Population genetics: Inferring divergence and selection at both interspecies and intraspecies level", lectures + practicals), 27-31 August 2019, Fondazione Edmund Mach, San Michele all'Adige (TN), Italy.
2015	"Understanding statistic tests and choose when and how to apply them - From experimental design to data analysis" (PhD course, lectures + practicals; with V Mazzoni), Fondazione Edmund Mach, San Michele all'Adige (TN) Italy.
2012	Co-instructor, "Population genetics" (PhD course, lectures; principal instructor: D Neale, U. of California at Davis), Fondazione Edmund Mach, Italy.
2011	Guest lecturer (MSc course; lecture; principal instructor: R Velasco), University of Bologna.
2007	"Evolution of non-coding DNA", Summer school "Genome evolution: mechanisms, dynamics and case studies", Trento (Italy).

2003-05	Teaching assistant, "Practical course in molecular population genetics" (MSc course, practicals; principal instructors: L Rose and D De Lorenzo), LMU–University of Munich, Germany.

Other Lectures

2012	"Genetics basics: what, where, how", workshop "Plant phenology and genetics", Trento (Italy).
2010	"What evolution does not explain", workshop "Updates on evolutionary research", Orvieto (Italy).
2009	"What evolution does not explain", workshop "Teaching evolution", Abbiategrasso - Milano (Italy).

Student (*co)supervision

Ph.D.

- 2022-2024: Nihel Oueslati* (main supervisor: Khaled Said, University of Monastir, Tunisia).
- 2022-2024: Asma Ghedir* (main supervisor: Khaled Said, University of Monastir, Tunisia).
- 2018-2021: Federica Valerio.

M.Sc.

- Ongoing: Aromita Mallik, Dibyojyoti Chattopadhyay, Corinne Castellano, Verdiana Fazio, Giulia Mercati, Enrica Carretta.
- 2022: Alessandro Macchia, Lucia Foresto*.
- 2021: Saja AM Boulad.
- 2019: Paola Staffiere.
- Previous: Luisa Bresadola*, Bettina Schirrmeister*, Lena Müller*, Claudia Lemcke*.

Bachelor

- Ongoing: Lorenzo Vecchio, Mattia Vignoli, Margherita Toppi, Anita Raccanello, Astra Bertelli.
- 2023: Giulia Mercati, Samuele Tarozzo, Mariam Mahmoud, Emma Pesenti.
- 2022: Elisa Miragliotta, Erica Melchionda.
- 2021: Morea Tomasi, Chiara Albertini, Corinne Castellano.
- 2019: Daria Marzanati.
- Previous: Johannes De Groeve*.

Ph.D. assessment committee

- Giulia Agostinetto (2022; University of Milano-Bicocca; Supervisors: Prof M. Casiraghi).
- Giobbe Forni (2021; University of Bologna; Supervisors: Prof. B. Mantovani and Prof. A Luchetti).
- Juke Wihe (2018; University of Ferrara; Supervisor: Prof. G. Bertorelle and Dr. C Varotto).
- Grazia Savini (2016; University of Pavia; Supervisor: Prof. A Malacrida).
- Daniel Croll (2009; University of Lausanne; Supervisor: Prof. I Sanders).

Ph.D. referee

- Greta Bellinzona (2021-23; University of Pavia; Supervisor: Prof. D Sassera).
- Francesca Messina (2021-23; University of Pavia; Supervisor: Prof. A Balestrazzi).
- Vincenzo Agostini (2021-23; University of Pavia; Supervisor: Prof. A Olivieri).

Institutional roles

- 2021-ongoing: Reference person of the University of Pavia for the Life Sciences working group of the Coimbra Group (https://www.coimbra-group.eu).
- 2021-ongoing: Academic tutor for the Dual Career program (aimed at student athletes) for the Biology and Biotechnology Bachelor and Master programs of the University of Pavia.
- 2021-ongoing: Member of the 'Consiglio Scientifico Bibliotecario 2', University of Pavia.
- 2021-ongoing: Member of the departmental council (Giunta di Dipartimento), Department of Biology and Biotechnology of the University of Pavia.
- 2019-ongoing: Member, PhD Program in Genetics, Molecular and Cellular Biology of the University of Pavia.
- 2023: PhD commission president, University of Pavia.

- 2019-2021: Member of the Research and Resources Committee, Department of Biology and Biotechnology of the University of Pavia.

Peer review referee

BMC Evolutionary Biology; *BMC Genomics*; *Evolution*; *Frontiers in Genetics*; *Genetica*; *Genetics*; *Genome Biology and Evolution*; *Heredity*; *Molecular Biology and Evolution*; *Molecular Ecology*; *Molecular Genetics and Genomics*; *PeerJ*; *PLoS One*; *PLoS Neglected Tropical Diseases*; *Scientific Reports*.

Grant reviewer

University of Padova – Department of Biology, Intramural Research Program.

Society membership

- Italian Society for Evolutionary Biology (Co-founder; 2006-2010 and 2015-2019: Council member; 2019-22: Secretary; 2022-… Vice President)
- European Society for Evolutionary Biology
- Society for Molecular Biology and Evolution

ORGANIZATION OF WORKSHOPS AND SCHOOLS

2023	Workshop "External actors engagement workshop", 19 January 2023 (online), European Reference Genome Atlas - ERGA initiative.
2022	Workshop "Building high-quality reference genome assemblies of eukaryotes", 21st European Conference on Computational Biology, 12-21 September 2022 (online), Sitges, Barcelona, Spain.
2022	Crash-course "Best practice for high quality genome assembly", hosted by the 8th Congress of the Italian Society for Evolutionary Biology (in partnership with European Reference Genome Atlas - ERGA), 4-7 September 2022, Ancona, Italy.
2021	Pavia Intensive School for Advanced Graduate Studies "Emerging viral threats in a globalized society: molecular, epidemiological, clinical and social aspects of emerging viral diseases", 6-10 September 2021 (online), University of Pavia, Italy.
2021	PhD Course "Molecular Phylogenetics: from genes to communities to kingdoms", PhD Programme in Genetics, Molecular and Cellular Biology, 26-30 April 2021 (online), University of Pavia (Italy).
2016	Workshop "Inferring natural selection from genome-wide data", promoted by the Italian Society for Evolutionary Biology, 16-18 December 2016, Ferrara, Italy.
2012	"EvolutionDay", 29 June 2012, Fondazione Edmund Mach, Italy.
2007	Summer School: "Genome evolution: mechanisms, dynamics and case studies", promoted by the Italian Society for Evolutionary Biology, 19-22 June 2007, Monte Bondone – Trento, Italy.

ORGANIZATION OF MEETINGS AND SYMPOSIA

2024	10th Congress of the Italian Society for Evolutionary Biology, 8-11 September 2024, Napoli, Italy.
2023	Symposium "Evolution of sensory systems", Congress of the Society for Molecular Biology and Evolution, 23-27 July 2023, Ferrara, Italy.
2022	9th Congress of the Italian Society for Evolutionary Biology, 4-7 September 2022, Ancona, Italy.
2013	5th Congress of the Italian Society for Evolutionary Biology, 28-31 August 2013, Trento, Italy.
2009	Symposium "Evolutionary Transcriptomics", 12th Congress of the European Society for Evolutionary Biology, 24-29 August 2009, Torino, Italy.

Scientific committees / Chairman activity

2024	Scientific committee, 10th Congress of the Italian Society for Evolutionary Biology, 8-11 September 2024, Napoli, Italy.
2023	Symposium chairman, workshop "From Eve's snake to molecular dogs", 2-3 November 2023, Bologna, Italy.
2024	Scientific committee, 10th Congress of the Italian Society for Evolutionary Biology, 8-11 September 2024, Napoli, Italy.
2022	Scientific committee, 9th Congress of the Italian Society for Evolutionary Biology, 4-7 September 2022, Ancona, Italy.
2019	Scientific committee and symposium chairman, 7th Congress of the Italian Society for Evolutionary Biology, 1-4 September 2019, Padova, Italy.
2015	Symposium chairman, 6th Congress of the Italian Society for Evolutionary Biology, 31 August-3 September 2015, Bologna, Italy.
2013	Congress and symposium chairman + Scientific committee, 5th Congress of the Italian Society for Evolutionary Biology, 28-31 August 2013, Trento, Italy.
2010	Symposium chairman, 4th Congress of the Italian Society for Evolutionary Biology, 2-4 September 2010, Milano, Italy.
2008	Scientific committee and Symposium chairman, 3rd Congress of the Italian Society for Evolutionary Biology, 2-5 October 2008, Alghero (SS), Italy.

OUTREACH

Invited Public Lectures

2019	Darwin Day, Rovereto (Trento), Italy.
2016	Darwin Day, Rovereto (Trento), Italy.
2015	Museo Civico, Rovereto (Trento), Italy.
2011	Climatrentino, Trento, Italy.
2010	Bioweek, Trento, Italy.
2010	Darwin Day, Trento, Italy.

Public Outreach

- Speaker, "L'evoluzione davanti al caminetto", 18 February 2022, Facebook streaming.
- Co-organizer and speaker, Wallace Day – An afternoon with evolutionary biologists, 31 August 2013, MuSe–Museo delle Scienze, Trento, Italy.
- Scientific guide at scientific expositions and at butterfly house.
- Numerous public demonstrations/seminars during university/research institute open-days (e.g. Research Night).
- Numerous outreach activities (including "1 ora con il ricercatore" - "1 hour with the researcher") at kindergartens, primary, secondary and high schools, summer camps.

TECHNICAL SKILLS AND COMPETENCES

Lab/field work	• Laboratory techniques: DNA extraction, amplification (PCR), purification, primer design, DNA sequencing and sequence analysis. • RNA extraction, amplification, and purification; microarray preparation and analysis. • Research experience (including handling, genetics, data analysis) with different model (Drosophila) and non-model organisms (insects, ants, frogs, plants). • Fieldwork experience (plant sampling, animal census, behavioural observations).
Bioinformatics	• Data analysis: R, PAML, codonw, Geneious, ABySS, SoapDenovo2, Platanus, RepeatMasker, orthoMCL, various other genome analysis tools, BLAST+. • Experience with de-novo genome draft assembly, analysis of Next Generation Sequencing data (including RNA-Seq), large datasets of SNPs, and genome scale projects. • Very good experience with Unix environment and perl programming language, basic usage of python.

LANGUAGES

Mother tongue	Italian
Other languages	English (very good; IELTS 7.5, C1), French (very good), German (basic).

Il sottoscritto, consapevole che – ai sensi dell'art. 76 del D.P.R. 445/2000 – le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali, dichiara che le informazioni rispondono a verità.

Il sottoscritto dichiara di aver ricevuto l'informativa sul trattamento dei dati personali.

Pavia, 27 Agosto 2024

Firma

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Firmato da Lino Ometto – copia originale firmata conservata agli atti