

# Curriculum Vitae

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## Miriam Ruocco

Marine Science Group  
Dept of Biological, Geological and  
Environmental Sciences

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Fano Marine Center  
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Website: <https://scholar.google.it/citations?user=bK4EzF0AAAAJ&hl=it&oi=ao>;

<https://www.researchgate.net/profile/MiriamRuocco>;

<https://www.unibo.it/sitoweb/miriam.ruocco2/>

Skype: miriam.ruocco

Nationality: Italian

## Area of scientific interests

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Molecular Ecology, Marine Ecology, Population Genetics, Molecular Biology, Evolutionary Ecology, Ecological Epigenetics

## Education and work experience

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25 Sep 2023 – today	<b>Teaching activity “Global Change of Human-Modified Ecosystems”</b> (6CFU) BIO/07 Ecology (english language). Second cycle degree programme (LM) in Sciences and Management of Nature, Alma Mater Studiorum - Università di Bologna (Italy)
6 Apr 2023 – 6 Sep 2023	<b>Maternity leave</b>
22 Feb 2023 – today	<b>Researcher (fixed-term)</b>

Alma Mater Studiorum - Università di Bologna (Italy)  
Department of Biological, Geological, and Environmental  
Sciences (BiGeA). Academic discipline: BIO/07 Ecology

- 1 Mar 2021 – 21 Feb 2023 **PostDoc Research Fellow** (*Assegno di ricerca*)  
Stazione Zoologica Anton Dohrn, Naples (Italy)  
Project "MARINE HAZARD - Sviluppo di tecnologie innovative per l' identificazione, monitoraggio e mitigazione di fenomeni di contaminazione naturale e antropica"
- 16 Feb 2020 – 16 Feb 2021 **PostDoc Research Fellow** (*Assegno di ricerca*)  
Stazione Zoologica Anton Dohrn, Naples (Italy)
- Dec 2018 – Jul 2019 **PostDoc Research Fellow** (*Borsa per attività di ricerca*)  
Stazione Zoologica Anton Dohrn, Naples (Italy)
- Oct 2015 – Sep 2018 **PhD Student**  
Stazione Zoologica Anton Dohrn, Naples (Italy)  
Director of study: Dr. Gabriele Procaccini, Stazione Zoologica Anton Dohrn; External supervisor: Prof. Fabio Bulleri, University of Pisa (Italy) - Program: Open University UK, XVII cycle - Registered discipline: School of Life, Health and Chemical Sciences. PhD thesis: "Unravelling the complexity of the molecular and physiological response to environmental change in seagrasses"
- Oct 2009 – Dec 2012 **Master's degree** in Biology (Bio-molecular)  
University of Naples "Federico II", Naples (Italy)  
110/110 cum laude  
Thesis: "Adaptive response of the seagrass *Posidonia oceanica* to the bathymetric gradient" – Tutors: Prof. Domenico Fulgione, University of Naples "Federico II" and Dr. Gabriele Procaccini, Stazione Zoologica Anton Dohrn
- Sep 2005 – May 2009 **Bachelor's degree** in General and Applied Biology (Molecular and Cellular Biology)  
University of Naples "Federico II", Naples (Italy)  
108/110  
Thesis: "Environmental effects on the cytoskeleton development in the initial oogenesis of *Rana esculenta*" – Tutor: Prof. Rosa Carotenuto, University of Naples "Federico II"

## Participation to EU/extra-EU research projects and working groups

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- 2021-2023 Project: **MARINE HAZARD** (PON03PE\_00203) - "Sviluppo di tecnologie innovative per l' identificazione, monitoraggio e mitigazione di fenomeni di contaminazione naturale e antropica" (*Participation as PostDoc research fellow*)
- 2020-2021 Project: **CircaGrass** - "Adaptation of the seagrass circadian clock to latitudes" funded by the ASSEMBLE Plus Transnational Access program (*Co-applicant of the project*)
- 2018-2022 Project: **MAGI** - "Marine Angiosperm Genomes Initiative" n° 504341 funded by US-Dept. of Energy, Joint Genome Institute (USA) (*Participation as research fellow*)
- 2018-2019 Project: **SEASstress** - "Application of molecular tools for detecting early signals of stress in Israeli and Italian seagrass species" funded by Italian Ministry of Foreign Affairs and International Cooperation/Israeli Ministry of Science and Technology (*Participation as PhD student and research fellow*)
- 2013-2015 Project: **HighGrass** - "High-CO<sub>2</sub> effects on seagrass photosynthetic ecophysiology" funded by Portuguese Foundation for Science and Technology (FCT) (*Participation as research fellow*)
- 2011-2012 **COST ACTION ES0906** - "Seagrass productivity: from genes to ecosystem management" funded by COST (European Cooperation in Science and Technology) (*Participation as master student*)

## Abroad research activity

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- 15 May 2022 – 14 Jun 2022 **Visiting Scientist**  
Tjärnö Marine Laboratory - Göteborg University (Sweden)  
Project: EPI-DIVERSEA - "The role of EPIgenetic DIVERsity in SEAGrass ecosystems"
- 5 Jun 2019 – 21 Jun 2019 **Visiting Scientist**  
Tjärnö Marine Laboratory - Göteborg University (Sweden)  
ASSEMBLE Plus Transnational Access (TA) program 3rd call.  
Project: "CircaGrass - Adaptation of the seagrass circadian clock to latitudes" (347.2)

- 4 May 2019 – 11 May 2019 **Visiting Scientist**  
 Centre of Marine Sciences (CCMAR) - University of Algarve, Faro (Portugal)  
 ASSEMBLE Plus Transnational Access (TA) program 3rd call.  
 Project: "CircaGrass - Adaptation of the seagrass circadian clock to latitudes" (347.1)
- Sep 2013 – Apr 2015 **Research Fellow**  
 Centre of Marine Sciences (CCMAR) - University of Algarve, Faro (Portugal)  
 Project: "HighGrass - High-CO<sub>2</sub> effects on seagrass photosynthetic ecophysiology" (PTDC/MAR-EST/3687/2012) funded by the Portuguese Foundation for Science and Technology (FCT)

## Grants and awards

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- 2021 Prize "100 anni di Ricerca Genomica" (5000€) awarded by Accademia Nazionale delle Scienze detta dei XL and Stazione Zoologica Anton Dohrn for Italian young researchers (<35 years old)
- 2019 Horizon 2020 Research and Innovation Action - Grant by ASSEMBLE Plus Transnational Access program to perform the project "CircaGrass - Adaptation of the seagrass circadian clock to latitudes"
- 2015 S.I.B.M. Award at the 4th Mediterranean Seagrass Workshop, Oristano (Italy)
- 2013 Grant by COST (European Cooperation in Science and Technology) to participate in the COST Training School: "Effects of increased CO<sub>2</sub>/Ocean Acidification on seagrass meadow"
- 2011 Grant by COST (European Cooperation in Science and Technology) to participate in the COST Training School "Linking seagrass productivity, community metabolism and ecosystem carbon fluxes"

## Editor/Reviewer activity

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Editorial Board Member as Topic Editor of the journal Diversity; Review Editor of the journal Frontiers in Marine Science specialty "Marine Molecular Biology and Ecology".  
 Reviewer for the ISI journals: Scientific Reports, Marine Genomics, Aquatic Botany, Italian

Botanist, Marine Pollution Bulletin, Proceedings of the Royal Society B, Frontiers in Marine Science

## Articles in peer review/impact factor journals

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1. Mazzuca S., Björk M., Beer S., Felisberto P., Gobert S., Procaccini G., Runcie J., Silva J., Borges A., Brunet C., Buapet P., Costa M. M., D' Esposito D., Gullström M., Lejeune P., Lepoint G., Olivé I., Rasmusson L., Richir J., **Ruocco M.**, Serra I.A., Spadafora A., Santos R. (2013) Establishing research strategies, methodologies, and technologies to link genomics and proteomics to seagrass productivity, community metabolism and ecosystem carbon fluxes. *Frontiers in Plant Science* 4:38
2. Dattolo E\*, **Ruocco M\***, Brunet C., Lorenti, M., Lauritano C., D'Esposito D., De Luca P., Sanges R., Mazzuca, S., Procaccini G. (2014) Response of the seagrass *Posidonia oceanica* to different light environments: Insights from a combined molecular and photo-physiological study. *Marine Environmental Research* 101:223-236. *\*First two authors share equal responsibility*
3. Lauritano C., **Ruocco M.**, Dattolo E., Buia M.C., Silva J., Santos R., Olivé I., Costa M. M., Procaccini G. (2015) Response of key stress-related genes of the seagrass *Posidonia oceanica* in the vicinity of submarine volcanic vents. *Biogeosciences* 12(13):4185-4194
4. Procaccini G., **Ruocco M.**, Brunet C., D' Esposito D., Lauritano C., Marín-Guirao L., Mazzuca S., Piro A., Bernardo L., Serra I.A., Beer S., Bjork M., Gulstrom M., Buapet P., Rasmusson L., Felisberto P., Gobert S., Runcie J., Silva J., Olivé I., Costa M. M., Barrote I., Santos R. (2017) Depth-specific fluctuations of gene expression and protein abundance modulate the photophysiology in the seagrass *Posidonia oceanica*. *Scientific Reports* 7:42890
5. **Ruocco M.**, Procaccini G., Musacchia F., Sanges R., Olivé I., Costa M. M., Barrote I., Santos R., Silva J. (2017) Genomewide transcriptional reprogramming in the seagrass *Cymodocea nodosa* under experimental ocean acidification. *Molecular Ecology* 26:4241-4259
6. Olivé I., Silva J., Lauritano C., Costa M.M., **Ruocco M.**, Procaccini G., Santos R. (2017) Linking seagrass gene expression to productivity: long and short-term responses of *Cymodocea nodosa* to CO<sub>2</sub> in volcanic vents. *Scientific Reports* 7:42278
7. **Ruocco M.**, Marín-Guirao L., Ravaglioli C., Bulleri F., Procaccini G. (2018) Molecular level responses to chronic versus pulse nutrient loading in the seagrass *Posidonia oceanica* undergoing herbivore pressure. *Oecologia* 188:23
8. Traboni C., Mammola SD., **Ruocco M.**, Ontoria Y., Ruiz J M., Procaccini G., Marín-Guirao L. (2018) Investigating cellular stress response to heat stress in the seagrass *Posidonia oceanica* in a global change scenario. *Marine Environmental Research* 141:12-23
9. **Ruocco M.**, Marín-Guirao L., Procaccini G. (2019) Within- and among-leaf variations in photo-physiological functions, gene expression and DNA methylation patterns in the large-sized seagrass *Posidonia oceanica*. *Marine Biology* 166(3):24

10. **Ruocco M.**, De Luca P., Marín-Guirao L., Procaccini G. (2019) Differential leaf age-dependent thermal plasticity in the keystone seagrass *Posidonia oceanica*. *Frontiers in Plant Science* 10:1556
11. **Ruocco M.**, Entrambasaguas L., Milito A., Marín-Guirao L., Procaccini G. (2020) A king and vassals' tale: molecular signatures of clonal integration in *Posidonia oceanica* under chronic light shortage. *Journal of Ecology* 109(1): 294-312
12. **Ruocco M.**, Ambrosino L., Jahnke M., Chiusano M.L., Barrote I., Procaccini G., Silva J., Dattolo E. (2020) m<sup>6</sup>A RNA methylation in marine plants: first insights and relevance for biological rhythms. *International Journal of Molecular Science* 21(20):7508
13. Pazzaglia J., Santillán-Sarmiento A., Helber B. S., **Ruocco M.**, Terlizzi A., Marín-Guirao L., Procaccini G. (2020) Does warming enhance the effects of eutrophication in the seagrass *Posidonia oceanica*? *Frontiers in Marine Science* 7:1067
14. Pazzaglia J., Nguyen M. H., Santillán S. A., **Ruocco M.**, Dattolo E., Marín-Guirao L., Procaccini G. (2021) The genetic component of seagrass restoration: what we know and the way forwards. *Water* 13(6):829
15. Entrambasaguas L., **Ruocco M.**, Verhoeven K., Procaccini G., Marín-Guirao L. (2021) Gene body DNA methylation in seagrasses: inter- and intraspecific differences and interaction with transcriptome plasticity under heat stress. *Scientific Reports* 11(1):1-15.
16. **Ruocco M.**, Barrote I., Hofman J.D., Pes K., Costa M.M., Procaccini G., Silva J., Dattolo E. (2021) Daily regulation of key metabolic pathways in two seagrasses under natural light conditions. *Frontiers in Ecology and Evolution* 9: 757187
17. Pazzaglia J., Santillán-Sarmiento A., **Ruocco M.**, Dattolo E., Ambrosino L., Marín-Guirao L., Procaccini G. (2022) Local environment modulates whole-transcriptome expression in the seagrass *Posidonia oceanica* under warming and nutrients excess. *Environmental Pollution* 303:119077
18. **Ruocco M.**, Jahnke M., Silva J., Procaccini G., Dattolo E. (2022) 2b-RAD genotyping of the seagrass *Cymodocea nodosa* along a latitudinal cline identified candidate genes for environmental adaptation. *Frontiers in Genetics* 13: 866758
19. Tutar O\*, **Ruocco M\***, Dattolo E., Lacorata G., Corrado R., Watteaux R., Iudicone D., Fach B., Procaccini G. (2022) High levels of genetic diversity and population structure in the Mediterranean seagrass *Posidonia oceanica* at its easternmost distribution limit. *ICES Journal of Marine Science* 79(8): 2286-2297. \*First two authors share equal responsibility
20. Pazzaglia J., Dattolo E., **Ruocco M.**, Santillán-Sarmiento A., Marín-Guirao L., Procaccini G. (2023) DNA methylation dynamics in a coastal foundation seagrass species under abiotic stressors. *Proceedings of the Royal Society B* 290: 20222197
21. Procaccini G., Dattolo E., **Ruocco M.** (2023) Genetic diversity and connectivity in the Mediterranean seagrass *Posidonia oceanica*: state of art and future directions. *Cahiers de Biologie Marine* 64-1.
22. Moreira-Saporiti A., Teichberg M., Garnier E., Cornelissen J.H.C., Alcoverro T., Björk M., Boström C., Dattolo E., Eklöf J., Hasler-Sheetal H., Holmer M., Marbà N., Marín-Guirao L., Meysick L., Olivé I., Reusch T.B.H., **Ruocco M.**, Silva J., Sousa A.I., Procaccini G., Santos R. (2023) A trait-based framework for seagrass ecology: trends and prospects. *Frontiers in Plant Science* 14.

23. Santillán-Sarmiento A., Pazzaglia J., **Ruocco M.**, Dattolo E., Ambrosino L., Winters G., Marin-Guirao L., Procaccini G. (2023) Gene co-expression network analysis for the selection of candidate early warning indicators of heat and nutrient stress in *Posidonia oceanica*. *Science of the Total Environment* 877: 162517.
24. Nguyen M.H., **Ruocco M.**, Dattolo E., Cassetti F.P., Calvo S., Tomasello A., Marín-Guirao L., Pernice M., Procaccini G. (2023) Signs of local adaptation by genetic selection and isolation promoted by extreme temperature and salinity in the Mediterranean seagrass *Posidonia oceanica*. *Molecular Ecology* 32: 4313–4328.
25. Ma X., Vanneste S., Chang J., Ambrosino L., Barry K., Bayer T., Bobrov A.A., Boston L., Campbell J.E., Chen H., Chiusano M.L., Dattolo E., Grimwood J., He G., Jenkins J., Khachatryan M., Marín-Guirao L., Mesterházy A., Muhd D.D., Pazzaglia J., Plott C., Rajasekar S., Rombauts S., **Ruocco M.**, ... Van de Peer Y. (2024) Seagrass genomes reveal ancient polyploidy and adaptations to the marine environment. *Nature Plants* 1-16.
26. Nguyen M.H., Hong U.V.T., **Ruocco M.**, Dattolo E., Marín-Guirao L., Pernice M., Procaccini G. (2024) Thermo-priming triggers species-specific physiological and transcriptome responses in Mediterranean seagrasses. *Plant Physiology and Biochemistry* 210, 108614.

## Participation to scientific congresses

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- 7th European Congress of Conservation Biology (ECCB) (17-21 June 2024, Bologna, Italy). Seagrass movement: oceanographic modelling and genetic data reveal connectivity patterns of *Posidonia oceanica* along the Western coast of Sicily. M. Ruocco, G. Lacorata, L. Palatella, I. Provera, A. Zenone, M. Martinez, E. Dattolo, J. Pazzaglia, V.M. Giacalone, F. Badalamenti, G. Procaccini. *(Oral presentation)*
- 1st Italian Congress on Marine Evolution (EvolMar) (23-25 Nov 2020, online). Gene body and environmentally inducible DNA methylation in seagrasses: inter- and intraspecific differences and associations with transcriptome plasticity under warming conditions. L. Entrambasaguas, M. Ruocco, K.J.F. Verhoeven, G. Procaccini, L. Marin-Guirao. *(Oral presentation by G. Procaccini)*
- 1st Italian Congress on Marine Evolution (EvolMar) (23-25 Nov 2020, online). Transcriptional responses of *Posidonia oceanica* under multiple stresses: the influence of the native environment. J. Pazzaglia, A. Santillan-Sarmiento, M. Ruocco, E. Dattolo, A. Terlizzi, L. Marin-Guirao, G. Procaccini. *(Poster by J. Pazzaglia)*
- 1st Italian Congress on Marine Evolution (EvolMar) (23-25 Nov 2020, online). Comparative analysis of gene networks in marine and terrestrial angiosperms. E. Dattolo, L. Ambrosino, M. Ruocco, G. Procaccini, M.L. Chiusano. *(Poster by E. Dattolo)*
- 1st Italian Congress on Marine Evolution (EvolMar) (23-25 Nov 2020, online). m<sup>6</sup>A RNA methylation in seagrasses: first insights and relevance for biological rhythms. M. Ruocco, L. Ambrosino, M. Jahnke, M.L. Chiusano, I. Barrote, G. Procaccini, J. Silva, E. Dattolo. *(Oral presentation)*

6. 1st EPIgenetics in MARine biology congress (EPIMAR) (6-9 Oct 2020, online). Estimation of daily changes of m6A methylation in the two seagrass species *Z. marina* and *C. nodosa* over a 24h period. M. Ruocco, M. Jahnke, J. Silva, I. Barrote, G. Procaccini, E. Dattolo (*Poster*)
7. 1st EPIgenetics in MARine biology congress (EPIMAR) (6-9 Oct 2020, online). Gene body and environmentally inducible DNA methylation in seagrasses: inter- and intraspecific differences and associations with transcriptome plasticity under warming conditions. L. Entrambasaguas, M. Ruocco, K. Verhoeven, G. Procaccini, L. Marín-Guirao. (*Oral presentation by G. procaccini*)
8. 50th Congress of Italian Society of Marine Biology (S.I.B.M.) (10-14 Jun 2019, Livorno, Italy). Molecular response of the shoot-apical meristem to low-light intensity in *Posidonia oceanica*: a new early warning indicator? M. Ruocco, L. Marín-Guirao, L. Entrambasaguas, G. Procaccini (*Poster by G. Procaccini*). In: Biol. Mar. Mediterr 26 (1): 322-323.
9. International Seagrass Biology Workshop (ISBW12) (16-21 Oct 2016, Nant Gwrtheyrn, Wales). Effects of ocean acidification on seagrass gene expression: insights from *Posidonia oceanica* at CO<sub>2</sub> vents. M. Ruocco, C. Lauritano, I. Olivé, MM. Costa, I. Barrote, R. Santos, J. Silva, G. Procaccini. (*Poster*)
10. 4th Mediterranean Seagrass Workshop (18-22 May 2015, Oristano, Italy). Circadian fluctuation of gene expression along a bathymetric cline in the marine angiosperm *Posidonia oceanica*. E. Dattolo, C. Lauritano, M. Ruocco, G. Procaccini (*Oral presentation by E. Dattolo*)
11. 4th Mediterranean Seagrass Workshop (18-22 May 2015, Oristano, Italy). *Posidonia oceanica* molecular adaptation to the light environment. G. Procaccini, E. Dattolo, C. Lauritano, M. Ruocco, L. Marín-Guirao. (*Oral presentation By G. Procaccini*)
12. 4th Mediterranean Seagrass Workshop (18-22 May 2015, Oristano, Italy). *Cymodocea nodosa* response to simulated CO<sub>2</sub>-driven ocean acidification: A first insight from global transcriptome profiling. M. Ruocco, G. Procaccini, F. Musacchia, R. Sanges, I. Olivé, M. M. Costa, I. Barrote, R. Santos, J. Silva. (*Oral presentation*)
13. ASLO Aquatic Sciences Meeting (22-27 Feb 2015, Granada, Spain). Seagrass photosynthetic responses to a natural high-CO<sub>2</sub> environment: physiology meets gene expression. J. Silva, M. M. Costa, I. Olivé, I. Barrote, M. Ruocco, C. Lauritano, G. Procaccini, R. Santos. (*Oral presentation by J. Silva*)
14. Final Conference COST Action ES0906: "Seagrasses in Europe: Threats, Responses and Management" (4-6 Mar 2014, Olhão, Portugal). Insights on adaptation and plasticity of *Posidonia oceanica* along a bathymetric gradient. G. Procaccini, E. Dattolo, D. D' Esposito, C. Lauritano, S. Mazzuca, M. Ruocco, R. Sanges. (*Oral presentation by G. Procaccini*)
15. Final Conference COST Action ES0906: "Seagrasses in Europe: Threats, Responses and Management" (4-6 Mar 2014, Olhão, Portugal). Stress genes in the seagrass *Posidonia oceanica*. C. Lauritano, M. Ruocco, E. Dattolo, M.C. Buia, J. Silva, G. Procaccini (*Poster by C. Lauritano*)
16. Final Conference COST Action ES0906: "Seagrasses in Europe: Threats, Responses and Management" (4-6 Mar 2014, Olhão, Portugal). Daily variation in gene expression along a depth-related gradient of light availability in *Posidonia oceanica*. M. Ruocco, E. Dattolo, C. Lauritano, G. Procaccini. (*Poster*)



17. XIV Congress of the European Society for Evolutionary Biology (19-24 Aug 2013, Lisbon, Portugal). Circadian fluctuation of gene expression along a bathymetrical cline in the marine angiosperm *Posidonia oceanica*. E. Dattolo, D. D' Esposito, C. Lauritano, M. Ruocco, G. Procaccini. (*Poster by E. Dattolo*)
18. 43th Congress of Italian Society of Marine Biology (S.I.B.M.) (4-8 Jun 2012, Marina di Camerota, Italy). *Posidonia oceanica* photoadaptation to the depth gradient. M. Ruocco, C. Brunet, M. Lorenti, C. Lauritano, D. D' Esposito, M. Riccio, G. Procaccini. (*Poster*). In: Biol. Mar. Mediterr 19 (1): 63-64.

## Invited talks

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1. Seminar for the Department of Marine Sciences, Tjärnö Marine Laboratory, University of Gothenburg (22 Apr 2021, online). Circagrass: Adaptation of the seagrass circadian clock to latitude. M. Ruocco
2. Seminar at the Institute of Evolution and Ecology, Eberhard Karls Universität Tübingen (4 Oct 2019, Tübingen, Germany). Seagrass plasticity across environmental gradients and multi-level response to climate change impacts. M. Ruocco.

## Student training/supervision

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2024	Alice Tosi, Master student University of Bologna
2024	Camilla Ruscelli, Master student University of Bologna
2021-2022	Isabella Provera, PhD student Open University UK/Stazione Zoologica Anton Dohrn
2019	Ludovica Pedicini, Master Student University of Pisa
2018-2020	Jessica Pazzaglia, PhD student University of Trieste/Stazione Zoologica Anton Dohrn
2018	Laura Pereda Briones, PhD student University of the Balearic Islands
2017	Giuseppe Cambrea, Master student University of Messina
2017	Salvatore Davide Mammola, Master student Marche Polytechnic University
2017	Angela Granata, trainee University of Naples "Federico II"
2016-2017	Özge Tutar, PhD student University of Milano-Bicocca

## Disseminating activities

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14-15 Oct 2023	Science communication activity at "Giornate FAI d'autunno" - Fano Marine Center, Fano (Italy).
11-13 Nov 2021	Science communication activity at V edition of "BookSophia - Festival della Classicità" – Massa Lubrense, Naples (Italy)
14-16 Nov 2019	Science communication activity at III edition of "BookSophia - Festival della Classicità" – Massa Lubrense, Naples (Italy).
27 Sep 2019	Science communication activity at "European Researchers' Night - SHARPER" – Museo Nazionale Ferroviario di Pietrarsa, Naples (Italy)
5-7 Dec 2018	Science communication activity at II edition of "BookSophia - Festival della Classicità" – Massa Lubrense, Naples (Italy)
25-28 May 2017	Science communication activity at XXXI edition of "Futuro remoto - CONNESSIONI" – Piazza del Plebiscito, Naples (Italy)
7-10 Oct 2016	Science communication activity at XXX edition of "Futuro remoto - COSTRUIRE" – Piazza del Plebiscito, Naples (Italy)

## Specialization courses and workshops

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Apr-May 2020	Online course by edx: Dartmouth_IMTx: DART.IMT.C.06: "Linux Basics: The Command Line Interface"
24-26 Jul 2019	Summer School "Protein Evolution: from Environmental Adaptations to Biotechnological Applications" - Stazione Zoologica Anton Dohrn, Naples (Italy)
6-7 Feb 2019	Data Carpentry Workshop "Introductory course on data management and visualization in R" - Stazione Zoologica Anton Dohrn, Naples (Italy)
3-5 Oct 2018	Euromarine Workshop: "Trait-based approach to seagrass ecosystems - TRAITGRASS" - Stazione Zoologica Anton Dohrn, Naples (Italy)
10-12 Apr 2017	Workshop "Molecular Phylogenetics" - Stazione Zoologica Anton Dohrn, Naples (Italy)
Feb-Mar 2017	Statistics course: "Statistica - un approccio pratico all'analisi dei dati biologici - Modulo II (statistica: tecniche per l'analisi dei dati biologici)" - Real Orto Botanico, Naples (Italy) (4 lessons)
25-29 Jan 2016	XX School on "Molecular and Biophysical aspects of Photosynthesis" - Venice (Italy)
Jan-Feb 2015	Statistics course: "Statistica - un approccio pratico all'analisi dei dati biologici" - Città della Scienza, Naples (Italy) (6 lessons)
16 Oct 2014	Biorad seminar "La nuova frontiera della PCR quantitativa QX200™ droplet digital PCR" - Stazione Zoologica Anton Dohrn, Naples (Italy)
6-11 May 2013	COST Training School "Effects of increased CO <sub>2</sub> /Ocean Acidification on seagrass meadow" – Vulcano, Aeolian islands (Italy)
28 Jun 2012	Meeting "Illumina Next Generation Sequencing Technology - A Revolutionary approach to study microbial genetics" - Stazione

10-19 Oct 2011	Zoologica Anton Dohrn, Naples (Italy) COST Training School "Linking seagrass productivity, community metabolism and ecosystem carbon fluxes" - Station de Recherches Sous-Marines et Océanographiques - Stareso, Corsica (France)
3-9 Jul 2011	School in "Conservation Genetics of Marine Organisms" - Chioggia (Italy)
1-2 Mar 2011	COST Workshop "Linking ecophysiology and ecogenomics in seagrass systems" - Stazione Zoologica Anton Dohrn - Naples (Italy)

## Qualification and licenses

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Open Water Diver ANIS/CMAS  
Drive license A, B

## Languages

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Italian	Mother tongue
English	Proficient

## Computer skills

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European Computer Driving Licence (ECDL)

Good knowledge of sequence alignment/editor and analysis tools (e.g., BioEdit, Sequence Scanner, BLAST, ClustalW, MEGA). REST and QuantStudio for relative quantification analysis of gene expression data in RT-qPCR studies. Gene Runner, Primer3 for primers design in PCR/RT-qPCR experiments. Peak Scanner Software for DNA fragment analysis. GraphPad Prism, Past, SigmaPlot, Statistica and PRIMER 6 & PERMANOVA+ software for statistical computing and graphics. GenAlex, Gimlet, Arlequin, Genepop, STRUCTURE, GENECLASS, EDENetworks, BayeScan and LOSITAN for population genetic studies. Efficient use of online databases (e.g., NCBI, Uniprot, TAIR, Plaza). Good knowledge of bioinformatic pipelines for SNPs analyses, R and bash programming language, and Linux operating system. Basic knowledge of ArcGIS.

## Relational abilities

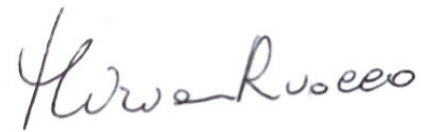
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Good communication skills acquired thanks to the participation in several national and international conferences/workshops, institutional seminars, lab meetings, and during

several periods as visiting scientist in international research institutions. Good ability to work independently as well as in team.

*Ai sensi del D. Lgs. 196/2003, la sottoscritta consente il trattamento dei propri dati personali nella misura necessaria al perseguimento degli scopi istituzionali e all'adempimento di obblighi previsti dalla Legge.*

3 September 2024

A handwritten signature in black ink, appearing to read 'Miriam Ruocco', written in a cursive style.