

Curriculum vitae et studiorum

Name: **Emanuela Dattolo**

Title: Ph.D.

Born in: Avellino (Italy) Date of Birth: 28/02/1979

Nationality: Italian

Affiliation: Stazione Zoologica Anton Dohrn, -Napoli (Italy)

Department of Integrative Marine Ecology.

Giardini Villa Comunale, 80121, Napoli

Researcher-Botany (BIO/01 with Italian University habilitation).

Phone: +39 081 5833236

Fax: +39 081 7641355

e-mail emanuela.dattolo@szn.it

Skype: emanudat

ORCID: <https://orcid.org/0000-0001-6005-5079>

Web of Science ResearcherID : ABD-6535-2020

Google scholar: <https://scholar.google.com/citations?hl=it&user=SRIUmH4AAAAJ>



Research interests

evolutionary ecology, molecular ecology, marine genomics, chronobiology, science communication.

Work experience

- From October 2018 to date: Researcher at Stazione Zoologica Anton Dohrn, Napoli (Italy) Department of Integrative Marine Ecology.
- January –September 2018: Postdoctoral fellow-laboratory technician Centre of Marine Sciences, University of Algarve (Faro, Portugal)
- 2013-2016: Postdoctoral fellow, Stazione Zoologica Anton Dohrn-Napoli (Italy)
- 2011-2012: Postdoctoral fellow, Institute for Coastal Marine Environment IAMC- CNR (Italy).

Education and Training

- 2016-2017: Postgraduate Master in Journalism and Science Communication, Università degli Studi di Ferrara (Italy)
- 2006-2009: Doctorate in Plant Biology, Università Della Calabria-Cosenza (Italy)
- 1999-2006: Graduate in biology (Master's Degree), Università degli Studi Federico II di Napoli (Italy)

Publications

1. 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*. doi: **10.1016/j.scitotenv.2023.162517**
2. 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. doi: **10.3389/fpls.2023.1088643**
3. 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. doi: **10.21411/CBM.A.18AC84C**
4. 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. doi.org/10.1098/rspb.2022.2197
5. 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. doi.org/10.1093/icesjms/fsac163
 6. 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 [doi: 10.3389/fgene.2022.866758](https://doi.org/10.3389/fgene.2022.866758)
 7. 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. [doi: 10.1016/j.envpol.2022.119077](https://doi.org/10.1016/j.envpol.2022.119077).
 8. 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* [doi: 10.3389/FEVO.2021.757187](https://doi.org/10.3389/FEVO.2021.757187); **WOS:000731709900001**
 9. Pazzaglia J., Nguyen H.M., Santillan-Sarmiento A., Ruocco M., **Dattolo E.**, Marin-Guirao L., Procaccini G., (2021) The Genetic Component of Seagrass Restoration: What We Know and the Way Forwards. *Water* [doi:10.3390/W13060829](https://doi.org/10.3390/W13060829); **WOS:000651975800001**,
 10. Ruocco M., Entrambasaguas L., **Dattolo E.**, Milito A., Marin-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* [doi:10.1111/1365-2745.13479](https://doi.org/10.1111/1365-2745.13479); **WOS:000563984300001**
 11. Ruocco M., Ambrosino L., Jahnke M., Chiusano M.L., Barrote I, Procaccini G., Silva J., **Dattolo E.** (2020) m⁽⁶⁾A RNA Methylation in Marine Plants: First Insights and Relevance for Biological Rhythms. *International Journal of Molecular Sciences* [doi:10.3390/IJMS2120750](https://doi.org/10.3390/IJMS2120750); **WOS:000585607200001**.
 12. Jahnke M., D'Esposito D., Orru L., Lamontanara A., **Dattolo E.**, Badalamenti F., Mazzuca S., Procaccini G., Orsini L., (2019) Adaptive responses along a depth and a latitudinal gradient in the endemic seagrass *Posidonia oceanica*. *Heredity* [doi:10.1038/S41437-018-0103-0](https://doi.org/10.1038/S41437-018-0103-0); **WOS:000455217300008**.
 13. Ceccherelli G., Oliva S., Pinna S., Piazzini L., Procaccini, G., Marin-Guirao L., **Dattolo E.**, Gallia R., La Manna G., Gennaro P., Costa M.M., Barrote I., Silva J., Bulleri F. (2018) Seagrass collapse due to synergistic stressors is not anticipated by phenological changes. *Oecologia* [doi:10.1007/S00442-018-4075-9](https://doi.org/10.1007/S00442-018-4075-9); **WOS:000427875700022**
 14. Marin-Guirao L., Entrambasaguas L., **Dattolo E.**, Ruiz J.M., Procaccini G. (2017) Molecular Mechanisms behind the Physiological Resistance to Intense Transient Warming in an Iconic Marine Plant. *Frontiers in Plant Science* [doi:10.3389/FPLS.2017.01142](https://doi.org/10.3389/FPLS.2017.01142); **WOS:000404360200001**
 15. Procaccini G., Ruocco M., Marin-Guirao L., **Dattolo E.**, Brunet C., D'Esposito D., Lauritano C., Mazzuca S., Serra I.A., Bernardo L., Piro A., Beer S., Bjork M., Gullstrom, M., Buapet P., Rasmusson L.M., Felisberto P., Gobert., Runcie J.W., Silva J., Olive I., Costa MM., Barrote I., Santos R. (2017) Depth-specific fluctuations of gene expression and protein abundance modulate the photophysiology in the seagrass *Posidonia oceanica*. *Scientific Reports* [doi:10.1038/SREP42890](https://doi.org/10.1038/SREP42890); **WOS:000394269400001**
 16. **Dattolo E.**, Marin-Guirao L., Ruiz J.M., Procaccini G. (2017) Long-term acclimation to reciprocal light conditions suggests depth-related selection in the marine foundation species *Posidonia oceanica*. *Ecology and Evolution* [doi:10.1002/ECE3.2731](https://doi.org/10.1002/ECE3.2731); **WOS:000394501900012**
 17. D'Esposito D., Orru L., **Dattolo E.**, Bernardo L., Lamontara A., Orsini L., Serra I.A., Mazzuca S., Procaccini, G. (2016) Transcriptome characterisation and simple sequence repeat marker discovery in the seagrass *Posidonia oceanica*. *Scientific Data* [doi:10.1038/SDATA.2016.115](https://doi.org/10.1038/SDATA.2016.115); **WOS:000390239000003**

18. Marin-Guirao L., Ruiz J.M., **Dattolo E.**, Garcia-Munoz R., Procaccini G. (2016) Physiological and molecular evidence of differential short-term heat tolerance in Mediterranean seagrasses. *Scientific Reports* doi: **10.1038/SREP28615**; **WOS:000378499100001**
19. Olsen J.L., Rouze P., Verhelst B., Lin Y-C., Bayer T., Collen J., **Dattolo E.**, De Paoli E., Dittami S., Maumus F., Michel G., Kersting A., Lauritano C., Lohaus R., Topel, M., Tonon T., Vanneste K., Amirebrahimi M., Brakel J., Bostrom C., Chovatia M., Grimwood J., Jenkins J.W., Jueterbock A., Mraz A., Stam W.T., Tice H., Bornberg-Bauer E., Green, P.J., Pearson G.A., Procaccini G., Duarte C.M., Schmutz J., Reusch T.B. H., Van de Peer Y. (2016) The genome of the seagrass *Zostera marina* reveals angiosperm adaptation to the sea. *Nature* doi:**10.1038/NATURE16548**; **WOS:000370327100036**
20. Lauritano C., Ruocco M., **Dattolo E.**, Buia M.C., Silva J., Santos R., Olive 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* doi:**10.5194/BG-12-4185-2015**; **WOS:000357978900018**
21. **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* doi:**10.1016/J.MARENRES.2014.07.010**; **WOS:000345488300024**
22. Carotenuto Y., **Dattolo E.**, Lauritano C., Pisano F., Sanges R., Miralto A., Procaccini G., Ianora A. (2014) Insights into the transcriptome of the marine copepod *Calanus helgolandicus* feeding on the oxylipin-producing diatom *Skeletonema marinoi*. *Harmful Algae* doi:**10.1016/J.HAL.2013.11.002.**, **WOS:000330497500017**
23. Jongma D.N., Campo D., **Dattolo E.**, D'Esposito D., Duchi A., Grewe P., Huisman J., Verlaque M., Mehmet B., Procaccini G. (2013) Identity and origin of a slender *Caulerpa taxifolia* strain introduced into the Mediterranean Sea. *Botanica Marina* doi: **10.1515/BOT-2012-0175**; **WOS:000314357200004**
24. **Dattolo E.**, Gu J., Bayer, Philipp E., Mazzuca S., Serra I.A., Spadafora A., Bernardo L., Natali L., Cavallini A., Procaccini G. (2013) Acclimation to different depths by the marine angiosperm *Posidonia oceanica*: transcriptomic and proteomic profiles. *Frontiers in Plant Science* doi:**10.3389/FPLS.2013.00195**; **WOS:000330166100001**.
25. Serra I.A., Lauritano C., **Dattolo E.**, Puoti A., Nicastro S., Innocenti A.M., Procaccini, G. (2012) Reference genes assessment for the seagrass *Posidonia oceanica* in different salinity, pH and light conditions. *Marine Biology* doi: **10.1007/S00227-012-1907-8**; **WOS:000303472100008**
26. Wissler, L., **Dattolo E.**, Moore A.D., Reusch T.B.H., Olsen J.L., Migliaccio M., Bornberg-Bauer E., Procaccini G. (2009) Dr. Zompo: an online data repository for *Zostera marina* and *Posidonia oceanica* ESTs. *Database* doi:**10.1093/DATABASE/BAP009**; **WOS:000208191300009**
27. L'Astorina A., Bergami C., D'Alelio D., **Dattolo E.**, Pugnetti A. (2018) What is at stake for scientists when communicating ecology? Insight from the informal communication initiative "Cammini LTER". *Visions for Sustainability* doi:**10.13135/2384-8677/2804**
28. D'Esposito D., **Dattolo E.**, Badalamenti F., Orsini L., Procaccini G. (2012) Comparative analysis of genetic diversity of *Posidonia oceanica* along a depth gradient using neutral and selective/ non neutral microsatellites markers/Analisi comparativa della diversità genetica di *Posidonia oceanica* lungo il gradiente batimetrico usando marcatori microsatelliti neutrali e sotto selezione. *Biologia Marina Mediterranea Contributo in Atti di convegno*.
29. Procaccini G., **Dattolo E.**, Innocenti A.M., Mazzuca S., Cavallini A., Natali L., Gu J., Bayer P. (2010) Differential gene expression profiling under different light conditions in *Posidonia oceanica* (L.) Delile by SSH analysis. *Rapp. Comm. Int. Mer Médit Contributo in Atti di convegno*.

Conference presentations

most relevant last 3 years

1. 2021 Assemble Marine biological research at the frontier (18- 29 Jan, Online), organized by EMBRC.EU and Centre of Marine Sciences of Algarve (CCMAR Algarve). "Circagrass: Adaptation of the seagrass circadian clock to latitudes". *Invited speaker*
2. 2020 EVOLMAR Marine Evolution 1° Congress (Online, 23-25 Nov). "Comparative analysis of gene networks in marine and terrestrial angiosperms". *Poster presentation*
3. 2020 EPIMAR EPIgenetics in MARine biology congress (online 6-9 Oct) Montpellier Agropolis (France). "Estimation of daily changes of global RNA methylation in the two seagrass species *Z. marina* and *C. nodosa* over a 24 h period" *Poster presentation*

Achievements And Service

Coordination and administration of people, projects and budgets; at work and in voluntary work.

1. Principal Investigator of the ASSEMBLE PLUS project (European Union's Horizon 2020 research and innovation program) Adaptation of the seagrass circadian clock to latitudes (*Circagrass*) Grant Agreement N° 730934.
2. Responsible of Functional area (RAF f.f.) of Molecular Biology of the Department of Integrative Marine Ecology (Stazione Zoologica Anton Dohrn) since 2019.
3. Member of the SZN-Open University PhD Program Board since 2019.
4. 2015-2017 Member of the organizing committee of 3 science communication tours (i.e bike trips-in stage):
 - 2015 *Mesothalassia* <http://www.lteritalia.it/?q=cammini/mesothalassia>
 - 2016 *Terramare* <http://www.lteritalia.it/?q=cammini2016/terramare2>
 - 2017 *Antropica* <http://www.lteritalia.it/?q=cammini2017/antropica>
5. 2016 Member of Science Communication Working Group of Long-Term Ecological Research network <http://www.lteritalia.it/?q=content/organizzazione>
6. Collaboration with the environmental magazine *La Nuova Ecologia* (in Italian), <https://www.lanuovaecologia.it/?s=Dattolo>
7. Collaboration of science communication magazine *Scienza in Rete* (in Italian) <https://www.scienzainrete.it/autori/dattolo/1757>
8. 2016-2018 Member of the organizing committee of 3 local events of the global science Festival *PINT OF SCINCE* <https://pintofscience.it/team/Team%20Avellino>
9. 2018 Partecipation to the Italian science Festival *FESTIVAL DELLA SCIENZA DI GENOVA*.
10. Member of the European Society for Evolutionary Biology since 2013.
11. Member of the Società dei Naturalisti in Napoli since 2017.
12. Author of the book "*Anthropica*" (Hoepli, 2023).