

**FIGRELLA PRADA**  
**RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY**  
**POSTDOCTORAL ASSOCIATE**

Date of Birth: 07 July 1984; Nationality: Italian; Place of Birth: San Jose', Costa Rica

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### EDUCATION AND TRAINING

Degree	Institution Conferring	Advisor(s)	Field	Dates
BS	University of Parma (Italy)	Francesco Nonnis Marzano	Natural Sciences	08 May 2003 – 12 July 2007
MS	University of Parma (Italy)	Francesco Nonnis Marzano, Stefano Goffredo	Ecology	23 Aug 2007 – 27 Apr 2010
Ph.D.	University of Bologna (Italy)	Stefano Goffredo	Biodiversity & Evolution	01 Jan 2011 – 08 May 2014

### PROFESSIONAL APPOINTMENTS

I have almost 7 years of postdoctoral experience in coral ecology/biology gained at the Italian National Research Council and at University of Bologna in Italy. During the last year of my PhD (2013) I spent a 1-year secondment period in Israel at Bar-Ilan University, under the supervision of Prof. Zvy Dubinsky and Prof. Oren Levy and at the Weizmann Institute of Science, under the supervision of Prof. Aldo Shemesh working on stable isotopes to investigate coral physiology and metabolism. I have published 31 peer-reviewed scientific articles since 2010 (*h*-index: 9, citations: 403), presented contributions in national (*n*=6) and international (*n*=17) meetings and symposia, and supervised MSc (*n*=4) and BSc (*n*=5) students.

Position	Institution; Advisor(s)	Funding Source	Topic	Dates
Postdoctoral Fellow	National Research Council - Institute for the Study of Anthropic Impact and Sustainability in the Marine Environment (Italy); Fabio Badalamenti	Ministry of Education, University and Research - Research Projects of National Interest: PRIN 2010-2011	Ecology, biology and morphometry of scleractinian coral <i>Astroides calycularis</i>	27 May 2014 – 26 Oct 2015
Postdoctoral Fellow	University of Bologna - Dept. of Biological, Geological and Environmental Sciences (BiGeA) (Italy); Stefano Goffredo	European Research Council (FP7 – IDEAS)	Ocean warming and acidification effects on growth and physiology of Mediterranean corals	01 Jan 2016 – 31 Dec 2016
Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Stefano Goffredo	European Research Council (FP7 – IDEAS)	pH up-regulation in calcification physiology and skeletal features of corals living along natural pCO <sub>2</sub> gradients	01 Jun 2017 – 31 May 2019
Adjunct Professor	University of Bologna - School of Psychology and Education (Italy)	University of Bologna - School of Psychology and Education	Elements of Ecology – Master Degree Programme in Primary teacher education	24 Sept 2018 – 17 Sept 2021
Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Marco Candela, Stefano Goffredo	H2020, Societal Challenges (Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy)	Effects of cumulative human impact on Mediterranean corals as bio-indicators of marine ecosystem health	01 Jun 2019 – 31 Oct 2020

Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Giuseppe Falini, Stefano Goffredo	University of Bologna - BiGeA	Analysis of the photosynthetic efficiency and autotrophy:heterotrophy ratio of zooxanthellate corals along a natural acidification gradient	01 Jan 2021 – 31 Oct 2021
Postdoctoral Fellow	Rutgers University – Dept. of Marine and Coastal Sciences (DMCS) (USA), Paul Falkowski	Rutgers University - DMCS	Nutrient cycling and biomineralization in deep sea corals	01 Nov 2021 – 31 Oct 2022

## HONORS AND AWARDS

- 2016 – Best poster Award: awarded at the 47<sup>th</sup> Conference for the Italian Society for Marine Biology (SIBM), Turin (Italy), 13-17 June. Poster entitled “Distribution of the orange stony coral *Astroides calycularis* along the Italian coasts” by Musco L, Pipitone C, Agnetta D, Alagna A, D’Anna G, Di Stefano G, Giacalone VM, Gristina M, Prada F, Vega Fernández T, Badalamenti F, awarded as best poster within the Theme “Bioconstructors”.
- 2015 – Scientific research and technological innovation award "Claudio Bonivento", awarded by Lions Club Bologna, Bologna (Italy), 11 May 2015. Honorable mention, PhD thesis entitled: “Effects of temperature and acidity on Mediterranean benthic calcifiers, in the face of Global Climate Change”.
- 2013 – Marco Polo Grant awarded by University of Bologna for scientific training abroad at Bar-Ilan University (Supervisor: Prof. Zvy Dubinsky).
- 2013 – Student award: awarded at the ICCB 2013: The international conference on coelenterate biology, Eilat (Israel) 1-5 December 2013. Awarded as one of the 15 qualifying and selected (non-Israeli) PhD students whose abstracts were accepted for oral or poster presentation at the Conference.

## PEER REVIEWED PUBLICATIONS

### #equal contributor; \*corresponding author

- [31] **Prada F**, Brizi L, Franzellitti S, Mengoli S, Fermani S, Polishchuk I, Baraldi N, Ricci F, Palazzo Q, Caroselli E, Pokroy B, Giorgini L, Fantazzini P\*, Falini G\*, Goffredo S\*, Fabricius KE (2021) Coral micro- and macro-morphological skeletal properties in response to life-long acclimatization at CO<sub>2</sub> vents in Papua New Guinea. *Scientific Reports*, 11:19927. doi: 10.1038/s41598-021-98976-9
- [30] Marchini C, Gizzi F, Pondrelli T, Moreddu L, Marisaldi L, Montori F, Lazzari V, Airi V, Caroselli E, **Prada F**, Falini G, Dubinsky Z, Goffredo S (2021) Decreasing pH impairs sexual reproduction in a Mediterranean coral transplanted at a CO<sub>2</sub> vent. *Limnology & Oceanography*, 9999: 1–11. doi: 10.1002/lno.11937
- [29] Palazzo Q#, **Prada F#**, Steffens T, Fermani S, Samorì C, Bernardi G, Terrón-Sigler A, Sparla F\*, Falini G\*, Goffredo S\* (2021) The skeleton of *Balanophyllia* coral species suggests adaptive traits linked to the onset of mixotrophy. *Science of the Total Environment*, 148778. doi: 10.1016/j.scitotenv.2021.148778
- [28] Meschini M, Machado Toffolo M, Marchini C, Caroselli E, **Prada F**, Mancuso A, Franzellitti S, Locci L, Davoli M, Trittoni M, Nanetti E, Tittarelli M, Bentivogli R, Branchini S, Neri P, Goffredo S (2021) Reliability of data collected by volunteers: a nine-year citizen science study in the Red Sea. *Frontiers in Ecology and Evolution*, 9: 694258. doi: 10.3389/fevo.2021.694258
- [27] Meschini M, Machado Toffolo M, Caroselli E, Franzellitti S, Marchini C, **Prada F**, Boattini A, Brambilla V, Martinez G, Prati F, Simoncini G, Visentin M, Airi V, Branchini S, Goffredo S (2021) Educational briefings in touristic facilities promote tourist sustainable behavior and customer loyalty. *Biological Conservation*, 259: 109122. doi: 10.1016/j.biocon.2021.109122

- [26] Cheli A, Mancuso A, Azzarone M, Fermani S, Kaandorp J, Marin F, Montroni D, Polishchuk I, **Prada F**, Stagioni M, Valdré G, Pokroy B, Falini G\*, Goffredo S\*, Scarponi D\* (2021) Climate variation during the Holocene influenced the skeletal properties of *Chamelea gallina* shells in the North Adriatic Sea (Italy). *PLOS ONE* 16: e0247590. doi: 10.1371/journal.pone.0247590
- [25] Palladino G, Rampelli S, Scicchitano D, Musella M, Quero GM, **Prada F**, Mancuso A, Seyfarth AM, Turrone S, Candela M, Biagi E\* (2021) Impact of marine aquaculture on the microbiome associated with nearby holobionts: the case of *Patella caerulea* living in proximity of sea bream aquaculture cages. *Microorganisms* 9: 455. doi: 10.3390/microorganisms9020455
- [24] Meschini M, Prati F, Simoncini GA, Airi V, Caroselli E, **Prada F**, Marchini C, Machado Toffolo M, Branchini S, Brambilla V, Covi C, Goffredo S (2021) Environmental Awareness Gained During a Citizen Science Project in Touristic Resorts Is Maintained After 3 Years Since Participation. *Frontiers in Marine Science*, 8: 584644. doi: 10.3389/fmars.2021.584644
- [23] Caroselli E, Frapiccini E, Franzellitti S, Palazzo Q, **Prada F**, Betti M, Goffredo S, Marini M (2020) Accumulation of PAHs in the tissues and algal symbionts of a common Mediterranean coral: skeletal storage relates to population age structure. *Science of the Total Environment* 743: 140781. doi: 10.1016/j.scitotenv.2020.140781
- [22] Franzellitti S\*, **Prada F**, Viarengo A, Fabbri E (2020) Evaluating bivalve cytoprotective responses and their regulatory pathways in a climate change scenario. *Science of the Total Environment* 137733. doi: 10.1016/j.scitotenv.2020.137733
- [21] Savinelli B, Fernández TV, Galasso NM, D'Anna G, Pipitone C, **Prada F**, Zenone A, Badalamenti F, Musco L (2020) Microplastics impair the feeding performance of a Mediterranean habitat-forming coral. *Marine Environmental Research*, 155: 104887. doi: 10.1016/j.marenvres.2020.104887
- [20] Wall M\*\*, **Prada F**#, Fietzke J, Caroselli E, Dubinsky Z, Fantazzini P, Brizi L, Weiner S, Mass T, Franzellitti S, Montagna P, Falini G, Goffredo S\* (2019) Linking internal carbonate chemistry regulation and calcification in corals growing at a Mediterranean CO<sub>2</sub> vent. *Frontiers in Marine Science* 6: 699. doi: 10.3389/fmars.2019.00699
- [19] **Prada F**, Musco L\*, Alagna A, Agnetta D, Beccari E, D'Anna G, Giacalone VM, Pipitone C, Vega Fernández T, Goffredo S, Badalamenti F (2019) Anthropogenic impact is negatively related to coral health in Sicily (Mediterranean Sea). *Scientific Reports* 9: 13469. doi:10.1038/s41598-019-49713-w
- [18] **Prada F**, Yam R, Levy O, Caroselli E, Falini G, Dubinsky Z, Goffredo S\*, Shemesh A\* (2019) Kinetic and metabolic isotope effects in zooxanthellate and non-zooxanthellate Mediterranean corals along a wide latitudinal gradient. *Frontiers in Marine Science*, 6: 522. doi: 10.3389/fmars.2019.00522
- [17] Mancuso A, Stagioni M, **Prada F**, Scarponi D, Piccinetti C, Goffredo S (2019) Environmental influence on calcification of the bivalve *Chamelea gallina* along a latitudinal gradient in the Adriatic Sea. *Scientific Reports*, 9: 11198. doi: 10.1038/s41598-019-47538-1
- [16] Caroselli E, Gizzi F, **Prada F**, Marchini C, Airi V, Kaandorp J, Falini G, Dubinsky Z, Goffredo S (2019) Low and variable pH decreases recruitment efficiency in populations of a temperate coral naturally present at a CO<sub>2</sub> vent. *Limnology & Oceanography*, 64: 1059-1069. doi:10.1002/lno.11097
- [15] Franzellitti S\*, Airi V, Calbucci D, Caroselli E, **Prada F**, Voolstra C, Mass, Falini G., Fabbri E, Goffredo S (2018) Transcriptional response of the heat shock gene hsp70 aligns with differences in stress susceptibility of shallow-water corals from the Mediterranean Sea. *Marine Environmental Research*, 140:444-454. doi: 10.1016/j.marenvres.2018.07.006
- [14] Ingrosso G, Abbiati M, Badalamenti F. ... **Prada F**, Ponti M, Rindi F, Russo GF, Sandulli R, Villamor A, Zane L, Boero F (2018) Mediterranean bioconstructions along the Italian coast. *Advances in Marine Biology*, 79:61-136. doi: 10.1016/bs.amb.2018.05.001

- [13] Iluz D, Fermani S, Ramot M, Reggi M, Caroselli E, **Prada F**, Dubinsky Z, Goffredo S, Falini G (2017) Calcifying response and recovery potential of the brown alga *Padina pavonica* under ocean acidification. *ACS Earth and Space Chemistry*, 1:316-323. doi: 10.1021/acsearthspacechem.7b00051
- [12] Gizzi F, de Mas L, Airi V, Caroselli E, **Prada F**, Falini G, Dubinsky Z, Goffredo S (2017) Reproduction of an azooxanthellate coral is unaffected by ocean acidification. *Scientific Reports*, 7: 13049. doi:10.1038/s41598-017-13393-1
- [11] Samorì C, Caroselli E, **Prada F**, Reggi M, Fermani S, Dubinsky Z, Goffredo S, Falini G\* (2017) Ecological relevance of skeletal fatty acid concentration and composition in Mediterranean scleractinian corals. *Scientific Reports*, 7:1929. doi: 10.1038/s41598-017-02034-2
- [10] Maor-Landaw K, Ben-Asher HW, Karako-Lampert S, Salmon-Divon M, **Prada F**, Caroselli E, Goffredo S\*, Falini G, Dubinsky Z, Levy O\* (2017) Mediterranean versus Red sea corals facing climate change, a transcriptome analysis. *Scientific Reports*, 7:42405. doi: 10.1038/srep42405
- [09] **Prada F**, Caroselli E, Mengoli S, Brizi L, Fantazzini P, Capaccioni B, Pasquini L, Fabricius KE., Dubinsky Z, Falini G, Goffredo S\* (2017) Ocean warming and acidification synergistically increase coral mortality. *Scientific Reports*, 7:40842. doi: 10.1038/srep40842
- [08] Reggi M, Samori C, Fermani S, Gizzi F, **Prada F**, Dubinsky Z, Goffredo S\*, Falini G\* (2017) Influence of intra-skeletal coral lipids on calcium carbonate precipitation. *CrystEngComm*, 18:8829-8833. doi: 10.1039/C6CE01939K
- [07] Musco L\*, **Prada F\***, D'Anna G, Galasso NM, Pipitone C, Fernández TV, Badalamenti F (2017). Turning casualty into opportunity: fragmenting dislodged colonies is effective for restoring reefs of a Mediterranean endemic coral. *Ecological Engineering*, 98: 206-212. doi: 10.1016/j.ecoleng.2016.10.075
- [06] Fantazzini P\*, Mengoli S, Pasquini L, Bortolotti V, Brizi L, Mariani M, Di Giosia M, Fermani S, Capaccioni B, Caroselli E, **Prada F**, Zaccanti F, Levy O, Dubinsky Z, Kaandorp JA, Konglerd P, Hammel JU, Dauphin Y, Cuif J-P, Weaver JC, Fabricius KE, Wagermaier W, Fratzi P, Falini G\*, Goffredo S\* (2015) Gains and losses of coral skeletal porosity changes with ocean acidification acclimation. *Nature Communications*, 6:7785. doi: 10.1038/ncomms8785
- [05] Pasquini L\*, Molinari A, Fantazzini P, Reggi M, Goffredo S, Caroselli E, **Prada F**, Levi O, Dubinsky Z, Falini G\* (2015) Isotropic microscale mechanical properties of coral skeletons. *Journal of the Royal Society Interface*, 12: :20150168-20150168. doi 10.1098/rsif.2015.0168
- [04] Goffredo S, Mancuso A, Caroselli E, **Prada F**, Dubinsky Z, Falini G, Levy O, Fantazzini P, Pasquini L (2015) Skeletal mechanical properties of Mediterranean corals along a wide latitudinal gradient. *Coral Reefs*, 34: 121-132. doi 10.1007/s00338-014-1222-6
- [03] Goffredo S\*, **Prada F**, Caroselli E, Capaccioni B, Zaccanti F, Pasquini L, Fantazzini P, Fermani S, Reggi M, Levy O, Katharina F, Dubinsky Z, Falini G\* (2014) Biomineralization control related to population density under ocean acidification. *Nature Climate Change*, 4:593-597. doi: 10.1038/nclimate2241
- [02] Fantazzini P\*, Mengoli S, Evangelisti S, Pasquini L, Mariani M, Brizi L, Goffredo S, Caroselli E, **Prada F**, Falini G, Levy O, Dubinsky Z (2013) Time-Domain NMR study of Mediterranean scleractinian corals reveals skeletal-porosity sensitivity to environmental changes. *Environmental Science & Technology*, 47:12679-12686. doi: 10.1021/es402521b
- [01] Caroselli E, **Prada F**, Pasquini L, Nonnis Marzano F, Zaccanti F, Falini G, Levy O, Dubinsky Z, Goffredo S\* (2011) Environmental implications of skeletal micro-density and porosity variation in two scleractinian corals. *Zoology*, 114:255-264. doi: 10.1016/j.zool.2011.04.003

## **PROFESSIONAL ACTIVITIES / SCIENTIFIC LEADERSHIP**

**Reviewer:** PLoS ONE, Biodiversitas Journal of Biological Diversity, Frontiers in Marine Science, Frontiers in Physiology

**Assistant reviewer:** Scientific Reports, Marine Chemistry, Water, Functional, Ecology, Biology Letter, Coral Reefs, Marine Biodiversity, Journal of The Royal Society Interface

**Review Editor:** Frontiers in Physiology

**Assistant reviewer for grants:** Federal Ministry of Education and Research (Germany); Ministry of Science, Technology (Israel); European Science Foundation, Zoological Society of London, National Geographic.

**Chair:** Session "How can innovative techniques to investigate calcification and its mechanism shed light into the past, present and future of coral reef organisms? / How do new insights into biomineralization help us understand the reef calcification response to global climate change?". Chairs: Alexander Venn, Sylvie Tambutté, Anton Eisenhauer, Virginie Chamard, Ed Hathorne, Fiorella Prada, Stefano Goffredo, Tali Mass, Jeana Drake. 14<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021.

### **Public outreach activities:**

26 September 2018, Public engagement presentation "Diving in the Night!...of the Researchers", Waiting for the European Researchers' Night, Scientific High School Augusto Righi, Bologna (Italy).

25 September 2018, Speed-dating presentation "Changes, cambiamento, cambiamenti", Waiting for the European Researchers' Night, CUBO – Centro Unipol Bologna

29 September 2017, "Man and Sea", European Researcher's Night, Salaborsa (Bologna).

18 May 2017, "The Panarea underwater volcanic crater. A dive into the future of our sea", Research on Stage, conference/show, Oratorio di San Filippo Neri (Bologna).

31 May 2017, "Scientific Diving: how to become a SCUBA diver to study the Sea and its inhabitants", Science Degrees Project (PLS), Stadium Swimming Pool (Bologna).

30 September 2016 – "Saving the Sea", European Researcher's Night, CUBO – Centro Unipol Bologna

22 April 2016 – "The underwater crater of Panarea: a natural laboratory for ocean acidification studies on benthic calcifiers". Climate Day, Liceo Laura Bassi (Bologna).

15 March 2014 - "The underwater Panarea crater: a natural laboratory for studying ocean acidification", XXII European Diving Show (EU.DI. Show), Diving Masters, Fiera di Bologna,

1-2 June 2012 - "Let's dive in the square!", Researchers Talk to the City, Giardini Margherita, Bologna.

29 November 2010 - "Acidic seas threaten coral reefs", COSMOS magazine (Australia), by Mico Tatalovic.