

Roberto Arrigoni

Born in Carate Brianza (Italy) on 09/08/1984

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Current Position: ricercatore III° livello (researcher)

Current Affiliation:

Department of Biology and Evolution of Marine Organisms (BEOM), Genoa Marine Centre (GMC), Stazione Zoologica Anton Dohrn–National Institute of Marine Biology, Ecology and Biotechnology, Villa del Principe, Piazza del Principe 4, 16126 Genoa, Italy

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Department of Biology, Università di Milano-Bicocca, Milano, Italy	Bachelor	2003-2007	Biological Sciences
Department of Biology, Università di Milano-Bicocca, Milano, Italy	Master	2007-2010	Biology
Department of Biology, Università di Milano-Bicocca, Milano, Italy	Ph.D.	2012-2015	Taxonomy and phylogeny of corals
King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia	Postdoc	2015-2018	Taxonomy and phylogeny of corals
Joint Research Center (JRC), European Commission, Ispra, Italy	Contract Agent	2019	Climate change, fish and coral ecology and evolution
Stazione Zoologica Anton Dohrn, Napoli, Italy	Ricercatore III° livello	2020-present	Phylogenetics, integrative systematics, biogeography, and evolution of corals

Appointments and awards

2018: Winner of the international prize “Mario Benazzi and Giuseppina Benazzi Lentati” in Evolutionary Biology, Accademia dei Lincei, Roma, Italy

2013: Winner of the European grant “SYNTHESIS EU”, European Union

Publications

Author of 52 publications on ISI-journals (h index: 23, on 11 December 2022) and 2 book chapters

List of publications of the last 10 years:

Peer-reviewed publications:

1. COKER DJ, DIBATTISTA JD, STAT M, ARRIGONI R, REIMER J, TERRANEO TI, VILLALOBOS R, NOWICKI JP, BUNCE M, BERUMEN ML. 2022. DNA metabarcoding confirms primary targets and breadth of diet for coral reef butterflyfishes. *Coral Reefs* 1–15, <https://doi.org/10.1007/s00338-022-02302-2>
2. TERRANEO TI, ARRIGONI R, MARCHESE F, CHIMIENTI G, EWEIDA AA, RODRIGUE M, BENZONI F. 2022. The complete mitochondrial genome of *Dendrophyllia minuscula* (Cnidaria: Scleractinia) from the NEOM region of the northern Red Sea. *Mitochondrial DNA Part B Resources* 5, 848-850
3. JUSZKIEWICZ DJ, WHITE NE, STOLARSKI J, BENZONI F, ARRIGONI F, ARRIGONI R,

- HOEKSEMA BW, WILSON NG, BUNCE M, RICHARDS ZT. 2022. Phylogeography of recent *Plesiastrea* (Scleractinia: Plesiastreidae) based on an integrated taxonomic approach. *Molecular Phylogenetics and Evolution*, 107469
4. ARRIGONI R, HUANG D, BERUMEN ML, BUDD AF, MONTANO S, RICHARDS ZT, TERRANEO TI, BENZONI F. 2021. Integrative systematics of the scleractinian coral genera *Caulastraea*, *Erythrastrea* and *Oulophyllia*. *Zoologica Scripta* 50, 509–527
 5. MAGGIONI D, SCHUCHERT P, ARRIGONI R, HOEKSEMA BW, HUANG D, STRONA G, SEVESO D, BERUMEN ML, MONTALBETTI E, COLLINS R, GALLI P, MONTANO S. 2021. Integrative systematics illuminates the relationships in two sponge-associated hydrozoan families (Capitata: Sphaerocorynidae and Zancleopsidae). *Contributions to Zoology* 90, 487–525
 6. MAGGIONI D, GARESE A, HUANG D, HOEKSEMA BW, ARRIGONI R, SEVESO D, GALLI P, BERUMEN ML, MONTALBETTI E, PICA D, TORSANI F, MONTANO S. 2021. Diversity, host specificity and biogeography in the Cladocorynidae (Hydrozoa, Capitata), with description of a new genus. *Cladistics* 38, 13–37
 7. STRONA G, LAFFERTY KD, FATTORINI S, BECK PS, GUILHAUMON F, ARRIGONI R, MONTANO S, SEVESO D, GALLI P, PLANES S, PARRAVICINI V. 2021. Global tropical reef fish richness could decline by around half if corals are lost. *Proceedings of the Royal Society B* 288, 20210274
 8. TERRANEO TI, BENZONI F, ARRIGONI R, BAIRD AH, MARIAPPAN KG, FORSMAN ZH, WOOSTER MK, BOUWMEESTER J, MARSHALL A, BERUMEN ML. 2021. Phylogenomics of *Porites* from the Arabian Peninsula. *Molecular Phylogenetics and Evolution* 161, 107173
 9. ARRIGONI R, BERUMEN ML, MARIAPPAN KG, BECK PS, HULVER AM, MONTANO S, PICHON M, STRONA G, TERRANEO TI, BENZONI F. 2020. Towards a rigorous species delimitation framework for scleractinian corals based on RAD sequencing: the case study of *Leptastrea* from the Indo-Pacific. *Coral Reefs* 39,1001–25
 10. HOEKSEMA BW, ARRIGONI R. 2020. DNA barcoding of a stowaway reef coral in the international aquarium trade results in a new distribution record. *Marine Biodiversity* 50, 41
 11. MAGGIONI D, ARRIGONI R, SEVESO D, GALLI P, BERUMEN ML, DENIS V, HOEKSEMA BW, HUANG D, MANCA F, PICA D, PUCE S, REIMER JD, MONTANO S. 2020. Evolution and biogeography of the *Zanclaea*-Scleractinia symbiosis. *Coral Reefs*, <https://doi.org/10.1007/s00338-020-02010-9>
 12. MAGGIONI D, SCHIAVO A, OSTROVSKY AN, SEVESO D, GALLI P, ARRIGONI R, BERUMEN ML, BENZONI F, MONTANO S. 2020. Cryptic species and host specificity in the bryozoan *Zanclaea divergens* (Hydrozoa, Zancleidae). *Molecular Phylogenetics and Evolution* 151, 106893
 13. MONTANO S, MAGGIONI D, LIGUORI G, ARRIGONI R, BERUMEN ML, SEVESO D, GALLI P, HOEKSEMA BW. 2020. Morpho-molecular traits of Indo-Pacific and Caribbean *Halofolliculina* ciliate infections. *Coral Reefs* 39, 375–386
 14. SEVESO D, MAGGIONI D, ARRIGONI R, MONTALBETTI E, BERUMEN ML, GALLI P, MONTANO M. 2020. Environmental gradients and host availability affecting the symbiosis between *Pteroclava krempfii* and alcyonaceans in the Saudi Arabian central Red Sea. *Marine Ecology Progress Series* 653, 91–103
 15. ARRIGONI R, BERUMEN ML, STOLARSKI J, TERRANEO TI, BENZONI F. 2019. Uncovering hidden coral diversity: a new cryptic lobophylliid scleractinian coral genus from the Indian Ocean. *Cladistics* 35, 301–328
 16. ARRIGONI R, MAGGIONI D, MONTANO S, HOEKSEMA BW, SEVESO D, SHLESINGER T, TERRANEO TI, TIETBOHL MD, BERUMEN ML. 2018. An integrated morpho-molecular approach to delineate species boundaries of *Millepora* from the Red Sea. *Coral Reefs* 37, 967–984
 17. TERRANEO TI, BENZONI F, BAIRD AH, ARRIGONI R, BERUMEN ML 2019. Morphology and molecules reveal two new species of *Porites* (Scleractinia, Poritidae) from the Red Sea and the Gulf of Aden. *Systematics and Biodiversity* 17, 491–508
 18. TERRANEO TI, FUSI M, HUME BCC, ARRIGONI R, VOOLSTRA CR, BENZONI F, FORSMAN ZH, BERUMEN ML 2019. Environmental latitudinal gradients and host-specificity shape Symbiodiniaceae distribution in Red Sea *Porites* corals. *Journal of Biogeography* 46, 2323–2335

19. SEVESO D, ARRIGONI R, MONTANO S, MAGGIONI D, ORLANDI I, BERUMEN ML, GALLI G, VAI M. 2019. Investigating the heat shock protein response involved in coral bleaching across scleractinian species in the central Red Sea. *Coral Reefs* 39, 85–98
20. ARRIGONI R, MAGGIONI D, MONTANO S, HOEKSEMA BW, SEVESO D, SHLESINGER T, TERRANELO TI, TIETBOHL MD, BERUMEN ML. 2018. An integrated morpho-molecular approach to delineate species boundaries of *Millepora* from the Red Sea. *Coral Reefs* 37, 967–984
21. ARRIGONI R, BERUMEN ML, STOLARSKI J, TERRANELO TI, BENZONI F. 2018. Uncovering hidden coral diversity: a new cryptic lobophylliid scleractinian coral genus from the Indian Ocean. *Cladistics* 35, 301–328
22. MAGGIONI D, ARRIGONI R, BERUMEN ML, GALLI P, SEVESO D, MONTANO S. 2018. Polyphyly of the genus *Zanclaea* and family Zanclidae (Hydrozoa, Capitata) revealed by the integrative analysis of two bryozoan-associated species. *Contributions to Zoology* 87, 87–104
23. BENZONI F, ARRIGONI R, BERUMEN ML, TAVIANI M, BONAGERTS P, FRADE PR. 2018. Morphological and genetic divergence between Mediterranean and Caribbean populations of *Madracis pharensis* (Heller 1868) (Scleractinia, Pocilloporidae): too much for one species? *Zootaxa* 4471, 473–492
24. TERRANELO TI, ARRIGONI R, BENZONI F, FORSMAN ZH, BERUMEN ML. 2018. Using ezRAD to reconstruct the complete mitochondrial genome of *Porites fontanesii* (Cnidaria: Scleractinia). *Mitochondrial DNA Part B Resources* 3, 173–174
25. TERRANELO TI, ARRIGONI R, BENZONI F, FORSMAN ZH, BERUMEN ML. 2018. The complete mitochondrial genome of *Porites harrisoni* (Cnidaria: Scleractinia) obtained using next-generation sequencing. *Mitochondrial DNA Part B Resources* 3, 286–287
26. ARRIGONI R, BERUMEN ML, HUANG D, TERRANELO TI, BENZONI F. 2017. *Cyphastrea* (Cnidaria: Scleractinia: Merulinidae) in the Red Sea: phylogeny and a new reef coral species. *Invertebrate Systematics* 31, 141–156
27. ARRIGONI R, VACHERIE B, BENZONI F, STEFANI F, KARSENTI E, JAILLON O, NOT F, NUNES F, PAYRI C, WINCKER P, BARBE V. 2017. A new sequence data set of SSU rRNA gene for Scleractinia and its phylogenetic and ecological applications. *Molecular Ecology Resources* 17, 1054–1071
28. TERRANELO TI, ARRIGONI R, BENZONI F, TIETBOHL MD, BERUMEN ML. 2017. Exploring the genetic diversity of shallow-water Agariciidae (Cnidaria: Anthozoa) from the Saudi Arabian Red Sea. *Marine Biodiversity* 47, 1065–1078
29. MONTANO S, FATTORINI S, PARRAVICINI V, BERUMEN ML, GALLI P, MAGGIONI D, ARRIGONI R, SEVESO D, STRONA G. 2017. Corals hosting symbiotic hydrozoans are less susceptible to predation and disease. *Proceedings of the Royal Society B* 284, 20172405
30. MAGGIONI D, MONTANO S, ARRIGONI R, GALLI P, PUCE S, PICA D, BERUMEN ML. 2017. Genetic diversity of the *Acropora*-associated hydrozoans: new insight from the Red Sea. *Marine Biodiversity* 47, 1045–1055
31. MAGGIONI D, GALLI P, BERUMEN ML, ARRIGONI R, SEVESO D, MONTANO M. 2017. *Astrocoryne cabela*, gen. nov. et sp. nov. (Hydrozoa: Sphaerocorynidae), a new sponge-associated hydrozoan. *Invertebrate Systematics* 31, 734–746
32. ARRIGONI R, BENZONI F, TERRANELO TI, CARAGNANO A, BERUMEN ML. 2016. Recent origin and semi-permeable species boundaries in the scleractinian coral genus *Stylophora* from the Red Sea. *Scientific Reports* 6, 34612
33. ARRIGONI R, BERUMEN ML, CHEN CA, TERRANELO TI, BAIRD AH, PAYRI C, BENZONI F. 2016. Species delimitation in the reef coral genera *Echinophyllia* and *Oxypora* (Scleractinia, Lobophylliidae) with a description of two new species. *Molecular Phylogenetics and Evolution* 105, 146–159
34. ARRIGONI R, BENZONI F, HUANG D, FUKAMI H, CHEN CA, BERUMEN ML, HOOGENBOOM M, THOMSON DP, HOEKSEMA BW, BUDD AF, ZAYASU Y, TERRANELO TI, KIATNO YF, BAIRD AH. 2016. When forms meet genes: revision of the scleractinian genera *Micromussa* and *Homophyllia* (Lobophylliidae) with a description of two new species and one new genus. *Contributions to Zoology* 85, 387–422
35. ARRIGONI R, VACHERIE B, BENZONI F, BARBE V. 2016 The complete mitochondrial genome of *Acanthastrea maxima* (Cnidaria, Lobophylliidae). *Mitochondrial DNA Part B* 27, 927–928
36. HUANG D, ARRIGONI R, BENZONI F, FUKAMI H, KNOWLTON N, SMITH ND, STOLARSKI J, CHOU LM, BUDD AF. 2016. Taxonomic classification of the reef coral family Lobophylliidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society* 178, 634–481
37. TERRANELO TI, BENZONI F, ARRIGONI R, BERUMEN ML. 2016. Species delimitation in the coral

- genus *Goniopora* (Scleractinia, Poritidae) from the Saudi Arabian Red Sea. *Molecular Phylogenetics and Evolution* 102, 278–294
38. ARRIGONI R, BERUMEN ML, TERRANEO TI, CARAGNANO A, BOUWMEESTER J, BENZONI F. 2015. Forgotten in the taxonomic literature: resurrection of the scleractinian coral genus *Sclerophyllia* (Scleractinia, Lobophylliidae) from the Arabian Peninsula and its phylogenetic relationships. *Systematics and Biodiversity* 13, 140–163
 39. MONTANO S, ARRIGONI R, PICA D, MAGGIONI D, PUCE S. 2015. New insights into the symbiosis between *Zanclaea* (Cnidaria, Hydrozoa) and scleractinians. *Zoologica Scripta* 44, 92–105
 40. MONTANO S, MAGGIONI D, ARRIGONI R, SEVESO D, PUCE S, GALLI P. 2015. The hidden diversity of *Zanclaea* associated with scleractinian revealed by molecular data. *PLoS ONE* 10, e0133084
 41. ARRIGONI R, RICHARDS ZT, CHEN AC, BAIRD AH, BENZONI F. 2014. Taxonomy and phylogenetic relationships of the coral genera *Australomussa* and *Parascolymia* (Scleractinia, Lobophylliidae). *Contributions to zoology* 83, 195–215
 42. ARRIGONI R, KITANO YF, STOLARSKI J, HOEKSEMA BW, FUKAMI H, STEFANI F, GALLI P, MONTANO S, CASTOLDI E, BENZONI F. 2014. A phylogeny reconstruction of the Dendrophylliidae (Cnidaria, Scleractinia) based on molecular and micromorphological criteria and its ecological implications. *Zoologica Scripta* 43, 661–688
 43. ARRIGONI R, TERRANEO TI, GALLI P, BENZONI F. 2014. Lobophylliidae (Cnidaria, Scleractinia) reshuffled: pervasive non-monophyly at genus level. *Molecular Phylogenetics and Evolution* 73, 60–64
 44. BENZONI F, ARRIGONI R, WAHEED Z, STEFANI F, HOEKSEMA BW. 2014. Phylogenetic relationships and revision of the genus *Blastomussa* (Cnidaria, Anthozoa, Scleractinia) with description of a new species. *The Raffles Bulletin of Zoology* 62, 358–378
 45. KITANO Y, BENZONI F, ARRIGONI R, SHIRAYAMA Y, WALLACE CC, FUKAMI H. 2014. A phylogeny of the family Poritidae (Cnidaria, Scleractinia) based on molecular and morphological analyses. *PLoS ONE* 9, e98406
 46. HUANG D, BENZONI F, ARRIGONI R, BAIRD AH, BERUMEN ML, BOUWMEESTER J, CHOU LM, FUKAMI H, LICUANAN WY, LOVELL ER, MEIER R, TODD PA, BUDD AF. 2014. Towards a phylogenetic classification of reef corals: the Indo-Pacific genera *Merulina*, *Goniastrea* and *Scapophyllia* (Scleractinia, Merulinidae). *Zoologica Scripta* 43, 531–548
 47. TERRANEO TI, BERUMEN ML, ARRIGONI R, WAHEED Z, BOUWMEESTER J, CARAGNANO A, STEFANI F, BENZONI F. 2014. *Pachyseris inattesa* sp. n. (Cnidaria, Anthozoa, Scleractinia): a new reef coral species from the Red Sea and its phylogenetic relationships. *Zookeys* 433, 1–30
 48. ARRIGONI R, STEFANI F, PICHON M, GALLI P, BENZONI F. 2012. Molecular phylogeny of the Robust clade (Faviidae, Mussidae, Merulinidae, and Pectiniidae): An Indian Ocean perspective. *Molecular Phylogenetics and Evolution* 65, 183–193
 49. BENZONI F, ARRIGONI R, STEFANI F, STOLARSKI J. 2012. Systematics of the coral genus *Craterastrea* (Cnidaria, Anthozoa, Scleractinia) and description of a new family through combined morphological and molecular analyses. *Systematics and Biodiversity* 10, 417–433
 50. BENZONI F, ARRIGONI R, STEFANI F, REIJNEN BT, MONTANO S, HOEKSEMA BW. 2012. Phylogenetic position and taxonomy of *Cycloseris explanulata* and *C. wellsi* (Scleractinia: Fungiidae): lost mushroom corals find their way home. *Contributions to Zoology* 81, 125–146
 51. MONTANO S, SEVESO D, STRONA G, ARRIGONI R, GALLI P. 2012. *Acropora muricata* mortality associated with extensive growth of *Caulerpa racemosa* in Magoodhoo Island, Republic of Maldives. *Coral reefs* 31, 793–793
 52. BENZONI F, ARRIGONI R, STEFANI F, PICHON M. 2011. Phylogeny of the coral genus *Plesiastrea* (Cnidaria, Scleractinia). *Contributions to Zoology* 80, 231–249

Book chapter:

1. TERRANEO TI, MARIAPPAN KG, FORSMAN Z, ARRIGONI R. 2022. Mitochondrial genome of nonmodel marine metazoans by Next-Generation Sequencing (NGS). In: *Marine Genomics*, (eds) Verde C, Giordano D. Humana, New York, NY.
2. BERUMEN ML, ARRIGONI R, BOUWMEESTER J, TERRANEO TI, BENZONI F. 2019. Corals of the Red Sea. Chapter 7. In: *Coral reefs of the Red Sea*, (eds) Voolstra C, Berumen ML. Springer, the Netherlands.