

## Maria Costantini



Born in San Paolo Belsito (Italy) on 27/06/1974

Tel.: +39 081 5833315

Fax: +39 081 7641355

e-mail: maria.costantini@szn.it

**Current Position:** Researcher, III° livello

**Current Affiliation:**

Department of Biology and Evolution of Marine Organisms, Stazione Zoologica Anton Dohrn, Napoli (Italy)

### Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
University Federico II of Napoli, Italy	Laurea	1997	Property of dimeric myoglobin from <i>N. mutabilis</i>
University Federico II of Napoli, Italy	Practical apprenticeship post-lauream	1997-1998	Isolation of gene of the dimeric myoglobin of <i>N. mutabilis</i>
University Federico II of Napoli, Italy	Contract of scientific collaboration with the C.I.R.A.M (Interdipartimental Center of Research "Environment")	1998 -1999	Realization of a database with RAPD analyses for the genetic characterization in populations of psychrophilic bacteria in mineral water in Campania
University Federico II of Napoli, Italy	Contract of scientific collaboration	1999	Analysis of genes in human bones of 4000 years ago by PCR
Stazione Zoologica Anton Dohrn, Napoli, Italy	PhD	1999 - 2003	Genome organization in Sponges
Stazione Zoologica Anton	Fellowship	2003	Molecular Evolution:

Dohrn, Napoli, Italy	from ISME (International Society of Molecular Evolution)	(1 month)	analysis on genome structure
Stazione Zoologica Anton Dohrn, Napoli, Italy	Forward contract as technologist	2003 - 2006	Evolutionary Genomics: organization and compartmentalization in vertebrates and invertebrates genomes
Stazione Zoologica Anton Dohrn, Napoli, Italy	Forward contract as researcher	2007 - 2009	Molecular Evolution and Evolutionary Genomics: genome structure and mapping of structural variations on personal genomes
Stazione Zoologica Anton Dohrn, Napoli, Italy	Research grant	2010 (February-September)	Role of nitric oxide during development in marine invertebrates
Stazione Zoologica Anton Dohrn, Italy	Researcher	2010	Secondary metabolites from marine organisms: source of stress and biologically active compounds

### **Appointments and awards**

- 2005 - First Price, Anton Dohrn award for outstanding poster presentation, 6th Anton Dohrn Workshop "Evolutionary Genomics," Ischia, Italy
- 2006 - Evaluations of Joel Huberman: Faculty of 1000 Biology, 4 May 2006 [<http://www.f1000biology.com/article/id/1032105/evaluation>] for the paper: Costantini M., Clay O., Auletta F., Bernardi G. (2006) An isochore map of human chromosomes. *Genome Research* 16(4): 536-541
- 2014 - Organizing Committee for the workshop "The genome: structure, expression and evolution" September 22-24, 2014 at the Stazione Zoologica Anton Dohrn, Naples, Italy. With the support of the International Union of Biochemistry and Molecular Biology (IUBMB) and the European Molecular Biology Organization (EMBO).
- 2015 - Guest Editor for Marine Genomics Special Issue: The Marine Genome: Structure, Regulation and Evolution
- 2015 – Present: Associate Editor of *Genome Biology and Evolution*

### **Other**

- INTRODUCTION TO SUPERVISION WORKSHOP (SCIENCE, MCT, KMI AND ARCS) at the Open University, Milton Keynes (29th April).
- REVIEWER ACTIVITY FOR THE FOLLOWING JOURNALS: *Biochimie*, *BMC Genomics*, *DNA Cell Biology*, *Gene*, *Genome Biology and Evolution*, *Genome Research*, *Molecular Biology and Evolution*, *PloS One*.

## Students' Supervision

PhD supervisor of one Ph.D. students (Director of Studies – Open University)

Tutor of several Laurea degrees

## Publications

Author of 26 papers publications on ISI-journals (h index: 12)

### Peer-reviewed publications:

- 1) Costantini M. An analysis of sponge genomes. *Gene* 2004;342(2): 321-325.
- 2) Costantini M, Clay O, Auletta F, Bernardi G. An isochore map of human chromosomes. *Genome Research* 2006;16(4): 536-541. [Joel Huberman: Faculty of 1000 Biology, 4 May 2006 <http://www.f1000biology.com/article/id/1032105/evaluation>].
- 3) Costantini M, Clay O, Federico C, Saccone S, Auletta F, Bernardi G. Human chromosomal bands: nested structure, high-definition map and molecular basis. *Chromosoma* 2007; 116(1): 29-40.
- 4) Costantini M, Auletta F, Bernardi G. Isochore patterns and gene distributions in fish genomes. *Genomics* 2007; 90(3): 364-371.
- 5) Costantini M, Di Filippo M, Auletta F, Bernardi G. Isochore pattern and gene distribution in the chicken genome. *Gene* 2007; 400:9-15.
- 6) Costantini M, Bernardi G. Correlations between coding and contiguous non-coding sequences in isochores families from vertebrate genomes. *Gene* 2008; 410:241-248.
- 7) Costantini M, Bernardi G. Replication timing, chromosomal bands and isochores. *Proc. Natl. Acad. Sci. USA*. 2008;105(9): 3433-3437.
- 8) Costantini M, Di Filippo M, Bernardi G. Extrapolating ENCODE data to the whole human genome. *Gene* 2008;419: 66-69.
- 9) Costantini M, Bernardi G. Short-sequence design of isochores from the human genome. *Proc. Natl. Acad. Sci. USA* 2008;105(37): 13971-13976.
- 10) Costantini M, Cammarano R, Bernardi G. The evolution of isochore patterns in vertebrate genomes. *BMC Genomics* 2009;10: 146.
- 11) Costantini M, Bernardi G. Mapping insertions, deletions and SNPs on Venter's chromosomes. *PLoS ONE* 2009;4: e5972.
- 12) Cammarano R, Costantini M, Bernardi G. The isochore patterns of invertebrate genomes. *BMC Genomics* 2009;10: 538.
- 13) Costantini S, Costantini M, Colonna G. Frequencies of specific peptides in intrinsic disordered protein domains. *Protein Pept. Lett.* 2010;17: 1398-1402.
- 14) Romano G, Costantini M, Buttino I, Ianora A, Palumbo A. Nitric oxide mediates the stress response induced by diatom aldehydes in the sea urchin *Paracentrotus lividus*. *PLoS ONE* 2011;6: e25980.
- 15) Costantini M, Auletta F, Bernardi G. The distribution of "new" and "old" Alu sequences in the human genome: the solution of a "mystery". *Molecular Biology and Evolution* 2012;29: 421-427.
- 16) Mattiello T, Costantini M, Di Matteo B, Livigni S, Andouche A, Bonnaud L, Palumbo A. The dynamic nitric oxide pattern in developing cuttlefish *Sepia officinalis*. *Developmental Dynamics* 2012;241: 390-402.

- 17) Marrone V, Piscopo M, Romano G, Ianora A, Palumbo A, Costantini M. Defense against toxic diatom aldehydes in the sea urchin *Paracentrotus lividus*. PLoS ONE 2012;7:e31750.
- 18) Gallo A, Costantini M. Glycobiology in reproductive processes: the state of art. Marine Drugs 2012;10(12): 2861-2892.
- 19) Costantini S, Sharma A, Raucci R, Costantini M, Autiero I, Colonna G. Genealogy of an ancient protein family: the Sirtuins, a family of disordered members. BMC Evolutionary Biology 2013;13: 60.
- 20) Costantini M, Alvarez-Valin F, Costantini S, Cammarano R, Bernardi G. Compositional patterns in the genomes of unicellular eukaryotes. BMC Genomics 2013;14: 755.
- 21) Guariniello S, Colonna G, Raucci R, Costantini M, Di Bernardo G, Bergantino F, Castello G, Costantini S. Structure-function relationship and evolutionary history of the human selenoprotein M (SelM) found over-expressed in hepatocellular carcinoma. BBA – Proteins and Proteomics 2014;1844: 447-456.
- 22) Varrella S, Romano G, Ianora A, Bentley MG, Ruocco N, Costantini M. Molecular response to toxic diatom-derived aldehydes in the sea urchin *Paracentrotus lividus*. Marine Drugs 2014;12: 2089-2113.
- 23) Zuppa A, Costantini S, Costantini M. Identification of bacterial symbionts from the marine sponges *Geodia cydonium* and *Ircinia muscarum*. Bioinformatics 2014;10(4): 196-200.
- 24) Costantini M. An overview on genome organization of marine organisms. Marine Genomics 2015;Apr 18. pii: S1874-7787(15)00057-4. doi: 10.1016/j.margen.2015.03.015
- 25) Costantini S, Romano G, Rusolo F, Capone F, Guerriero E, Colonna G, Ianora A, Ciliberto G, Costantini M. Anti-inflammatory effects of a methanol extract from the marine sponge *Geodia cydonium* on the human breast cancer MCF-7 cell line. Mediators of Inflammation ID 204975.
- 26) Guariniello S, Colonna G, Guerriero E, Capone F, Costantini M, Di Bernardo G, Accardo M, Castello G, Costantini S. (2015) Sequence and structure analysis of human selenoprotein 15kDa (Sep15), an up-expressed protein in the hepatocellular carcinoma. International Journal of Research Studies in Biosciences 3(9), 1-14.