

## Lucia Barra



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**Current Position:** Post Doc. Fellowship

Supervisor: Sergio Balzano and Angela Sardo

Appointed on project: founded by Institution FOE

**Affiliation:**

Section Marine Biotech Department, Stazione Zoologica Anton Dohrn, Napoli (Italy)

### Education/Training/Experience

<b>Institute and Location</b>	<b>Degree / Function</b>	<b>Year</b>	<b>Field of Study</b>
University of Naples “Federico II”, Naples, Italy	Master degree	2000-2005	Biotechnology address Agricultural Science
University of Naples “Federico II”, Naples, Italy	Master degree	2008-2009	Biotechnology address Agro -industry
University of Naples “Federico II”, Naples, Italy	Ph.D.	2005-2008	Biotechnological Science: Molecular basis of reproduction in plants
Stazione Zoologica “Anton Dohrn”, Naples, Italy	Postdoc	2009-2012	Microarray detection of toxic algae
Stazione Zoologica “Anton Dohrn”, Naples, Italy	Postdoc	2012-2013	Microalgal biomass optimisation for biotechnological purposes
CNR-IBBR, Portici (Naples), Italy	Postdoc	2014-2015	Epigenetics of plant reproduction

University of Naples “Federico II”, Naples, Italy	High Qualified Course- PON Biopolis	2016-2017	Biorefinery, Circular Economy, Green Chemistry
Ministry of Research and Instruction	Teacher	2017-2020	Maths, Science, Chemistry, Biology
Stazione Zoologica “Anton Dohrn”, Naples, Italy	Postdoc	2020-till now	Phycoremediation through the use of microalgae

**Patent:** Patent MIDTAL, notification concerning availability of the publication of the international application N. WO2015/00801 Medlin et al. , January 28<sup>th</sup> 2015

### **Oral communication:**

MiDTAL: a microarray approach for the detection of harmful algal blooms (HABs). Barra L., Ruggiero M.V., De Luca P., Kooistra W.H.C.F., Montresor M., Sarno D., Zingone A. 4-5 November 2011. SBI (Società Botanica Italiana, sezione algologia), Ancona, Italy

### **Conferences**

“ICGENE: a real time LAMP based tool for phytopathological diagnostics” Workshop “Precision Monitoring of Citrus Tristeza Virus (CTV) on citrus trees through SMART diagnostic biomolecular analysis directly on field” ALSIACRMA –SS106 Jonica Metaponto (MT), 20 July 2017

Conclusive Event PON03PE\_00107\_1 “BIOPOLIS: A project for bio-economy and country”. Project Work Presentation 11 May 2017, Conference Centre “Federico II”, Via Partenope 36, Naples

“Genome Editing: Molecular basis and application” F.I.B.I.O course, 05 of april 2017, University of Biotechnological Science, Via T. De Amicis 95, Naples

“Transcriptomic analysis through RNA-seq” F.I.B.I.O (Italian Federation of Biotech) course, 11-12 of march 2016, University of Biotechnological Science, Via T. De Amicis 95, Naples

Meiosis Final Project Meeting: “Advances in understanding manipulation of meiotic recombination from Arabidopsis to crop plants” held at Stazione Zoologica Anton Dohrn, Naples from 6<sup>th</sup> to 8<sup>th</sup> of May 2014

Flagship project EPIGEN annual meeting held at Ergife hotel, Rome from 17<sup>th</sup> to 21<sup>th</sup> of February 2014

14<sup>th</sup> International conference on Harmful Algae. 1<sup>th</sup> -5<sup>th</sup> November 2010 Heraklion (Crete)

The Gordon research conference on meiosis. 8<sup>th</sup> -13<sup>th</sup> June 2008 Colby-Sawyer College in New London, New Hampshire, USA

VI Summer School for Plant Genetics: “Genetics of plant development: implications for breeding”. Pacognano, Vico Equense, Naples 13<sup>th</sup> -15<sup>th</sup> June 2007

Summer School in “Advanced microscopic techniques as a tool for plant cellular and tissues analysis”. Sabaudia (LT) 16<sup>th</sup> -19<sup>th</sup> October 2006

50<sup>o</sup> Annual Congress of Italian Society of Agricultural Genetics. Ischia (NA) 10<sup>th</sup> -14<sup>th</sup> September 2006

Giornate Scientifiche del Polo delle Scienze e delle Tecnologie per la Vita. Faculty of Medicine, University of Naples “Federico II” 15th-16th June 2006

V Summer School of Agricultural Genetics: “Plant genetic engineering: technologies and their impact”. Isola Polvese (Pg) 05<sup>th</sup> -07<sup>th</sup> June 2006

### **Other matters relevant to scientific career**

Member of the Italian Biotechnology Association from 2006 till now.

### **Publications**

Author of 10 publications on ISI-journals

#### ***List of publications of the last 10 years:***

##### ***Journal Papers***

Perrella G, Consiglio MF, Aiese-Cigliano R, Cremona G, Sanchez-Moran E, Barra L, Errico A, Bressan RA, Franklin FCH, Conicella C. (2010). Histone hyperacetylation affects meiotic recombination and chromosome segregation in *Arabidopsis*. *Plant J.*, 62: 796-806

Zapata M, Rodríguez F, Fraga S, Barra L, Ruggiero MV. (2011). Chlorophyll c pigment patterns in 18 species (51 strains) of the genus *Pseudo-nitzschia* (bacillariophyceae). *J. Phycol.* 47, 1274–1280

Barra L, Aiese-Cigliano R, Cremona G, De Luca P, Zoppoli P, Consiglio MF, Conicella C. (2012). Transcription profiling of laser microdissected microsporocytes in *Arabidopsis mutant (Atmcc1)* with enhanced histone acetylation. *J. Plant Biol.*, 55: 281-289

Barra L, Ruggiero MV, Sarno D, Montesor M, Kooistra WHCF. (2012). Strengths and weaknesses of microarray approaches to detect *Pseudo-nitzschia* species in the field. *Environ Sci Pollut Res*, doi 10.1007/s11356-012-1330-1.

Ruggiero MV, Barra L. (2012). Project MIDTAL (Microarrays for the Detection of Toxic ALgae): final workshop report. *Harmful Algae News*, 46:16-17

Barra L, Ruggiero MV, Chen J, Kooistra WHCF. (2013). Specificity of LSU rRNA-targeted oligonucleotide probes for *Pseudo-nitzschia* species tested through dot-blot-hybridization. *Environ Sci Pollut Res*, doi 10.1007/s11356-013-1953-x

Brunet C, Chandrasekaran R, Barra L, Giovagnetti V, Corato F, Ruban AV. (2014) Spectral radiation dependent photoprotective mechanism in diatom *Pseudo-nitzschia multistriata*. *PloSone*, 9: e87015

Barra L, Chandrasekaran R, Corato F, Brunet C. (2014). The challenge of ecophysiological biodiversity for biotechnological applications of microalgae. *Marine Drugs*, doi:10.3390/md120x000x

Chandrasekaran R, Barra L, Carillo S, Caruso T, Corsaro MM, Dal Piaz F, Graziani G, Corato F, Pepe D, Manfredonia A, Orefice I, Ruban AV, Brunet C. (2014). Light modulation of biomass and

macromolecular composition of the diatom *Skeletonema marinoi*. Journal of Biotechnology, 192: 114–122

Ruggiero MV, Sarno D, Barra L, Kooistra WHCF, Montresor M, Zingone A. (2015). Diversity and temporal pattern of Pseudo-nitzschia species (*Bacillariophyceae*) through the molecular lens. Harmful Algae, 42: 15–24

McNamee SE, Medlin LK, Kegel J, McCoy GR, Raine R, Barra L, Ruggiero MV, Kooistra WHCF, Montresor M, Hagstrom J, Perez Blanco E, Graneli E, Rodríguez F, Escalera L, Reguera B, Dittami S, Edvardsen B, Taylor J, Lewis JM, Pazos Y, Elliott CT, Campbell K. (2016). Distribution, occurrence and biotoxin composition of the main shellfish toxin producing microalgae within European waters: A comparison of methods of analysis. Harmful Algae, 55: 112-120