



stazione zoologica anton dohrn



Stazione Zoologica Anton Dohrn

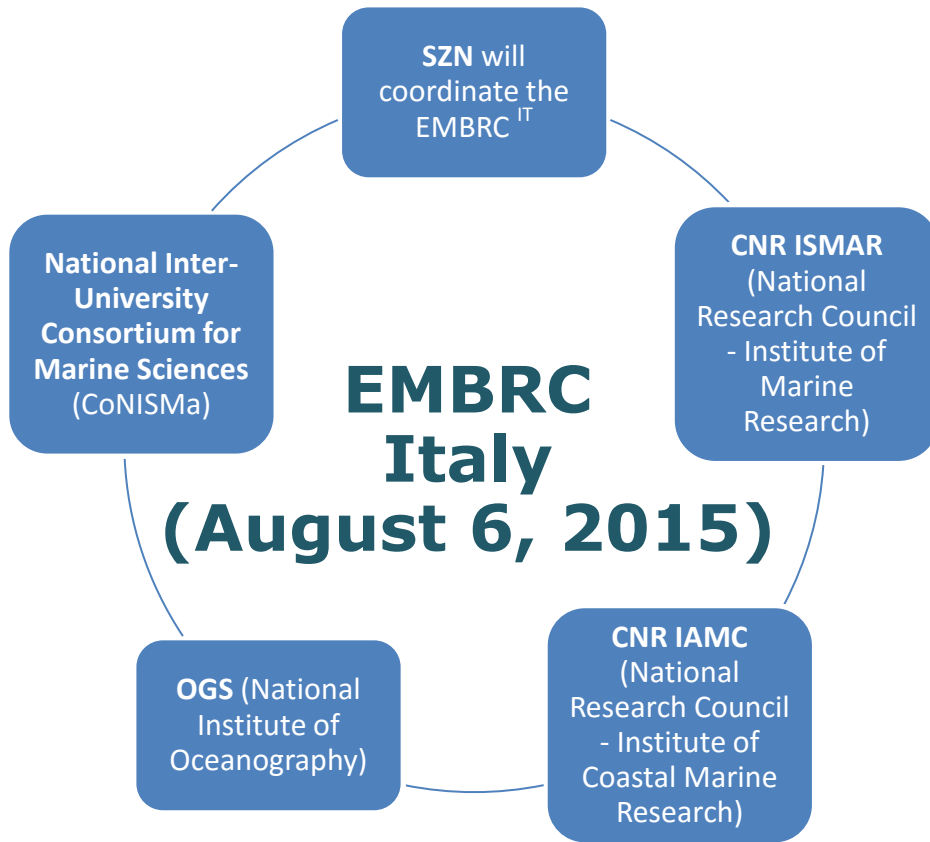
MARINE BIOTECH RESEARCH PLATFORMS, SERVICES AND POSSIBLE PRODUCTS IN NAPLES



Fabrizio Vecchi
Grant and Innovation Officer



JRU EMBRC^{IT} – Italian node of European Marine Biological Resource Centre (EMBRC)

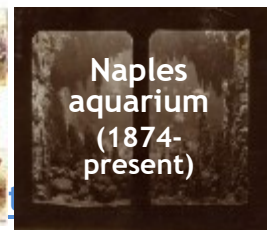


*Overall: >1500 researchers
Access to their infrastructures and competences*



- The Stazione Zoologica of Naples was founded in 1872 by Anton Dohrn
- It was the first marine institution in the world
- To prove and support Darwin's theories

1872
Foundation

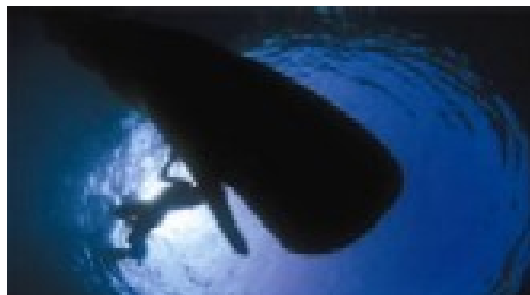


1982
Recognition as Public Special Scientific Institution

1991
National Research Institute

2011
New Statute





2016 - SZN Facts

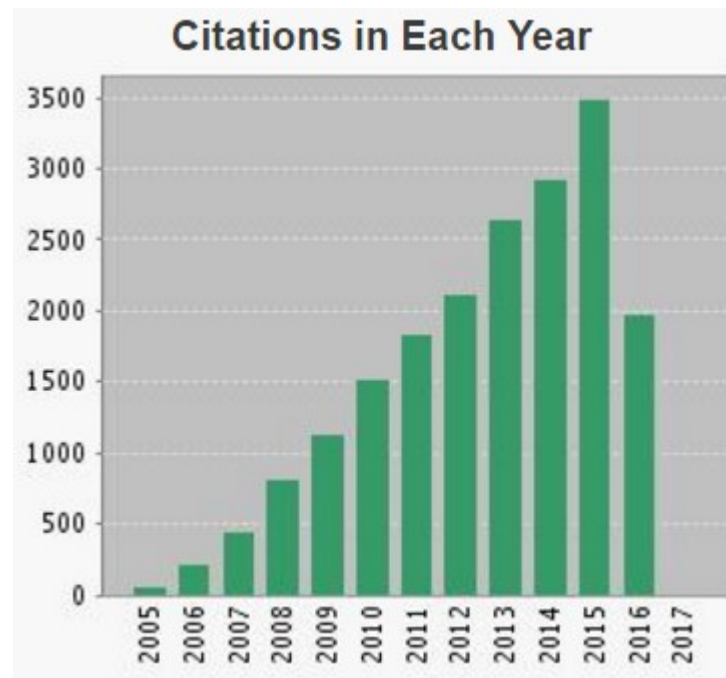
- 200 scientists involved in research on marine science
- International vocation - high percent. of inter. scientists
- Top publications - Nature, Science, PNAS
- International PhD and master degrees
- Outreach activities (the oldest Aquarium in EU, “Science and society”, Turtle Research and Rescue Centre)
- Technical-scientific activities for public institutions and companies - agreements: National (50+) and international (95+) partnerships
- Collaborations: national (45+) and international (55+) universities
- Partner in 3 ESFRI Research Infrastructure (Coordinator of the RI EMBRC Italian node, EMSO, LIFEWATCH)
- SZN research = **100% Blue Growth**

SZN - Scientific production (2005-2015)

Average citations per item (2010-2015): 12.34

WEB OF SCIENCE™

Search date:
08.09.2016



You searched for: AD=naples AND AD=(dohrn OR dorhn OR stn zool OR stazione) OR AD=Napoli AND AD=(dohrn OR dorhn OR stn zool OR stazione)

An analysis of the scientific performance of SZN and of its researchers is ongoing (Research Value - Giovanni Abramo)

Almost all SZN researchers publish in top journal (last 10 years)

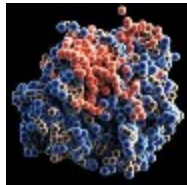
9 Nature - 8 Science - 14 PNAS

Results found:	968
Sum of the Times Cited [?]	19214
Sum of Times Cited without self-citations [?]	16882
Citing Articles [?]	12553
Citing Articles without self-citations [?]	11977
Average Citations per Item [?]	19.85
h-index [?]	61

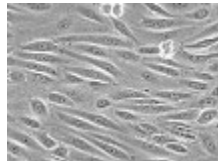
Biotechnology techniques @ SZN



DNA/RNA Genomics, pharmacogenomics, gene probes, genetic engineering, DNA/RNA sequencing/amplification, gene expression profiling, and use of antisense technology



Proteins and other molecules Improved delivery methods for large-molecule drugs; proteomics, protein isolation and purification, signalling, identification of cell receptors



Cell and tissue culture and engineering Cell culture, embryo manipulation, marker-assisted breeding technologies



Process biotechnology techniques Fermentation using bioreactors, bioremediation, biosensing, biofiltration and phytoremediation, molecular aquaculture



Bioinformatics Construction of databases on genomes, protein sequences; modelling complex biological processes, including systems biology

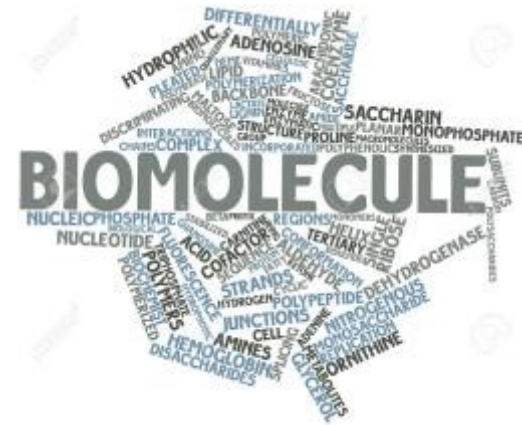
Selection of Biotechnology services @ SZN

Sampling and provision

Identification and Taxonomy

Biocompatibility test

Discovery of new biomolecules

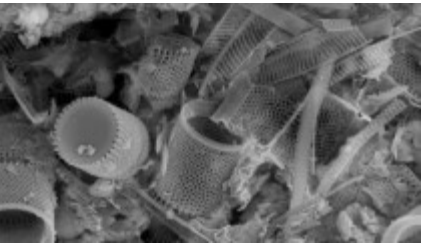


Access (restricted) to biota and their ecosystem in the Gulf of Naples



- Sampling of marine organisms
- Sampling subtidal areas
- Access to LTER plankton samples and environmental data from high CO₂ - low pH site (Ischia)
- Sampling at LTER Marechiaro
- Sublittoral sediment
- Posidonia seagrass beds

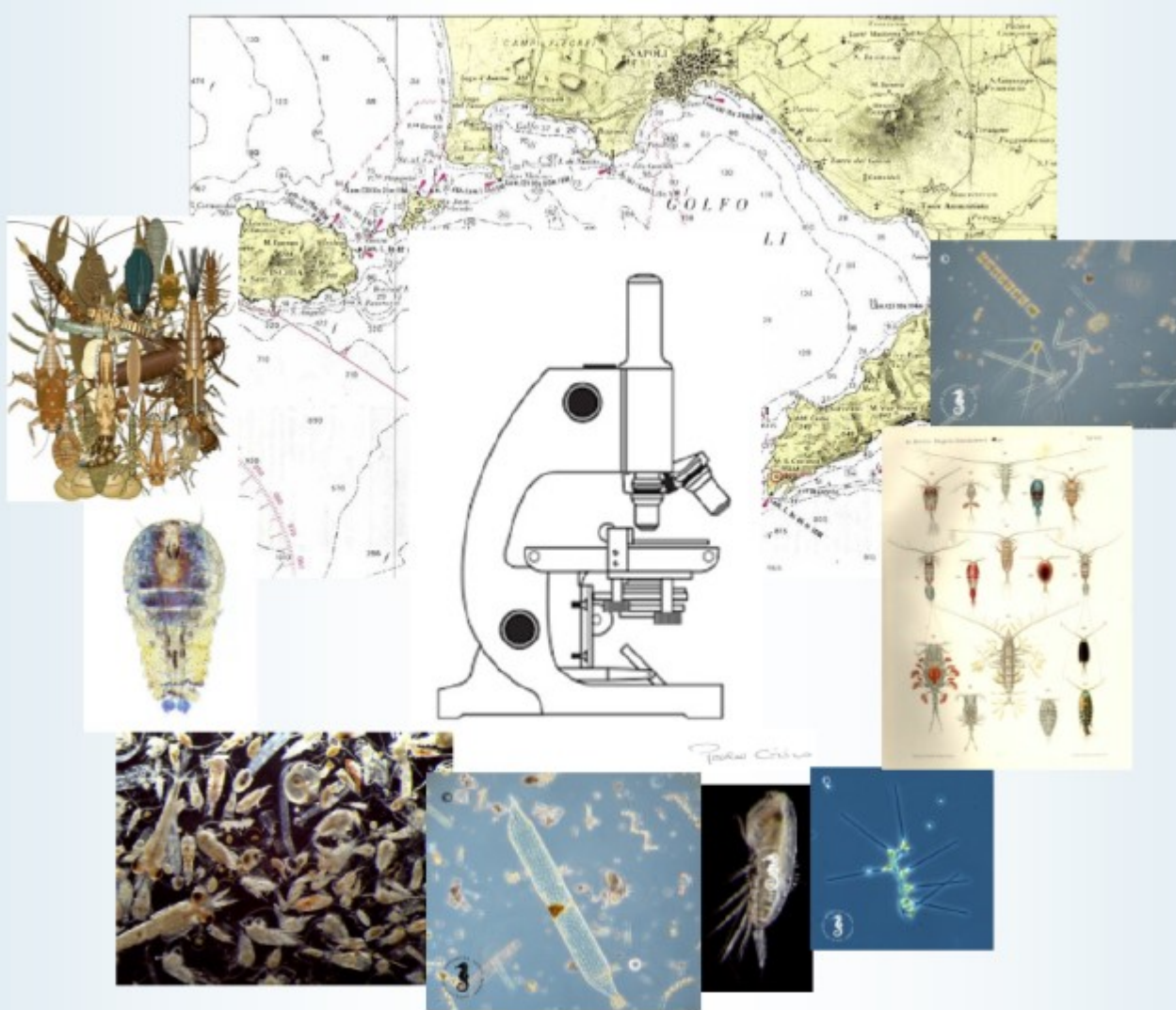
Provision of marine organisms



- Diatoms (Isolation on request)
- Dinoflagellates (Isolation on request)
- Phaeodactylum tricornutum (Genetically modified strains)
- Pseudo-nitzschia multistriata (Multi-generation strains)
- Benthic macrofauna (Sampled on request)
- Ciona intestinalis (Sampled on request)
- Paracentrotus lividus (Sampled on request)
- Astropecten aranciacus (Sampled on request)
- Branchiostoma lanceolatum (Sampled on request)
- Octopus vulgaris (Research restricted by law)
- Sepia officinalis (Research restricted by law)
- Caretta caretta (Research restricted by law)



Identification and Taxonomy service



- Sample sorting
- Sorting of target species
- Classical taxonomic identification
- Detailed morphological analyses
- Sample counting
- Molecular analyses (DNA/RNA extraction, barcoding, etc.)
- Training courses and workshops

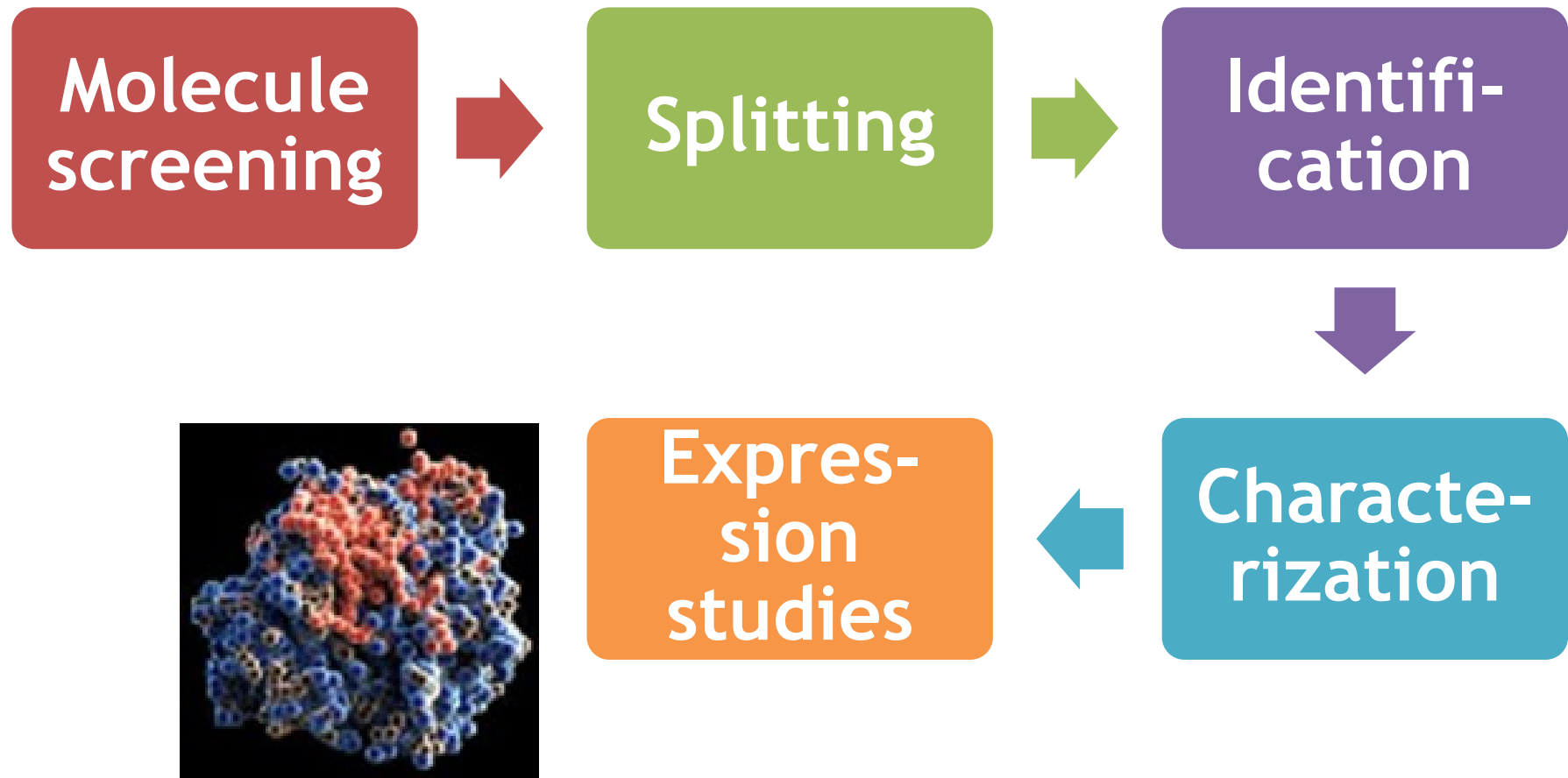
Biocompatibility test in controlled systems



- Maintenance of experiments and logistic support for experimentation (climate controlled aquaria)
- Access to experimental facilities photobioreactors, climate rooms, temp. and light controlled incubators, temp. and light controlled mesocosms



Complete process to discover new biomolecules



BIOSEARCH

BioSEArch Srl - Spin off company of the Stazione Zoologica Anton Dohrn and the National Research Council (CNR) to develop and exploit **new molecules of marine origin to treat infections, inflammatory diseases and cancer**

Current portfolio

- 1) A novel vaccine adjuvant
- 2) A new cosmeceutical with antiaging properties from marine microalgae
- 3) A new potential anticancer for lung carcinoma treatment from marine microalgae

CONTACT

Diego Bosco

diego.bosco82@gmail.com

biosearch@pec.net

Mob. +39.348.1306750

Skype: diego.bosco82

Patents @ SZN

Title	Num.	Year	Application
Algal flocculation by inactivation of photoreceptors	EP 2441828B1	2010	To improve the diatom biofuel production
Light system for aquatic photosynthetic organisms	EP2883950	2013	To improve the production of aquatic photosynthetic organisms
Automated apparatus and process for cultures of aquatic Organisms	PCT/IB2016 /052128	2015	To reduce the costs for cultures of aquatic organisms

Applications under submission

- A new fast method for the early diagnosis of cell fate
- A novel inhibitor of gamma-Glutamyl Transpeptidase
- System for remote real-time distributed measuring



Fabrizio Vecchi
Grant and Innovation Officer
fabrizio.vecchi@szn.it
+39 340 7207845
Skype: fvecchi69

*Knowledge from the Sea,
knowledge for the Sea*

*Explore the Mediterranean Sea to
understand and protect the Global Ocean*