#### Curriculum vitae et studiorum

#### Stefano Piraino

Associate Professor, Zoology & Evolutionary Biology
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Google Scholar (H index 26, 2274 citations on February 20th, 2017) http://goo.gl/BJiSqR

Research Gate (RG Score 40.14 on February 20th, 2017) https://www.researchgate.net/profile/Stefano Piraino/publications

#### **Personal Data**

Birth place/date Palermo (Italy), 06/12/1960 Tax Code PRNSFN60T06G273X

### Main disciplines

Marine invertebrate zoology and developmental biology, focus on cnidarians (zoology and evolutionary developmental biology, taxonomy, systematics, ecology, biotech applications)

#### Keywords

Jellyfish, polyps, life cycles, reproduction, integrative taxonomy, evolution; biodiversity conservation, pelagobenthic coupling, species functional roles, outbreak-forming species, trophic ecology, genetic connectivity, marine bioinvasions, metagenomics; reverse development, cell transdifferentiation, organogenesis; bioactive compounds.

#### Education

| 1990 | Ph.D. Marine Environmental Sciences (III cycle) – University of Naples, Stazione Zoologica of |
|------|---|
|      | Naples, University of Messina, University of Catania.   |
| 1984 | (February) Bachelor Degree + M.Sc. equivalent, cum laude - University of Palermo              |

#### **Professional Appointments**

| 2015-2021 -    | National Qualification to Full Professor (05/B1, Zoology)                              |
|----------------|--|
| 2005 - to date | Associate Professor of Zoology, University of Salento, Lecce (Italy)                   |
| 2000 -2005     | Researcher and lecturer, University of Salento, Lecce (Italy)                          |
| 1995- 2000     | Researcher, National Research Council, Oceanographic Institute Taranto (Italy)         |
| 1994           | Post-doc fellow, National Health Institute, Rome (Italy)                               |
| 1991-1993      | Post-doc fellow, University Federico II, Naples (Italy)                                |
| 1989-1991      | Research Assistant, National Research Council, Oceanographic Institute Taranto (Italy) |
|                |  |

#### **Professional Service**

- Chairman, Academic Board in Biology, University of Salento, Lecce (Italy) (2015-2108)
- Steering Committee Member, EuroMarine International Research Network (2014 to date)
- Steering Committee Member, Italian Zoological Union (UZI, Unione Zoologica Italiana) (2014-2017)

- Chairman, Educational Board Italian Zoological Union (Unione Zoologica Italiana) (2016-2017)
- Member of JRC-EASIN European Alien Species Information Network Editorial Board (2015 to date)
- Director, National Interuniversity Consortium of Marine Science (CONISMA) Research Unit, University of Salento
- University of Salento Delegate Member of the Steering Committee of the National Interuniversity Consortium of Marine Sciences
- President of the International Hydrozoan Society (2007-2010)
- Guest Editor: *Estuarine, Coastal and Shelf Science* (2015-2017) Special Issue "Vectors of Change in Oceans and Seas Marine Life, Impact on Economic Sectors" *Biological Invasions* (2015) Special issue " Molecular Tools for monitoring marine bioinvasions"; *Marine Ecology* Wiley (2012) Special Issue "Current Trends in Hydrozoan Biology"; *Scientia Marina* (1996) Special Issue "Advances in Hydrozoan Biology"
- Associate Editor "Marine Biodiversity" Springer
- Associate Editor "Marine Ecology An Evolutionary Perspective" (Wiley)
- Chairman Steering Committee 5th International Jellyfish Blooms Symposium (Barcelona) (30 May-3 June 2016) http://www.jellyfishbloom2016.com/
- Chairman 7th International Workshop of the Hydrozoan Society (Porto Cesareo, Italy, September 2010).
- Organizer 3rd International Workshop of the Hydrozoan Society (Roscoff, France, October 1994)
- Reviewer for scientific journals: Current Biology, Estuarine Coastal and Shelf Science, Journal of Plankton
  Research, Hydrobiologia, International Journal of Developmental Biology, Invertebrate Biology, Journal of
  Applied Ecology, Journal Experimental Zoology, Journal of Integrative and Comparative Biology (USA), Journal
  of Marine Biological Association (UK), Journal of Theoretical Biology, Meiofauna marina, Marine Biology,
  Marine Ecology, Proceedings National Academy of Sciences U.S., PLOS One, Proceedings Royal Society London
  B, Sarsia, Scientia Marina, Tissue and Cell, Zoomorphology
- Scientific Proposal Reviewer for: U.S. National Science Foundation (NSF), FWF Fonds zur Förderung der wissenschaftlichen Forschung (Austrian Science Fund), CNRS (Centre National de la Recherche Scientifique, France)
- Chairman Board for the selection procedure of 1 full time position of research technologist, Stazione Zoologica of Naples (2009)
- University of Salento delegate Coordinator of bilateral agreements with Universities of Basel (Switzerland), Zhoushan (China), Lille (France)

#### Teaching I - Courses

|              | reacting reduises  |
|--------------|--|
| 2015         | Chairman, Co-organizer NSF - ARTS Graduate/postgraduate Course on Systematics and Biology      |
|              | of Hydrozoa (Cnidaria) Bocas del Toro - Smithsonian Tropical Research Institute (Panama) (7-   |
|              | 21 July)   |
| 2015         | Chairman, Co-organizer International Graduate Summer School "An integrated approach to         |
| inverte      | brate biodiversity: evolutionary and functional adaptations" co-organized with                 |
| Univer       | sities of Padova, Milano, Palermo at Tricase Porto (Lecce) (21-26 September 2015)              |
| 2014         | Chairman, Co-organizer International Graduate Summer School Introductions to Cnidarians and    |
|              | ctenophores (ICM-CSIC, Barcelona, November 2014)   |
| 2013         | Chairman, Co-organizer International graduate summer School "An integrated approach to         |
|              | invertebrate biodiversity: evolutionary and functional adaptations" co-organized with          |
|              | Universities of Padoa, Milano, Palermo at Chioggia Marine Biological Station (June 17-22)      |
| 2010 to date | Università del Salento - Course on Life cycles and Development of Marine Invertebrates -       |
|              | Module Evolution and Development (Master Course Programme in Coastal and Marine Biology        |
|              | and Ecology - 2010 to date, entirely taught in English)  |
| 2006 to date | Chairman - Co-organizer of Master Course (2006-2012, 2014-2016) on Experimental                |
|              | Developmental Biology of Marine Invertebrates (in collaboration with UPMC Paris VI and         |
|              | University of Basel) - Station Biologique de Roscoff (France) (entirely taught in English)     |
| 2000 to date | Università del Salento - courses of Zoology, Animal Biology, General Biology, Biodiversity and |
|              | Biotechnologies, Systematics and Phylogenetics, Experimental Biology of Marine Invertebrates   |
|              | (Bachelor Course Programmes in Biotechnology and Biological Sciences) (in Italian)             |

| 2008-2009 | Zoology and Biology Didactics course for High School Teachers Education | (SSIS) |
|-----------|---|--------|
| 2007-2008 | Zoology and Biology Didactics course for High School Teachers Education | (SSIS) |
| 2002-2003 | Zoology and Biology Didactics course for High School Teachers Education | (SSIS) |

## Teaching II - PhD Board memberships/ PhD tutorships

Université Pierre et Marie Curie Paris VI - Steering Committee PhD thesis (Gonzalo Quiroga Artigas) (2017) University of Aix Marseille - Steering Committee PhD thesis (Justine Gadreaud) (2015) first year University of Alicante (Spain) Chairman Steering Committee PhD (Cesar Bordehore Fontanet) (2014) Joint PhD École doctorale Systèmes Intégrés, Environnement et Biodiversité, École Pratique des Hautes Études, France and Università del Salento - Steering Committee PhD Fundamental Ecology - Dr. Rita Sahyoun (2012) University of Palermo Steering Committee PhD Animal Biology (XIX cycle, XXII cycle) University of Messina Steering Committee PhD PhD Environmental Sciences: Marine Environment and Resources (XXI cycle)

University of Milano Steering Committee PhD Animal Biology (2009)

University of Basel (Switzerland) Steering Committee PhD in Developmental Biology (Daria Graziussi)(2008)

PhD theses tutorships in Animal Biology/Fundamental Ecology/ Biological Resources/Earth system sciences: environment, resources and cultural heritage/Plankton ecology

University of Salento

dr. Giorgio Aglieri, dr. Giacomo Milisenda (2014)

dr Serena Zampardi, dr Mar Bosch-Belmar (2016)

Co-tutorship University of Tuscia (Viterbo) dr. Simonetta Scorrano (2015)

Co-tutor University of Modena and Reggio Emilia Dr.ssa Rosa Caprioli (2015)

Co-tutor Université de Carthage, Tunisia at Faculté des Sciences de Bizerte dr.ssa Sonia Gueroun (2013-2015)

Co-tutorship University of Milano (dr. Alessandro Dell'Anna) (2012)

Co-tutor PhD thesis Universidad de Cadiz, Dr Manuel Maria Gonzalez-Duarte (2011)

# Scientific activity (Projects and research grant)

| 2016-2019   | National Coordinator PRIN Italian National Project " PHENIX - From cell fate plasticity      |
|-------------|--|
|             | to tissue homeostasis to longevity: insights from two emerging model invertebrates,          |
|             | the"immortal jellyfish" Turritopsis dohrnii and the budding ascidian Botryllus schlosseri"   |
| 2016-2020   | Principal Investigator CONISMA-Lecce Research Unit H2020 project CERES - Climate change      |
| and         | European aquatic resources (jellyfish impact on fishery and aquaculture)                     |
| 2016-2018   | Scientific Coordinator PULMO EC-Marie Sklodowska-Curie IF "Population dynamics, trophic      |
| interac     | tions, and exploitation of a novel nutraceutical and pharmaceutical marine resource: the     |
| Medite      | rranean sea lung, Rhizostoma pulmo"  |
| 2012-2015   | Scientific Coordinator ENPI CBC MED project MED-JELLYRISK (www.jellyrisk.eu) 2012-2015: "    |
|             | Integrated monitoring of jellyfish outbreaks under anthropogenic and climatic impacts in the |
|             | Mediterranean Sea (coastal zones): trophic and socio-economic risks"                         |
| 2011- 2015  | WP Leader / Member of Steering Committee - EC 7th FP Project VECTORS "Vectors of Change      |
|             | in Oceans and Seas Marine Life, Impact on Economic Sectors WP2 Mechanisms of changes" -      |
| WP2.1)      | Outbreaks and invasive species".   |
| 2012 - 2016 | Task Leader EU 7thFP Towards COast to COast NETworks of marine protected areas               |
|             | (from the shore to the high and deep sea), coupled with sea-based wind energy                |
|             | potential (CoCoNET) project - Lead Author deliverable D4.2 "Report on dynamics of the        |
| invasive    | species in the Mediterranean and Black Seas"   |
| 2012        | ASSEMBLE Visiting grant /on site access Kristineberg Marine Station (Sweden) - Project       |
|             | coordinator research proposal MORPHOS-GAP "Role of intercellular gap junction                |
|             | communications in morphogenesis and neural development of the basal metazoan Clava           |
|             | multicornis (Hydrozoa, Cnidaria)" (main applicant)   |

| 2008-2010                               | National Coordinator PRIN 2007 Italian National Project " PROTOBRAIN - Origin and Evolution of centralized nervous systems in early metazoans"                            |  |  |  |
|---|---|--|--|--|
| 2003-2006<br>hvdroz                     | Scientific Coordinator EC 5th FP Project Marie Curie Project "MEDUSA - Genetic controls for zoan life cycle reversal: Hox/Parahox gene inventory and expression studies". |  |  |  |
| 2003                                    | Sandgerdi Marine Center, Iceland - European Commission Grant Visiting Scientist   |  |  |  |
| 2000 - 2003                             | PNRA - Programma Nazionale Ricerche in Antartide (2000, 2002 POLARSTEN R/V, Alfred  |  |  |  |
|   | Wegener Institute; Coordinator, Biology group at the Italian Base "Mario Zucchelli", Terra Nova   |  |  |  |
|   | Bay, Ross Sea, Antarctica)  |  |  |  |
| 1999                                    | National Research Council - Short-Term Mobility Grant, University of Basel (Switzerland)  |  |  |  |
| Research periods (visiting scientist)   |   |  |  |  |
| 2015                                    | Smithsonian Tropical Research Institute - Panama (2 weeks)  |  |  |  |
| 2003                                    | Sandgerdi Marine Center (Iceland) (1 month)   |  |  |  |
| 1995-2005                               | Zoology Institute of the University of Basel and the Biocenter/Pharmacenter, Basel (2-3   |  |  |  |
|   | weeks per year)   |  |  |  |
| 1992                                    | Friday Harbor Laboratories, University of Washington BC, USA (2 months),  |  |  |  |
| 1988                                    | National Environmental Council UK, Plymouth (2 months)  |  |  |  |
| 1987-1989                               | Stazione Zoologica of Naples (PhD fellow)   |  |  |  |
| Third Mission (outreach, international) |   |  |  |  |
| 2016                                    | NATIONAL GEOGRAPHIC "Like 'Deadpool,' This Jellyfish Has Amazing Superpowers  |  |  |  |
|   | (https://goo.gl/8EMhvL)   |  |  |  |
| 2014                                    | EUROCEAN 2014 - EUROPEAN MARINE BOARD EVENT (ROME, October 7-9) - Invited Speaker   |  |  |  |
|   | "Citizen Science in Action (Jellywatch)"  |  |  |  |
| 2014                                    | Suez Canal expansion could see more alien species invade the Mediterranean. The Conversation.   |  |  |  |
|   | (https://goo.gl/BuJt9R)   |  |  |  |
| 2014                                    | NATIONAL GEOGRAPHIC Beautiful, Golden Jellyfish Invading Fisher's Nets Is a New Species   |  |  |  |
|   | (https://goo.gl/EeKSQE)   |  |  |  |
| 2014                                    | The beautiful new jellyfish identified in the Gulf of Venice. The Conversation  |  |  |  |
|   | (https://goo.gl/6rXQDM)   |  |  |  |
| 2013                                    | THE GUARDIAN Jellyfish surge in Mediterranean threatens environment – and tourists (on  |  |  |  |
|   | ENPI CBC MED project Med-Jellyrisk) (https://goo.gl/qaI7kF)   |  |  |  |
| 2009                                    | NATIONAL GEOGRAPHIC "Immortal" Jellyfish Swarm World's Oceans (https://goo.gl/40bj)   |  |  |  |
| 2008                                    | Cuissot P, Lossignol F. (film directors) Cuissot P, Turquet B. (film writers) - Superjellyfish  |  |  |  |
|   | (Movie), Gideon production (France) (53 minutes). https://goo.gl/AAydMa   |  |  |  |
| 2008                                    | Proponent and Author of Laudatio for the Degree Honoris Causa in Human Biology to Walter  |  |  |  |
|   | Jakob Gehring (Lecce, 18 March 2008   |  |  |  |
|   |   |  |  |  |