

*Ethics, Health, Biotechnology,
Marine Science, geoscience
geoEthics, Third countries,
Access and Benefit Sharing
Innovative partnerships,
international cooperation,*



www.sciencethics.org

*Cell cycle, cancer
Ocean observation,
Innovation,
Artificial Intelligence
personal data protection
Scientific Management*

Independent Ethics Advisor

Executive Director, Institut de Science et Ethique, Since 2015. consulting company for ethics and for scientific research project and implementation of governance based on socio-ecological systems (management, communication, coordination), Nice, France

Expert evaluator & reviewer Since 2014

For Ethics, European Commission (Marie Curie Skodolowska, SME-INSTRUMENT, H2020 INNOSUP, Ethics checks/assessment follow-up 2016, H2020-BG, H2020-RUR, H2020-BB, H2020-SFS)

For Science, European Commission (H2020 Societal Challenge 2, H2020-SC2-2014-SFS-BG ISIB), **Federal Ministry of Education and Research in Germany**-Federal Government's Strategy for the Internationalization of Science and Research (2015).

Author of the CIESM Charter on Access and Benefits Sharing of Marine Genetics Resources for access to knowledge to everyone and to prevent the abuses of the ocean global commons, 2014 (<http://www.ciesm.org/>)

Scientific Officer

International Scientific Officer – Mediterranean Science Commission – **CIESM**, HQ Monaco. Since 2008

Officer in Marine Genetics Resources, Marine Biotechnology, Access and Benefits Sharing,

CIESM is an inter-governmental organisation conceived in 1910 that promotes research in the Mediterranean and Black Seas. It offers a unique forum for scientific exchanges and dialogue and facilitates, stimulates cooperation efforts across the Basin. 23 States around the Mediterranean and Black seas are members of CIESM

International Scientific Manager

Project Manager of the WP “Autonomous Ocean Observation networks including Argo floats, drifters, gliders, moorings (PIRATA, Biogeochemical fixed-platforms, Transport Mooring Array) European Aquatic Animals Tracking Network H2020 AtlantOS project. Since 2015.

European Project Manager, Station Biologique de Roscoff – SBR- **CNRS-UPMC**, France 2004-2008

- Project: FP7 Network of Excellence « **Marine Genomics Europe – MGE**” (10 M€, 45 institutions, 16 countries, 500 scientists)
- Project *Marie Curie* “**ESTEAM**” (1,8 M€ for 9 early-stage international scientists studying at SBR)

Leader of the communication strategy (internal and external) MGE and ESTeam

Scientist specialized in marine sciences

At **IFREMER**, Microbiology and Phycotoxin Department, REPHY Program, Nantes, **France** (2002)

At **NOAA** - Department of Commerce, National Ocean Service -Center for Coastal Environmental Health and Biomolecular Research-CCEHBR, Charleston, SC, USA (1999- 2002)

At **Institut Territorial de Recherches Médicales Louis Malardé (Institut Pasteur)**, Medical Oceanography Unit, Papeete, Tahiti, French Polynesia (1997-1999)

At **Observatoire Océanologique de Banyuls sur mer**, Cell and Molecular Biology Department (CNRS-UPMC) (Ifremer PhD grant), France , (1992-1996)

Education

PhD in Life Science, Cell and Molecular Biology, Univ. Pierre and Marie Curie, Paris 6, Observatoire Océanologique de Banyuls sur mer, France. PhD thesis title: “Cell cycle regulation in unicellular eukaryote Dinoflagellates”. PIs: M.O. Soyer-Gobillard & A. Picard, 1996

Master in Animal Biology and Cell physiology, option Genetics, Protistology and Microbiology, Univ. Blaise Pascal, Clermont Ferrand, France, 1990

Bachelor on Animal Cell Biology and Physiology, option Virology, Bacteriology, Immunology and Microbiology, Univ. Blaise Pascal, Clermont Ferrand, France, 1989

Expertise

Legislation

UNCLOS and Nagoya Protocol in the framework of the Ocean Sampling Day implementation in MicroB3: Bioinformatics and Marine microbial diversity - EU-FP7 project, MPI MM, German (www.microb3.eu/)

Member of the advisory board on legal issues within the **Project Oceanomics** (Investissement d'Avenir) - wOrld oCEAN biOressources, biotechnologies, and Earth-system servICeS-, Biotechnologies et Bioressources, **2015**, coordination SB Roscoff, France

Education and Capacity Building

Courses on ethics in research. Highlighting human health and safety, environmental protection but also artificial intelligence, transhumanism and data protection, use of animal in research.

Initiation of new partnerships: Technical pedagogic engineer, UPMC – CNRS (2014) “New partnerships for marine biotechnology development” (Master de Biologie Intégrée – Biologie et Bioressources Marines)

Elaboration of long-term programs and management large international scientific networks in research and capacity building; conception of integrating activities: sharing technology platforms, training and education; gender actions

Communication

Initiation of white papers in Marine sciences: “Marine Genomics Europe: The European Flagship in Marine Sciences for a Sustainable Future”. 2008. Aman R., Arendt D., Barbier M., Boyen C., *et al.*

Initiation of scientific book series on marine genomics “Introduction to marine genomics” J.M. Cock Ed., Springer, 2010.

Creation and implementation of original communication supports

“ImaGene”, a photo contest on marine genomics, 2005 (see *Science*, 310: 227, 2005) followed up by a travelling exhibition in European aquaria

“Once upon a time... the marine sciences”, 2005, a booklet made by and for teenagers

Scientific edition (French and English, see below) **& Popular articles:**

-“Algae and posidonia” A. Mouradi, M. Barbier, Dictionary of the Mediterranean, Editions Actes Sud, MMSH, CNRS (2016)

- “The Mediterranean, a major research laboratory for Global warming in need of a GO-SHIP program”, [CIESM press release](#);
- Recherches génomiques sur les organismes marins, M. Barbier & C. Boyen, 2006, *BioFutur* (265): 53-56

Winner of a scientific communication prize, Institut Malardé, Tahiti:” le généthon de la gratte” (1998)

Winner of the Daniel Jouvance prize (1996)

Editions

Biogeochemical-Argo Planning Group. 2016. The scientific rationale, design and Implementation Plan for a Biogeochemical-Argo float array. *Edited by Ken Johnson and Hervé Claustre.* doi:10.13155/46601

Special Issue of *Marine Genomics* “Omics at the crossroads –from integrated science to multisector implications”, Vol 17, 2014 , L. *Giuliano & M. Barbier*, Guest editors.

***CIESM Marine Policy Series* (1)** (51p): New partnerships for blue biotechnology development, 2012, L. *Giuliano, M. Barbier.*

***CIESM Workshop Monograph* n°43:** Designing Med-SHIP: a program for repeated oceanographic surveys, 2011 (162 p.), *F. Briand Ed.*

Special Issue of *Microbial Biotechnology* “Marine Omics” Vol 3, (5), 2010. L. *Giuliano, M. Barbier & F. Briand*, Guest editors.

Publications (selection)

Ethical recommendations for ocean observation, Barbier, M., Reitz, A., Pabortsava, K., Wöflf, A.-C., Hahn, T., and Whoriskey, F. *Adv. Geosci.*, 45, 343-361, 2018 <https://doi.org/10.5194/adgeo-45-343-2018>

The Ocean Sampling Day, Kopf et al. *GigaScience* 2015 4:27

The founding charter of the Genomic Observatories Network, Davies et al. *GigaScience*, 2014, 3:2

Marketing opportunities for jellyfish, M. Barbier and H. Milo, *CIESM Marine Policy series* 2012, (1): 25-30.

Computing power and Bioinformatics – catching up with the Genomics revolution. M. Barbier, F.O. Glöckner, G. Sutton, M. El Bour, B. Bouhaouala, L. Giuliano in *Report on Marine Genomics: ‘The Interface of Marine Microbial Ecology and Biotechnological Applications’* 2009 edited by the EU US Task Force on Biotechnology Research .

Empowering Marine Science through Genomics. *Marine Genomics* 2008 (1): 33-35. F.A.M.J. Volckaert, M. Barbier, A.V.M. Canario, J.L. Olsen, J. Wesnigk, M. Clark and C. Boyen.

Permanent expression of a cyclin B homologue in the cell cycle of a primitive unicellular dinoflagellate, *Karenia brevis*. *Journal of Eukaryotic Microbiology* 2003 50 (2): 123-131. Barbier M., Leighfield T.A., Soyer-Gobilarad M.O.& Van Dolah F

Dinoflagellate centrosome: Associated proteins old and new. *Eur. J. Protistology* 2000 36(1):1-19. Ausseil J., Soyer-Gobillard M.O., Géraud M.L., Bhaud Y., Perret E., Barbier M., Albert M., Plaisance L., Moreau H

Co-localization of the cyclin B homologue, p56 and beta-tubulin during the cell cycle in a unicellular Dinoflagellate. *Biology of the Cell* 1998 90 (1): 63-76. Barbier M., Géraud M.L., and Soyer-Gobillard M.O

Cell cycle regulation of the primitive Dinoflagellate *Cryptothecodinium cohnii* Biechler: Evidence for the presence of a homologue of cyclin B. *Biology of the Cell* 1995 84: 35-42. Barbier M., Albert M., Géraud M., Picard A., Soyer-Gobillard M

A detailed study of the complex cell cycle of the Dinoflagellate *Cryptothecodinium cohnii* and evidence for variation in histone H1 kinase activity. *Journal of Eukaryotic Microbiology* 1994 41 (5): 519-526. Bhaud Y., Barbier M., Soyer-Gobillard.

Conferences (selection)

Marine Bioprospecting, legislation & ethics, M. Barbier, IRCAN – Institute for research and cancer, France, 9 September 2017

Barbier M. Access to algae: legislation, science and ethics, 11th International phycological Congress, Bioprospecting for algae: the profitable side of collecting algae Szczecin, Poland, 13-18 August 2017

Participation to the ERANet MarineBiotech OUTLOOK workshop, foresight process to develop a longer term view of how and where marine biotechnology is likely to contribute to the realisation of the grand societal challenges by maximising the impact of research funds provided by the EU's research programme H2020, Copenhagen, 4-5 December 2014

Barbier M., "An original Instrument, the CIESM Charter on MGRs Access and Benefits Sharing", MicroB3 Stakeholders WK: Towards a Model Agreement on Access and Benefit Sharing for Marine Genetic Resources, 27-28 February 2013, Brussels

Barbier M., "MicroB3 – OSD - Legal aspect 'The Mediterranean Code of Conduct'", MicroB3 Task Force meeting on Standards and InterOperability, EBI-EMBL, Hinxton, UK, 19-20 April 2012 and 5-6 July 2012

Barbier M and Briand F." Environmental risks in the Mediterranean Sea". ERAM Workshop, Alexandria, Egypt, 3-5 October 2010

Barbier M. "Integrative ecosystemic research in the Mediterranean, the CIESM experience" EMBO Workshop, Evo devo meets marine ecology, Ischia, Italy, 9-11 October 2009.