

Dr Ann C. Andersen

Assistant Professor

Sorbonne University (formerly University Pierre & Marie Curie, i.e. Paris VI)

Department: Adaptation and Diversity in the Marine Environment (UMR 7144 CNRS-UPMC)

Research Team: Dynamic of the Diversity (DyDiv)

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Main Research Areas

- *Symbiosis* (host state in vent and seep invertebrate species) with *in situ* imaging of host tissues (cellular stages, immunolocalization of expressed proteins...)
- *Ecophysiology*: (adaptations to hypoxia in harsh environments, characterization of respiratory blood pigments and their functional properties, gill surface biometry)

Career

1988 - current: Assistant professor, Paris VI, UPMC, Sorbonne University, Roscoff

1986 - 1988: Temporary Ass. prof. (Assistante associée), University of Rouen, France.

Education

1986-1988 Post-doctoral researcher at the laboratory of Molecular Endocrinology of Pr. H. Vaudry) University of Rouen: "Characterization and localization by immunological techniques of neuropeptides in the amphibian brain".

1984 - pHD Thesis in Biological Oceanology from the University Paris VI, with honours.

"Contribution to the immunohistological study of endocrine cells in the blue mussel *Mytilus edulis*, the crab: *Carcinus maenas*, the glass eel: *Anguilla anguilla* and the flounder *Platichthys flesus*. Study of the disturbances induced by metal pollutants."

1982 DEA of Biological Oceanology (i.e. Second Year of Master degree)

1981 Maîtrise in Animal Biology, with Biochemistry and Oceanography options (i.e. 1st year of Master degree).

Supervision and Mentoring

- 2015- 2018: Thesis Co-supervision with Pr. S. Duperron (MNHN) of the PhD of Bérenice Piquet : "*FLEXibility of the SYmbioses between Bivalves and chemotrophic bacteria : mecanism, regulation and resilience*". Defended 23th October 2018
- 2017: Post-doctoral program of Dr. Arunima Sean at Roscoff about Siboglinid worm species and symbiont characterization from high Arctic cold seeps.
- 2008-2011- Thesis Co-supervision with Dr. Karine Olu, IFREMER of the PhD of Carole Decker: "*Diversity, ecology and adaptations of vesicomid bivalves from reduced environments of the deep-sea continental margins*".
- 1998-2008 Technical supervision (in histology and immunolabelings, for confocal and electron microscopy, biochemistry) of 5 pHDs in my team (F. Chausson, MC De Cian, M. Rousselot, S. Sanchez, and H. Guézi).
- Technical tutoring of E. Loumaye, pHD directed by Dr. B. Knoopfs, University Louvain-la-Neuve, Belgium, *on oxidative stress in Arenicola marina*.
- J. Nkwoji pHD from the University of Lagos, Nigeria on *compared structure and function of the hemoglobins of three Nereid species and their respiratory gill surface*.
- Supervision of 19 research internships (of which 2 IUT students and 17 Master students).

Teaching and Outreach

- Teaching charge: > 200 hours per year in biology of marine invertebrates, marine ecology, coastal habitat characterization and management, and ecophysiology.

- Responsible organizer of 4 teaching units of 60 hours each in the Master degree Sciences de la Mer and IMBrSEA, with field work at the marine station.
- Responsible organizer in two 4-days units (25hours each) of in-service training:
 - EUNIS European habitat typology of the seashores
 - Taxonomy of Polychaetes (Spionids, Capitellids)
- Teaching marine biology (intertidal, hydrothermal vents and cold seeps) (21 hours yearly at Roscoff Marine station) for the Teacher's Training College: Ecole Normale Supérieure (ENS) de Lyon.
- *E-marin lab* on-line course on Zonation of Benthic Habitats in French and in English. <https://emarinlab.obs-banyuls.fr/course/view.php?id=67> (2016-2017).
- Workshop presentations about Vent and seep Fauna or the main public in the frame of the yearly open Days to Sciences.

Professional services

- Peer-reviews for the following journals: Deep-Sea Biology I, Zootaxa, J. of Fisheries & Aquatic Sciences, Marine Biological Records. Canadian Journal of Zoology, Developmental Biology, Marine Biology.
- Reviews and comments for the following books:
 - The Biology of Rocky Shores. 2nd edition (Chapters II,II and XI). Colin Little, Gray A. Williams & Cynthia D. Trowbridge (2010) Oxford University press.
 - Substances naturelles d'origine marine", (volume II on Invertebrates, Chapter 21 on "Organismes vermiformes: Plathelminthes, Nématodes, Némertes, Annélides" (2005) by Dr. Jean-Michel Kornprobst, Editions of Lavoisier
- 2019- Local correspondent at Roscoff for the joint International Master in Marine Biological Resources (IMBRSea) based in Ghent.
- 2004 - current: Member of the Educational Team of the section: Oceanography and Marine Environment at Sorbonne University
- 2012-2016 Elected member of the Management Board (Conseil d'Administration) and of the Conseil de Fédération of the Station Biologique de Roscoff.
- Participation to 7 oceanographic cruises on hydrothermal vents and cold seeps.

Research Grants

- 2017 AURORA fellowship between Norway Research Council and Campus-France for the study and travel costs of the collaboration on the Arctic Siboglinids and their symbiosis, for Dr. Arunima Sen from the University of Tromsø and A.C. Andersen
- 2015-2018 individual PhD fellowship for Bérénice Piquet, ARED-funding (Allocation de Recherche Doctorale) from the Région Bretagne (€ 45 000), and from the UPMC (€ 45 000).
- 2009-2012 project coordinator for the researchers at the Station Biologique de Roscoff, associated as CNRS-partner in HERMIONE international program: Hotspot Ecosystem Research and Man's Impact on European Seas for WP5: Chemosynthetic ecosystems (SBR part: 60 000 €)
- 2005-2009 project coordinator for the researchers at the Station Biologique de Roscoff, associated as UPMC-partner in HERMES international program: Hotspot Ecosystem Research on European Margins for WP3: Cold seeps- (SBR part: 38 000 €)

Peer-Reviewed Publications

40 international peer reviewed publications, Citations 1011, h=17, i-10index: 26 in Google scholar in 03/2019.

Congress Presentations :

59 contributions, see Scientific Production for full documentation.
