

CLAUDIA MENGELT

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EDUCATION

2000 – 2005(expected) Ph.D. Candidate, Marine Sciences
University of California, Santa Barbara
Advisor: Dr. B. B. Prézelin

1997 – 2000 M.S. Biological Oceanography
Oregon State University, Corvallis
Advisor: Dr. M. R. Abbott

1994 – 1996 B.S. Aquatic Biology
University of California, Santa Barbara

1991 – 1993 Vordiplom in Physics and Biology
University of Fribourg, Switzerland

FELLOWSHIPS

2005 Science and Technology Policy Fellowship at the National Academies

2004 – 2005 Dean's Graduate Student Fellowship

2002 – 2004 U. C. Marine Council Fellowship for the California Coastal Environmental
Quality Initiative

2002 Nejat Bulent Ezal Fellowship

GRANTS & AWARDS

2003 Sigma-Xi Aid-in-Research Grant

2002 10th International Harmful Algae Conference Student Travel Award

RELEVANT EXPERIENCE

2000 – present University of California Santa Barbara, CA
Graduate Research Assistant with Dr. B. B. Prézelin

- Monitoring for harmful algal species and associated toxicity along the central California coast using molecular probes (in situ hybridization and LSU rRNA targeted sandwich hybridization) and HPLC for domoic acid detection
- Testing for growth response and photo-adaptation to natural solar ultraviolet (UV) for the toxigenic diatom *Pseudo-nitzschia multiseriata* and *P. australis*, using spectral absorption and pulse-amplitude modulated fluorometry (PAM) to monitor cellular adaptation to enhanced UV.

2005 the National Academies, Washington, D.C.
Science & Technology Graduate Policy Fellow, Board of Atmospheric Sciences and Climate and Polar Research Board, Mentor: Paul Cutler.

- Developing survey to determine usefulness of various funding modes
- Assisting with general board activities, such as committee nomination, background research, and workshop preparation

1997 – 2000 Oregon State University Corvallis, OR
Graduate Research Assistant with Dr. M. Abbott

- Collection and analysis of phytoplankton samples from the Antarctic Polar Front (U.S. JGOFS program) using high performance liquid chromatography (HPLC).
- Analysis of bio-optical drifter data from the Antarctic Polar Front (U.S. JGOFS).
- Programming in Matlab.
- *In situ* experiments on physiological response to light shift using a Fast Repetition Rate Fluorometer (FRRF) in Baja California during MODIS ground-validation cruise.

1996 – 1997 University of California Santa Barbara, CA

Staff Research Assistant with Dr. B. B. Prézelin

- Numerical and graphical analysis of database from the Bellingshausen Sea, Antarctica (LTER program).

PUBLICATIONS

- Busse, L.B., E.L. Venrick, R. Antrobus, P.E. Miller, V. Vigilant, M.W. Silver, C. **Mengelt**, L. Mydlarz, B.B. Prézelin, **in press**. *Documentation of domoic acid in phytoplankton and fish in San Diego, California, USA*. Harmful Algae.
- Mengelt**, C. and B.B. Prézelin, **in press**. *UVA Enhancement of Carbon Fixation and Elevated Resilience to UVA Inhibition for the Genus Pseudo-nitzschia May Provide Competitive Advantage in High UV Surface Waters*. Mar. Ecol. Prog. Ser.
- Mengelt**, C., and B.B. Prézelin, **in press**. *A potential novel link between organic nitrogen loading and Pseudo-nitzschia spp. blooms*. In: Proceedings of the California and the World Ocean conference, Santa Barbara, 2002.
- Mengelt**, C. and B. B. Prézelin. **2004**. *Dark survival and subsequent light recovery for Pseudo-nitzschia multiseriis*, pp. 388-390. In K. A. Steidinger, J. H. Landsberg, C. R. Tomas and G. A. Vargo (eds.) Harmful Algae 2002. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO. St. Petersburg, Florida, USA.
- Gorga, J. J., C. **Mengelt** and B. B. Prézelin. **2004**. *UV-B inhibition of Pseudo-nitzschia australis: primary production is minimized by UV-A enhancement effects*, pp. 385-387. In K. A. Steidinger, J. H. Landsberg, C. R. Tomas and G. A. Vargo (eds.) Harmful Algae 2002. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO. St. Petersburg, Florida, USA.
- Mengelt**, C., M. R. Abbott, J. A. Barth, R. M. Letelier, C. I. Measures, and S. Vink. **2001**. *The influence of silicic acid and iron concentrations on the phytoplankton pigment distribution across the Antarctic Polar Front during Austral summer*. In: Topical Studies in Oceanography, US Southern Ocean JGOFS Program (AESOPS). Deep-Sea Research II. 48, 4081 - 4101.
- Mengelt**, C., **2000**. *Physical and chemical factors controlling the distribution of the major phytoplankton classes at the Antarctic Polar Front, 170° W*. Masters Thesis. Oregon State University, Corvallis.
- Prézelin, B.B., Hofmann, E.E., **Mengelt**, C., Klinck, J.M., **2000**. *The linkage between Upper Circumpolar Deep Water (UCDW) and phytoplankton assemblages on the west Antarctic Peninsula continental shelf*. Journal of Marine Research 58, 165 - 202.

TEACHING EXPERIENCE

- 2005 Lecturer: Processes in the Ocean
Lecture co-instructed with Prof. A. Alldredge
- 2003 Teaching Assistant: Processes in the Ocean
Prof. M. Brzezinski, Dr. S. Goldwaith
- 2001 Teaching Assistant: Introductory Biology I
Prof. R. Christoffersen, Prof. L. Johnson, Prof. S. Feinstein
- 2000 Teaching Assistant: Ecological Processes in Aquatic Environments.
Prof. J. Melack and Prof. S. MacIntyre

RELEVANT ACTIVITIES

- 2004 Design of lesson plans for K 6-8 science teachers for Harmful Algal Bloom outreach activity
- 2003 Organizing the Marine Science Winter Colloquium
- 2002 – 2003 Co-organizer of Woman in Science and Engineering Speaker/Lecture Series
- 2002 Attended Summer Course at Bigelow: Ecology of Harmful Algae with Dr.T. Smayda

1999 Graduate Student Representative on Dean's Graduate Student Committee

MENTORING ACTIVITIES

2003 – 2004 Mentoring E. Wallner's undergraduate research project funded by the UCRA award program (\$1000)
2003 – 2004 Mentoring K. Keltner's senior honors thesis funded by the UCRA award program (\$1000)
2002 – 2003 Mentoring R. Hernandez' senior honors thesis funded by the CAMP award program, RISE fellowship program and UCRA award program (\$3000), selected to represent excellence in undergraduate research at UCSB during the U.C.-Day in Sacramento
Spring 2001 Mentoring G. Keating's undergraduate research project

CONFERENCES

11th International Harmful Algal Bloom Conference, CapeTown, South Africa. Talk: *Pseudo-nitzschia abundance and associated toxins at two coastal sites during 2003-2004*. 2004
ASLO Aquatic Science Meeting, Hawaii, Poster: *UV Photophysiology and photoecology of two toxigenic diatom species Pseudo-nitzschia australis and multiseriis*. 2004
10th International Harmful Algal Bloom Conference, St. Pete, Florida. Poster: *Dark Survival and Subsequent Light Recovery for Pseudo-nitzschia multiseriis*. 2002
California and the World Ocean, Santa Barbara, California. Talk: *A Potential Novel Link Between Organic Nitrogen Loading and Pseudo-nitzschia Blooms*. 2002
Gordon Research Conference on Polar Marine Science, Ventura, California. Poster: *Phytoplankton pigment distribution in relation to the physics across the Antarctic Polar Front, 170° W*. 2001
ASLO Aquatic Science Meeting, Albuquerque, New Mexico, Poster: *Ultraviolet Biological Weighting Functions (BWFs) for primary production in California Coastal waters: Preliminary analysis of patterns and variability*. 2001
Ocean Sciences, San Antonio, Texas, Poster: *Phytoplankton pigment distribution in relation to the physics across the Antarctic Polar Front, 170° W*. 2000
AESOPS data workshop, Keystone, Colorado, Poster: *Surface pigment distribution at the Antarctic Polar Front*. 1999
AESOPS data workshop, Knoxville, Tennessee, 1998
ASLO, Aquatic Science Meeting, Santa Fee, New Mexico, 1997

EXPERIENCE AT SEA

R/V Point Sur, LTER cruise, Santa Barbara Channel, U.S., 2004
R/V Melville, MODIS calibration, Baja California, Mexico, 1999
R/V R. Revelle, U.S. JGOFS/AESOPS, Antarctic Polar Front, 1998
R/V Polar Duke, LTER cruise, Drake Passage and Bellingshausen Sea, Antarctica, 1996
R/V Robert Gordon Sproul, Santa Barbara Channel, U.S., 1995
R/V George Petit, Mediterranean Sea, France, 1991
Submersible Johnson's Sea Link II, Mediterranean Sea, France, 1991