

Cécile Élise Mioni, Ph.D.

CONTACT INFORMATION

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EDUCATION

- 2001 – 2004 **Ph.D. Microbiology**, University of Tennessee, Knoxville, TN.
Dissertation: “Using a bioluminescent bacterial bioreporter to assess iron bioavailability in the Oceans”.
Advisor : Dr. Steven W. Wilhelm
- 2000 **M.S. Biological Oceanography & Marine Environment**, *cum laude*. Université Pierre et Marie Curie, Paris (France).
Thesis: “Responses of the diatom *Thalassiosira oceanica* to Iron limitation” (in French).
Advisors: Pr. Paul Tréguer and Dr. Stéphane Blain
- 1999 **Maîtrise Biology of Populations & Ecosystems**, *magna cum laude, Valedictorian (rank 1/83)*.
European Institute of Marine Studies – Université de Bretagne Occidentale, Plouzané (France).
Thesis: “Trends of abundance indices for demersal fish species of the Guinea’s waters and the relationship with their catches” (in French).
Advisor: Dr. Eric Morize
- 1998 **B.S. General Biology & Earth Sciences**, *magna cum laude, Salutatorian (rank 2/140)*.
Université de Bordeaux I, Talence (France).

PROFESSIONAL EXPERIENCE

- Aug. 2007 – *Postdoctoral scholar*, Chemistry & Biochemistry Department, University of California, Santa Cruz. Isolation of new marine culturable microbial strains for drug discovery (main targets: neglected diseases such as malaria and tuberculosis). Advisor: Dr Roger G. Linington.
- Jan. – Aug. 2007 *Adjunct faculty*, Science division, Lane Community College, Eugene, OR.
- Aug. – Oct. 2006 *Research assistant*, Department of Oceanography, The University of Hawaii, Manoa. Seawater sampling for cyanobacterial DNA and RNA analyses. Advisor: Dr Zackary I. Johnson.
- Jan. – May 2006 Processing of my Green Card application - not authorized to work during this time.
- 2001 – 2005 *Research and teaching assistant*, Department of Microbiology and Center for Environmental Biotechnology, The University of Tennessee, Knoxville, TN.
Molecular biology (PCR, cloning, *lux*- and *gfp*-based bioreporters), microbiology (aseptic techniques, optimization of culture media), class 100 clean room experience, trace metal clean techniques. Advisor: Dr Steven W. Wilhelm.
- 2001 (Spring) *Research Assistant*, Observatoire Midi-Pyrénées (LEGOS lab), Toulouse (France).
Inter-calibration of Autonomous Nutrient Analyser *In Situ* and Technicon analyzer. Advisor: Dr. Véronique Garçon.
- 2001 (March) *Trainee*, Groupement pour le Développement de la Télédétection Aérospatiale, Toulouse (France). Geographic Information Systems (Arcview software).
- 2000 (Summer) *Visiting Scientist*, Geosciences department, Princeton University, Princeton NJ.
Culture of the diatom *T. weissflogii*, class 100 clean room experience, trace metal clean & aseptic techniques. Advisors: Pr. François M. Morel and Dr. Allen J. Milligan.
- 2000 *Research assistant*, European Institute of Marine Studies, Plouzané (France).
Culture and chemical analyses of oceanic diatoms, class 100 clean room experience, trace metal clean and aseptic techniques. Advisors: Pr. Paul Tréguer and Dr. Stéphane Blain
- 1998 –1999 *Research assistant*, Institut de Recherche pour le Développement, Plouzané (France).
Fish stock assessment & analyses of stock evolution. Advisor: Dr. Eric Morize
- 1998 (Summer) *Trainee*, Laboratory of Biological Oceanography, Arcachon (France).

AWARDS AND FELLOWSHIPS

- 2005 DIALOG VII symposium participant. DISL, Mobile, AL. Dec. 3rd – 10th, 2005.
2004, 2005 University of Tennessee Travel Award and Graduate Student Senate Travel Awards.
2003 Daniel Jouvance international research Award “Recherches sur le plancton marin 2003”.
2003 Ryan Kelley Memorial scholarship – International Women’s Fishing Association.
2001 – 2003 Center for Environmental Biotechnology, Center of Excellence Graduate Fellowships.
1999 – 2000 “Ministère de la Recherche et de l’Education” Fellowship.

TEACHING ASSIGNMENTS

- 2007 *Instructor*. Lane Community College (Eugene, OR). General Biology 101J: “Unseen Life on Earth” telecourse.
2001 – 2004 *Teaching Assistant*. The University of Tennessee (Knoxville). Introduction to Microbiology (Micro 210) laboratory courses.
2002 (Spring) *Guest Lecturer*. The University of Tennessee (Knoxville). Oceanography 446: Carbon cycle.

MENTORING EXPERIENCE

- 2005 Ms Margret Henke (summer project). Bioreporter & trace metal clean techniques.
2003 Ms Sarah M. Handy (research assistant): Bioreporter & trace metal clean techniques.
2003 Mr Matt Smith (undergraduate research assistant): Molecular biology techniques.
2002 Mr Bruce Applegate Jr. (summer project). Bioreporter & trace metal clean techniques.

SERVICES

- 2007 – *Volunteer Mentor* – ASM Science Educator Network
2006 *Volunteer* – ASLO/TOS/AGU Ocean Sciences Meeting
2004 *Student Volunteer* – ASLO/TOS Ocean Research Conference (Audiovisual).
2003 – *Reviewer for Professional Journals*: Limnology and Oceanography, Deep Sea Research II, Aquatic Microbial Ecology, Environmental Science & Technology.

PROFESSIONAL AFFILIATIONS

- 2005 – American Geophysical Union.
2005 – American Society for Microbiology.
2005 – ANDÈS (Association Nationale des Docteurs ès Sciences).
2004 – The Oceanography Society.
2001 – American Society of Limnology and Oceanography.

FIELD RESEARCH PARTICIPATION (since Fall 2001)

- 08/15/06 – 10/13/06 R/V *Kilo Moana*, Fe in Equatorial Pacific Undercurrent (Honolulu, HI – Rabaul, PNG).
03/08/06 – 03/12/06 R/V *Kilo Moana*, HOT-179 cruise, ALOHA station (*volunteer participant*).
06/22/03 – 08/05/03 R/V *Kilo Moana*, NE Pacific Ocean and Bering Sea (Seattle, WA – Dutch Harbor, AK).
09/23/02 – 10/19/02 R/V *Nathaniel B. Palmer*, Eastern Pacific (Punta Arenas, Chile – San Diego, CA).

PUBLICATIONS

- *Published (available on my website)*

Mioni, C.E., Palkuski, J.D., Poorvin, L., Baldwin, A., Twiss, M.R., Jeffrey, W.H., and S.W. Wilhelm (2007), Variability in the in situ bioavailability of Fe to bacterioplankton communities in the eastern subtropical Pacific Ocean, *Aquatic Microbial Ecology*, 46: 239 – 251.

Mioni, C.E., Poorvin, L., and S.W. Wilhelm (2005), Virus- and siderophore- mediated transfer of available Fe between heterotrophic bacteria: characterization using an Fe-specific bioreporter. *Aquatic Microbial Ecology*, 41: 233-245.

Mioni, C.E., Handy, S.M., Elwood, M.J., Twiss, M.R., McKay, R.M.L., Boyd, P.W., and S.W. Wilhelm (2005), Tracking changes in bioavailable Fe within high-nitrate low-chlorophyll oceanic waters: A first estimate using a heterotrophic bacterial bioreporter, *Global Biogeochemical Cycles*, *Invited article*, 19 (4), GB4S25, doi:10.1029/2005GB002476.

McKay, R.M.L., Wilhelm, S.W., Hall, J., Hutchins, D.A., Al-Rshaidat, M.M.D., **Mioni, C.E.**, Pickmere, S., Porta, D., and P.W. Boyd (2005), Impact of phytoplankton on the biogeochemical cycling of iron in subantarctic waters southeast of New Zealand during FeCycle, *Global Biogeochemical Cycles*, Invited article, 19 (4), GB4S24, doi:10.1029/2005GB002482.

Boyd, P. W., Law, C. S., Hutchins, D. A., Abraham, E. R., Croot, P. L., Ellwood, M., Frew, R. D., Hadfield, M., Hall, J., Handy, S., Hare, C., Higgins, J., Hill, P., Hunter, K. A., LeBlanc, K., Maldonado, M. T., McKay, R. M., **Mioni, C.**, Oliver, M., Pickmere, S., Pinkerton, M., Safi, K., Sander, S., Sanudo-Wilhelmy, S. A., Smith, M., Strzepek, R., Tovar-Sanchez, A.; Wilhelm, S. W. (2005), FeCycle: Attempting an iron biogeochemical budget from a mesoscale SF₆ tracer experiment in unperturbed low iron waters, *Global Biogeochemical Cycles*, 19 (4), GB4S20, doi:10.1029/2005GB002494.

Mioni, C.E., Howard, A. M., DeBruyn, J.M., Bright, N.G., Applegate, B.M., and S.W. Wilhelm (2003), Characterization and preliminary field trials of a bioluminescent bacterial reporter of iron bioavailability. *Marine Chemistry*, Invited article, 83: 31-46.

- **Submitted – In Preparation**

Mioni, C.E., Fones, G.R., Saito, M., and S.W. Wilhelm (2005), Assessment of iron bioavailability in the subarctic Pacific Ocean during the summer of 2003, (in prep.).

Milligan, A.J., **Mioni, C.E.**, and F.M.M. Morel, The response of carbon metabolism to iron deficiency in the marine diatom *Thalassiosira weissflogii*, (in prep.).

MEETING PRESENTATIONS

Mioni, C.E., Poorvin, L., and S.W. Wilhelm. Bioluminescent bacterial reporters: a tool of biological & chemical relevance to estimate Fe bioavailability in aquatic systems. ASLO, Salt Lake City, UT, Feb. 2005.

Poorvin, L., **Mioni, C.E.**, Sander, S., and S.W. Wilhelm. Characterization and bioavailability of iron released by viral lysis of marine plankton. ASLO, Salt Lake City, UT, Feb. 2005.

Mioni, C.E., Handy, S.M., Twiss, M.R., Frew, R.D., Jeffrey, W.H., Boyd, P.W., and S.W. Wilhelm. Deployment of a heterotrophic bioluminescent bioreporter to estimate the bioavailability of iron in seawater. ASLO/TOS Ocean research conference, Honolulu, HI, Feb. 2004 (Invited presentation).

Wilhelm, S. W., **Mioni, C. E.**, Twiss, M. R., McKay R. M., and C. G. Trick. Resolving iron availability in Lake Erie. International Association of Great Lakes Researchers, Chicago, IL, June 2003 (Invited presentation).

Applegate, B.M. Jr., Bright, N.G., **Mioni, C.E.**, Husseiny, S.M., Wilhelm, S.W, and B.M. Applegate Sr. Development of a bioluminescence based assay to evaluate the efficacy of lactoferrin as a bacteriostatic agent. IFT, Chicago, IL, July 2003.

Mioni, C.E., Howard, A. M., DeBruyn, J.M., Bright, N.G., Applegate, B.M., and S.W.W. Wilhelm. Characterization and preliminary field trials of a bioluminescent bacterial reporter of iron bioavailability. AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, Feb. 2002.

Garçon, V., Thouron, D., Philippon, X., Vuillemin, R., **C. Mioni**. ANAIS: Autonomous Nutrients Analyzer *In Situ*. Ocean Sciences Meeting, Honolulu, HI, Feb. 2002 (poster).

Garçon, V., Thouron, D., Philippon, X., Vuillemin, R., **C. Mioni**. ANAIS: Autonomous Nutrients Analyzer *In Situ*. Gordon Research Conference, Tilton, NH, Aug. 2001 (poster).

Milligan, A.J., **Mioni, C.E.**, and F.M.M. Morel. The response of carbon metabolism to iron deficiency in the marine diatom *Thalassiosira weissflogii*. ASLO meeting, Albuquerque, NM, Feb. 2001.

MISCELLANEOUS

Languages: French (native), English (bilingual), Spanish (scholar)