MAUREEN E. AURO

Telephone: (508)289-3828
Fax: (508)457-2193
E-mail: mauro@whoi.edu

Marine Chemistry & Geochemistry Department
Clark 448/456
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

EDUCATION:

1999-2003 **B.A. Biology,** Minor Environmental Sciences, Lafayette College, Pennsylvania

2004-2007 **M.S. Biology (concentration in Marine Biology)** San Francisco State University
Thesis: "Nitrogen Dynamics and toxicity of the pinnate diatom, *Pseudo-nitzschia cuspidata*: A field and laboratory based study"
Advisor: William P. Cochlan

PROFESSIONAL EXPERIENCE:

2010-present **Research Associate II –** Woods Hole Oceanographic Institution
2007-2010 **Research Assistant III –** Woods Hole Oceanographic Institution
2004-2007 **Graduate Research Assistant –** San Francisco State University

AWARDS:

Whelan Grant (2008); Woods Hole Oceanographic Institution
Graduate Student Award for Distinguished Achievement (2007); San Francisco State University
Maxwell Scholarship (2006-2007); San Francisco State University
SF Bay Scholarship (2004, 2005, 2006); San Francisco State University
IRA Supply Scholarship (2005-2006); San Francisco State University

PROFESSIONAL AFFILIATIONS:

2008-present Member of American Geophysical Union

RESEARCH INTERESTS:

- Coral dating, studying deep sea corals to help understand recent and distant past climate variations and use of isotopes to understand weathering processes.
- Iron incorporation into oceans from continental shelves and particulate iron speciation
- Trace metal analysis from oceanic profiles

PROFESSIONAL ACTIVITIES:

2008-2011 Graded and Marine Personnel Committee – Secretary
2010 Vetlesen/Penzance/Schrawder Award Committee

PARTICIPATION IN EDUCATION PROGRAM:

Fall 2009 Introduction to Isotope Chemistry
2009/2010 ICP-MS Training by Bernhard Peucker-Ehrenbrink

SUPERVISION AT WHOI:

Raphaelle Escoube (2007-2008), Dustin Long (Summer 2008), Andrea Burke (2008-present), Ali Criscitiello (2008-present), Kais Jacob Mohamed Falcon (Summer 2009-present), Kate Hendry (Spring 2009 – present), David Case (2009), Ellen Crapster-Pregont (Winter 2009), Talya Havice (Winter 2009), Sophie McCoy (Spring 2009), Christelle Nott (Spring 2009), Lasse Dossing (Spring 2009), Moutusi Roy (Winter 2009), Sarah Bennett (Spring 2009), Fanny Chevre (Spring 2010), Tammy Catanach (Spring/Summer 2010), John Swartz (Spring/Summer 2010), Jennifer Haskell (Spring/Summer 2011), Daniel Ohnemus (2010-present), Kuo-Fang (Denner) Huang (2010-present), Molly Burtis (Spring 2011-present), Andrew Margolin (Spring/Summer 2011), Sarah Rosengard (Fall 2011)

CRUISE PARTICIPATION/FIELD WORK:

June 2011: *R/V Nathaniel B. Palmer* (NBP1103); Punta Arenas (set-up only).
January/February 2011: *R/V Melville* (Great Calcite Cruise); Punta Arenas, Chile to Cape Town, South Africa
October 2008: *R/V Thomas G. Thompson* (FEMO); Honolulu to Honolulu.
May 2008: *R/V Nathaniel B. Palmer* (NBP0805); Punta Arenas (set-up only).
June 2008: Mullica River, NJ field work
September/October 2006: *R/V Thomas G. Thompson* (ECOHAB-PNW VI); Seattle to Seattle.
May/June 2006: *R/V Thomas G. Thompson* (PAPA SEEDS); Alaska to Seattle.
September 2006: *R/V Melville* (ECOHAB-PNW V); Seattle to Seattle.
July 2005: *R/V Atlantis* (ECOHAB-PNW IV); Seattle to Seattle.

PUBLICATIONS :

- **Auro, M.E.**, L.F. Robinson, A. Burke, L. Bradtmiller, M. Fleisher, R. Anderson. Analysis of ^{232}Thorium, ^{230}Thorium, and ^{231}Protactinium in seawater: Lessons learned during GEOTRACES Intercalibration. Limnology and Oceanography Methods.
- Case, D, L.F. Robinson, **M.E. Auro**, A. Gagnon.2010. Environmental and biological controls on Mg and Li in deep-sea scleractinian corals. Earth and Planetary Science Letters 300(3-4), pp.215-225.
- Rouxel, O., **Auro, M.** 2010 Iron Isotope Variations in coastal seawater determined by Multi-collector ICP-MS. Geostandards and Geoanalytical Research, 34(2), pp. 135-144.
- Waters, N.M., **M.E. Auro**, T. Hagan, K. L. Dumont. 2005. How colonization time influences macroinvertebrate community measures on artificial substrates. Journal of Freshwater Ecology 20(1): 9-16.

PUBLISHED ABSTRACTS:

- **Auro, M.E**., L.F. Robinson, R. Anderson, M. Fleisher, M. Saito. 2011. Efficient Analysis of Seawater Thorium and Protactinium. Mineralogical Magazine, Vol. 75(3).
- Robinson, L.F., B. Hönisch, **M.E. Auro.** 2010**.** Boron isotopes in Southern Ocean deep-sea corals. Goldschmidt Conference, Knoxville, Tennessee.
- Bradtmiller, L.I., L.F. Robinson, J.F. McManus, **M.E. Auro** and H.C. Bostock. 2009. The distribution of ^{231}Pa and ^{230}Th in paired water column and surface sediment samples. Geochimica et Cosmochimica Acta Supplement, Vol. 73, p.A154.
- Case, D.H., L.F. Robinson, **M.E. Auro**, A.C. Gagnon. 2009. Distribution of Mg and Li in Deep-Sea Scleractinian Corals: Implications for "Vital Effects" and Deep Sea Thermometry. American Geophysical Union, Fall Meeting 2009, Abstract #PP11A-1287.
- Criscitiello, A., L.F. Robinson, and **M.E. Auro**. 2009. Uranium-series Absolute Dating of

Ancient Ice. Graduate Climate Conference in Seattle, WA.

- Cochlan, W.P., R.L. Radan, **ME. Auro**, and V.L. Trainer. 2009. Differential toxin response of *Pseudo-nitzschia* species as a function of nitrogen sufficiency and source: a comparative study of *P. multiseries* and *P. cuspidata*. Second Open Science Meeting on HABs and Eutrophication, Beijing, China.
- Robinson, L.F., J. F. McManus, **M.E. Auro** and Tina van de Flierdt. 2009. Measurement of ^{232}Th, ^{230}Th and ^{231}Pa in modern and fossil deep-sea corals. Geochimica et Cosmochimica Acta Supplement, Vol. 73, p.A1108.
- **Auro M.E.**, Rouxel O., German C., Toner B., Edwards K. 2008. Iron Isotope Systematics in Hydrothermal Plume Fall-out at EPR9°50'N. American Geophysical Union, Fall Meeting 2008, Abstract #B21A-0338.
- **Auro**, **M.E.,** W.P. Cochlan, V.L. Trainer. 2007. "Growth, Toxicity and Nitrogen Uptake Capabilities of the Toxigenic Diatom *Pseudo-Nitzschia cuspidata* from the Pacific Northwest". Woods Hole, MA. 4th Symposium on Harmful Algae in the U.S.
- Radan, R.L., **M.E. Auro**, W.P. Cochlan. 2007. "Ammonium Surge Uptake and Inhibition of Nitrate Uptake by Small and Large Cell-Sized *Pseudo-Nitzschia* Species from the Pacific Northwest". Woods Hole, MA. 4th Symposium on Harmful Algae in the U.S.

ACKNOWLEDGEMENTS:

- Bradtmiller L.I., J.F. McManus, L.F. Robinson. Submitted. ^{231}Pa/^{230}Th evidence for vigorous intermediate ocean circulation during Heinrich Event 1 *Geophysical Research Letters*.
- Burke A, L.F. Robinson. Submitted. Southern Ocean Radiocarbon during the deglaciation. *Science*.
- Hendry, K.R., L.F. Robinson. Submitted. The relationship between silicon isotope fractionation in sponges and silicic acid concentration: modern and core-top studies of biogenic opal seawater. *Geochimica et Cosmochimica Acta*.
- Longworth. B.E., L.F. Robinson, M.L. Roberts, S.R. Beaupre, W.J. Jenkins. Submitted. Rapid AMS Analysis of Carbonates by Direct Sputtering *Nuclear Instruments and Methods in Physics Research, Section B*.
- Hendry, K., M.J. Leng, L.F. Robinson, H.J. Sloane, J. Blusztjan, R.E.M. Rickaby, R. Bastian Georg, A.N. Halliday. 2011. Silicon isotopes in Antarctic sponges: an interlaboratory comparison. Antarctic Science 23: 34-42.
- S. J. McCoy**,** L.F. Robinson, C.A. Pfister, J.T. Wootton, and N. Shimizu. 2011. Exploring B/Ca as a pH proxy in bivalves: Relationships between Mytilus californianus B/Ca and environmental data from the northeast Pacific. *Biogeochemical Cycles Discuss.* 8, pp. 5587-5616.
- Hendry, K. R., R. B. Georg, *et al*. 2010. Deep ocean nutrients during the Last Glacial Maximum deduced from sponge silicon isotopic compositions. Earth and Planetary Science Letters 292(3-4): 290-300.
- Burke, A., L.F. Robinson, A.P. McNichol, W.J. Jenkins, K.M. Scanlon, D.S. Gerlach. 2010 Reconnaissance dating: A new radiocarbon method applied to assessing the temporal distribution of Southern Ocean deep-sea corals. Deep-Sea Research Part I: Oceanographic Research Papers 57(11), pp. 1510-1520.
- McGee, D., F. Marcantonio, J.F. McManus, G. Winckler. 2010. The response of excess ^{230}Th and extraterrestrial ^{3}He to sediment redistribution at the Blake Ridge, western North Atlantic. Earth and Planetary Science Letters 299(1-2), pp. 138-149.
- Bennett, S.A., P.J. Statham, D.R.H. Green, N. Le Bris, J.M. McDermott, F. Prado, O.J. Rouxel, K. Von

Damm, C.R. German. 2011. Dissolved and particulate organic carbon in hydrothermal plumes from the East Pacific Rise, 9°50′N. Deep Sea Research Part I: Oceanographic Research Papers 58(9), pp. 922-931.

- Hendry, K.R., L.F. Robinson, M.P. Meredith, S. Mulitza, C.M. Chiessi, H. Arz. Accepted. Abrupt changes in high-latitude nutrient supply to the Atlantic during the last glacial cycle. Geology.
- Robinson, L., and T. van de Flierdt. 2009. Southern Ocean evidence for reduced export of North Atlantic Deep Water during Heinrich event 1. Geology 37, pp.195-198.
- Glazer, B.T., Rouxel, O.J. 2009. Redox Speciation and Distribution within Diverse Iron-dominated Microbial Habitats at Loihi Seamount. Geomicrobiology Journal 26(8), pp. 606-622.
- L. Robinson, T. Noble, and J. McManus. 2008. Measurement of adsorbed and total 232Th/230Th Ratios from Marine Sediments. Chemical Geology Vol. 252 pgs. 169-179.
- Escoube, R., O. Rouxel, E. Sholkovitz, and O.F.X. Donard. 2009. Iron isotope systematics in estuaries: The case of North River, Massachusetts (USA). Geochim. Cosmochim. Acta 73(14), pp. 4045-4059.