

# Abigail E. Noble, Ph.D.

[abigail@abigail.science](mailto:abigail@abigail.science) • <http://abigail.science/> • 857-636-0915 • 6 Wyman Street • Boston, MA 02130

Dedicated professional applying management and problem-solving skills to new projects and programs. Expert analytical chemist with a strong track record of collaborative success on multidisciplinary projects with teams from diverse backgrounds.

## PROFESSIONAL EXPERIENCE

### **Independent Contractor**, Boston, MA

*Environmental Scientist, Researcher, Writer*

2014 – present

- Data analysis and workup, writing for publication, draft proposals, scopes and budgets.

### **Gradient**, Cambridge, MA

*Associate Consultant, Environmental Chemist*

2014 – 2017

- Managed fast turnaround and multi-year projects in environmental compliance and litigation.
- Drafted proposals, scopes and budgets, and managed project progress and client communications.
- Provided technical support and chemistry expertise for environmental consulting projects.
- Experience with federal and state regulations and criteria (*e.g.* TSCA, EPA Safer Choice, CARB, Natl. Primary and Secondary Drinking Water, State level DEP/DEQ water quality, NPDES permitting, National Recommended Aquatic Life Criteria, NOAA SMART protocol for oil spills)
- Expertise: chemistry (analytical, organic, inorganic), data quality assessment, international chemical registration, regulatory research, green chemistry initiatives, environmental sampling methods.

### **Massachusetts Institute of Technology**, Cambridge, MA

*Postdoctoral Associate*

2012 – 2014

- Investigated the evolution of dissolved lead and lead isotopes at ppt concentrations in the Atlantic Ocean using pre-concentration techniques and analyses by Quadrupole ICP-MS and multi-collector ICP-MS.
- Participated in interdisciplinary research expeditions in the Pacific Ocean.
- Mentored graduate and undergraduate students, meeting regularly to discuss research progress.

*Teaching Assistant, Graduate-level Aquatic Chemistry course*

2010

- Ran weekly recitation session, graded problem sets, met with students privately and in groups.

### **Woods Hole Oceanographic Institution**, Woods Hole, MA

*Postdoctoral Investigator*

2011 – 2012

- Investigated the ocean cycling of dissolved cobalt and cobalt chemical speciation across the North Atlantic Ocean at ppt concentrations as part of the International GEOTRACES program.

*Graduate Research Scientist, Research Assistant*

2006 – 2011

- Investigated the ocean cycling of trace metals (Co, Fe, Mn, Cd, Ni) in several ocean basins (Ross Sea, Arctic Ocean, Equatorial Pacific, South Atlantic Ocean).
- Developed expertise at trace level (ppt) concentration analyses of dissolved metals in complex aqueous media by inductively coupled plasma mass spectrometry (ICP-MS) and electrochemical techniques.
- Accomplished complex tasks as a part of multidisciplinary teams on international research expeditions.
- Executed a successful and challenging Antarctic field expedition as a part of a small team.
- Designed, organized, and executed experiments in a timeframe determined externally.

*Research Assistant*

2004 – 2006

- Coordinated packing, ordering, shipping for, and participated in five research expeditions.
- Measured trace level (ppt) concentrations of dissolved metals in environmental samples.
- Performed lab maintenance and inventoried supplies.

## EDUCATION

### **Massachusetts Institute of Technology/Woods Hole Oceanographic Institution**,

Cambridge & Woods Hole, MA

*Ph.D., Chemical Oceanography*, 2012

### **Haverford College**, Haverford, PA

*B.S., Organic Chemistry*, 2004

## RELATED SKILLS AND CONTRIBUTIONS

### Leadership and Teamwork

- >10 years experience working 60+ hour weeks in isolated environments with researchers and ship's crew.
- >3 years experience managing environmental consulting projects for compliance and litigation
- Participated in >10 field expeditions, totaling > 7 months at sea. 2004 – present
- Composed three successful proposals for research grants and two consulting projects.
- Completed Project Management bootcamp training with PSMJ Resources, Inc. 2015
- Tutored General Chemistry and Organic Chemistry 2002 – 2004
- Resident Assistant and mentor for college freshmen 2001 – 2002
- Musical director, college a cappella group 2002 – 2003
- Captained NCAA Varsity Cross Country Team, member of three varsity athletic teams 2000 – 2004

### General and Technical

- >10 years experience as an expert analyst of trace level constituents in complex aqueous matrices
- Authored >20 peer-reviewed publications with over 650 citations. Example journals: *Nature Geoscience*, *Frontiers in Chemistry*, *Marine Chemistry*, *Limnology and Oceanography*, *Deep-Sea Research II*
- Designed and constructed specialized lab spaces for contamination-sensitive analyses. 2004 – present
- Experience with ICP-MS, electrochemical analyses, spectroscopy techniques (UV-Vis, FT-IR, gamma ray detection, NMR), spectrophotometry, column chromatography, reagent purification and distillation, electronics soldering, and safe deployment of research equipment at sea
- Proficient at Excel, Word, PowerPoint, MacOS, iOS, and Windows
- Basic mastery of HTML and CSS

### Professional Activities

- Member, American Chemical Society 2004-present
- Member, Association for the Sciences of Limnology and Oceanography
- Invited manuscript reviewer for peer reviewed scientific journals: *Marine Chemistry*, *Biogeosciences*, *Global Biogeochemical Cycles*, *Chemical Geology*, *Deep-Sea Research II*, and *Earth and Planetary and Science Letters*.
- Invited grant proposal reviewer for the *National Science Foundation*.
- WHOI/MIT Joint Program Treasurer 2008 – 2009

### Community Service

- Volunteer Boston Cyclists Union 2018 – present
- Fundraiser and rider: Bikes not Bombs Bike-A-Thon 2016 – present
- Fundraiser and rider: 175 mile National Multiple Sclerosis Society, Cape Cod Getaway 2014 – present
- Fundraiser and rider: Vermont Foodbank Harpoon Point to Point ride 2014