

# Shane Lahman Hogle

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## Positions Held

Postdoctoral Associate; 2016 - present  
Department of Civil and Environmental Engineering, MIT (Advisor: Dr. Sallie W. Chisholm)  
Graduate Researcher; 2014 - 2016  
Scripps Institution of Oceanography, UCSD (Advisor: Dr. Katherine A. Barbeau)  
Graduate Fellow; 2010 - 2014  
Scripps Institution of Oceanography, UCSD (Advisor: Dr. Katherine A. Barbeau)

## Education

Ph.D. Oceanography; 2016  
Scripps Institution of Oceanography at the University of California San Diego  
B.A. with honors, Chemistry; 2010  
Earlham College, Richmond, Indiana

## Research

### *Published Peer-Reviewed Papers*

**Hogle SL**, Brahamsha B, Barbeau KA. 2016. Direct heme uptake by phytoplankton-associated *Roseobacter* bacteria. *mSystems [In press]* 2(1):e00124-16.

Editor's Pick at mSystems

Featured on the American Society for Microbiology's mBiosphere blog (Publication date TBD)

Associated commentary by Alison Buchan (UT-Knoxville), Seth John (USC), and Dan Repeta (WHOI) (Publication date and venue TBD)

**Hogle SL**, Bundy RA, Blanton JM, Allen EE, Barbeau KA. 2016. Copiotrophic marine bacteria are associated with strong iron-binding ligand production during phytoplankton blooms. *Limnol. Oceanogr. Lett.* 1:36-43. doi:10.1002/lol2.10026

**Hogle SL**, Thrash JC, Dupont CL, Barbeau KA. 2016. Trace metal acquisition by heterotrophic bacterioplankton with contrasting trophic strategies. *Appl. Environ. Microbiol.* 82(5):1613-1624. doi:10.1128/AEM.03128-15

Dupont CL, McCrow JP, Valas R, Moustafa A, Walworth N, Goodenough U, Roth R, **Hogle SL**, Bai J, Johnson ZI, Mann E, Palenik B, Barbeau KA, Venter JC, Allen AA. 2015. Genomes and gene expression across light and productivity gradients in eastern subtropical Pacific microbial communities. *ISME J.* 9:1076-1092. doi:10.1038/ismej.2014.198

**Hogle SL**, Barbeau KA, Gledhill MA. 2014. Heme in the marine environment: from cells to the iron cycle. *Metallomics* 6:1107-1120. doi:10.1039/C4MT00031E

Kharbush JJ, Ugalde JA, **Hogle SL**, Allen EE, Aluwihare LI. 2013. Composite bacterial hopanoids and their microbial producers across oxygen gradients in the water column of the California Current. *Appl. Environ. Microbiol.* 79(23): 7491-7501. doi:10.1128/AEM.02367-13

Roe KL, **Hogle SL**, Barbeau KA. 2013. Utilization of heme as an iron source by marine *Alphaproteobacteria* in the *Roseobacter* clade. *Appl. Environ. Microbiol.* 79(18) 5753-5762. doi:10.1128/AEM.01562-13

Abbriano RM, Carranza MM, **Hogle SL**, et al. 2011. Deepwater horizon oil spill: A review of the planktonic response. *Oceanography* 24(3):294-301. doi:10.5670/oceanog.2011.80

### *Papers in Preparation*

**Hogle SL**, Dupont CL, Hopkinson B, King A, Barbeau KA, and others. A mosaic of iron and light limitation within subsurface chlorophyll maximum layers of the eastern subtropical Pacific Ocean. *[In prep]*

## Conference and Seminar Presentations

**Hogle SL**. Signatures of iron cycling in marine microbial genomes and ecosystems. Invited oral presentation, Microbial Systems Seminar @ MIT, November 2016.

**Hogle SL**, Bundy RM, Barbeau KA. Linking phytoplankton and bacterioplankton community dynamics to iron-binding ligand production in a microcosm experiment. Poster presentation, TOS/ASLO/AGU 2016 Ocean Sciences Meeting, February 2016

**Hogle SL**, Dupont C, Brahmsha B, Barbeau KA. Evolution, ecology, and mechanisms of heme uptake in the marine *Roseobacter* lineage. Oral presentation, ASLO 2015 Meeting, February 2015

**Hogle SL**, Dupont C, Brahmsha B, Barbeau KA. What do marine bacterial transporters tell us about ocean chemistry? Oral Presentation, Scripps Student Symposium, September 2014

**Hogle SL**, Brahmsha B, Barbeau KA. Mechanisms for Trace Metal Assimilation in Marine *Roseobacters*. Poster presentation, Goldschmidt Meeting: Session 17e Trace Elements, Microbes, and Biogeochemical Cycles in the Ocean Environment, June 2014

**Hogle SL**, Brahmsha B, Barbeau KA. An Outer Membrane Receptor Critical for Heme Utilization in a Marine *Roseobacter*. Poster presentation, TOS/ASLO/AGU 2014 Ocean Sciences Meeting, February 2014

**Hogle SL**, Brahmsha B, Barbeau KA. Heterotrophic bacterioplankton utilize heme-based molecules for growth: a case study in the biological controls on a model iron-binding ligand. Oral presentation, ASLO 2013 Meeting, February 2013

**Hogle SL**, Hopkinson BM, Barbeau KA, Dupont C. Comparative Prokaryotic Metagenomics Across Subsurface Chlorophyll Maxima in the Southern California Bight. Oral presentation, TOS/ASLO/AGU 2012 Ocean Sciences Meeting, February 2012

## Teaching Experience

Sep 2015 - Dec 2015: Teaching Assistant - SIO40: Life and Climate on Earth

Sep 2014 - Dec 2014: Teaching Assistant - SIO40: Life and Climate on Earth

## Field Experience

Jun 2011 - July 2011: R/V Melville, California Current Ecosystem LTER Process Cruise, San Diego, CA

## Mentoring

Jun 2014 - Aug 2014: Leila Whitener - Northwest Indian College. Title: A novel approach to measuring heme in the marine environment. Project resulted in poster presentation at UCSD undergraduate research conference

Apr 2014 - Aug 2014: Kelsey Dowdy - UCSB. Volunteer student, assisted with microbial community DNA extraction and high throughput sequencing library preparation

Jan 2012 - Jun 2013: Aarani Arulmoli - UCSD. Title: Bacterial community composition in iron induced phytoplankton blooms. Project resulted in material for undergraduate thesis

## Outreach Activities

Organizer and participant with the Scripps Institution of Oceanography Team for Inclusion & Diversity in Education and Science (TIDES) program

Participant in the Scripps Institution of Oceanography Community Based Science Program

Volunteer with San Diego Coastkeeper Program

## Honors, Awards, & Fellowships

National Science Foundation Graduate Research Fellowship, 2011 - 2014

University of California San Diego Director's Fellowship, 2010 - 2011

Phi Beta Kappa, Delta Chapter of Indiana, 2010

American Chemical Society Undergraduate Award in Inorganic Chemistry, 2010

Thomas Clarkson Grave and Anna Hubbard Grave Graduate Scholarship in Natural Science (Earlham College), 2010

NSF Research Experience for Undergraduates (University of Minnesota and the National Science Foundation), 2009

Gertrude P. Hubbard Distinguished Student in the Natural Sciences Award (Earlham College), 2009

Last updated: January 6, 2017