

# Shane Lahman Hogle

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## Education

Ph.D. Oceanography - Expected early 2016  
The Scripps Institution of Oceanography at the University of California San Diego  
  
B.A. Chemistry, Highest Honors - 2010  
Earlham College; Richmond, Indiana

## Fields of Interest

Molecular mechanisms and underlying genetics of microbial nutrient acquisition  
Structure - function relationships of microbial communities  
Microbial genome evolution

## Research

### *Published Peer-Reviewed Papers*

**Hogle SL**, Thrash JC, Dupont CL, Barbeau KA. *Accepted*. Trace metal acquisition by heterotrophic bacterioplankton with contrasting trophic strategies. *Appl. Environ. Microbiol.*

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.* 1(17):1751-7362/14

**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, <http://dx.doi.org/10.5670/oceanog.2011.80>

### *Papers in Preparation*

**Hogle SL**, Brahamsha B, Barbeau KA. *In prep.* Marine heterotrophic bacteria scavenge iron from labile organic matter by means of heme uptake.

**Hogle SL**, Bundy RA, Barbeau KA. *In prep.* Linking phytoplankton and bacterioplankton community dynamics to iron-binding ligand production in a microcosm experiment.

## Conference and Seminar Presentations

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

**Hogle SL**, Brahamsha 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**, Brahamsha 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**, Brahamsha 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

## 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