

# Alaina Rose Weinheimer

2125 Derring Hall, 926 W Campus Dr, Blacksburg, VA 24061 – [alainarw@vt.edu](mailto:alainarw@vt.edu)

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## EDUCATION

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**M.Sc. in Marine Microbiology** October 2016 – March 2018  
Max Planck Institute for Marine Microbiology/University of Bremen  
*Bremen, Germany*

**B.S. in Biology** Aug 2012 - May 2016  
Schreyer Honors College, Pennsylvania State University  
*University Park, PA*  
Minors: Microbiology, Marine Science, Environmental Inquiry  
Study Abroad: Tropical Ecology and Coastal Biology in Curaçao, 2014.  
GPA: 3.91 on 4.0 Scale, Major GPA: 3.90  
GRE scores (11/2015)  
Verbal 160 (85<sup>th</sup> pctl), Quantitative 155 (60<sup>th</sup> pctl), Writing 4.5 (80<sup>th</sup> pctl)

## RESEARCH & TEACHING EXPERIENCE

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**Thesis Project, Dr. Nicole Dubilier Lab and Dr. Matthew Sullivan Lab** September 2017 - present  
Dept of Symbiosis, Max Planck Institute of Marine Microbiology  
*Bremen, Bremen, Germany*

- Dept of Microbiology, Ohio State University, Columbus, Ohio, USA
- Exploring the virome associated with the symbiosis between deep sea *Bathymodiolus* mussels and their chemosynthetic microbial partners
  - Using bioinformatic tools (i.e., VirSorter, VirFinder) to identify and evaluate viral contigs in the metagenomes of *Bathymodiolus* gill tissues enriched for phages for biodiversity, putative hosts, etc analyses

**Lab Rotation III, Dr. Jillian Petersen Group** June 2017 – July 2017  
Division of Microbial Ecology, University of Vienna, Austria

- Examined the feet of Lucinid clams for the presence of sulfur oxidizing symbionts using FISH
- Examined the gills of Lucinid clams for the presence of *Endozoicomonas* bacteria using FISH

**Lab Rotation II, Microbial Genomics and Bioinformatics Research Group,** May 2017 – June 2017  
Max Planck Institute for Marine Microbiology, Bremen, Germany

- Performed cluster analyses on biosynthetic gene clusters belonging to metagenomic-assembled genomes from TARA Oceans samples

**Lab Rotation I, Microsensors Group,** March 2017 – May 2017  
Max Planck Institute for Marine Microbiology Bremen, Germany

- Measured pH profiles of the coralline algae *Lithamnion glaciale* exposed to prolonged, continuous darkness
- Cultivated bacteria growing on the surface of *L. glaciale*

**Teaching Assistant, MICRB 415** January 2016 – April 2016

Pennsylvania State University, University Park, PA  
Course: General Virology, Microbiology 415 (MICRB 415)  
Professor: Dr. Moriah Szpara

**Research Assistant, Dr. Mónica Medina Lab** August 2015 – April 2017

- Pennsylvania State University, University Park, PA
- Analyzed microbial diversity and dynamics associated with strains of *Symbiodinium*
  - Assessed the impact of salinity on the composition of the coral microbiome as part of the Global Coral Microbiome Project

**Research Assistant, Dr. Iliana Baums Lab** August 2013 – May 2016

- Pennsylvania State University, University Park, PA
- Genotyped *Orbicella faveolata* larvae and *Acropora cervicornis* larvae and parent individuals, eggs, for separate compatibility
  - Extracted DNA from *Acropora palmata* samples
  - Extracted RNA from *Acropora cervicornis* samples
  - Thesis research

**Summer Intern, Dr. Joshua Voss Lab** May 2015 – July 2015

- Harbor Branch Oceanographic Institute, Fort Pierce, FL
- Compared the microbiomes of *Montastraea cavernosa* colonies along the St. Lucie Inlet freshwater discharge gradient
  - Photographed images along transect lines in Geyer Bank, McGrail Bank, and Bright Bank; *Montastraea cavernosa* sample processing; species identification for annotation aboard the R/V Manta

**Research Assistant, Dr. Amanda Demopoulos Lab** April 2015 – May 2015

- U.S. Geological Society, Gainesville, FL
- processed deep sea sediment from push cores for macrofaunal and meiofaunal analyses aboard the first leg of the E/V Nautilus 057 cruise in the Gulf of Mexico

**NSF REU Marine Microbiology Intern, Dr. Kim Ritchie Lab** May 2014 – August 2014

- Mote Marine Laboratory, Sarasota, FL
- Analyzed the effects of ocean acidification on calcification rates, microbial communities, respiration and photosynthetic rates, of six different genotypes of *Acropora cervicornis*, staghorn coral
  - Thesis research

## **GRANTS / AWARDS/HONORS**

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<b>Travel Grant</b> , Schreyer Honors College, <b>\$350</b>	October 2015
<b>Doris N. McKinstry Scholarship</b> , Eberly College of Science, <b>\$25,983</b>	July 2015
<b>Aldine Lucille Cech Honors Scholarship</b> , Eberly College of Science, <b>\$2,000</b>	July 2015
<b>Phi Kappa Phi National Honors Fraternity</b> inductee	April 2015
<b>Undergraduate Research Grant</b> , Pennsylvania State University, <b>\$1,000</b>	August 2014
<b>Undergraduate Research Grant</b> , Pennsylvania State University, <b>\$1,000</b>	August 2013
<b>Academic Excellence Scholarship</b> , Schreyer Honors College, <b>\$16,000</b>	August 2012
<b>Berks County Conservation District Scholarship</b> grand prize winner, <b>\$4,000</b>	April 2012

## FIELD EXPERIENCE

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**E/V Nautilus Cruise 057**, Gulf of Mexico (2015)

**R/V Manta Cruise**, Gulf of Mexico (2015)

**Global Coral Microbiome Project Field Expedition**, Colombia (2015)

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## POSTERS/PRESENTATIONS

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Weinheimer, A., Navarro-Muñoz, J., Glöckner, F. O., Medema, M., Fernandez-Guerra, F., *Defining gene cluster families from globally-distributed seawater samples using community detection methods.*

YOUMARES 8 Conference, Kiel University, Kiel, Schleswig-Holstein, Germany. September 15, 2017.

**(Presentation)**

Weinheimer, A., Voss, J., *Muddy waters: the blue and browns of discharge water on coral surface microbial communities.* Scones and Scholarship Series, Schreyer Honors College, State College, Pennsylvania. October 6, 2015. **(Presentation).**

Weinheimer, A., Voss, J. *Muddy waters: the blue and browns of discharge water on coral surface microbial communities.* FAU Harbor Branch Oceanographic Institute Summer Intern Symposium, Fort Pierce, Florida, July 30, 2015. **(Presentation.)**

Weinheimer, A., Baums, I., Devlin-Durante, M., *Identifying compatibility between *Acropora cervicornis* individuals using larval ratios.* Pennsylvania State University Undergraduate Research Exhibition, State College, Pennsylvania. April 2015. Pennsylvania State University. **(Poster)**

Weinheimer, A., Graham, C., Muller, E., Ritchie, K., *Finding resilient genotypes of staghorn coral for coral-reef restoration.* Mote Marine Laboratory Research Experiences for Undergraduates, July 2014. **(Poster)**

Weinheimer, A., Muller, E., Ritchie, K., *Finding resilient genotypes of staghorn coral for coral-reef restoration.* Mote Marine Laboratory Research Experiences for Undergraduates, Sarasota, Florida. June 2014. **(Proposal Presentation)**

Weinheimer, A., Baums, I., Devlin-Durante, M., *Identifying compatibility between *Orbicella faveolata* individuals using larvae ratios.* Pennsylvania State University Undergraduate Research Exhibition, State College, Pennsylvania. April 2014. **(Poster).**

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## OUTREACH

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Invertebrate Animal Day, The Friends School, State College, PA

December 18, 2015

Educational blog: Sea Gazing, seagazing.wordpress.com

January 2015-July 2015

Presentation, Women in STEM Day, University Park, PA

January 2015

Blog post: "'Chicken Pox' of the Sea -- Corals Can Get Sick Too." Weinheimer, A.,

September 14, 2015

Pusey, S., Collins, A., No Bones, Smithsonian National Museum of Natural History.

[http://nrmh.typepad.com/no\\_bones/2015/09/chicken-pox-of-the-sea.html](http://nrmh.typepad.com/no_bones/2015/09/chicken-pox-of-the-sea.html)

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## CERTIFICATIONS

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NAUI Advanced SCUBA certified, 12/30/14-present

NAUI Nitrox Certified, 11/9/2015-present

AAUS Scientific Diver, in-training

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## SERVICE AND LEADERSHIP ACTIVITIES

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**Science LionPride, Pennsylvania State University** Fall 2012 – Spring 2016

Student ambassador club of the Eberly College of Science

- Hosts community outreach and alumni board events, participate in recruiting events (presentations, tours), represent student body
- Alumni Relations Director Spring 2014 – Spring 2015
- Eberly College of Science Climate and Diversity Committee student representative, Fall 2012 – Spring 2015
- Eberly College of Science tour guide, Fall 2012 – Spring 2016
- Member of the Semester (Fall 2015)
- Member of the Year (Fall 2015 – Spring 2016)

**IFC/Panhellenic Dance Marathon (THON), Pennsylvania State University** Fall 2013 – Spring 2015

Largest student-run volunteer organization that raises money for pediatric cancer research and patients via the Four Diamonds

- Donor Alumni Relations committee member – Fall 2014 – Spring 2015
  - THONvelopes co-chair, counted and distributed solicitation letters
- Rules and Regulations committee member – Fall 2013 – Spring 2014
  - Four Diamonds Recycling Effort co-chair of committee, in charge of advocating and organizing the collection of recyclables

**Monarch FTK, Pennsylvania State University** Fall 2013 – Spring 2016

Student-run volunteer organization that provides emotional support for pediatric cancer patients and their families, fundraise money for THON

- Events Director, Spring 2014 – Spring 2016
- Special Events committee member, Fall 2013 - Spring 2014

**Nittany Divers, Pennsylvania State University** Fall 2014 – Spring 2016

Penn State's recreational scuba diving club

- Dive Safety Officer, Fall 2014 – Spring 2016
- Social Chair, Spring 2015 – Spring 2016