

Lydia Bienlien

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EDUCATION:

Virginia Institute of Marine Science, Gloucester Point/VA August 2016-Present
College of William and Mary, Williamsburg/VA

Pursing a Doctor of Philosophy degree

- Expected graduation date: May 2020

Virginia Institute of Marine Science, Gloucester Point/VA August 2016
College of William and Mary, Williamsburg/VA

Master of Science: Major: Marine Science; Major Concentration: Aquatic Health Sciences

- Thesis Title: Influence of *Perkinsus marinus* Infection and Oyster Health on Levels of Human-Pathogenic Vibrios in Oysters
- GPA: 3.92

Morningside College, Sioux City/IA May 2013

Bachelor of Science: Biology; Bachelor of Arts: Chemistry; Cluster: Mass Communication

- *summa cum laude*
- GPA: 3.987/4.0

ACADEMIC HONORS/AWARDS:

- Virginia Institute of Marine Science Foundation – Grey Allison & H. Renwick Dunlap Fellowship, 2016
- Virginia Institute of Marine Science Office of Academic Studies Student Travel Grant, 2016
- National Shellfisheries Association Student Travel Award - National Shellfisheries Association, 2016
- FY16 Student Equipment Request-Virginia Institute of Marine Science Equipment Trust Fund Office of Academic Studies, 2015
- Virginia Institute of Marine Science Office of Academic Studies Student Travel Grant, 2015
- National Shellfisheries Association Student Travel Award - National Shellfisheries Association, 2015
- Southern Association of Marine Laboratories Student Support Program - Southern Association of Marine Laboratories, 2015
- Tidewater Oyster Gardeners Association Fellowship recipient - VIMS Foundation, 2015-2016
- Virginia Institute of Marine Science 3 Minute Thesis Speech Competition, 2014, 1st Place and People's Choice Award
- Outstanding Graduate Award in Sciences recipient - Awarded to the top graduating student of all scientific departments for Academic Excellence, Morningside College, 2013
- Omicron Delta Kappa Biology Award recipient - Awarded to the top Biology student, Morningside College, 2013
- Deans List, Presidential Scholar - Invited as part of an exclusive group to participate in President Reynders Book Club, 2011-2013
- Interdepartmental Honors
- Omicron Delta Kappa National Leadership Honor Society

- Alpha Lambda Delta National Honor Society
- Two-Time Academic All-American
- Lt. Farnsworth Scholarship recipient – provided for exceptional student work in the Biology/Chemistry Department.
- Two-time Packard Scholarship recipient - awarded for excellence in academics, service, and leadership on campus.
- Beta Beta Beta Biological Honor Society
- Selected as a student mentor for the Biology/Chemistry department for first year students, 2012 orientation.

GRANTS:

Decreasing Water Usage on the VIMS Campus. (PI) \$12630. With Co-PI M. Brabham. William & Mary Committee on Sustainability's Green Fee. April 2017-March 2018

Influence of Altered Disease Progression Timing on the Potential Relationship between *Perkinsus marinus* Infection and Levels of human-pathogenic vibrios in aquaculture oysters. \$2000. With Co-PI R. Carnegie. Virginia Institute of Marine Science Student Research Grant. October 2015-May 2016

Influence of *Perkinsus marinus* Infections of Levels of Human-Pathogenic Vibrios in Aquacultured Oysters (PI). \$1250. With Co-PI R. Carnegie. Michael Castagna Student Grant for Applied Research. January 2015-December 2015

Influence of *Perkinsus marinus* infection on level of human-pathogenic vibrios in aquaculture oysters (PI). \$2,000. With Co-PI R. Carnegie. Virginia Institute of Marine Science Student Research Grant. October 2014-May 2015

Investigation of Potential Correlation Between Oyster Health and Contamination with Human-Pathogenic Vibrios (Author). \$6900. With PI R. Carnegie, C. Audemard, and K. Reece. Virginia Sea Grant. September 2014-April 2015

UNDERGRADUATE RESEARCH EXPERIENCE:

Virginia Institute of Marine Science, Gloucester Point/VA

Summer 2012

Research Experience for Undergraduates

- Selected as a student researcher under a program funded by the National Science Foundation.
- Performed animal intake & necropsy of oysters to establishment and evaluation of Ray's fluid thioglycollate cultures for *Perkinsus* spp. detection.
- Gained knowledge and experience in standard histological methods & histopathological recognition of major pathogens.
- Trained in polymerase chain reaction (PCR) and *in situ* hybridization (ISH) methods.
- Wrote a comprehensive prospectus leading to a paper titled "Molecular Analysis of *Perkinsus marinus* Infection Acquisition in *Crassostrea virginica*"; supervised by Dr. Ryan Carnegie.
 - Presented research and findings to faculty, staff, and other student researchers at the end of the program.
 - Poster presentation at the Association for the Sciences of Limnology and Oceanography 2013 Aquatic Sciences Meeting as the top undergraduate student representative from the Virginia Institute of Marine Science

University of Nebraska Medical Center, Omaha/NE

Summer 2011

Summer Undergraduate Research Program

- Designed, implemented, and reported the results of an experiment, “Mysterious Ajuba takes on the Great p53”.
- Gained skills in experimental design, poster presentations, gel electrophoresis, cell culture and transfection, immunoprecipitation, and Western blotting.
- Presented poster at UNMC, Summer 2011 & the 2012 Palmer Research Symposium.

Morningside College, Sioux City/IA

Fall 2010

Microbiology Research

- Collaborated in a small group to conduct research, “Expressions of *Luciferase* Gene in *Vibrio fishcheri in vitro*,” presented at the Spring 2011 Palmer Research Symposium.
- Developed unique recipes for agars and broths to stimulate specified bacterial growth.

Morningside College, Sioux City/IA

Fall 2010 to Spring 2011

Biological Research

- Worked as a team with a group of students, under the direction of an instructor, to determine the effects that prairie patch size has on the biodiversity of terrestrial gastropods.
- Utilized dichotomous keys to identify nomenclature.

SCIENTIFIC AND OUTREACH PRESENTATIONS:

National Shellfisheries Association, Annual Meeting, 2017: “Investigating connections among human-pathogenic *Vibrio* species, *Perkinsus marinus* parasitism, and oyster health within *Crassostrea virginica*”; Oral

Aquaculture 2016, Triennial Conference, Feb. 2016, “Influence of *Perkinsus marinus* Infection on Levels of Human-Pathogenic Vibrios in the Oyster *Crassostrea virginica*”; Poster

Tidewater Oyster Growers Association, Annual Meeting, 2016: “Influence of *Perkinsus marinus* infection on level of human-pathogenic vibrios in oysters”; Oral

Department of Aquatic Health Sciences, VIMS, Departmental seminar, 2015: "Frenemies or Loners? Is there a 'relationship' between *Perkinsus marinus* and *Vibrio* spp. within the oyster?"; Oral

NewMarket Reception, 2015: “The Secret Triad”; Oral

VIMS, Board Meeting, 2014: “The Secret Triad”; Oral

VIMS Inaugural 3 Minute Thesis (3MT) Competition, 2014: “The Secret Triad”; Oral -People’s Choice Award -1st Place Winner

Morningside College, Palmer Research Symposium,

2013: “Artificial Coral Reefs: Pollution or Restoration?”; Oral, “The Value of Knowledge: Intrinsic or Extrinsic”; Oral

2011: “Expressions of *Luciferase* Gene in *Vibrio fishcheri in vitro*”; Oral

Association for the Sciences of Limnology and Oceanography, Aquatic Sciences Meeting, 2013: “Molecular Analysis of *Perkinsus marinus* Infection Acquisition in *Crassostrea virginica*”; Poster

VIMS, Experience for Undergraduate Presentation, 2012: “Molecular Analysis of *Perkinsus marinus* Infection Acquisition in *Crassostrea virginica*”; Oral

Totally On Earth’s Side, Trashion Show, 2012: “A Sea of Plastic”; Oral

University of Nebraska Medical Center, Summer Undergraduate Research Program Presentation, 2011: “Mysterious Ajuba takes on the Great p53”; Poster

POLICY DEVELOPMENT

Was selected from a group of applicants to participate in the “VASG/VIMS COASTAL & MARINE POLICY EXPEDITION TO DC,” March 9-11, 2016

Sat in on part of the ICES WGPDMO meeting at VIMS, February 16-20, 2016

Note taker for the East Coast Molluscan Health Workshop in Portland, Maine, (which brought together 50 participants from industry, academia, and the regulatory and extension communities coast-wide to identify solutions for improving biosecurity within the regional shellfish aquaculture industry), January, 2015

Sat in on part of the East Coast Molluscan Aquaculture Health Management Workshop (25 attendees), VIMS, 2014

OTHER PROFESSIONAL DEVELOPMENT:

Remote Pilot (Drone) License, 2017

Member of the VIMS Writing Group, 2017-Present

Teaching Assistant for MSC1 501E- Fundamentals of Environmental Chemistry, Toxicology and Pathobiology, 2017

Elected Co-President of the VIMS Graduate Student Association, 2017-Current

Member of the VIMS Green Team, 2016-Current

Member of the VIMS 2017 Awards Committee

Reviewer for the Graduate Student Association Travel Grant, 2017

Reviewer for the Graduate Student Association Research Grant, 2016

Reviewer for the Graduate Student Association Travel Grant, 2016

COMPASS science communication workshop (4hrs) April 20th, 2016 at VIMS

Elected Treasurer of the Graduate Student Association, 2015-2016

Member of the Virginia Institute of Marine Science Honor Council, 2013-Present

Volunteer for VIMS annual Marine Science Day (a public outreach program), 2015, 2016, and 2017

Teaching Assistant for MSC1 503-Interdisciplinary Research in Estuarine and Coastal Systems, 2015

Reviewer for the Graduate Student Association Travel Grant, 2015

VIMS Graduate Student Association Silent Auction Coordinator, 2013

MENTORSHIP

Oriented, directed and scheduled work for a high school volunteer, 2015-2016.

Day of Caring 2016, Live united. Painted kitchen at the Merrimack Juvenile detention center 9/16/16

2016 Gloucester-Mathews Humane Society benefit volunteer

Oriented, directed and scheduled work for an undergraduate volunteer, 2014-2015.

MEMEBERSHIP IN PROFESSIONAL ORGANIZATIONS:

National Shellfisheries Association