

Brooke A. Jude, PhD

P.O. Box 5000
Annandale-on-Hudson, NY 12504
email: bjude@bard.edu

Phone: (office) (845) 752-2337
(cell) (603)304-6948
website: <http://www.judelab.com>

EDUCATION

PhD. Dartmouth College/Geisel School of Medicine/Guarini School of Graduate and Advanced Studies 2008
Hanover NH
Molecular and Cellular Biology/Microbiology. Dissertation Advisor, Ronald K. Taylor
(defended thesis 2007- degree hooded 2008)

A.B. Colby College, Waterville, ME 2000
Double Major: Biology/ Religious Studies; *cum laude*

ACADEMIC APPOINTMENTS

Faculty Academic Director Bard Houses Program 2018-present
Associate Professor Biology Program 2017-present
Academic Program Director Bard Rockefeller Semester in Science Program 2016-present
Program Director Biology 2016-2017
Program Director Citizen Science Program 2010-2012
Assistant Professor, Biology Program 2009-2017
Visiting Assistant Professor Colby College, Biology Department 2007-2009

COURSES TAUGHT

Distilling Biotechnology- Bard Prison Initiative (BPI), Eastern Correctional Facility 2019
BIO432- Calderwood Course in Public Writing; Distilling Biotechnology 2018, 2019, 2020
BIO419- Biotechnology and Infectious Disease 2017
BIO158- Case Studies in Medical Biology 2017
BIO111- Microbes in the Environment 2017, 2018
Microbiology- Bard Prison Initiative (BPI), Eastern Correctional Facility 2016, 2018
BIO145- Environmental Microbiology (4 credits/lab) 2013, 2015
BIO165- Microbial Techniques Workshop (2 credits/lab only) 2016
BIO201- Eukaryotic Genetics/Genetics and Evolution (4 credits/lab) 2010, 2013-present
BIO303- Microbiology (4 credits/lab) 2010- present
BIO314-Virology (4 credits/lab) 2009
BIO406- Cholera: Pandemics, Pathology and Molecular Mechanisms (2 credit seminar) 2011, 2016
BIO414-Virology (2 credit seminar) 2012
BIO427- Topics in Virology: Ebola (2 credit seminar) 2015
Applied Microbiology- Tutorial (1 student) 2013
Cholera- Tutorial (1 student) 2013, 2015

PUBLICATIONS

(underlined indicates undergraduate student)

Jude B.A. Draft Genome of *Chitinomonas sp* From Hudson Valley Waterways Expressing Violacein Pigment. *Microbiol Resour Announc.* 2019 Aug 29;8(35). pii: e00683-19. doi: 10.1128/MRA.00683-19.

Jude, B.A. A Flamboyance of (Flamingo) Microbes. *L & O Bulletin.* 2018 November; 27(4). P 123-124.
<https://doi.org/10.1002/lob.10267>

Lamendella R. & **Jude B.A.** Draft genomes of violacein producing *Duganella sp* isolates from a waterway in Eastern Pennsylvania. *Microbiol Resour Announc.* 2018 Sep 27;7(12). pii: e01196-18. doi: 10.1128/MRA.01196-18. eCollection 2018 Sep.

Dahan, D., Jude B.A., Lamendella, R., Keesing F., Perron G.G. Exposure to Arsenic Alters the Microbiome of Larval Zebrafish. *Frontiers in Microbiology*. *Front. Microbiol.*, 21 June 2018 <https://doi.org/10.3389/fmicb.2018.01323>

Doing, G., Perron G.G., Jude B.A. Draft Genome of Violacein Producing *Iodobacter sp* From Hudson Valley Watershed. *Genome Announc.* 2018 Jan 4;6(1). pii: e01428-17. doi: 10.1128/genomeA.01428-17.

Bettina, A.M., Doing, G., O'Brien K., Perron G.G., Jude, B.A. Draft Genomes of Phenotypically Distinct *Janthinobacterium sp* Isolates Cultured From the Hudson Valley Watershed. *Genome Announcements*. *Genome Announc.* 2018 Jan 18;6(3). pii: e01426-17. doi: 10.1128/genomeA.01426-17

O'Brien, K., Perron, G.G., Jude, B.A. Draft Genome of a Red Pigmented *Janthinobacterium sp.*, Native to the Hudson Valley Watershed. *Genome Announcements*. *Genome Announc.* 2018 Jan 4;6(1). pii: e01429-17. doi: 10.1128/genomeA.01429-17.

Jude, B.A. Strategies for developing a science communicator through science writing. *CourseSource*. <https://doi.org/10.24918/cs.2017.5>

Agate L, Beam D, Bucci C, Dukashin Y, Jo'Beh R, O'Brien K, Jude B.A. The search for violacein-producing microbes to combat *Batrachochytrium dendrobatidis*: a collaborative research project between secondary school and college research students *J. Microbiol. Biol. Educ.* 2016. 17(1):70-73 doi:10.1128/jmbe.v17i1.1002

Jude C.D., **Jude B.A.** Powerful soil: utilizing microbial fuel cell construction and design in an introductory biology course. *J. Microbiol. Biol. Educ.* 2015.16(2):286-288 doi:10.1128/jmbe.v16i2.934 **Selected as a highlighted article for print Spotlight Issue of JMBE, Summer 2016

Savage A.F. and **Jude, B.A.*.** Starting Small: using microbiology to foster scientific literacy. *Trends Microbiol.* 2014 Jul;22(7):365-7.

Cerda-Maira F.A., Kovacicova G., **Jude, B.A.**, Skorupski K.A. and Ronald K. Taylor. Characterization of BreR Interaction with the Bile Response Promoters *breAB* and *breR* in *Vibrio cholerae*. *J Bacteriol.* 2013 Jan;195(2):307-17

Jude B.A.*. A 'Case' for Active Learning: Bard College faculty jointly review the National Center for Case Study Teaching (Buffalo Case Studies). *Journal of Microbiological Education (JMBE)*. 2012 July.

Jude B.A.*., Taylor R.K. The physical basis of type 4 pilus-mediated microcolony formation by *Vibrio cholerae* O1. *J Struct Biol.* 2011 Jul;175(1):1-9. Epub 2011 Apr 20. (*corresponding author)

Martinez R.M., **Jude B.A.**, Kim T.J., Skorupski K., Taylor R.K. The role of FlgT in anchoring the flagellum of *Vibrio cholerae*. *Journal of Bacteriology*. 2010 Feb 12.

Jude B.A. , Martinez, R.M., Skorupski K.A., and Taylor R.K. Levels of the secreted *Vibrio cholerae* attachment factor GbpA are modulated via protease dependent degradation. *Journal of Bacteriology*. 2009 Nov;191(22):6911-7.

Clark S.E., Jude, B.A., Danner G.R., Fekete F.A. Identification of a multidrug efflux pump in *Flavobacterium johnsoniae*. *Vet Res.* 2009 November-December;40(6):55

Wardwell, L.H., Jude B.A., Moody J., Olcerst A., Gyure R.A., Nelson R.E., Fekete F.A. Pervasiveness of Mercury and Antibiotic Resistance Due to Co-selection in Sphagnum Core Samples Dating Back 2000 Years. *Geomicrobiology Journal*. 2009 June; 26(4):238-247

Swanson, I, **Jude B.A.**, Zhang A.R., Pucker A, Smith Z.E., and Golovkina T.A. Sequences within the gag Gene of Mouse Mammary Tumor Virus Needed for Mammary Gland Cell Transformation. *Journal of Virology*. 2006 Apr;80(7):3215-24

Kim T.J**, **Jude B.A.**.**, and Taylor R.K. A colonization factor links *Vibrio cholerae* environmental survival and human infection. *Nature*. 2005 Dec 8;438(7069):863-6 (** co-first author)

Jude B.A., Pobezhinskaya Y., Bishop J., Parke S., Medzhitov R.M., Chervonsky A.V., Golovkina T.V. Subversion of the innate immune system by a retrovirus *Nature Immunol.* 2003 Jun;4(6):573-8.

Hook L.M., **Jude B.A.**, Ter-Grigorov V.S., Hartley J.W., Morse H.C. 3rd, Trainin Z., Toder V., Chervonsky A.V., Golovkina T.V. Characterization of a novel murine retrovirus mixture that facilitates hematopoiesis. *Journal of Virology.* 2002 Dec;76(23):12112-22.

BOOK CHAPTER

Jude, B.A. and Taylor, R. K. “Genetics of *Vibrio cholerae* pili and flagella,” chapter in “*Vibrio cholerae*. Genomics and Molecular Biology.” Eds. Faruque, S.M. Nair, G.B. 2008, Horizon Press.

TEXTBOOK

Jude, B.A. *Biotechnology and infectious diseases : modern strategies for finding, evading, and defeating wicked pathogens* Momentum Press, NY, NY. 2017

MANUSCRIPTS IN PREPARATION

Gibson J and **Jude B.A.** Draft Genome of violacein pigment producing Oxalobacteraceae from British Columbia, Canada. Manuscript draft written, sequences, assemblies, annotations in curation at NCBI.

Henry, H., Gibson J., Russell N., Kickner I., Shresethova M., Mitchell C., Cooper A., Medjo-Akono, S. and Jude, B.A. Characterization of the motility phenotypes displayed by Hudson Valley isolates of violacein producing bacteria. Data, and all replicates fully collected and analyzed. Manuscript drafts being completed.

PRESENTATIONS AND PROFESSIONAL MEETINGS

ASM Microbe – San Francisco, CA 2019

Invited speaker in panel: “Community Microbiology: Moving Beyond Crowdsourcing to Active, Participatory Science by the Public,” *Finding Purple in the Water: Community Mapping of Violacein Producing Bacteria*

ASLO Summer Meeting “Water Connects”. Victoria, British Columbia, CA 2018

Poster Presentation. Jude, B.; Kuckyr, M.; Alba, P.: Detection of violacein producing bacterial strains as a potential indicator for waterway health 2018

Comparing Model Systems: Examining the Effect of Violacein on *Chytrid* and *C. elegans*
NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting. 2017

Symposium Day Keynote Speaker at BHSEC Queens 2016

Moving Past the Resolution Limit: STED and PALM Microscopy 2014

Science on the Edge Seminar. Bard College. Prof. Brooke Jude and Prof. Chris Lafratta

The chemistry and biology of violacein: a purple antibiotic from the Esopus Creek 2014

Lifetime Learning Institute Seminar. Bard College
Prof. Brooke Jude and Prof. Emily McLaughlin

Powerful Soil: Microbial Fuel Cell Construction for Teaching 8th Graders Through Undergraduates (poster) 2014

(Purple) Microbial Protectors: Analysis of violacein production in Hudson Valley microbes (oral)
NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting.

(Purple) Microbial Protectors: Analysis of violacein production in Hudson Valley microbes. 2014

Invited Keynote speaker, Vassar College. Hudson Valley Life Sciences Group Meeting.

Characterization of *Batrachochytrium dendrobatidis* killing by violacein producing environmental microbial isolates of the Hudson Valley 2014

- Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor Laboratories
Smith, E., Miller, L., Tanner, J., Steckler, V., Bettina, A., Finn, M., North, M., Hoelzli, E., Ko-Ko, T., Norman, M., McLaughlin, E.C., Jude, B.A.
- Analysis, Characterization and Synthesis of Violacein from *Janthinobacterium* Isolate Extracts** 2012
 Poster presentation: Matthew Norman, Joshua Tanner, Thant KoKo, Brooke Jude, and Emily C. McLaughlin; ACS Fall Meeting, Philadelphia, PA
- The Citizen Science Program at Bard College: improving science literacy in college freshmen** 2012
 Oral presentation (Invited panelist): Jude, B.A. American Association of Immunologists
- A Microbe at Home: *Janthinobacterium* isolate as a case study for molecular genetic progress** 2012
 Oral Presentation: Jude, B.A.; Ithaca College Biology Seminar Series
- The science of sticking/making science stick: teaching, research and Citizen Science Program development at Bard College** 2011
 Microbiology & Molecular Pathogenesis Meeting
 Celebration of Dr. Ronald K. Taylor 25th Lab Anniversary; Oral Presentation: Jude, B.A.
- Investigating the science of sticking: Analysis of attachment, biofilm and pigment production in Hudson Valley aquatic microbes** 2011
 Oral Presentation (2 seminars): Jude, B.A. Smith College Life Sciences Colloquium Series
- Dartmouth Molecular and Cellular NIH Training Grant Series** 2010
 Oral Presentation. Discussed research projects and work at Bard College in a seminar for students and postdoctoral associates funded by the Dartmouth Molecular and Cellular NIH Training Grant (B.A. Jude was funded by this grant from 2004-2006)
- The science behind sticking: Revealing factors involved with surface attachment and biofilm production in a Hudson Valley bacterial isolate (oral presentation)**
 Bard College Faculty Seminar Series
- Dartmouth LEAD Symposium for Women in Science and Medicine** 2010
 Invited Panelist
- Bard College Matriculation Ceremony** 2010
 Invited Faculty Speaker
- The Time of Cholera: History of an infectious disease** 2010
 Bard Language and Thinking Rostrum Seminar Series: Invited Speaker
- What's Sticking to your Lobster?: Adventures in the Jude Lab** 2009
 Bard Biology Seminar Series: Oral Presentation
- Dartmouth Center for the Advancement of Learning (DCAL)** 2009
 Invited lecture
- Attachment and Detachment of *Vibrio cholerae*: a role for quorum sensing** 2007
 Boston Bacterial Meeting: Oral Presentation: **Jude, B.A.** and Taylor, R.K.
- Levels of the secreted *Vibrio cholerae* attachment factor GbpA are modulated by quorum sensing** 2006
 Oral and Poster Presentations: **Jude, B.A.** and Taylor, R.K.
 Host-Microbe Interaction EMBO/FEBS Lecture Course, Spetses, Greece
- Levels of the secreted *Vibrio cholerae* attachment factor GbpA are modulated by quorum sensing** 2006
 Poster Presentation: **Jude, B.A.** and Taylor, R.K.; ASM General Meeting.

Bacterial attachment in the ‘gutter and the gut’: the characterization of GbpA in *Vibrio cholerae* 2006
Colby College Department of Biology Colloquia; Invited Seminar

Analysis of the mechanism of TCP mediated autoagglutination and microcolony formation in *Vibrio cholerae* 2005
Oral Presentation: **Jude, B.A.** and Taylor, R.K.; US-Japan Cholera Conference

Genetic transinteraction analysis of the mechanism of TCP mediated autoagglutination and microcolony formation in *Vibrio cholerae* 2005
Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor Symposiums
Poster Presentation: **Jude, B.A.**, and Taylor, R.K.

GbpA is a secreted GlcNAc binding protein that is important for *Vibrio cholerae* intestinal colonization and attachment to chitin 2005
Poster Presentation: **Jude, B.A.**, Kirn, T.K. and Taylor, R.K.
International Union of Microbiological Societies, San Francisco, CA

ABSTRACTS AND PRESENTATIONS WITH STUDENTS

NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting. 2019
Poster Presentation: Comparison of Quorum-Sensing Related Behaviors Among Unique Violacein-Producing Isolates - Julia Gibson, Allegra Cooper, Sacha Medjo, and Brooke Jude

NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting. 2017
Poster Presentation
Practical Prevention: Developing Methods to Lower Burden of *Vibrio cholerae*
Alexis Akingbade, Philippine Alba, Cassandra Savino, Elizabeth Osborne-Schwartz, Francesca Di Rienzo, and Brooke A. Jude

NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting. 2016
Oral presentations: Kelsey O’Brien (Awarded E. R. Leadbetter Memorial Scholarship to attend the meeting)

American Society of Microbiology 49th Annual Regional Meeting; Albany, NY. 2014
Poster presentations:
Georgia Doing and Brooke Jude, *Characterization of genetic knockouts in violacein producing microbes*
Yangtsho Gyaltsen and Brooke Jude, *Violacein synthesis and Batrachochytrium dendrobatidis growth in environmentally-mimicked conditions of the Hudson Valley*

NEMPET (Northeastern Microbiologists: Physiology, Ecology and Taxonomy) Meeting. 2014
Poster presentations:
Georgia Doing and Brooke Jude, *Construction of Genetic Knockouts in Violacein Producing Microbes*
Yangtsho Gyaltsen and Brooke Jude, *Analysis of Violacein Production in Response to Environmentally Mimicked Conditions*

American Society of Microbiology 45th Annual Regional Meeting 2010
Albany, NY.
Poster: Bettina, A.M. and Jude, B.A.
Characterization of violacein hyper producing Janthinobacterium sp. Isolate from the Hudson River Valley

Host-Microbe Interaction EMBO/FEBS Lecture Course 2010
Spetses, Greece
Poster: Bettina, A.M. and Jude, B.A.
Characterization of the attachment and biofilm pathways and violacein production in local Janthinobacterium isolate.

PROFESSIONAL DEVELOPMENT

- Completion of Johns Hopkins COVID-19 Tracer Course (Coursera) 2020
- Reporter for a Day – ASLO Summer Meeting, Victoria, British Columbia CA 2018
- PATRIC/RAST Workshop at Argonne National Laboratory, Chicago IL USA 2017
- ASM-LINK Fellow supported by ASM and NSF to attend ABRCMS, Tampa FL USA 2016
- GCAT-SEEK Genomics Workshop- Juniata College, Metagenomics section. 2015
In collaboration with Prof. Gabriel Perron. (Fully funded)
- Organized spring symposium of the Hudson Valley Life Sciences Group 2015
Bard College
- GCAT-SEEK Genomics Workshop- Lycoming College, Prokaryotic Genetics 2014
(Fully funded, 3 members of Jude Lab, including 2 students, Georgia Doing and Yangtsho Gvaltshen)
- Optical Microscopy and Imaging Course, Marine Biological Lab, Woods Hole, MA 2014
- Summer Institute for Communicating Science, SUNY Stonybrook School of Journalism 2011
Full Scholarship Awarded)
- Graduate Student Teacher Training Workshop 2007
Dartmouth Center for Teaching and Learning, Hanover, NH

AFFILIATIONS AND MEMBERSHIPS

- Council of Undergraduate Research (CUR)
- American Society of Microbiology (ASM)
- AAAS- American Association for the Advancement of Sciences
- New York Academy of Science

SENIOR PROJECT STUDENTS (54)

Grey McLaine	2021
Sacha Medjo	2021
Cailey Mitchell	2021
Kane Moser	2021
Mia Sheshova (Joint Project with Chemistry and Biochemistry – E. McLaughlin)	2021
Glenn Decety (Co-advised with M. Tibbetts) “Quantifying <i>Saccharomyces cerevisiae</i> Growth to Elucidate the Mechanism of Violacein”	2020
Michael Uhle (Co-advised with M. Tibbetts) “Impact of electronic and traditional cigarette smoke vapor on biofilm production in <i>Pseudomonas aeruginosa</i> and <i>Pseudomonas fluorescens</i> ”	2020
Julia Gibson “The Characterization of Quorum Sensing Related Behaviors for BJB404, a Unique Violacein Producing Isolate from Salt Spring Island, Canada”	2020
Gabriela Vasquez (Co-advised with M. Tibbetts)	
Daisy Noe “Exploring the Effects of a Novel Microbial Inoculant, <i>Janthinobacterium</i> , on <i>Glycine max</i> Growth”	2019
Michael Kuckyr “Analysis of Bacterial Membrane Structures Which Alter the Effectiveness of Violacein’s Antibacterial Function”	2019
Henry O’Donnell “Investigation of Genes Related to Quorum Sensing in <i>Iodobacter</i> BJB302”	2019
Hannah Henry	2019

“Antibiotic Mediated Biofilm Enhancement in Resistant <i>Pseudomonas aeruginosa</i> ”	
Alexis Akingbade	
“The Impact of Acidity on <i>Vibrio cholerae</i> in Foodborne Environments”	2018
Lillian Brennessel	
“Impact of Electronic Cigarette Smoke Vapor on Biofilm Production in I”	2018
Miroslav Skular	
“Investigation into the Mechanisms of Violacein-Mediated Cell Death in <i>C. elegans</i> ”	2018
Jackson Barr	2017
“Constructing a Novel Conjugate Vaccine for Cholera: Conjugation of a Protective <i>Vibrio cholerae</i> Virulence Factor to Dextran by Squaric Acid Chemistry	2017
Sophia Konstantine	
“An Investigation into the Antinematodal Properties of <i>Janthinobacterium lividum</i> using <i>Caenorhabditis elegans</i> as a Model”	2017
Dynte’ Moore	
“Potentially Pathogenic: The Classification and Examination of Environmental <i>Vibrio</i> Isolates Sampled from Water Sources Along the Gulf Coast and the Bahamas”	2017
Kelsey O’Brien	
“The Genomic Characterization of Oxalobacteraceae Isolates from the Hudson Valley region: A Proposed Genomic Pipeline”	2017
Elizabeth Osborne-Schwartz	
“Attachment of <i>Vibrio cholerae</i> to Resistant Starches to Improve Oral Rehydration Therapy”	2017
Cassandra Savino	
“Lime juice as an abundant and affordable mechanism for food borne cholera infection”	2017
Deanna DePietro	2016
“Exploring Copper Tolerance in an Aquatic <i>Janthinobacterium</i> species: An Examination of Biofilm Formation and Viability for Environmental Applications”	2016
Yegor Dukashin	2016
“Examination of the Activity of Glycosyltransferases in the Development of <i>Streptococcus mutans</i> Biofilms in Response to Sucrose”	2016
Katherine Moccia	2016
“What makes a healthy aquatic environment? Investigating the Effects of Hydraulic Fracturing Material Glutaraldehyde on Bacterial Communities”	2016
Andrea Szegedy-Maszak	2016
“Optimization of the Microbial Fuel Cell for Use in Novel STEM Pedagogy”	2016
Tytravia Riley	2016
“The Interaction between Violacein Producing Bacteria and <i>Metarhizium anisopliae</i> F52”	2016
Alessia Zambrano	2016
“Examination of violacein-producing <i>Janthinobacterium</i> species’ biofilm structure”	2016
Alexander Page	2015
“The Antibacterial Activity of Tryptophan-derived Pigments Violacein and Deoxychromoviridans on Four Common	2015

Bacterial Strains”

Abby Soussan “Investigation of <i>Batrachochytrium dendrobatidis</i> Zoospore Movement in Response to Violacein-Producing Bacteria”	2015
Georgia Doing “Machine Learning on Images of a Microbial Mutant Library” (Joint project with Computer Science Program)	2015
Mildred Kissai (Joint Project with Chemistry Program)	2015
Kody Chen “Synthesis and Assays of Potential Anti-Cancer Ruthenium-Ferrocene Compounds” (Joint project with Chemistry Program)	2015
Francesca Di Rienzo “Design and development of a chitin-based method for <i>Vibrio cholerae</i> filtration”	2014
Molly North “Transposon based analysis of violacein production in <i>Janthinobacterium lividum</i> ”	2014
Neena Marano “Characterization of biofilm production in <i>Janthinobacterium lividum</i> ”	2014
Julia Les “Biofilm production and swarming motility of <i>Pseudomonas putida</i> in the presence of sub-inhibitory concentrations of the antibiotic chloramphenicol”	2013
Adenike Akapo “Do soil microbes inhibit the growth of oral microbes? A natural antibiotic treatment for dental overgrowth”	2013
Raed Al-Abbasee “Evidence for the presence of colonization factor GlcNAc binding protein A in <i>Vibrio cholerae</i> O1 El Tor biotype variant”	2013
Perry Anderson “Carbon source effect on violacein production [in] Hudson Valley aquatic microbial isolates”	2013
Alexia Downs “Colonization and conjugation in <i>Vibrio cholerae</i> : the possible link between the GbpA attachment factor and the presence of IncA/C multidrug resistance plasmids”	2013
Margo Finn “An Investigation of the Molecular Mechanism of Quorum Sensing in <i>Janthinobacterium lividum</i> ”	2013
Lena James “Effects of chitin on conjugation frequencies of the multi-drug resistant plasmid IncA/C from donor <i>Aeromonas salmonicida</i> AS03 to recipient <i>Vibrio cholerae</i> BAA-2163 (Haitian epidemic isolate)”	2013
Erin Smith “The effects of violacein-producing bacterial strains on <i>Batrachochytrium dendrobatidis</i> using a novel chytrid-killing assay”	2013
Sara Yilmaz “Acquiring multi-drug resistance in aquatic environments: the role of chitin in conjugation frequencies	2013

of the IncA/C plasmid between *Aeromonas salmonicida* subs. *salmonicida* AS03 and *Vibrio cholerae* MQ1795 (Bangladeshi isolate)”

Liza Miller 2012
 “Survey of vernal pools in the Hudson Valley yields bacterial isolates which inhibit the amphibian pathogen *Batrachochytrium dendrobatidis*”

Sining Leng 2012
 “Characterization a mutation in the gene *IRE1* using a cooperative tumor model in *Drosophila*: role of the unfolded protein response in cancer”

Jananie Ravi 2012
 “Characterization of differences in biofilm formation and violacein production in environmental strains of *Janthinobacterium lividum*”

Emma Taylor Salmon 2012
 “Examination of transfer frequency of a multi-drug resistant plasmid to *Vibrio cholerae* via conjugation”

Veronica Steckler 2012
 “Environmental detection of bacterial with anti-fungal activity against the amphibian pathogen *Batrachochytrium [sic] dendrobatidis*: a preliminary survey of *Janthinobacterium* in the Hudson Valley”

Joshua Tanner 2010
 “Interruption of *vioC* in a *Janthinobacterium sp.* mutant produces a green pigment structurally similar to chromoviridans”

Alexandra Bettina 2009
 “The preliminary identification and classification of *Janthinobacterium* hyper-violacein producing mutants as effective anti-microbial agents”

Jyoti Dev 2009
 “Co-localization and interaction of a retroviral Gag protein with cellular caveolin-1 protein”

Will Wylie 2009
 “Predation effectiveness and biofilm composition in *Bdellovibrio* and its prey”

INDEPENDENT RESEARCH

2009
 Sining Leng
 Yonqing Yuan
 Jing Yang
 Lauren Dorsey-Spiz

Erin Kelly*
 Liana Perry*
 Emma Barnes*
 *Participated in the
 Microbial techniques
 workshop

Ismary Blanco*
 Katherine Moccia
 Griffin Burke
 Emily Hoelzli
 Jake Weissman
 Imaani Easthausen

2010
 Abishek Dev

2013
 Yasho- Victoria Singh*
 Carmel Yaari*
 Elisa Caffrey*
 Rebecca Landsbury*
 Isabel Keddy-Hector*
 Ian McElfresh*
 Kexin (Muna) Ding*
 Yangtsho Gyaltsen*
 Deanna DePietro*

2017
 Michael Kuckyr
 Molly Woolery
 Alexis Akingbade
 Nadia Russell
 Leah Berry-Sandlin

2011
 Samuel Shapiro

2012
 Julia Les*
 Molly North*
 Jake Weissman*
 Meger Snyder*

2018
 Hannah Henry
 Julia Gibson

Izabel Kickner
Mia Shushova
Nadia Russell
Allegra Cooper

2020 (shortened spring semester)
Christina Kiser
Chrissy Gildersleeve
Emma Tilley

Emma Deutsch

BARD SUMMER RESEARCH INSTITUTE (20)

2010

Alexandra Bettina

2011

Joshua Tanner

2012

Lena James

H. Sara Yilmaz

Ashley Beaulieu (St. Joseph's College, Standish, ME)

2013

Molly North

Griffin Burke

Emily Hoelzli

Shailab Shrestha

2014

Georgia Doing

Yangtsho Gyaltshen

2015

Yegor Dukashin

Kelsey O'Brien

Raneem Jo'Beh (Al Quds)

2016

Kelsey O'Brien

2017

Alexis Akingbade

Philippine Alba

2019

Julia Gibson

Allegra Cooper

Sacha Medjo-Akono

HIGH SCHOOL RESEARCH STUDENTS

2019

Lizzie Culp (Red Hook High School)

2018

Cruz Garcia (Margaretville High School)

2017

Madi Guski (Red Hook High School)

2016

Emilio Pardi (Onteora High School)

Oscar Key (Red Hook High School)

Christopher Bennicasa '21 (Red Hook High School)

2015

Joe Becker (Red Hook High School)

Tyler Sheahan (Red Hook High School)

MODERATION BOARD MEMBER (A=ADVISOR/RESPONSIBLE FOR REPORT) (112)

2009-2011

Joshua Tanner

Emma Taylor-Salmon

Jessica Philpott

Perry Anderson

Sining Leng (A)

Michelle Yuan

Gabriella Spitz

Laura Schubert

Abby Fuchsman

Miles Ingraham

Raed Al Abbasee

Becca Clinger

Kimara Ducasse

Brendan Beecher

Diana Crow (A)

Feifan Zheng

2011-2012

Julia Les

Sam Prince

Weiqing Wang (A)

Aliza Ray

Julie Hackett

Ismary Blanco (A)

Neena Marano (A)

Molly North (A)

Jasper Williams

Cameron Brenner

Abishek Dev

Francesca Di Rienzo (A)

Eva Shrestha

Alexander Sciurella (A)

Emma Troisi

2012-2013

Emily Hoelzli

Alexandra Smith

Megan Snyder

Taryn Kelly

Lily Mastrodimos

Elisa Caffrey

Erin Kelly

Dalia Najjar

Haya Dandis

Mildred Kissai
Shaya French
Kody Chen
Abby Soussan
Georgia Doing (Joint w/
Computer Science)

2013-2014

Lily Moll
Imaani Easthausen (A)
Noah Dickerman (A)
Alex Page (A)
Briana Flonc (A)
Kedian Keohan
Rock Deliquanti
John English (A)
Alessia Zambrano (A)
Leah Silverberg (A)
Clara Woolner
Deanna DePietro (A)
Beckett Landsbury (A)
Katherine Moccia (A)
Andrea Szegedy-Maszak (A)
Sophie Zega (A)
Shailab Shrestha (A)
Genevieve Pierre
Kexin Ding
Alex Clarke

2014-2015

Bonnie Wilson-McNair (A)
Pola Kuhn (A)
Sydney Pindling
Javell Watson
Matthew Lampeter
Jonathan Von Reusner
Stefanie Walker
Victoria Palfini
Abiba Salahou

SENIOR PROJECT BOARD MEMBER

2010-2011

Anshul Zota
Sara Director
Olivia Nathanson
Stavros Vellisaris
(chemistry)
Sara Doble
Jing Yang
(chemistry)

2011-2012

Luke Henry
Abigail Fuchsman
Briana Franks

Kelsey O'Brien
Annie Kissel
Mengzhen Chen

2015-2016

Cassandra Savino (A)
Pearson Lau (A)
Lizzy Elliott (A)
Dynte' Moore (A)
Marisol Dothard
Nicholas George (A)
Nick Kifyak
Zavontae Holmes
Maia Weisenhaus
Ama Oppong (A)
Anna Richard (Psychology)
Carla Sanchez
Julie Roberts
Elizabeth Miller (A)
Chris Hulbert
Sarah Weiner (2 boards, Biology
and Human Rights) (A)
Philippine Alba
Molly McQuillan
Molly Woolery
Lillian Brennesel (A)

2016-2017

Miroslav Skular (A)
Leah Santana
Hannah Henry (A)
Saleem Alhumaidi
Nora Levine
Rachael Mendoza
Xiofei Guo (A)
Kara Kuhn
Jarlenn Morales
Michael Kuckyr (A)
Lily Schwartz (A)

Deven Connolly
Jessica Philpott

2013-2014

Dalya Najjar
Xujin Liu
Alexander Sicurella
Abishek Dev
Jasper Willams
Ismary Blanco
Aliza Ray
Eva Shrestha

2014-2015

Melissa Yost-Bido
Henry O'Donnell (A)

2017-2018

Michael Uhle
Nadia Russell (A)
Bruno DiNucci (A)
Maracela Talamantes
Gabriella Vasquez
Sana Tariq
Aidan Furze
Glenn Decety
Daisy Noe
Addie Finch
Eli McClatchy
Rachel Mordecai
Elinor Stapyilton (A)
Julia Gibson (A)
Tejaswee Neupane (A)

2018-2019

Lia Solensten (A)
Grace Carter (A)
Madelaine Epstein (A)
Cailey Mitchell (A)
Sacha Medjo-Akono (A)
Sarah Zylka
Mia Shresthova (joint Biology
and Chemistry/Biochemistry)
Stephanie Blanco
Cillian Ahern
Avani Fachon
Michelle Reynoso
Ashley Nicolich
Daniella Mingo (Sociology)

Dylan Dahan
Megan Snyder
Lily Moll
Alexandra Smith
Elisa Caffrey
Emily Hoelzli
Yangtsho Gyaltshen
Shaya French
Taryn Kelley
Imaani Easthausen

2015-2016

Clara Woolner
Quinnehtukqt McLamore

Genevieve St. Pierre
 Madeline Hwee
 Sophie Zega
 Leia Carey
 Fred Tangerman
 Beckett Landsbury
 Alexandra Clarke
 Shailab Shrestha

2016-2017
 Marisol Dothard
 Haley Goss-Holmes
 Emma Kelsick
 Quanita Kendrick
 Paul Kim
 Pola Kuhn
 Pearson Lau

Victoria Palfini
 Naomi Weiser
 Martie Stoudhoff
 Jenny Chen

2017-2018
 Philippine Alba
 Alyx Cleveland
 Carla Sanchez
 Kara Kuhn
 Elizabeth Miller
 Maia Weisenhaus

2018-2019
 Ryan Chipman
 Dylan McDonald
 Saleem Alhumaidi

Gabriella Vasquez
 Frank Ortega
 Renad Bdair
 Aidan Furze

**2019-2020 (*sabbatical Spring
 2020 not at final borad)**
 Jewel Smith*
 Addie Finch*
 Maracela Talamantes*
 Sana Tariq*
 Rachel Mordecai*

INTERNATIONAL BACCALAUREATE RESEARCH STUDENT

Madi Guski

Melissa Van Norden

“The Effect of Vanillin on Quorum Sensing in *J. lividum*” (Red Hook High School, Class of 2015)

BARD MAT MASTERS STUDENT

2011-2012

Melissa Bryant, Detecting fluorescence in GFP-expressing *Escherichia coli* as a safe method of tracking pathogen transmission.

FUNDING

- ASM-LINK Fellowship to attend ABRCMS 2016 (awarded) **2016**
- ASM Judges Subsidy to attend ABRCMS 2016 (*declined to accept LINK Fellowship*) 2016
- ASM Undergraduate Research Fellowship for Kelsey O’Brien *2016, not funded*
 Science-based Community Stewardship of the Saw Kill Watershed
 Participating faculty member **2015, Funded, \$44,779**
- New York State Water Resources Institute, “Using citizen science to map
 Hudson Valley waterways for violacein-producing microbes” **2014, Funded, \$10,000**
 Primary Investigator
- Contributor Sherman Fairchild Equipment Grant (in collaboration with
 Prof. Paul Cadden Zimansky and Prof. Christopher LaFratta) **2014, Funded, \$500,000; 4 years**
- HHMI Grant for Defining Science Literacy **2012, Funded, \$800,000; 4 years**
 (contributor/steering committee)
- Bard Summer Research Institute student stipends (19) **2009- present, \$52,000**
- HHMI SEA Change Grant *2009 Not funded*
- Beckman (Contributor) *2009, 2011 Not funded*
- MRI (for DNA sequencer); contributor *2009 Not funded*

SERVICE- COLLEGE WIDE

Bard Houses Program: Director, Yauch House Professor

2017-present

In its inaugural year, worked to start this program where 4 faculty families reside on campus in one of 4 designated houses. Faculty are assigned one quarter of the incoming first year class (and in subsequent years will have one quarter of the student body) to invite to home for informal events (e.g. brunch, cookie making,

spa day, movies, etc.), as well as be a point of faculty contact from move in day, onward.

Panelist for Women in Science, Mathematics and Technology Panel April, 2016

Member of Bard High School Early College Faculty Evaluation and Oversight Committee (FEOC) 2015- present
Charged with maintaining communication between BHSEC campuses, Simons Rock and the Bard Annandale campus, to improve curricular structure, ease transfer of credits between campuses and facilitating conversations between programs.

Served on promotion committee for candidates for Associate Professor 2020

Mentor for Bringing Theory to Practice Program 2016

Serve as a faculty mentor for student peer mentors and mentees to help provide clear guidance and support for improving methods of organization, study skills, and confidence in the STEM fields. Give dinner seminars on selected topics for program participants.

Family Weekend Sample Class Session

BIO432- Distilling Biotechnology 2018

BIO158 – Case Studies in Medical Biology Lab Experience 2017

BIO427- “Distilling Information from the Ebola Crisis” 2015

BEOP Welcome Lecture for SM&C Division 2015-2018

Organized and participated in a workshop to introduce BEOP and POSSE scholars to the Science, Mathematics and Computing Division, describing courses, providing sample syllabi, conducting a question and answer session and touring the building

Library, Bookstore and Computers committee 2013

(1 semester term for sabbatical replacement)

HHMI Grant for Defining Science Literacy: Steering Committee/Member 2012-2018

Met as a group to prioritize goals for grant execution; work as a college wide group to establish a definition for scientific literacy at the undergraduate level; focused on designing courses and assessment of courses for attaining competency for the definition of scientific literacy. Attended workshops and retreats focused on course design, assessment design, and pedagogy.

Facilitator for Language and Thinking First Year Orientation program 2012

Lifetime Learning Institute Lecture 2012, 2014

Presented lectures with Professor Emily McLaughlin on the mechanisms of antibiotic resistance.

Faculty Fellow 2012-2014

Coordinated academic and social events for assigned cluster of campus residences.

Student Affairs Committee/ Student Judiciary Board 2011

(1 semester term for sabbatical replacement)

Center for Faculty Curricular Development work (CFCD) 2010-present

Served as a member of the steering committee (2010-2016) to coordinate schedule of talks and workshops for academic year. Presented a number workshops, approximately 1 per semester including, but not limited to:

- *Getting the most out of student presentations (co-presented with Professor Deirdre D’Albertis)*
- *Rubrics and being the most effective teacher you can be (co-presented with Professor Daniel Berthold)*
- *Beginning the new semester: the first 30 minutes (co-presented with Professor Kristin Scheible)*
- *Advising Senior Projects (co-presented with Associate Dean Susan Merriam)*
- *Responding to student work (co-presented with Professor Phil Pardi)*
- *Teaching Close Reading in the science and humanities (co-presented with Professor Thomas Bartscherer)*

- *and Professor Phil Pardi)*
- *Apps for the Classroom*

SERVICE- PROGRAM/DIVISION WIDE

Evaluation of Bard MAT Biology applicants	2015-present
Faculty Liaison for Bard College Membership in New York Academy of Science Science Alliance Program	2012-2016
Selection committee for the Bard Rockefeller Semester of Science (BRSS) Interviewed and selected students to participate in this competitive program at The Rockefeller University; Interviewed post-doctoral candidates interested in teaching 1 semester courses at the NYC campus for BRSS students.	2011-present
Distinguished Science Scholar Selection Committee Charged with selection of summer scholarship recipients and DSS continuing awards from undergraduate candidate pool.	2011-2014
Co-coordinator of Biology Program Seminar Series (BIO208) Helped to solicit seminar speakers, prepare assessment materials, introduce speakers	2011-2012
Search Committees	
Tenure Track search for mathematics faculty (2 offers accepted, Matthew Junge, Caitlin Levenson)	2018-2019
Tenure Track search for Developmental/Physiologist in Biology Program (Search Unsuccessful- one offer made and turned down)	2015-2016
Visiting Assistant Professor, Biology (Hired- Emily Pollina)	Spring 2015
Visiting Assistant Professor Biology Program (Kristen Hultgren)	2014
Tenure Track Search Psychology Program, (2 positions- Amy Winecoff; 2 nd search failed)	2014

SERVICE- COMMUNITY OUTREACH

Rhinebeck Discovery Festival Presenter Built Foldscopes with families as part of an annual event put on by the Rhinebeck (NY) Science Foundation	2019
Skype-a-Scientist Faculty Paired up with Brie Smith, a 1 st and 2 nd grade enrichment teacher in the Lovejoy School District in Texas. Spoke with the students over Skype, answered questions about research, followed up with emails and sent a package containing a microbes book for children, a Foldscope kit to assemble, and a set of scientific slides to look at.	2019- present
Outreach visits for Violacein Producing Microbes Project Visit local classrooms, teach about project background and protocols. Students collect water, plate it in the classroom, and deliver to the lab for further analysis Red Hook High School (Red Hook, NY), Linden Avenue Middle School (Red Hook, NY) Roosevelt High School (Hyde Park, NY), Holy Trinity School (Poughkeepsie, NY) Upcoming: Haviland Middle School (Hyde Park, NY)	2015-present
Panelist SUNY Ulster Career Fair	2012-2014, 2016
Tivoli Library Talk: "What is Citizen Science?"	
Judge at local Red Hook and Rhinebeck Science Fairs (elementary and middle school)	2011- present
Science Outreach Seminars	

Designed and presented science outreach seminars to a wide variety of groups, on and off campus. Purpose of these seminars is to introduce biology and biological inquiry in a manner that allows participants to both engage with, and enjoy a scientific experience. Science seminars include:

Mill Road Science night at Red Hook's Mill Road Elementary School (Part of the Citizen Science Program)
>200 students aged K-5th grade visited various age appropriate stations of activities, instructed by Citizen Science Faculty and Citizen Science students.

BHSEC Workshop

Presented DNA extraction activity, as well as various nature of scientific inquiry exercises for incoming 9th grade students of BHSEC Manhattan and BHSEC Queens. Workshops served approximately 50 students per summer, over two 1.5 hour workshops

8th Grade Science Days

Over 2 days, taught 10 1 hour sessions of approximately 15 students per session, teaching about DNA extraction

Alumni Weekend at Bard College

DNA extraction seminar (2 classes of approximately 20 students, range of ages)

Family Weekend at Bard College

DNA extraction seminar (2 classes of approximately 20 students, range of ages)

8th Grade Bailey Middle School, Kingston NY

Developed workshop for 8th grade students that incorporated a previous DNA extraction exercise with a more complex genetics and molecular biology follow up activity. Prepared material following lecture for high school faculty to use as a follow up lesson.

Science Outreach Days – Citizen Science

Trained Bard First Year students enrolled in Citizen Science to be teach DNA extraction lessons to 8th grade students from local school districts. Over 3 days, taught and supervised teaching of 15 1 hour sessions of approximately 15 students per session, teaching about DNA extraction.

Build, Learn, Play! (BLP!) Summer Science Program

Conducted a 2-day biology workshop with local middle school students centered around local microbiology. Workshops were conducted on site of the Bard Farm, as well as in the laboratory of the Reem and Kayden Center for Science and Computation.

8th Grade Science visits

Designed microbial fuel cell activity for local 8th grade students to built fuel cells at Bard, and bring completed fuel cells back to classroom for use. Constructed all materials for handouts and training, trained students to teach activity, helped supervise activity. (resulted in peer review publication, Jude and Jude, 2015)

SERVICE- SCIENCE COMMUNITY

Alumni talk (Zoom) for Guarini School of Arts and Sciences (Dartmouth) 2020

External Letter Writer for contract renewal 2020

External Reviewer for Tenure and Promotion 2016, 2019

Journal Reviewer (Ad Hoc)

Molecular Microbiology

Infection and Immunity

Invited Book Review

ASM- Laboratory Textbook

Oxford Books- Prospectus for 3rd Edition of Writing in the Biological Sciences

Invited Journal Review

AIMS Microbiology
Open Biomedical Engineering Journal
PLOS One
Amphibian and Reptile Conservation
Cellular and Molecular Biology
International Journal of Medical Microbiology
Journal of Clinical Microbiology
Journal of Microbiology Education (JMBE)

Invited Grant Review

John R. Evans Leaders Fund (JELF)- Canada Foundation for Innovation	2019
National Science Foundation	2011
NH INBRE	2015
NSF Graduate Research Fellowship Program (GRFP) Review Panel	2014-2015
Leopold Center Grant Review	2014

Journal of Microbiological Education

Reviewing Board Member 2012-present

Nomination committee

Educational awards of the American Society of Microbiology 2014-2016

PRESS

Inclusion in 1 Million Women in STEM:

“Citizen Science: Bard Prepares for the 21st Century” Sanford Simon, The Bardian

“An Infusion of Science Where the Arts Reign” Lisa Foderaro
The New York Times January 21st, 2011

“Bringing Science To the Citizens” Celia Arnaud
Chemical and Engineering News February 7th, 2011