Benjamin D. Peterson

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Education

University of Wisconsin - Madison — Madison, WI
PhD candidate in Environmental Chemistry and Technology Program, Department of Civil and Environmental Engineering — current

State University of New York at Geneseo — Geneseo, NY
Bachelor of Science, *summa cum laude* Biochemistry — 2012
Honors Minor (Edgar Fellows Honors Program)

Employment and Research Experience

Animal Biologist (Contracter with Kelly's Government Services) — 2014-2015
National Institute on Aging: Neuroplasticity and Behavior Unit — PI: Dr. Henriette van Praag

Postbaccalaureate IRTA Research Fellow — 2012-2014
National Institute on Aging: Neuroplasticity and Behavior Unit — PI: Dr. Henriette van Praag

Undergraduate Research Assistant — 2009-2012
State University of New York at Geneseo: Biology Department — PI: Dr. George Briggs
Characterization of a Novel Specifier Protein in the Glucosinolate-Myrosinase Pathway in Brassica rapa

Summer Undergraduate Research Assistant — Summer 2011
University of Buffalo: Department of Biological Sciences — PI: Dr. Denise Ferkey
Impact of G-protein coupled signaling receptors on chemosensation of quinine in C. elegans

Peer-reviewed publications

* indicates co-first authorship
** indicates undergraduate student I mentored

Mohammad, H., Marchisella, F., Ortega-Martinez, S., Hollos, P., Eerola, K., Komulainen, E., Kulesskaya, N., Freemantle, E., Fagerholm, V., Savontous, E., Rauvala, H., **Peterson, B.D.**, van Praag, H., Coffey, E.T., 2018. "JNK1 controls adult hippocampal neurogenesis and imposes cell-autonomous control of anxiety behaviour from the neurogenic niche." Mol Psychiatry 23, 362–374. https://doi.org/10.1038/mp.2016.203

Sah, N., ***Peterson, B.D.**, Lubejko, S.T., Vivar, C., van Praag, H., 2017. "Running reorganizes the circuitry of one-week-old adult-born hippocampal neurons." Sci Rep 7, 10903. https://doi.org/10.1038/s41598-017-11268-z

Vivar, C., **Peterson, B.D.**, van Praag, H., 2016. "Running rewires the neuronal network of adult-born dentate granule cells." NeuroImage 131, 29–41. https://doi.org/10.1016/j.neuroimage.2015.11.031

Pre-prints and submissions

Peterson, B.D., McDaniel, E.A., Schmidt, A.G., Lepak, R.F., Tran, P.Q., Marick, R.A., Ogorek, J.M., DeWild, J.F., Krabbenhoft, D.P., McMahon, K.D., 2020. "Mercury methylation trait dispersed across diverse anaerobic microbial guilds in a eutrophic sulfate-enriched lake". bioRxiv. https://doi.org/10.1101/2020.04.01.018762

McDaniel, E.A., **Peterson, B.D.**, Stevens, S.L.R., Tran, P.Q., Anantharaman, K., McMahon, K.D., 2020. "Expanded Phylogenetic Diversity and Metabolic Flexibility of Microbial Mercury Methylation". bioRxiv. https://doi.org/10.1101/2020.01.16.909358 *Submitted*

Oral presentations

Invited talks

Identification of Mercury Methylating Organisms along a Trophic Gradient. **Greater Everglades Ecosystem Restoration Conference**. Coral Springs, Florida. *April 2019*

Contributed talks

Novel hgcA+ organisms dominate mercury-methylating community in water column of sulfate-enriched lake. **International Conference on Mercury as a Global Pollutant**. Krakow, Poland. *September 2020*

Mercury-methylating organisms in Lake Mendota. **American Water Resources Association Wisconsin Section Annual Meeting**. Delavan, WI. *March 2019*

Internal Seminars

Identification and activity of mercury-methylating microbes in Lake Mendota. **NTL-LTER Early Career Scientist Meeting**, University of Wisconsin - Madison. *April 2020*

Identification and activity of mercury-methylating microbes in Lake Mendota. **Environmental Chemistry and Technology Seminar**, University of Wisconsin - Madison. *March 2020*

Mercury-methylating organisms in Lake Mendota. **Environmental Chemistry and Technology Seminar**, University of Wisconsin - Madison. *April 2019*

Mercury-methylating organisms in Lake Mendota. **Center for Limnology Weekly Seminar**. University of Wisconsin - Madison. *May 2019*

Distribution of mercury-methylating microbes along spatial and temporal redox gradients in a freshwater lake. **Environmental Chemistry and Technology Seminar**, University of Wisconsin - Madison. *April 2018*

Meta-omics, microbes, and freshwater biogeochemistry! Oh My! **Environmental Chemistry and Technology Seminar**, University of Wisconsin - Madison. *April 2017*

Poster Presentations

Distribution of mercury-methylating microbes along spatial and temporal redox gradients in a freshwater lake. **International Society for Microbial Ecology Conference**. Leipzig, Germany. *August 2018*

Distribution of mercury-methylating microbes along spatial and temporal redox gradients in a freshwater lake. **SETAC Young Environmental Scientist Meeting**. University of Wisconsin - Madison. *March 2018*

Distribution of mercury-methylating microbes along spatial and temporal redox gradients in a freshwater lake. **International Conference on Mercury as a Global Pollutant**. Providence, RI. *July 2017*

Spatial distribution of ultramicrobacteria along Lake Erie. **IAGLR's Conference on Great Lakes Research**. Detroit, MI. *May 2017*

Vertical distribution of microbial communities during late stratification in a eutrophic, dimictic lake. **International Society for Microbial Ecology Conference**. Montreal, Canada *September 2016*

Teaching and Mentoring

ComBEE presentations

Undergraduate Mentor in McMahon Lab 2015-present
- Anna Grace Schmidt: - North Temperate Lakes Microbial Observatory Team

Organic Chemistry Tutor and Grader 2010-2012
Chemistry Department, SUNY-Geneseo

Service

Water at UW grad rep

Organizer, SETAC YES meeting

Postbac IRTA Representative 2013-2015
National Institute on Aging

Geneseo Presidential Scholar 2011-2012
State University of New York at Geneseo

Grants and Awards

NSF GRFP	2016
Anna Grant Birge Memorial Scholarships	2016, 2017
Becker Travel Award	2016
Phi Beta Kappa	2012
Ulmer-Jackson Biochemistry Award	2012
Goldwater Scholar	2011
CRC Award to the Best Overall Student in Introductory Chemistry	2009
Geneseo Dean's List	7 semesters