

- **Personal Information**

Name: Sam Bryson

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Address: 616 NE Northlake Pl, Seattle, WA 98105 (University of Washington, Benjamin Hall IDR Bldg)

- **Education**

PhD in Microbiology, Oregon State University – September 2017

BSc in Microbiology, University of Georgia – December 2010

BA in Political Science, University of Georgia – May 2005

- **Research Interests**

PhD Research

I examined resource partitioning within marine microbial communities sampled from the coastal North Pacific. Populations of heterotrophs within these communities compete for resources (e.g. organic carbon molecules like amino acids, fatty acids and sugars) and specific adaptations for the acquisition and utilization of these resources define their respective niches. I applied a novel experimental approach, proteomic stable isotope probing (Proteomic SIP), to quantify assimilation of ¹³C-labeled substrates and concurrently characterize substrate preferences for individual taxa and the structural and functional responses of natural sampled communities to substrate additions.

Current Research

My research has shifted focus away from the partitioning of organic carbon among organotrophs, to resource partitioning among Nitrogen transforming lithotrophs. This work is part of a larger project to develop synthetic microbial assemblages for more efficient waste water treatment.

- **Scientific Output**

Samuel Bryson, Zhou Li, Francisco Chavez, Peter K. Weber, Jennifer Pett-Ridge, Robert L. Hettich, Chongle Pan, Xavier Mayali, Ryan S. Mueller¹, Phylogenetically conserved resource partitioning in the coastal microbial loop. *ISME J advance online publication, August 11, 2017*; doi:10.1038/ismej.2017.128.

Samuel Bryson, Zhou Li, Jennifer Pett-Ridge, Robert L. Hettich, Xavier Mayali, Chongle Pan, Ryan S. Mueller, Proteomic Stable Isotope Probing Reveals Taxonomically Distinct Patterns in Amino Acid Assimilation by Coastal Marine Bacterioplankton. *mSystems*. 1 (2) e00027-15. **2016**. <http://msystems.asm.org/content/1/2/e00027-15>.

* Editor's choice, also featured as editor's choice in *The Scientist* magazine

Mueller RS, Bryson S, Kieft B, Li Z, Pett-Ridge J, Chavez F, Hettich RL, Pan C, Mayali X, Metagenome sequencing of a coastal marine microbial community from Monterey Bay, California. *Genome Announcements*, 3(2):e00341-15. **2015**. <http://genomea.asm.org/content/3/2/e00341-15.full>

Bryson, S. J., Thurber, A. R., Correa, A. M. S., Orphan, V. J. and Vega Thurber, R., A novel sister clade to the Enterobacteria Microviruses (family *Microviridae*) identified in methane seep sediments. *Environmental Microbiology*, 17: 3708–3721. **2014**.

<http://onlinelibrary.wiley.com/wol1/doi/10.1111/1462-2920.12758/abstract>