Biographical Sketch – Sean M. McAllister, Ph.D.

Postdoctoral Scholar (2019 – present)
Genetics and Genomics Group
University of Washington Joint Institute for the Study of the Atmosphere and Ocean (JISAO) &
NOAA Pacific Marine Environmental Laboratory (PMEL), Seattle, WA 98115
206-526-6197 sean.mcallister@noaa.gov

Professional Preparation

Western Washington University, *magna cum laude*, Cellular Biology, with honors, B.S. 2008
Western Washington University, Marine Microbial Ecology, Biology, M.S. 2011
University of Delaware, Marine Biosciences, Ph.D. 2019

Appointments

Postdoctoral Scholar, University of Washington JISAO & NOAA PMEL	2019 – present
Postdoctoral Researcher, University of Delaware	2019
Graduate Teaching Assistant, University of Delaware	2015
Contractor: Educational Outreach and Cultural Enrichment, CMOP (concurrent)	2011 –2012
Research Assistant, Western Washington University (concurrent)	2011 – 2012
Graduate Teaching Assistant, Western Washington University	2009 – 2011
Biology Stockroom Technician, Western Washington University	2006 – 2007
Fisheries Bio-Technician (GS-3), U.S. Fish and Wildlife Service, Dillingham, AK	2005
Biological Aide, Bureau of Land Management, Bering Glacier, AK	2004

Products: 5 Most Relevant Papers *(of 20 published peer-reviewed journal articles, H-Index = 10)*

1) **McAllister SM**, SW Polson, DA Butterfield, BT Glazer, JB Sylvan, CS Chan. **2020**. Validating the Cyc2 neutrophilic iron oxidation pathway using meta-omics of Zetaproteobacteria iron mats at marine hydrothermal vents. *mSystems* 5: e00553-19. doi:10.1128/mSystems.00553-19
2) **McAllister SM**, RM Moore, A Gartman, GW Luther, III, D Emerson, CS Chan. **2019**. The Fe(II)-oxidizing Zetaproteobacteria: Historical, ecological, and genomic perspectives. *FEMS Microbiol Ecol* 95:fiz015. doi:10.1093/femsec/fiz015
3) **McAllister SM**, RM Moore, CS Chan. **2018**. ZetaHunter, a reproducible taxonomic classification tool for tracking the ecology of the Zetaproteobacteria and other poorly resolved taxa*. Microbiol Res Announc* 7:e00932-18. doi:10.1128/MRA.00932-18
4) **McAllister SM,** JM Barnett, JW Heiss, AJ Findlay, DJ MacDonald, CL Dow, GW Luther, III, HA Michael, CS Chan. **2015**. Dynamic hydrologic and biogeochemical processes drive microbially enhanced iron and sulfur cycling within the intertidal mixing zone of a beach aquifer. *Limnology and Oceanography* 60:329–345. doi:10.1002/lno.10029
5) **McAllister SM**, RE Davis, JM McBeth, BM Tebo, D Emerson, CL Moyer. **2011**. Biodiversity and emerging biogeography of the neutrophilic iron-oxidizing Zetaproteobacteria. *Appl Environ Microbiol* 77:5445-5457. doi:10.1128/AEM.00533-11

Five Other Related Papers

6) Garber AI, KH Nealson, A Okamoto, **SM McAllister**, CS Chan, RA Barco, N Merino. **2020**. FeGenie: a comprehensive tool for the identification of iron genes and iron gene neighborhoods in genome and metagenome assemblies. *Front Microbiol* 11:37. doi:10.3389/fmicb.2020.00037
7) Fullerton H, KW Hager, **SM McAllister**, CL Moyer. **2017**. Hidden diversity revealed by genome-resolved metagenomics of iron-oxidizing microbial mats from Lō'ihi Seamount, Hawai'i. *ISMEJ* 11:1900–1914. doi:10.1038/ismej.2017.40
8) Chan CS, **SM McAllister**, AH Leavitt, BT Glazer, ST Krepski, D Emerson. **2016**. The architecture of iron microbial mats reflects the adaptation of chemolithotrophic iron oxidation in freshwater and marine environments. *Front Microbiol* 7:796. doi:10.3389/fmicb.2016.00796
9) Smythe WF, **SM McAllister**, KW Hager, KR Hager, BM Tebo, CL Moyer. **2016**. Silica biomineralization of *Calothrix*-dominated biofacies from Queen's Laundry hot-spring, Yellowstone National Park, USA. *Front Environ Sci* 4:40. doi: 10.3389/fenvs.2016.00040
10) Hugo RC, WF Smythe, **S McAllister**, B Young, B Maring, A Baptista. **2013**. Lessons learned from a geoscience education program in an Alaska Native community. *Journal of Sustainability Education* 5:1–32. ISSN:2151-7452

Synergistic Activities, Grants, and Awards

- *Programming proficiency*: Perl, Bash, and R (**2013-present**)
- *Undergraduate and graduate student training.* Mentored and trained *nine* undergraduate students and *eleven* graduate students in molecular ecology and bioinformatics. (**2008-2019**)
- *University of Delaware Dissertation Fellowship* (**2017-2018**)
- *Delaware Biotechnology Institute outreach*. Participated in several tours, molecular biology activities, and information panels for visiting middle and high school students interested in the biological sciences. (**2015-2018**)
- *Delaware Space Grant Graduate Fellowship* (**2012-2013** & **2016-2017**)
- *Serviam Girls Academy outreach*. Helped to plan and run workshops on microbiology for these underprivileged girls. (**2014-2016**)
- *Oceanographic experience.* Participated in seven oceanographic expeditions using ROVs, visiting Iheya North, Loihi Seamount, Mariana Arc, and the Mid-Atlantic Ridge (**2008-2014**).
- *EU-US Bioinformatics training course*. Participated in this international training course designed to teach a wide variety of bioinformatics skills, including microbial ecology, metagenomics/metatranscriptomics, and statistics. (**2013**)
- *Native Alaskan geoscience educational outreach.* Led yearly geoscience workshops for the Hydaburg School District in rural Alaska and developed geoscience curriculum combining Native traditional knowledge and culture with western geoscience. (**2010-2012**)
- *WWU Biology Dept. Graduate Thesis Accomplishment Award* (**2011**)
- *Post-Expedition Activity Award for IODP Expedition 331: Deep Hot Biosphere* (**2011**)
- *WWU Biology Dept. Graduate Teaching Excellence Award* (**2008**)
- *Outstanding Graduate for the WWU University Honors Program* (**2008**)
- *Western Undergraduate Exchange Scholarship* (**2004-2006**)