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https://astrobiomike.github.io/research/

(a) Professional Preparation

Undergraduate Institution	Kean University, NJ, USA	Biology	BS, 2013
Graduate Institution	University of Southern California, CA, USA	Biology	PhD, 2018
Postdoctoral Institution	NASA Ames Research Center, CA, USA	Bioinformatics	-

(b) Appointments

2018–Current: NASA Space Biology Postdoctoral Fellow; Exobiology, NASA Ames Research Center, Mountain View, CA 94035
2018–Current: JCVI Research Fellow; J. Craig Venter Institute, La Jolla, CA 92037
2015–2018: USC SeaGrant Fellow; Biological Oceanography, University of Southern California, Los Angeles, CA 90089
2013–2015: USC Dornsife Merit Fellow; Biological Oceanography, University of Southern California, Los Angeles, CA 90089
9/2012–12/2012: NASA Undergraduate Student Research Program (USRP) Intern; NASA Ames Research Center, Mountain View, CA 94035
6/2011–8/2011: NASA USRP Intern; NASA Kennedy Space Center, Merritt Island, FL 32899

(c) Synergistic Activities

- I build and maintain an open-source website designed to help biologists develop bioinformatics skills to aid in their research: https://astrobiomike.github.io/

- I am a certified Data Carpentries Instructor. The Carpentries is a community of volunteer instructors dedicated to teaching foundational coding and data science skills to researchers worldwide.

- I am heavily involved in helping to run yearly bioinformatics workshops including the STAMPS course at the Marine Biological Laboratory in Woods Hole, MA, USA (of which I've been a part for the past 5 years) and the DIBSI course at UC Davis in Davis, CA, USA. And I personally occasionally lead smaller workshops covering the foundations of working at the command line using the materials I've developed and have available at https://astrobiomike.github.io/bash/.

(d) Publications

Lee, M.D., Walworth, N.G., McParland, E.L., Fu, F.-X., Mincer, T.J., Levine, N.M., Hutchins, D.A., and Webb, E.A. (2017). The *Trichodesmium* consortium: conserved heterotrophic co-occurrence and genomic signatures of potential interactions. *ISMEJ*. https://doi.org/10.1038/ismej.2017.49

Lee, M.D., Webb, E.A., Walworth, N.G., Fu, F.-X., Held, N.A., Saito, M.A., and Hutchins, D.A. (2017). Transcriptional activities of the microbial consortium living with the marine nitrogen-fixing cyanobacterium *Trichodesmium* reveal potential roles in community-level nitrogen cycling. *Applied and Environmental Microbiology*. https://doi.org/10.1128/AEM.02026-17

Lee, M.D., Walworth, N.G., Sylvan, J.B., Edwards, K.J., and Orcutt, B.N. (2015). Microbial communities on seafloor basalts at Dorado Outcrop reflect level of alteration and highlight global lithic clades. *Frontiers in Microbiology*. https://doi.org/10.3389/fmicb.2015.01470

Lee, M.D., Kling, J.D., Araya, R., and Ceh, J. (2018). Jellyfish life stages shape associated microbial communities, while a core microbiome is maintained across all. *Frontiers in Microbiology*. https://doi.org/10.3389/fmicb.2018.01534

Walworth, N.G., Fu., F-X., **Lee, M.D.**, Cai, X., Saito, M.A., Webb, E.A., and Hutchins, D.A. (2017). Nutrient co-limited *Trichodesmium* as nitrogen source or sink in a future ocean. *Applied and Environmental Microbiology*. https://doi.org/10.1128/AEM.02137-17

Walworth, N.G. and **Lee, M.D.**, Suffridge, C., Qu, P., Fu., F-X., Saito, M.A., Webb, E.A., Sañudo-Wilhemly, S.A., And Hutchings, D.A. (2017). Functional genomics and phylogenetic evidence suggest genus-wide cobalamin production by the globally distributed marine nitrogen fixer *Trichodesmium*. *Frontiers in Microbiology*. https://doi.org/10.3389/fmicb.2018.00189

Momper, L.M., Jungbluth, S.P., **Lee, M.D.**, and Amend, J.P. (2017). Energy and carbon metabolisms in a deep terrestrial subsurface fluid microbial community. *ISMEJ*. https://doi.org/10.1038/ismej.2017.94

Walworth, N.G., **Lee, M.D.**, Fu, F.-X., Hutchins, D.A., and Webb, E.A. (2016). Molecular and physiological evidence of genetic assimilation to high CO2 in the marine nitrogen fixer *Trichodesmium*. *PNAS*. https://doi.org/10.1073/pnas.1605202113

Walworth, N.G., Fu, F.-X., Webb, E.A., Saito, M.A., Moran, D., McIlvin, M.R., **Lee, M.D.**, and Hutchins, D.A. (2016). Mechanisms of increased *Trichodesmium* fitness under iron and phosphorus co-limitation in the present and future ocean. *Nature Communications*. https://doi.org/10.1038/ncomms12081

Walworth, N.G., Hutchins, D.A., Dolzhenko, E., **Lee, M.D.**, Fu., F-X., Smith, A.D., and Webb, E.A. (2017). Biogeographic conservation of the cytosine epigenome in the globally important marine, nitrogen-fixing cyanobacterium *Trichodesmium*. *Environmental Microbiology*. https://doi.org/10.1111/1462-2920.13934

Ramirez, G.A., Hoffman, C.L., **Lee, M.D.**, Lesniewski, R.A., Barco, R., Garber, A., Toner, B.M., Wheat, C.G., Edwards, K.J., Orcutt, B.N. (2016). Assessing marine microbial induced corrosion monitored in Santa Catalina Island, California. *Frontiers in Microbiology*. https://doi.org/10.3389/fmicb.2016.01679

Hutchins, D.A., Fu, F.-X., Walworth, N.G., **Lee, M.D.**, Saito, M.A., and Webb, E.A. (2017). Comment on "The complex effects of ocean acidification on the prominent N2-fixing cyanobacterium *Trichodesmium*". *Science*. https://doi.org/10.1126/science.aao0067