DR. MELISSA A. CREGGER

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EDUCATION

2007-2012	PhD, University of Tennessee, Ecology and Evolutionary Biology. (Advisor: Aimee T. Classen)
1999-2003	BS, University of Southern Indiana, Biology

PROFESSIONAL APPOINTMENTS

2021-2024	Subject Matter Editor, Ecology and Ecological Monographs
2019-2023	Joint assistant professor, Ecology and Evolutionary Biology, University of Tennessee
2018-	Staff Scientist, Biosciences, Oak Ridge National Laboratory
2015-2018	Distinguished Staff Fellow, Biosciences, Oak Ridge National Laboratory
2014-2015	Post-doctoral research associate, Oak Ridge National Laboratory
2012-2014	Post-doctoral research fellow, University of Illinois, Carl Woese Institute for Genomic Biology
2007-2012	Graduate teaching/research assistant, University of Tennessee
2006-2007	Research associate, HistoRx
2004-2006	Research assistant/lab manager, Yale University

GRANTS AND FELLOWSHIPS (selected)

2021-2026	**DOE BER:** Early Career Award. PI M. Cregger. $2.5M.
2020-	**DOE BER:** Secure Ecosystem Engineering and Design. Task Lead M. Cregger. $9M. $1.1M to M. Cregger
2019-2021	**ORNL LDRD:** Secure biosystems design of plants and microbiomes. PI M. Cregger $3.6M
2018-	**DOE BER:** BIOgeochemical transformations at CRitical InterfaceS in a mercury Perturbed watershed (BIOCRISP) Scientific Focus Area. Task Lead M. Cregger. $10.2M. $300,000 to M. Cregger
2017-	**DOE BER:** The Plant-Microbe Interfaces Scientific Focus Area. Task Lead M. Cregger. $27M. $1.1M to M. Cregger
2017-	**DOE BER**: The center for bioenergy innovation. Task Lead M. Cregger. $125M. $425,000 to M. Cregger

REFEREED PUBLICATIONS (selected; Google Scholar H index: 25)

Carrell, A.A., Hicks, B.B., Sidelinger, E., Johnston, E.R., Jawdy, S.S., Clark, M.M., Klingeman, D.M., Cregger, M.A., 2023. Nitrogen addition alters soil fungal communities, but root fungal communities are resistant to change. Front. Microbiol. 13, 1033631. https://doi.org/10.3389/fmicb.2022.1033631

Moore, J.A.M., Abraham, P.E., Michener, J.K., Muchero, W., Cregger, M.A., 2022. Ecosystem consequences of introducing plant growth promoting rhizobacteria to managed systems

and potential legacy effects. New Phytologist 234, 1914–1918. https://doi.org/10.1111/nph.18010

Kristy, B., Carrell, A.A., Johnston, E., Cumming, J.R., Klingeman, D.M., Gwinn, K., Syring, K.C., Skalla, C., Emrich, S., Cregger, M.A., 2022. Chronic Drought Differentially Alters the Belowground Microbiome of Drought-Tolerant and Drought-Susceptible Genotypes of *Populus trichocarpa*. Phytobiomes Journal 6, 317–330. https://doi.org/10.1094/PBIOMES-12-21-0076-R

Dove, N.C., Carrell, A.A., Engle, N.L., Klingeman, D.M., Rodriguez, M., Wahl, T., Tschaplinski, T.J., Muchero, W., Schadt, C.W., Cregger, M.A., 2022. Relationships between Sphaerulina musiva Infection and the *Populus* Microbiome and Metabolome. mSystems 7, e00120-22. https://doi.org/10.1128/msystems.00120-22

Howe, T.I.-B.M.W.C.A., Bonito, G., Chou, M.-Y., Cregger, M.A., Fedders, A., Field, J.L., Martin, H.G., Labbé, J.L., Mechan-Llontop, M.E., Northen, T.R., Shade, A., Tschaplinski, T.J., 2022. Frontiers and Opportunities in Bioenergy Crop Microbiome Research Networks. Phytobiomes Journal 6, 118–126. https://doi.org/10.1094/PBIOMES-05-21-0033-MR

Le, N., Cregger, M., Fazleabas, A., Braundmeier-Fleming, A., 2022. Effects of endometriosis on immunity and mucosal microbial community dynamics in female olive baboons. Sci Rep 12, 1590. https://doi.org/10.1038/s41598-022-05499-y

Schwartz, G.E., Muller, K.A., Rathore, S.S., Wilpiszeski, R.L., Carrell, A.A., Cregger, M.A., Elias, D.A., Podar, M., Painter, S.L., Brooks, S.C., 2022. Incorporating concentration-dependent sediment microbial activity into methylmercury production kinetics modeling. Environ. Sci.: Processes Impacts 24, 1392–1405. https://doi.org/10.1039/D1EM00287B

PRESENTATIONS (selected)

Cregger MA (2023) Leveraging plant microbe interactions to build better ecosystems. Southeastern Forest Tree Improvement Conference. *Invited plenary talk*

Cregger MA (2023) Leveraging plant microbe interactions to build better ecosystems. Institute for Genomic Biology, University of Illinois. *Invited keynote talk*

Cregger MA (2021) Abiotic and Biotic Stressors: Impacts on Belowground Plant-microbe Interactions. Vanderbilt. *Invited Talk*

Cregger MA (2020) Growing up in a national laboratory. University of Vermont. Burlington, VT. *Invited Talk*

PROFESSIONAL SERVICE AND OUTREACH (selected)

2023 Board Member, Applied Microbiology International, Healthy Land Advisory Group

2023 Distinguished Staff Fellowship Selection Committee. Oak Ridge National Laboratory.

2023 Graduate Education for Minorities (GEM) program mentor for the last five years.

2023 Explore Bioinformatics, genetics, and genomics (BiGG) Data REEU mentor. University of Tennessee. Five year funded mentorship program to increase female representation in STEM.