Fall 2022 Graduate Cohort Fellowships with the Center for Root and Rhizosphere Biology at Penn State

The Huck Center for Root and Rhizosphere Biology (CRRB) at the Pennsylvania State University seeks high-achieving, diverse graduate applicants to join an exciting PhD cohort of Root Resiliency Fellows. Together, we will form an interdisciplinary and collaborative network of researchers and graduate students whose research addresses the key basic and applied problems in plant root and rhizosphere research. Fellows will participate in seminars, host a Plant Root Resiliency Research Symposium, write integrative research proposals and articles, and engage in other synergistic activities. We highly encourage students from diverse, underrepresented backgrounds in STEM to apply.

Research projects available to fellows, could include but are not limited to:

1. Determine the role of microbial associations and root exudates in plant invasions and evolutionary change (PIs: C. Lowry (Plant Science) & J. Lasky (Biology); Graduate program: Ecology). Contact: Carolyn.Lowry@psu.edu or jrl35@psu.edu

2. Understand how root stress can shape plant physiology and the microbiome using grape as a model. (PIs: S. Crandall (Plant Pathology & Environmental Microbiology) & M. Centinari (Plant Science); Graduate program: Ecology, Plant Pathology, or Agricultural and Environmental Plant Science. Contact: sgcrandall@psu.edu and mzc22@psu.edu

3. Explore how multiple global change factors modulate root exudates and their impacts on the rhizosphere microbiome assembly and functioning (PI: F. Dini-Andreote (Plant Science); Graduate program: Ecology, AEPS). Contact: andreote@psu.edu

4. Elucidate genomic drivers of crop root interactions with beneficial microbes (AMF/rhizobia). PIs: Ruairidh Sawers and Liana Burghardt (Plant Science); Graduate programs: AEPS, Ecology, Plant Biology. Contact: rjs6686@psu.edu or liana.burghardt@psu.edu

5. Exploring the soil / rhizosphere / endosphere microbial continuum in climate vulnerable ecosystems. PIs: Estelle Couradeau (Ecosystem Science and Management) and Maria del Mar Jimenez Gasco (Plant pathology and Environmental Microbiology). Graduate program: Ecology Contact: estelle@psu.edu or mxj22@psu.edu