

Probing Plant-Microbe Interactions



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Scientists and engineers at PNNL study plant root microbiomes, the microbial communities that live around a plant's roots, to understand how plants get nutrients from the soil and survive droughts. There are many different microbes in the soil, including bacteria and fungi. These microbes produce enzymes and proteins that have different jobs. Scientists use a tool called Activity-Based Protein Profiling (ABPP) to 'fish' for proteins and enzymes in a microbiome sample. This helps scientists capture the proteins they want to study so they can understand their 'jobs' in the root microbiome and whether they help or harm the plant.



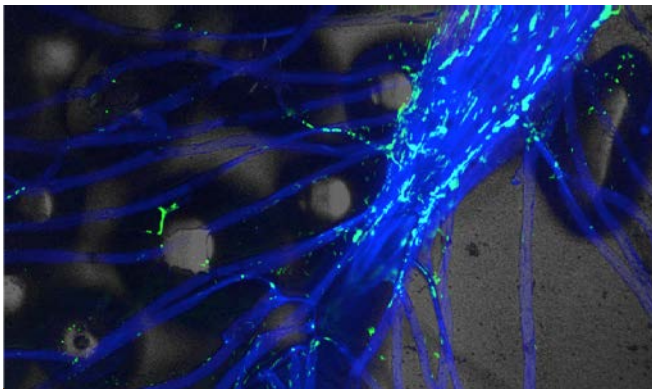
By studying plant microbiomes, scientists are improving our understanding of how to grow healthier plants that need less fertilizer and can survive a changing climate.



For more information, visit:
www.pnnl.gov/stem



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What is a microbiome?

Why is it important to study plant root microbiomes?

What is Activity-Based Protein Profiling (ABPP)?