



Molly Perchlik



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The NSPIRE IGERT Program is a multidisciplinary student doctoral training program designed to create a new generation of scientists with broad and rigorous training in nitrogen cycling who seamlessly integrate nitrogen cycle science for effective communication with public policy makers.

Research title: Roles of Amino Acid Transporters in Nitrogen Uptake by Plants

Molly's research explores the processes controlling the uptake and partitioning of amino acids in plants. The current focus of her research is to understand the mechanisms regulating organic nitrogen uptake from the soil by identification and functional characterization of transport. This is achieved through expression analysis using functional genomic techniques, and characterization of transport systems using functional characterization of transporters in plants by mutant analysis to evaluate their physiological role and effects of modification. These techniques will help to clue in on the biochemical networks and mechanisms that control the acquisition and distribution of nitrogen in plants. The ultimate goal is to determine the importance of transport processes in the nitrogen use efficiency and nutritional quality of plants.

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