Lara Jeline Jazmin

Graduate Institution: Vanderbilt University

Graduate Discipline: Chemical Engineering

Hometown: Cary, NC

Relevant SC Research: Biological and Environmental Research

Research Interest:

My research interests include the analysis of metabolic networks in photoautotrophs by combined experimental and computational methods. These investigations give insight to photoautotrophic metabolism, which represents the primary source of all food on earth as well as raw materials for bio-based production of fuels and chemicals. Specifically, I apply metabolic flux analysis (MFA) to quantify intracellular fluxes in bacterial and plant systems. MFA studies use the combination of isotopic labeling measurements and computational analysis to reconstruct comprehensive flux maps describing intracellular metabolism. My current research projects involve applying metabolic engineering and MFA to redirect carbon toward biofuel compounds in engineered strains of cyanobacteria, as well as quantifying metabolic phenotypes of plants that have been engineered to enhance carbon fixation by the RuBisCO enzyme.

About Me:

I received a BS in Chemical Engineering and a BS in Polymer & Color Chemistry from North Carolina State University in 2010. I am entering my third year as a Chemical Engineering PhD student at Vanderbilt University in Jamey Young's group. The main focus of our lab is the application of metabolic engineering in combination with current biochemical and molecular biology approaches to investigate a variety of cell models of relevance to biotechnology and medicine. Upon completion of my PhD, I would like to extend my work as a research scientist in either a university setting, national laboratory, or in the biotechnology industry. Outside of the lab, I enjoy music, photography, traveling, and both watching and participating in sports activities, specifically volleyball and basketball.