Construction and Validation of Dimerization Dependent Fluorescent Probes to Visualize Lipid Droplet - Organelle Contacts

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What is your research question?

• Can we design a fluorescent probe that will allow us to visualize Lipid Droplet (LD) contacts with other organelles in live cells?

Why does your research question matter?

• Our research question will allow us to study the effects of metabolic stressors on LD-organelle contacts and allow us to study the physiological functions of these contacts in live cells.

What are your results?

• We were able to create probes for both LD-mitochondria and LD-peroxisome contacts

Why are your results important to your scholarly or research community?

• The creation of these dimerization fluorescent dependent probes will provide our research community with tools to study LD-organelle contacts in live cells.

Why are your results important to a general audience?

• Lipids are essential molecules for life. Understanding how these lipids are regulated by the cell through LD-organelle contacts will provide insight into metabolic disease.