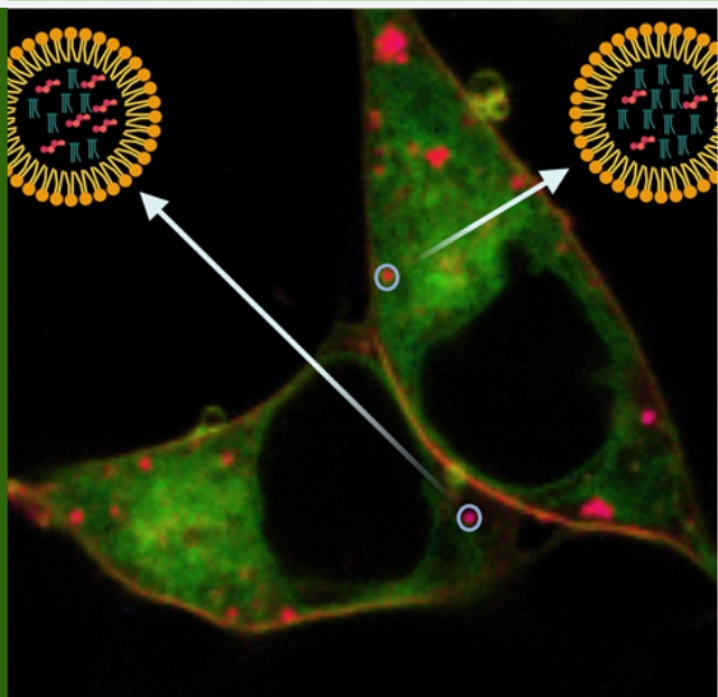


PROJECT NAME: BIOPHYSICAL PROPERTIES OF LIPID DROPLETS AND THEIR IMPLICATIONS IN GAUCHER DISEASE AND PARKINSON'S DISEASE

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Objectives

- O1. Relation between LD biophysics and lipid composition
- O2. Changes in LD biophysical properties in GD cell models: a link between LD and GlcCer
- O3. Role of LD biophysics in α -Syn toxicity in GD cell models: a link between GD and PD

Methodology

Combined spectroscopic and microscopic techniques employing environment-sensitive probes are promising tools for studying the biophysical properties of LD. The photophysical characteristics of such probes change according to their environment, thus reporting on the local lipid composition. Calibration of probe fluorescence “fingerprints” in model LD with known composition and the translation of this knowledge to live cell experiments will enable insights into multiple aspects of LD biology including their role in health and disease.



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