

GUEST LECTURE SERIES



February 29, 2024

5:00 p.m.

Humboldtstrasse 48/II, SR 44.22

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Tracking Neutral Lipid Metabolism

Triglyceride (TG) cycling is the continuous process of triglyceride degradation and re-synthesis within cellular stores. This project focuses on understanding TG turnover and the mechanisms of futile substrate cycling in adipocytes and hepatocytes. Using a combination of molecular biochemistry, mass spectrometry, and bioinformatics, we model the interconnected pathways at the stereospecific level of acylglycerol substrates and products. This tracer-based approach to metabolic flux analysis allows us to study biochemical reactions that would otherwise be experimentally inaccessible. Our data indicate a rapid redistribution of fatty acids within acylglycerols, with specific spatial distributions of reactions and preferred stereo- and regio-specific combinations of acyls in acylglycerols.