

The Lipid Droplets Conference

Keynote Lecture Bio: Tobias C. Walther, PhD



Tobias C. Walther is a Howard Hughes Medical Institute Investigator, Professor of Molecular Metabolism (at the T.H. Chan School of Public Health, HSPH), and Professor of Cell Biology (at Harvard Medical School).

Dr. Walther was trained in Iain Mattaj's laboratory (Ph.D.) at the European Molecular Biology Laboratory in Heidelberg, Germany and in Peter Walter's laboratory at UC San Francisco studying membrane biology. In 2006, he started his laboratory at the Max Planck Institute of Biochemistry in Martinsried, Germany and then Yale's School of Medicine (New Haven, USA) studying the biochemistry, cell biology and physiology of lipid droplets. In 2014, long-time scientific partners Drs. Walther and Farese merged their laboratory at Harvard.

Through their work together, Farese & Walther elucidate the molecular mechanisms for triglyceride synthesis and storage in lipid droplets (LDs). They uncover fundamental mechanisms of LD formation, LD expansion, protein targeting to LDs, and cellular lipotoxicity when TG storage in LDs is overwhelmed. They elucidate the physiology and pathologies linked to oil synthesis and storage in LDs, including discovering mutations in these pathways that lead to congenital diarrhea syndrome or lipodystrophy in humans.

At HSPH, he serves as the director of the Center on Causes and Prevention of Cardiovascular Disease. He is also an associate member of the Broad Institute of MIT and Harvard. Dr. Walther has received numerous honors, including for example the Avanti Award for Lipid Research and an honorary professorship at Tsinghua University.