



### **Biosketch, Vissarion Efthymiou**

Dr. Vissarion (Arionas) Efthymiou is a Senior Scientist, currently based at UDEM of Inselspital, DBMR of University of Bern, and D-HEST of ETH Zurich. He is specializing in systemic metabolism and genetic and pharmacological approaches to tackle metabolic diseases, including obesity, type 2 diabetes, and MASLD. His research focuses on adipose tissue and liver biology and aims to shed light on the underpinning molecular mechanisms of incretin-based therapies, integrating in vivo models with cutting-edge single-cell omics approaches. He obtained his MSc at University College London and completed his PhD at ETH Zürich, where he uncovered regulators of brown fat function. Dr. Efthymiou

completed his postdoctoral training at Harvard Medical School, Joslin Diabetes Center, where he contributed to the generation of comprehensive single-cell atlases of human adipose tissue and uncovered novel regulators of metabolic adaptation. Dr. Efthymiou has authored numerous publications in leading journals, secured competitive funding including grants from the Swiss National Science Foundation and the Chan Zuckerberg Initiative, and collaborates closely with industry partners. He is also an experienced mentor, with a strong track record of leading interdisciplinary research projects and translating complex biological insights into therapeutic strategies.

Title of the talk:

**“More Than Fat: Adipose Tissue Heterogeneity and its Multifaceted Roles in Metabolism”**

Description of my research & talk

The talk will be consisted of two vignettes. First, studies from a single-cell atlas of the human abdominal white adipose tissue will be presented. Focus will be placed on adipocytes, highlighting the identification of two distinct adipocyte sub-populations: the canonical ADIPOMAT<sup>hi</sup> adipocytes and the pro-inflammatory and pro-fibrotic ADIPOMAT<sup>lo</sup> adipocytes. Our findings demonstrate that abundance of ADIPOMAT<sup>lo</sup> adipocytes is linked to metabolic disease. Next, unpublished studies from the effects of a dual GLP1R/GCGR co-agonist on systemic and adipose tissue metabolism will be presented. Performing hyperinsulinemic-euglycemic clamps and omics approaches in diet-induced obese mice treated with the dual agonist, we reveal early effects on adipose insulin sensitivity, independent of caloric intake.