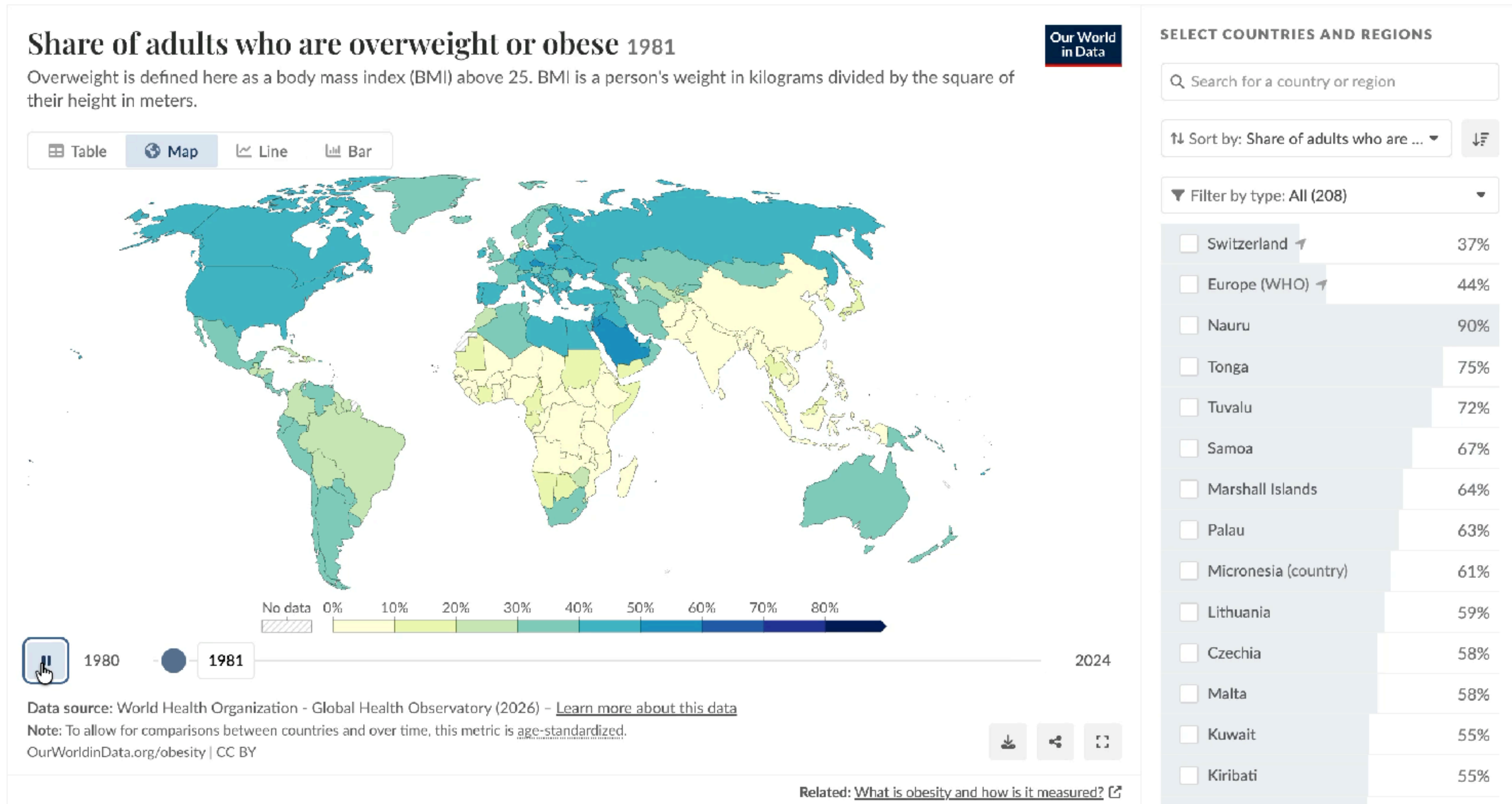


Nutrition and Metabolism

@ EPFL

Giovanni D'Angelo
Institute of Bioengineering and Global Health Institute
School of Life Sciences

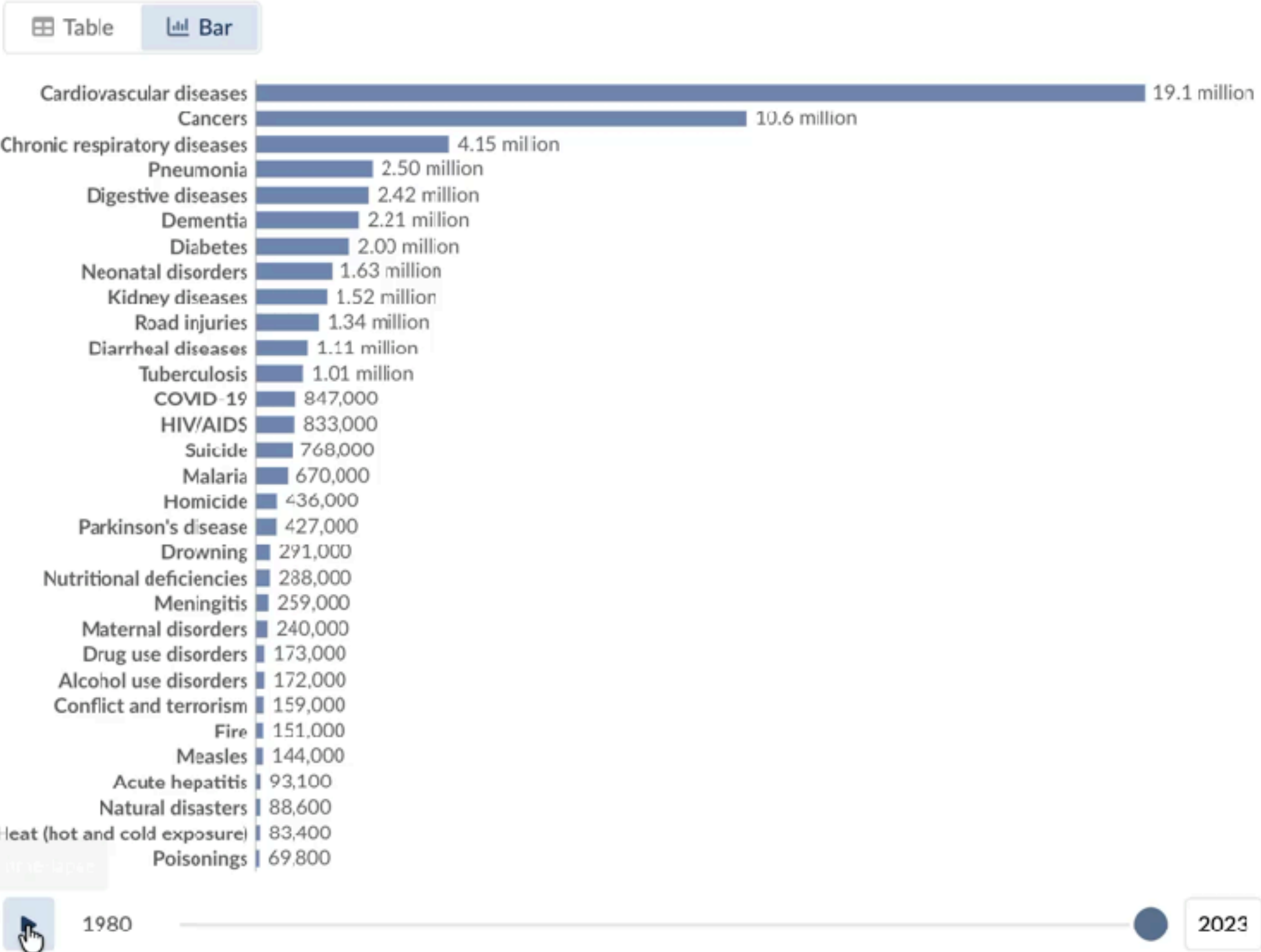
Nutrition and Metabolism



Nutrition and Metabolism

Causes of death World, 2023

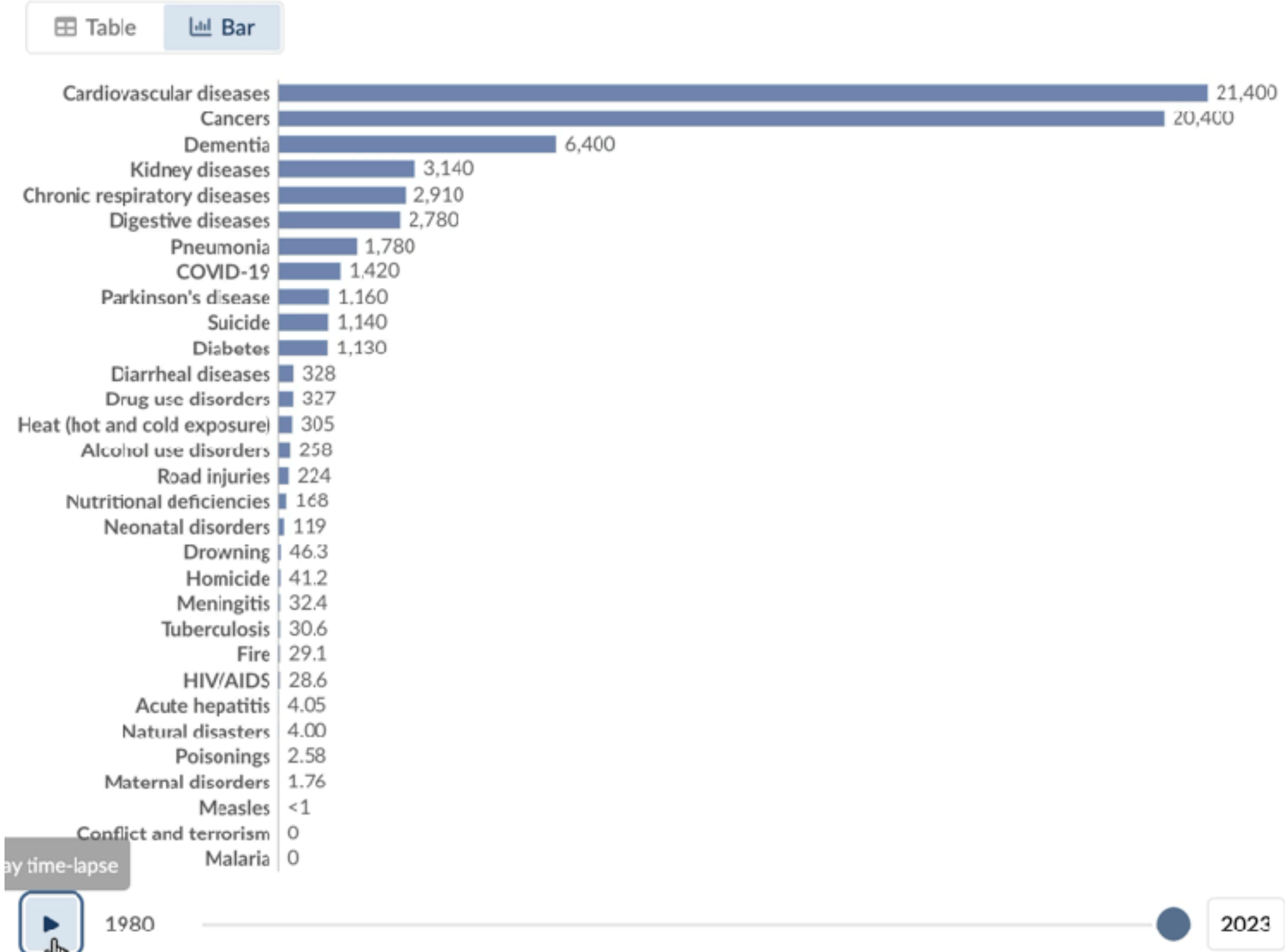
The estimated annual number of deaths from each cause. Estimates come with wide uncertainties, especially for countries with poor vital registration.



Data source: IHME, Global Burden of Disease (2025) – [Learn more about this data](#)
OurWorldinData.org/causes-of-death | CC BY

Causes of death Switzerland, 2023

The estimated annual number of deaths from each cause. Estimates come with wide uncertainties, especially for countries with poor vital registration.



Data source: IHME, Global Burden of Disease (2025) – [Learn more about this data](#)
OurWorldinData.org/causes-of-death | CC BY

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Center for Food Challenges



Dr. Federico Matteini
Executive Director



Prof. Holger Frauenrath
Academic Director

Soil Sustainability



Future Food Factory



Nutrition & NCDs



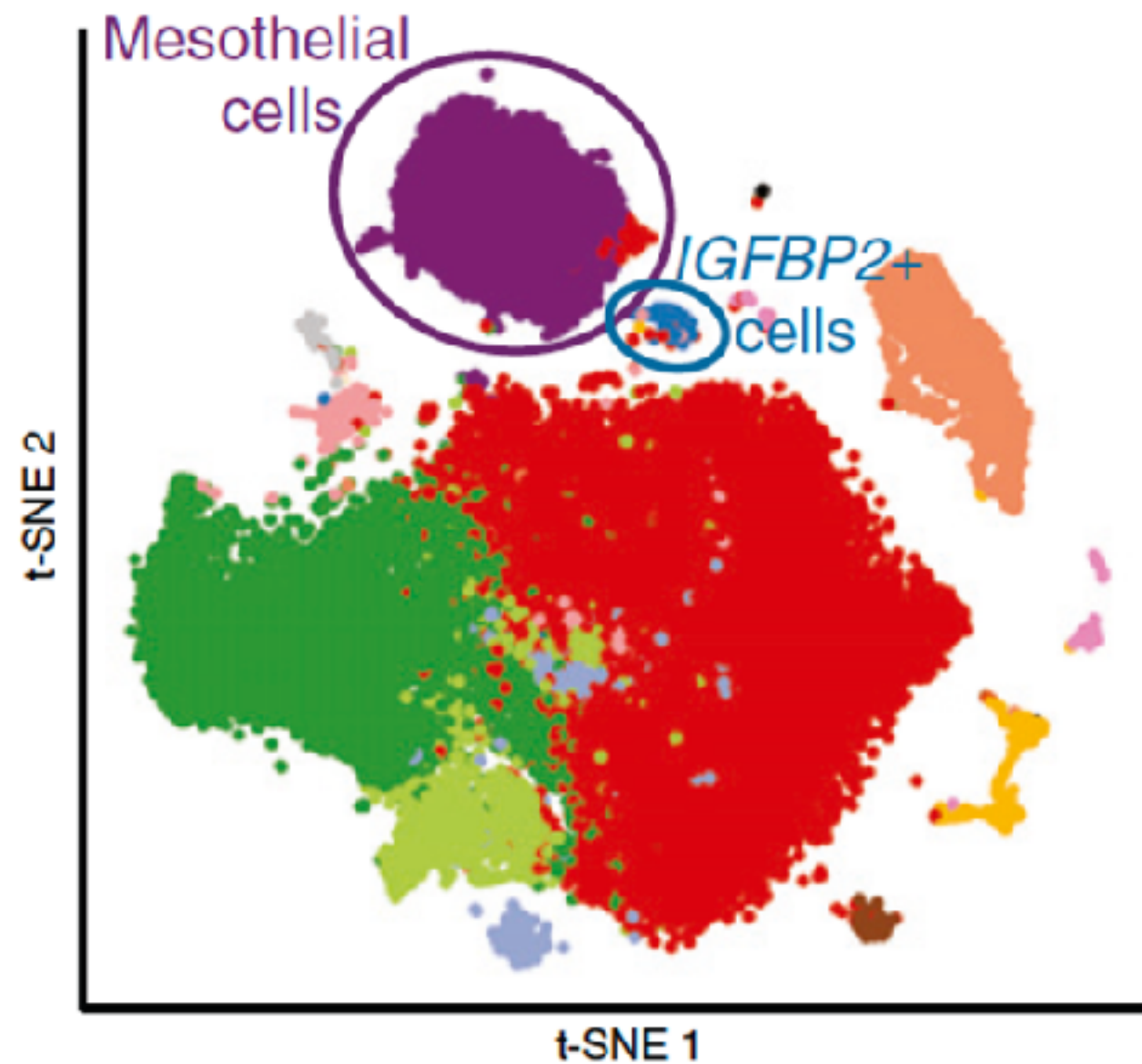
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Prof. Bart Deplanke

A natural brake on fat growth

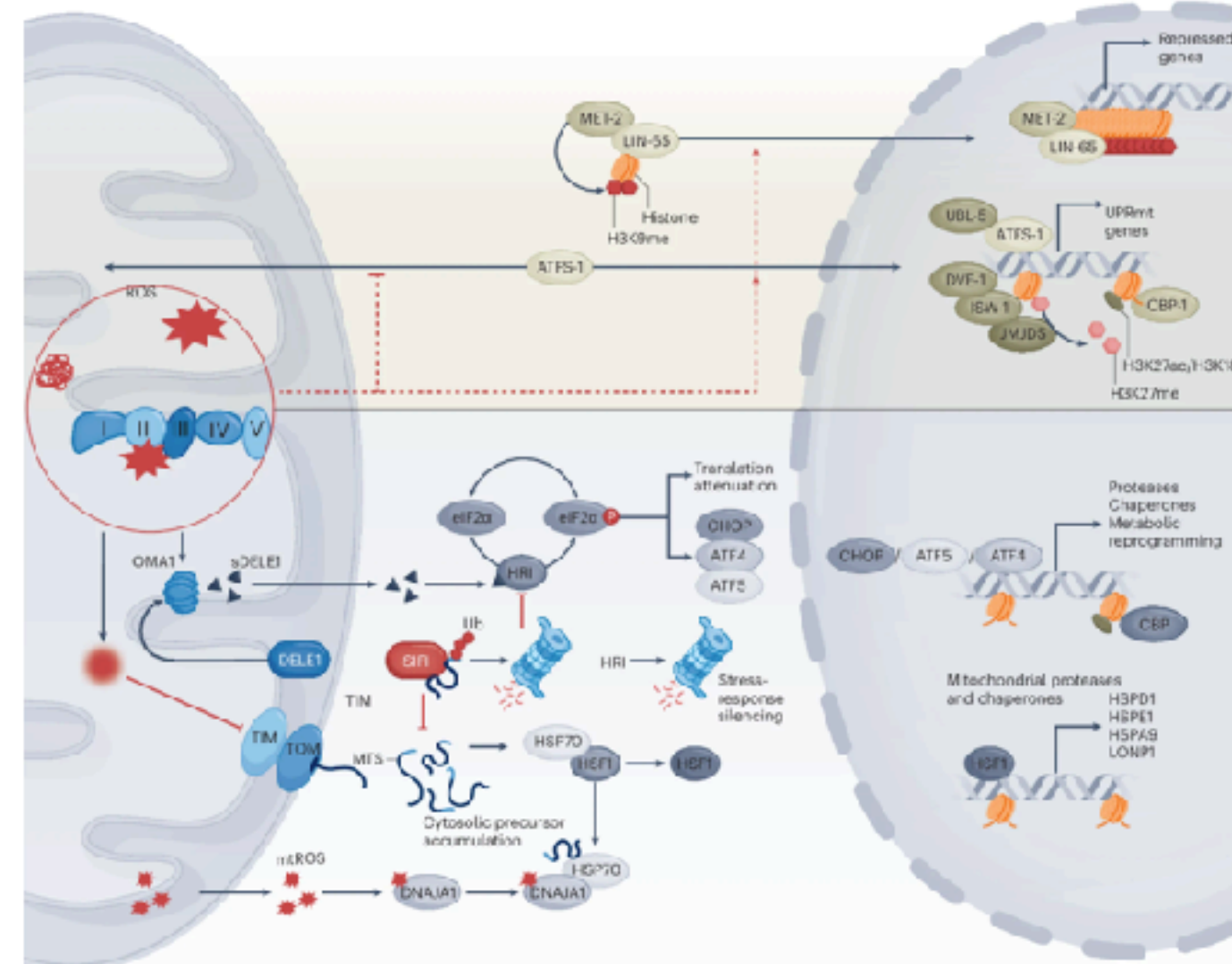
cells inside the tissue set the balance of adipogenesis



Prof. Johan Auwerx

Aging is a metabolic dysfunction

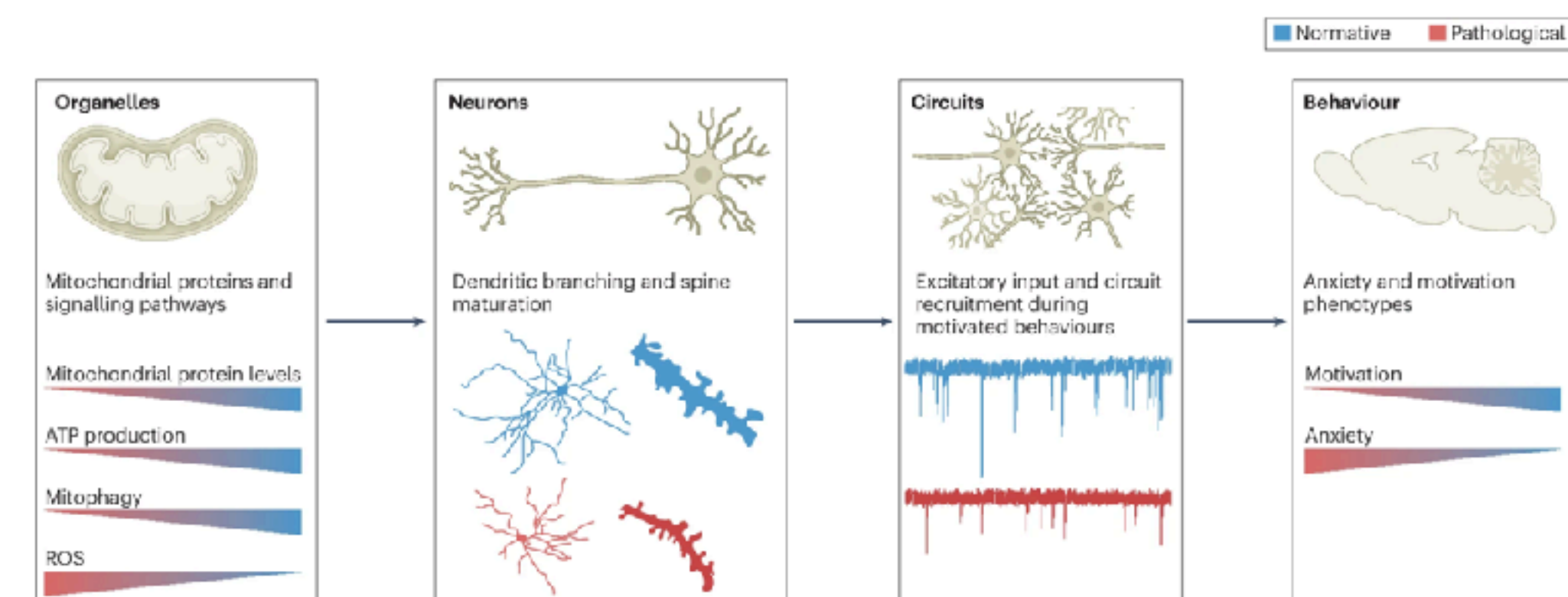
and can be reverted



Prof. Carmen Sandi

Metabolism impacts behaviour

anxiety is caused by mitochondrial dysfunction



Nutrition and Metabolism @ EPFL



Prof. Kristina Schoonjans

Metabolic messengers

bile acids are hormones in disguise



Prof. Felix Naef

Metabolic tempo

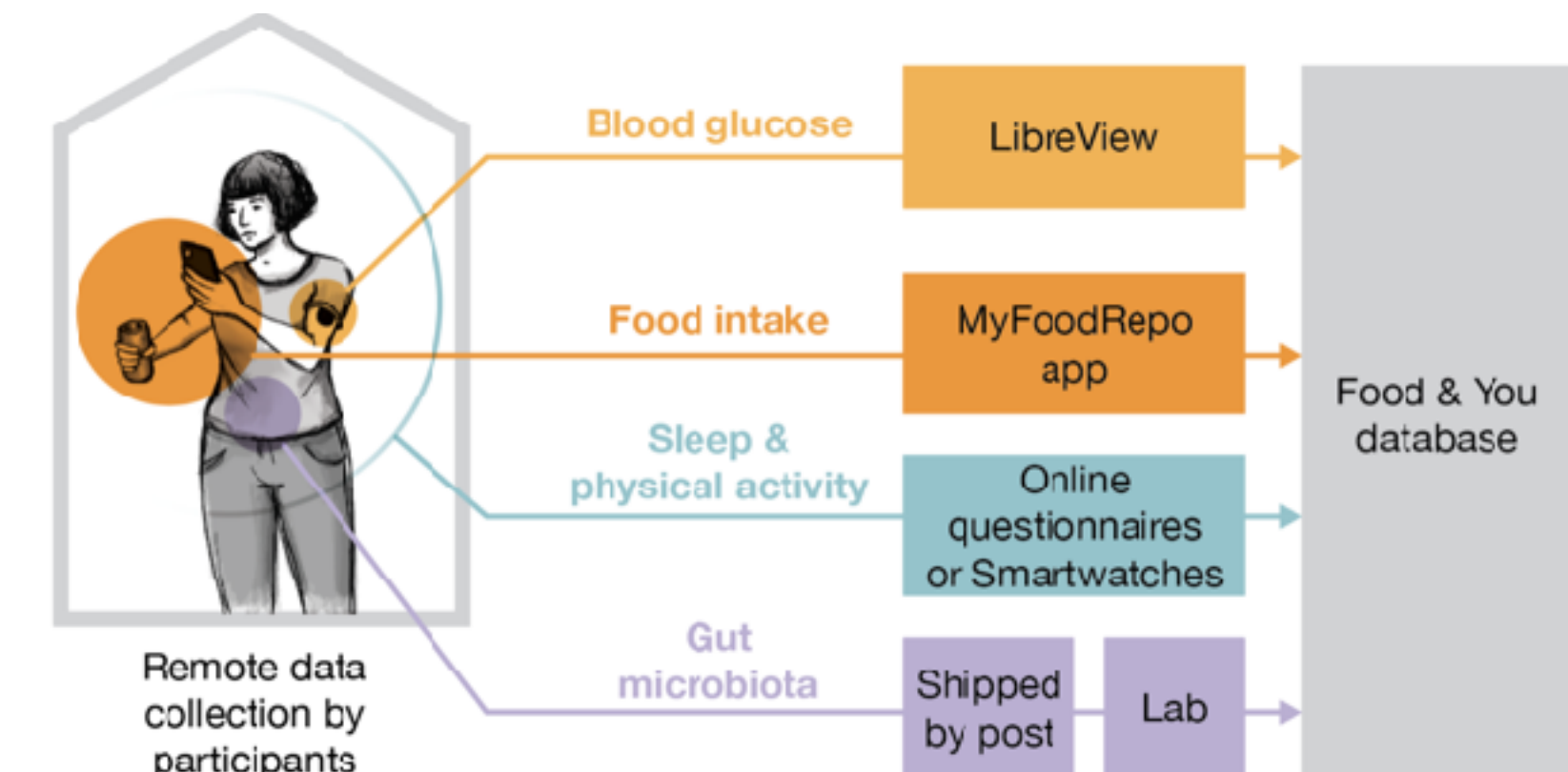
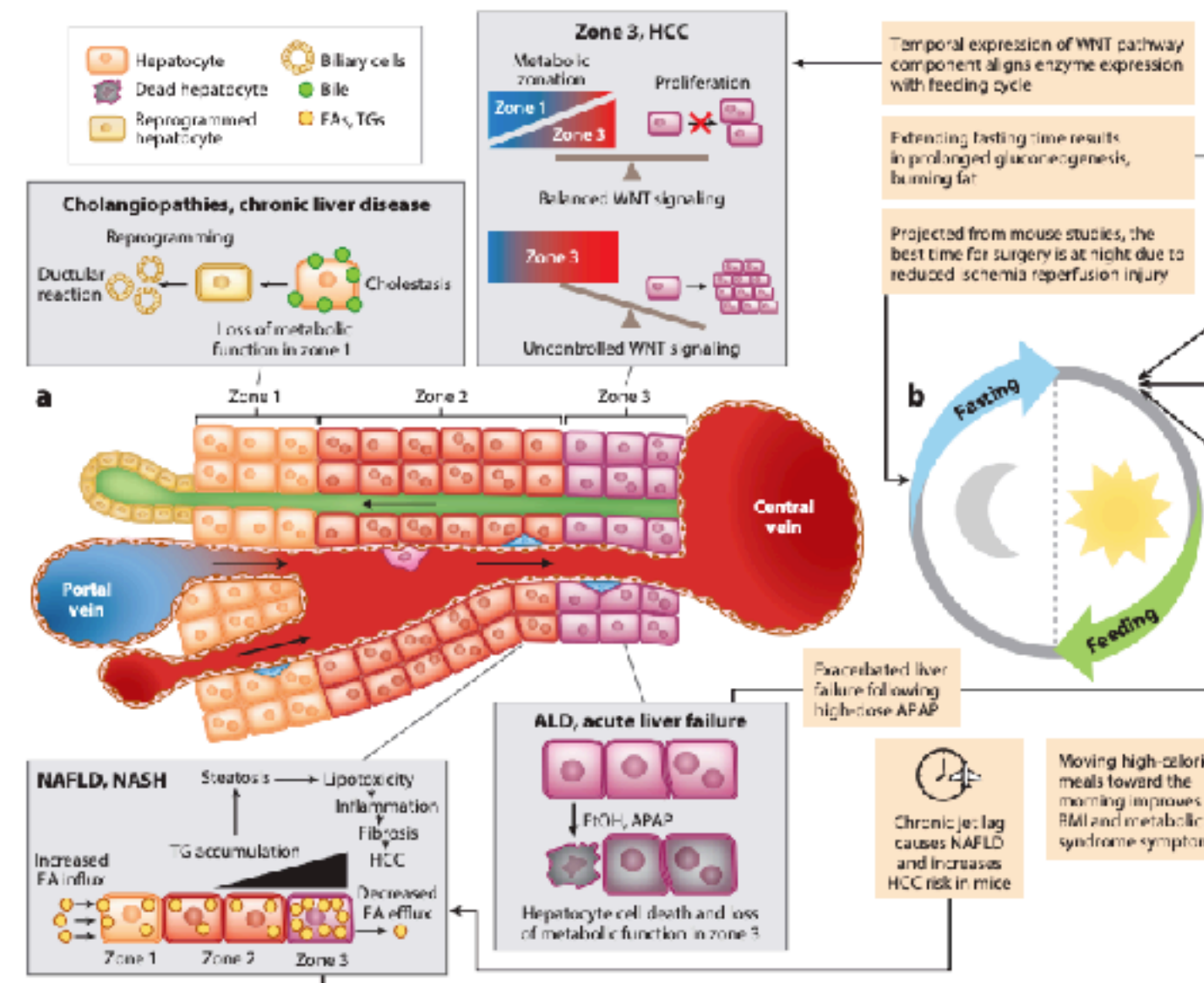
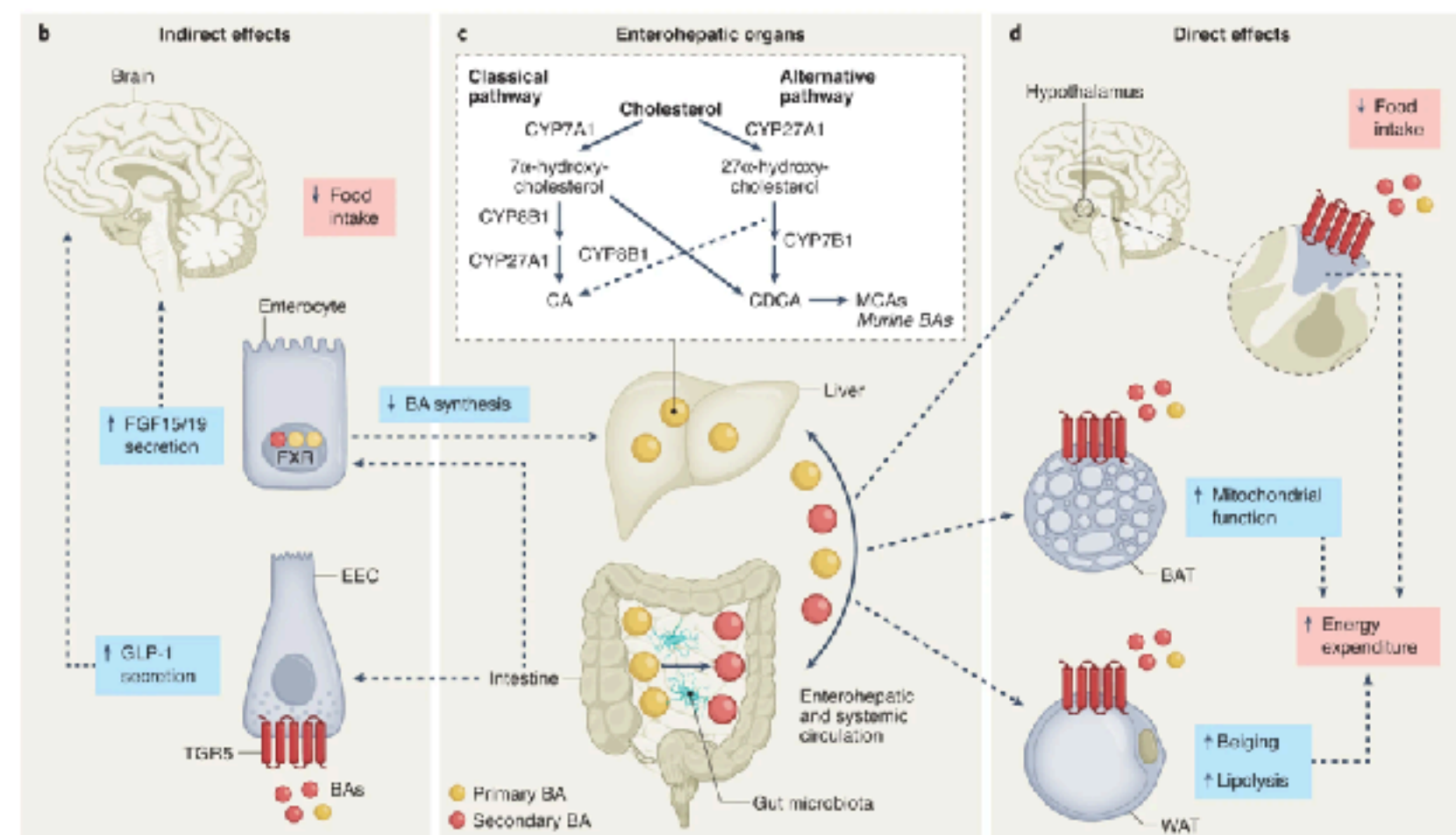
your liver isn't the same organ at 9am and 9pm



Prof. Marcel Salathé

Personalised metabolism

what and when we eat influences our microbiome



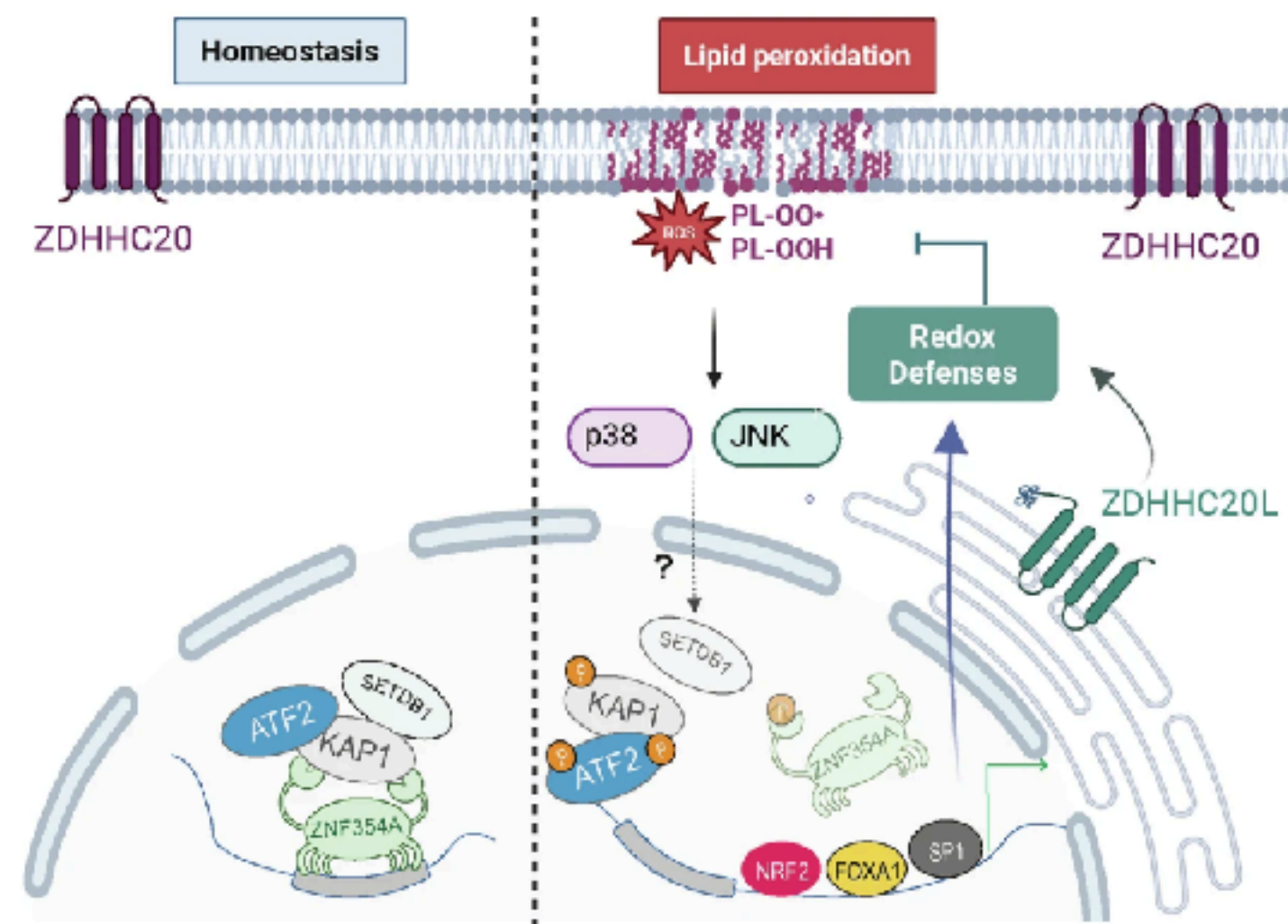
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Prof. Gisou van der Goot

An alarm system for damaged lipids

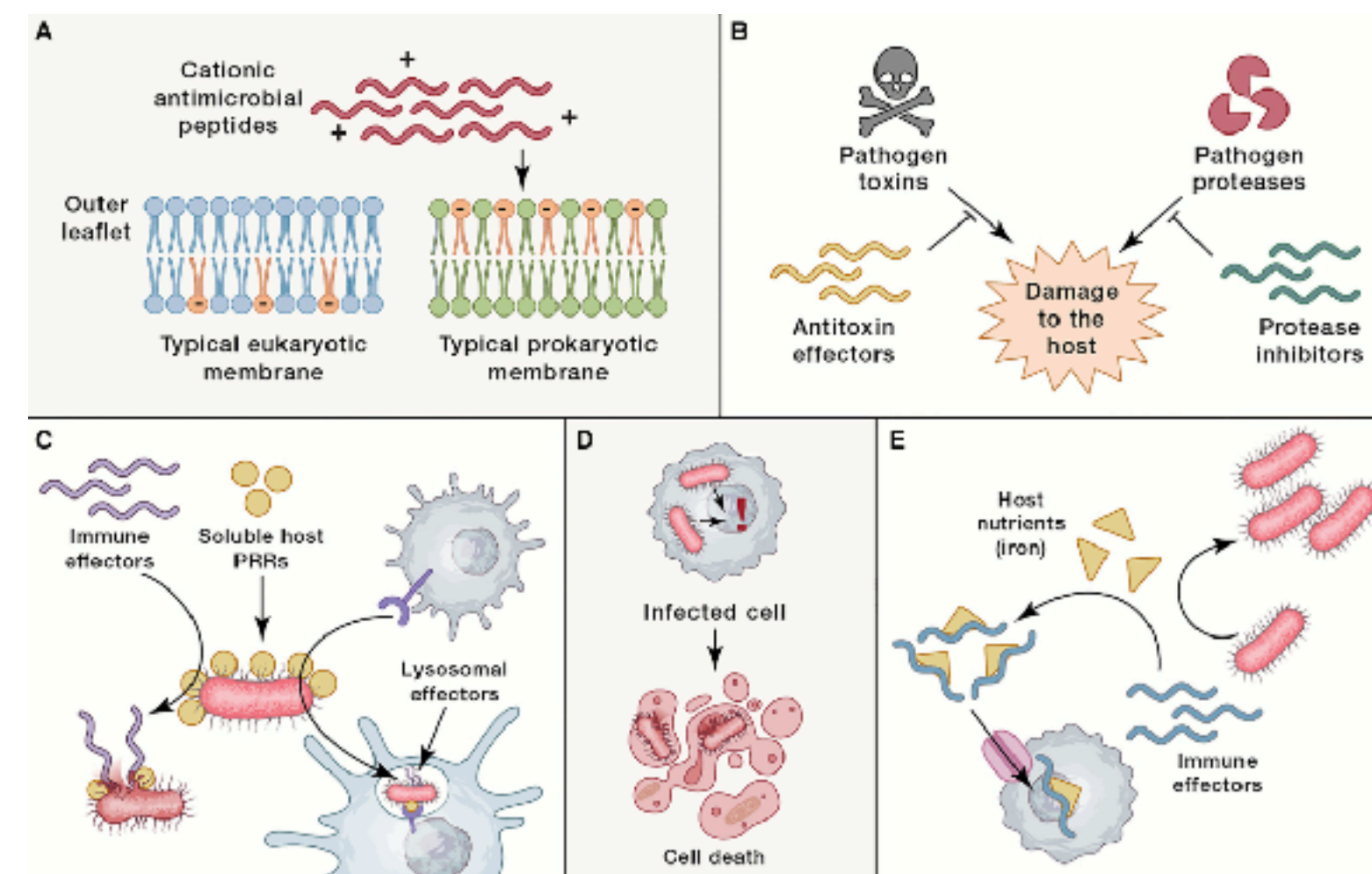
that decides between cell life and death



Prof. Bruno Lemaitre

Metabolism is rewired in immune response

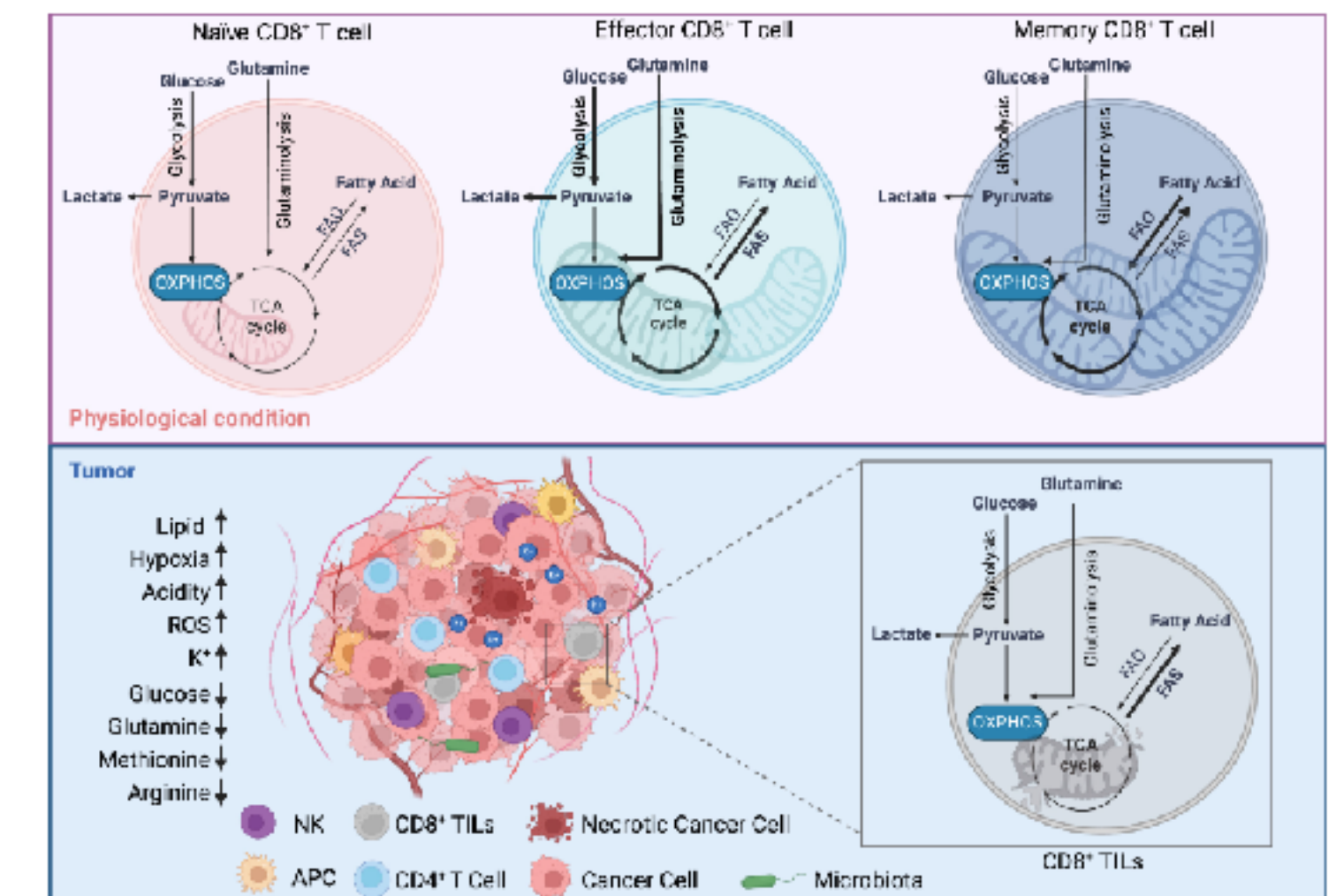
Lipids fuel the cellular response to infection



Prof. Li Tang

Metabolic Armored Immunity

Rewiring metabolism to fight cancer



Nutrition and Metabolism @ EPFL



Prof. Vassily Hatzimanikatis



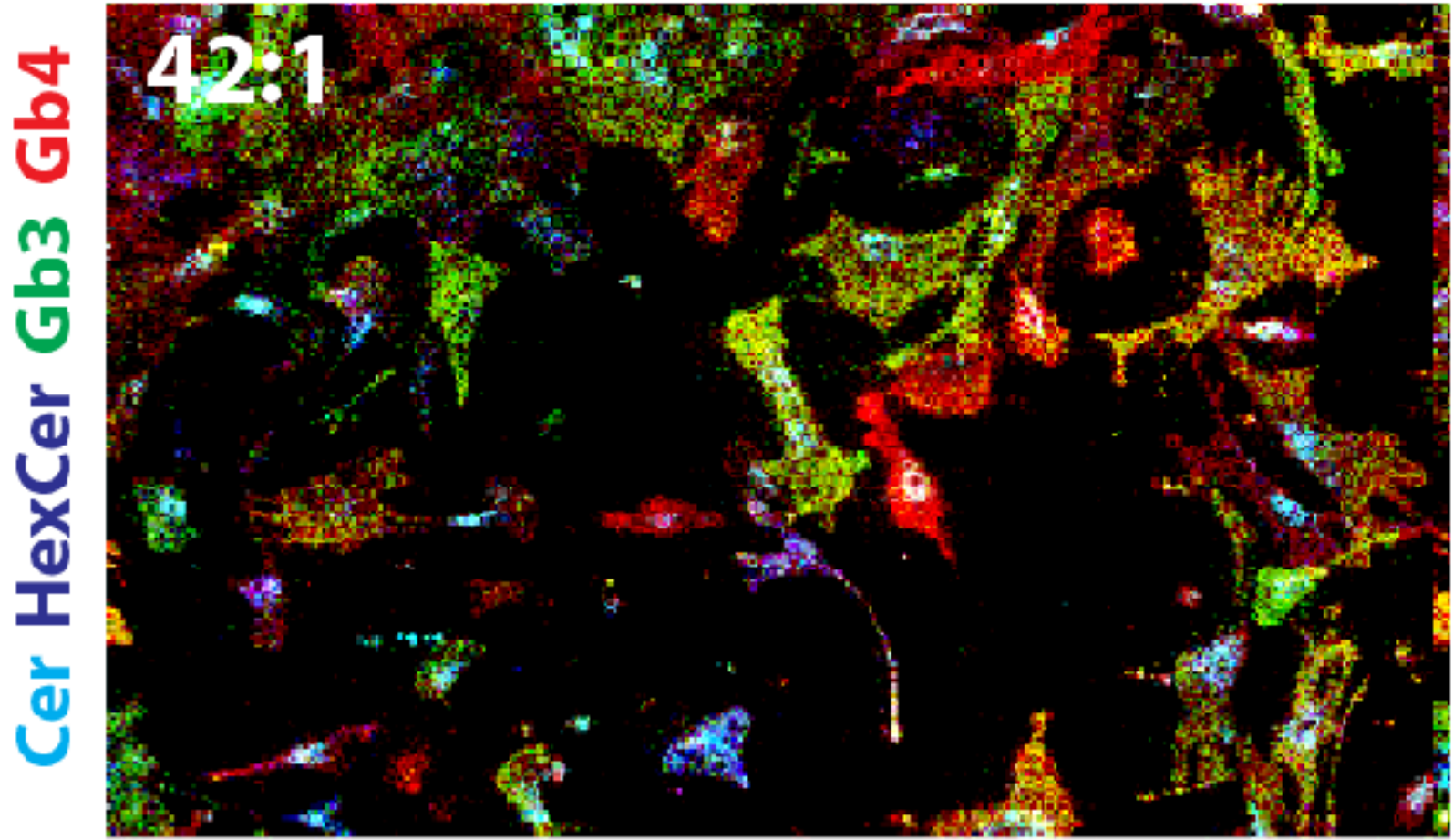
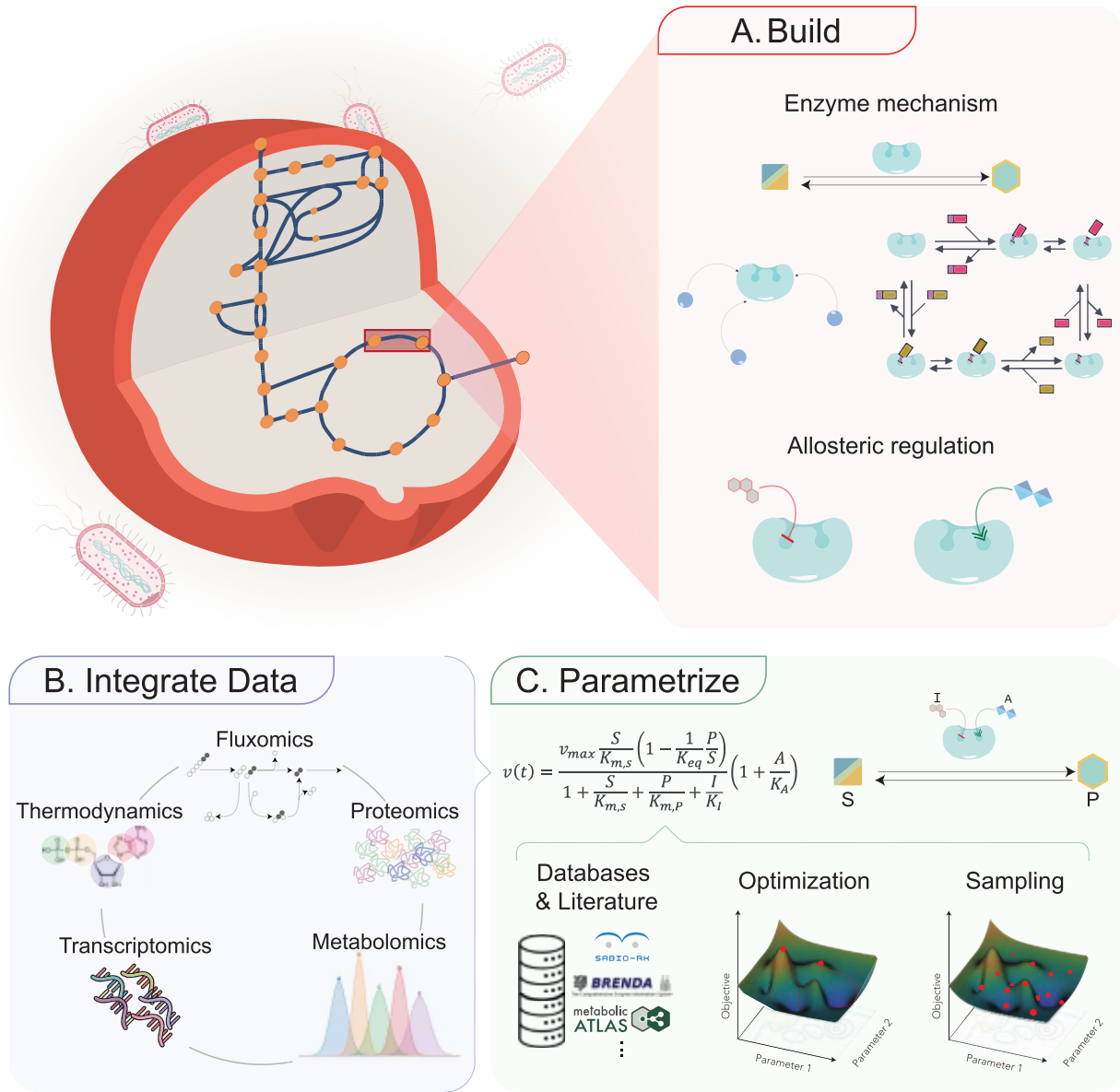
Prof. Giovanni D'Angelo



Prof. Gioele La Manno

Modelling as a discovery tool
and to reverse engineer metabolic processes

Metabolism defines cell identity
and anatomy





Future **Directions**

Develop a coordinated strategy to tackle nutrition and metabolism from food systems to metabolic dysfunction

