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# Background

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Obesity, type 2 diabetes and related complications represent the major health challenge globally. These largely impact societies, as fully demonstrated during the COVID-19 pandemic, which disproportionately affected patients with obesity and/or diabetes. Even though the incidence of diabetes is decreasing in urban areas when compared to rural ones, diabetes management and access to proper care are much worse among low-income and aged urban inhabitants.

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Prevention and early treatment of the disease, before complications arise, have the highest long-term impact. However, there is an unmet need for effective, affordable non-pharmacological measures and their implementation. Variability in metabolic responses to lifestyle interventions is one reason. Research into predictors of successful metabolic response, identifying surrogate markers of response and bottlenecks in the interventional programme delivery, will help identify future directions at the verge of science and public health care.

The project will bring together leading European scientists for a symposium combining interactive talks and educational workshops, spanning from basic research into the multi-omics predictive patterns, energy balance and host-microbiome interactions, over the diet and exercise intersection to epidemiology and policymaking. The ultimate aim is to identify the crucial steps to be taken to maximize the impact of lifestyle interventions: how to personalize them and how to increase the implementation effectively and sustainably in urban societies.

The aim to identify ways to effective prevention and early treatment of disabilities from non-communicable diseases and to support the resilience of the European population, namely those vulnerable, living in urban environments. To get to the goal the project would set up an informal research/education platform that would formulate future research directions for personalized lifestyle interventions and to identify new prospects of future PhD topics.

We would like to invite you for an introductory symposium in Prague that would combine:

1. invited state-of-the art talks on crucial aspects of the lifestyle intervention and its implementation
2. focused group works on specific tasks on future research and implementation strategies and
3. opportunities to present research outputs for early career researchers from partner universities and to get information about possible mobilities