

Study design for integrative genomics and metabolomics studies



Prof Jerzy Adamski

Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Institute of Experimental Genetics, Helmholtz Zentrum München, German Research Center for Environmental Health, Neuherberg, Germany

Institute of Biochemistry, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Metaron Diagnostics i.G., Neuherberg, Germany

Abstract

Integration of omics has been proven to explain complex human phenotypes, disease progression and their heritability. Through the analyses of impact of genome on metabolome we have learned new interlaced control pathways and further discovered unexpected plasticity of environmentally driven signal transduction pathways. These integrative studies have their own requirements for study design, sample randomisation and normalisation of data. Not all study design strategies performing well in genomics can be directly applied to metabolomics or other functional studies like transcriptomics and metabolomics. Examples of design-flawed approaches will be shown to illustrate the impact of study design on the outcome and statistical analyses of data. Quality control procedures might be implemented to prevent flawed design.

Kindly click here to join the meeting:

<https://nus-sg.zoom.us/j/86107499167?pwd=TDI1NnF1TnRtN3FaYjNHUld6YnlhZz09>

Meeting ID: 861 0749 9167

Password: 133798



Date: 7 October 2021 (Thursday)

Time: 11am – 12pm

Host: Prof Markus R. Wenk