"Liaisons dangereuses
Genes, Environment and Cardiometabolic Outcomes"

The worldwide epidemic of cardio-metabolic diseases has been mainly attributed to lifestyle changes. However, even in a permissive environment some individuals appear protected from the deleterious effects of an unhealthy lifestyle while others develop adverse metabolic consequences at early ages. These inter-individual differences can be explained at least in part by genetic factors. In the last twenty years, important progress has been made in the elucidation of the genetic architecture of cardio-metabolic outcomes. In parallel with successful identification of genes, the number of gene-environment interaction studies has grown rapidly. These discoveries have led to a better understanding of the complex relationships between genes and components of the cardio-metabolic syndrome. Drs Meyre and Pare will review the progress, pitfalls and prospects of these hot topics of research. They will explain how these discoveries may have applications in the emerging fields of personalized medicine and individualized lifestyle recommendations.