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Canadian Longitudinal Study on Aging
Étude longitudinale canadienne sur le vieillissement

CLSA Approved Project

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Project Title
Deep phenotyping of UGT human knockouts

Project Summary
UDP-glucuronosyltransferase (UGT) enzymes are key contributors to drug metabolism and in maintaining the homeostasis of numerous endogenous compounds. Among the UGT family, UGT2B17 and UGT2B28 are two of the ten genes most deleted from the human genome. Despite the relatively frequent occurrence of UGT knockouts (KO) and the growing evidence of their association with several diseases, the metabolic and health-related consequences of these germline deletions have not been comprehensively determined. We want to leverage on data of the CLSA cohort to perform deep phenotyping of human UGT KO. We hypothesized that UGT2B17 and UGT2B28 KO influence the systemic metabolome and may be related to common risk factors of occurrence/severity of diseases, health span and longevity. Findings may improve our understanding of the biological functions of UGT proteins. They will also validate previously identified target-disease links in a large cohort representative of the real-world.

Keywords
Metabolism, Cancer, Aging, Steroids, Uronic acid pathway