

# **Diabetes and Obesity Genomics to Metabolic Personalized Medicine**

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## **Summary**

Type 2 Diabetes (T2D) and obesity are both multifactorial diseases due to the interaction of genes with the environment. A non negligible fraction of these metabolic disorders are due to mutation in a single gene or to chromosome abnormalities. The elucidation of these forms of disease has important implication for physiopathology and for clinical care. Recent progress in Next Generation Sequencing has made possible the molecular diagnostic of these patients. Genome Wide Association Studies have discovered more than 200 genes that contribute to common T2D and/or obesity. However, altogether these genetic markers don't explain more than 10% of disease heritability: rare variants and epigenetics can contribute to the development of metabolic disorders and to their complications and may help to make progress towards more personalized metabolic medicine. The lecture will present state of the art in genomic medicine of T2D and obesity.