

TOWARDS A PERSONALIZED TREATMENT AGAINST DIABETES

The European project against diabetes, DIRECT, is officially launched for a seven-year period

Geneva, February 21st, 2012

Under embargo until February 22nd

Gathering experts from 21 European academic institutions and key players of the pharmaceutical industry, the DIRECT project (Diabetes REsearch for patient stratiFication) will focus on the stratification of patients with type 2 diabetes in order to develop personalized treatments, that would therefore be more efficient. This 54 million Swiss franc project is supported by the Innovative Medicine Initiative (IMI), a joint programme of the European Commission and the European Federation of Pharmaceutical Industries and Associations (EFPIA).

The University of Geneva (UNIGE)'s team, coordinated by Emmanouil Dermitzakis, Professor at the Department of genetic medicine and development, will play a key role in the experimental and statistical analysis of the biological measurements collected.

Type 2 diabetes is a pandemic disease which currently affects 285 million people worldwide and which is anticipated to affect 439 million people by 2030. To develop more efficient treatments, scientists recommend a stratified approach which consists in adapting the treatment to the patient depending on his biological characteristics.

The DIRECT consortium believes that patients with type 2 diabetes can be stratified into "profiles" or subtypes that may progress or be treated differently to other subtypes. This will result in the development of new personalized treatments against diabetes.

Over a seven year period, the consortium aims to develop biomarkers and tests to emphasize the differential characteristics of diabetic patients. Around 150 researchers will collect phenotypic and genomic data from pre-diabetic and diabetic patients. More than 100 000 samples of well-characterized type 2 diabetes patients will be provided by scientists to identify patient profiles, understand the dissimilarities and develop a personalized medicines approach to treatment of diabetes.

Experimental and statistical analysis: the Genevan asset

The UNIGE will be strongly involved in this European project by playing an essential role in the experimental and statistical analysis of the biological measurements collected from diabetic patients. The UNIGE's team, coordinated by Emmanouil Dermitzakis, in collaboration with Philippe Halban, Professor at the Department of genetic medicine and development, will compile genomic and molecular data and participate in the analysis of the various patient profiles. Integrated models will then be identified to provide a stratification of patients suffering from type 2 diabetes.

According to Professor Dermitzakis, "the DIRECT project is the perfect example of the beneficial merger between traditional diagnosis of type 2 diabetes and state-of-the-art technologies. The recent groundbreaking developments in genomic research and genetic analysis has enabled such an exercise that is simply the beginning of a new way of delivering personalized medical services to the population".

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