

## IMIDIA

### IMPROVING BETA-CELL FUNCTION AND IDENTIFICATION OF DIAGNOSTIC BIOMARKERS FOR TREATMENT MONITORING IN DIABETES

#### SUMMARY:

A complete or relative decrease in insulin secretion by pancreatic beta-cells underlies the development of, respectively, type 1 and type 2 diabetes. These diseases impose a huge burden on welfare systems, both in Europe and in other developed and developing countries. So far, symptomatic therapeutic options for treatment of diabetes are available, but none to cure or prevent this pandemic disease. This is largely due to our limited knowledge of beta-cell biology in health and disease. Although considerable amount of knowledge has been gained on the function of beta-cells from animal models, knowledge of human beta-cell function, survival, and of the pathophysiological mechanisms that lead to their demise remains limited.

The scientific program aims at delivering:

- 1- Novel tools for the study of human beta-cell development, function and survival; their modulation by potential therapeutic compounds; and for in vivo beta-cell imaging.
- 2- Biomarkers for the diagnosis and prognosis of beta-cell failure and for monitoring diabetes progression and treatment.
- 3- Knowledge on novel molecular pathways and sites that control beta-cell life & death as well as mass and function.

This public-private-partnership consisting of academic teams, pharmaceutical companies and a SME provides a unique blend of expertise and forms a strong basis for a successful enterprise to ultimately improve industrial competitiveness and Public Health in Europe.

#### PARTICIPANTS:

##### EFPIA:

- Sanofi-Aventis GmbH, Frankfurt/Main, Germany (*Project coordinator*)
- Institut De Recherches Servier, Suresnes, France (*Project Co-coordinator*)
- AstraZeneca AB, Södertälje, Sweden
- Boehringer Ingelheim International GmbH, Ingelheim, Germany
- Eli Lilly Ltd. UK, Basingstoke, United Kingdom
- Novartis Pharma AG, Basel, Switzerland
- Novo Nordisk A/S, Bagsvaerd, Denmark
- F. Hoffmann-La Roche AG, Basel, Switzerland

**STARTING DATE:** 01.02.2010

**DURATION:** 60 months

##### FINANCING:

IMI funding:	€ 7.074.760
Other contributions:	€ 3.750.920
EFPIA in kind contribution:	€ 15.081.800
<b>TOTAL PROJECT COST:</b>	<b>€ 25.907.480</b>

#### UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT:

- Université de Lausanne, Lausanne, Switzerland (*Managing Entity of IMI Beneficiaries*)
- Centre National de la Recherche Scientifique (CNRS), Paris, France
- Commissariat à l'Énergie Atomique, Paris, France
- Imperial College of Science, Technology and Medicine, London, United Kingdom
- Institut Suisse de Bioinformatique, Geneva, Switzerland
- Institut National de la Santé et de la Recherche Médicale (INSERM), Paris, France
- Medizinische Hochschule Hannover, Hannover, Germany
- Technische Universität Dresden, Dresden, Germany
- Università di Pisa, Pisa, Italy
- Université Paris Diderot - Paris 7, Paris, France
- Université de Genève, Genève, Switzerland
- Vrije Universiteit Brussel, Brussel, Belgium

#### SME's:

- Endocells SARL, Paris, France

#### CONTACTS:

##### Project coordinator

Sanofi-Aventis GmbH  
Frankfurt, Germany

##### Project Co-coordinator

Institut De Recherches Servier  
Suresnes, France

##### Managing Entity of IMI beneficiaries

Bernard Thorens  
Department of Physiology & Center for Integrative Genomics, Université de Lausanne, Lausanne, Switzerland

**e-Mail:** [INFO@IMIDIA.ORG](mailto:INFO@IMIDIA.ORG)

**Website:** [WWW.IMIDIA.ORG](http://WWW.IMIDIA.ORG)

