NEW HORIZONS IN DIABETES RESEARCH
12–13 September 2019

Scientific symposium
Humanities Theatre
Uppsala University

100 year anniversary of Göran Gustafsson (1919–2003)
Thursday 12 September  Preliminary program

12.30  Welcome

Eva Åkesson, Vice-Chancellor, Uppsala University, Sweden
Stellan Sandler, vice-rector, Uppsala University
Welcome and opening remarks

12.40–16.20  150-year anniversary of the discovery of pancreatic islets - New horizons

Chair  Anders Tengholm, Uppsala University, Sweden

Patrick MacDonald, University of Alberta, Canada
Insights from combined functional and transcriptomic profiling of human islet cells

Charna Dibner, University of Geneva, Switzerland
Chronobiology of the pancreatic islet cells

Olof Idevall, Uppsala University, Sweden
Organelle dynamics in beta-cells

14.00–14.30  Coffee break

Alejandro Caicedo, University of Miami, Miller School of Med, USA
New insights into the innervation of the pancreatic islet

Gustaf Christoffersson, Uppsala University, Sweden
Imaging local immune regulation in the pancreas

Olov Andersson, Karolinska Institutet, Sweden
In vivo drug discovery to stimulate beta-cell regeneration

Frank Reimann, University of Cambridge, United Kingdom
Enteroendocrine cells and glucose homeostasis

17.00  Göran Gustafsson Lecture in Medicine 2019
University main building, Auditorium X

Bernard Thorens, University of Lausanne, Switzerland
Brain neuronal circuits controlling glucose homeostasis and feeding behavior

18.00–19.00  Scientific poster exhibition with refreshments

Göran Gustafsson (1919–2003)

Göran Gustafsson was born in the far north of Sweden. Becoming a successful businessman, notably in real estate, Göran Gustafsson created the economic basis for his donations to two foundations that promote basic scientific research. Through these donations, Göran Gustafsson’s vision was to provide Swedish researchers with the required conditions for competing with the best researchers in the world.
Friday 13 September

9.00–11.50  Type 2 diabetes
– New paradigms in pathobiology and treatment

Chair  Jan Eriksson, Uppsala University, Sweden
Anubha Mahajan, University of Oxford, United Kingdom
An update on type 2 diabetes genetics
Angela M. Valverde, Institute of Biomedicine Alberto Sols (CSIC) and CIBERDEM, Madrid, Spain
Non-alcoholic Fatty liver disease: insights from cellular and animal models
Marcel den Hoed, Uppsala University, Sweden
Image and CRISPR-based screens in zebrafish larvae to improve our understanding of diabetes aetiology

10.20–10.50  Coffee break

Tina Vilsbøll, University of Copenhagen, Denmark
Incretin hormones – basis for new treatment era
John Wilding, University of Liverpool, United Kingdom
Will SGLT2 inhibitors change the diabetes and cardiovascular landscape?

11.50–13.00  Lunch

13.00–15.10  Technical applications for the advances of diabetes

Chair  Per-Ola Carlsson, Uppsala University, Sweden
Klearchos Papas, University of Arizona, USA
Oxygenated macrocapsules for pancreatic islet transplantation
Diego Balboa, Helsinki University, Finland
CRISPR Cas9 technology for human pluripotent reprogramming and the understanding of human beta-cell disease
Olof Eriksson, Uppsala University, Sweden
Novel tracers for imaging of the pancreas and their beta-cells by PET
Roman Hovorka, University of Cambridge, United Kingdom
Closed loop technology
Robin Strand, Uppsala University, Sweden
Imiomics and machine learning in whole-body imaging studies of diabetes

15.10–15.40  Coffee break

15.40–17.30  How do we form societies preventing diabetes?

Chair  Tove Fall, Uppsala University, Sweden
Anna-Maria Volkmann, University College London, United Kingdom
Cities changing diabetes
Brent Loken, Stockholm University, Sweden: EAT foundation
Can we feed a future population of 10 billion people a healthy diet within planetary boundaries?
Duk-Hee Lee, Kyungpook National University, Korea
Environmental pollutants and diabetes
Jonathan Cedernaes, Uppsala University, Sweden
Circadian rhythms, shift work and diabetes
100 years and 2 days of utmost importance

Dear colleague, it is with great pleasure we invite you to Uppsala University and the international scientific symposium New horizons in diabetes research. Our wish is to present a comprehensive overview of research at the absolute forefront of our field, and that you will join us in honoring Göran Gustafsson, a true philanthropist in the world of science.

This September, Uppsala University and The Göran Gustafsson Foundation for Research at Uppsala University and KTH wish to commemorate that 100 years have passed since the birth of Göran Gustafsson. We will do so with a two-day symposium on diabetes. This is a growing global health problem where science still needs to find effective means for prevention and cure. By gathering leading experts in the field, our aim is to strengthen the platform for our common endeavor to meet one of the major health care challenges of our time.

Stellan Sandler
professor, medical cellbiology
vice-rector, Uppsala University

Tove Fall
professor, molecular epidemiology
Uppsala University

Göran Gustafsson lecturer in medicine

Professor Bernard Thorens conducts research on the molecular physiology of energy homeostasis at the Center for Integrative Genomics of the University of Lausanne. He graduated in biochemistry and obtained his PhD from the University of Geneva. Following postdoctoral training at the Whitehead Institute for Biomedical Research at MIT, Cambridge, USA, he returned to Switzerland to establish his own laboratory. Bernard Thorens is renowned for his pioneering work on glucose transporters and gluco-incretin receptors, which he initiated by the cloning and functional characterization of the GLUT2 transporter and the GLP-1 receptor in pancreatic beta-cells. These original discoveries were followed by continued cutting-edge research on different glucose sensing mechanisms and blood glucose control. His present research focusses on how brain glucose-sensing neurons control glucose homeostasis via autonomic nervous effects on pancreatic alpha- and beta-cell function, as well as how these neurons determine feeding behaviour. His laboratory also investigates signalling pathways, which adapt beta-cell mass and function to gluco-incretin hormone action and metabolic stress with the aim to find novel targets for the treatment of diabetes. The work of Professor Bernard Thorens has been recognised by several prestigious prizes.