

Pr Jim JOHNSON

University of British Columbia, Vancouver

Pancreatic β -cell states in health, disease and cell therapy

Tuesday 27. MAY, 14h (CET)

Amphithéâtre IECB

Host: J. Lang

Jim Johnson is Professor in the Department of Cellular and Physiological Sciences at the University of British Columbia, in Vancouver Canada. He is currently Associate Director of Vancouver Coastal Health Research Institute. Previously, he was Director of the Life Sciences Institute (LSI) where he was integrally involved with its transformation. His laboratory participates in multiple research teams, including those dedicated to diabetes, obesity, cancer, aging, and heart disease.

Johnson earned his PhD in Physiology and Cell Biology from the University of Alberta under the supervision of Prof. John Chang. His post-doctoral training was with Profs. Stanley Misler and Ken Polonsky at Washington University in St. Louis focused on human islet biology and the genetics of islet cell dysfunction and death using mouse models.

Prof. Johnson is a global leader in the foundational biology of insulin, including both its production and action in multiple contexts including obesity, diabetes, cancer, heart disease. Prof. Johnson is the author of 179 peer-reviewed articles. Highlights include being the first to demonstrate a causal role of hyperinsulinemia in diet-induced obesity, insulin resistance, fatty liver, accelerated aging, and cancer initiation.

Prof. Johnson has won several awards, including being named the top Canadian researcher under 45 by the Canadian Diabetes Association. He is Editor-in-Chief of the journal *Islets*. In 2016, Prof. Johnson co-founded the Institute for Personalized Therapeutic Nutrition and is Board Chair of this registered charity dedicated to research, clinical care, and advocacy for professionals employing personalized diets to decrease the burden of type 2 diabetes.

From 2016-2018, Prof. Johnson was the inaugural Director of the Novo Nordisk Research Centre in Oxford, a hybrid academic-industry Institute focused on the fundamental biology of type 2 diabetes and target discovery.

Prof. Johnson's greatest passion is training the next generation of scientists; many of his former trainees hold academic faculty positions or are leaders in industry. Prof. Johnson is actively involved in science outreach on multiple social media sites @JimJohnsonSci.

Some recent publications:

- M. G. Atser et al., *Pyruvate dehydrogenase kinase 1 controls triacylglycerol hydrolysis in cardiomyocytes*. J Biol Chem 301, 108398 (2025).
- J. Zhao et al., *PDX1+ cell budding morphogenesis in a stem cell-derived islet spheroid system*. Nat Commun 15, 5894 (2024).
- J. Kolic et al., *Proteomic predictors of individualized nutrient-specific insulin secretion in health and disease*. Cell Metab 36, 1619-1633 (2024).
- A. M. Y. Zhang et al., *Hyperinsulinemia acts via acinar insulin receptors to initiate pancreatic cancer by increasing digestive enzyme production and inflammation*. Cell Metab 35, 2119-2135 (2023).
- S. Skovsø et al., *Beta-cell specific Insr deletion promotes insulin hypersecretion and improves glucose tolerance prior to global insulin resistance*. Nat Commun 13, 735 (2022).
- C. M. J. Chu et al., *Dynamic Ins2 Gene Activity Defines β -Cell Maturity States*. Diabetes 71, 2612-2631 (2022).
- H. H. Cen et al., *Human and mouse muscle transcriptomic analyses identify insulin receptor mRNA downregulation in hyperinsulinemia-associated insulin resistance*. FASEB J 36, e22088 (2022).