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## Cellular and Molecular Biology of the Beta Cell

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### Message from the Guest Editor

Dear Colleagues,

Glucose metabolism is regulated through a feedback loop between insulin-producing pancreatic  $\beta$ -cells and insulin-sensitive tissues, in which tissue sensitivity to insulin correlates with the magnitude of  $\beta$ -cell response. Metabolic (dys)homeostasis is controlled by fine-tuned and non-permanent modulations of gene expression in response to extracellular stimuli. Although the mechanisms underlying  $\beta$ -cell dysfunction are still debated, emerging data suggest that specific molecular and cellular effects are necessary for  $\beta$ -cell adaptation to metabolic stress. This Special Issue aims to provide an overview of the recent molecular and cellular cues involved in the control of  $\beta$ -cell mass and/or function and propose an integrated view of the biological effects that could contribute at the  $\beta$ -cell level to metabolic disorders, such as T2D. We hope that the original research and reviews presented by expert laboratories will be valuable to improve our knowledge of the fascinating  $\beta$ -cell and provide new concepts to prevent or propose new treatment strategies to counteract  $\beta$ -cell failure.

Dr. Jean Sébastien Annicotte

*Guest Editor*



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Special Issue



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## Message from the Editorial Board

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