

Special Issue

Molecular Biology of Gestational Diabetes: The Culprit of the Diabetes Pandemic

Message from the Guest Editors

According to IDF, 15.8% of live births are affected by gestational diabetes (GDM). The risk for both offspring and mother to develop type 2 diabetes later in life is increased 7–8-fold. The number and function of the pancreatic beta cells during pregnancy play a central role in the development of diabetes in both mother and offspring. Normally, the beta cell number will increase in the pregnant woman due to hormonal and metabolic changes concomitantly with the fetal development of the pancreas. In GDM, hyperglycemia may result in premature maturation of the fetal beta cells and growth of the child. Malnourishment during pregnancy may result in impaired development of the beta cells in the fetus by fetal programming that may be transmitted to the next generation. Recent studies of gene expression and epigenetic changes during embryonic development of the pancreas have identified a number of non-coding RNAs and histone modifications related to GDM. The purpose of this Special Issue is to gather the current knowledge in this research area in order to depict novel approaches to prevent or treat GDM and hopefully break the diabetes pandemic.

Guest Editors

Prof. Dr. Jens Høiriis Nielsen

Department of Biomedical Sciences, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark

Prof. Susan E. Ozanne

University of Cambridge Metabolic Research Laboratories and MRC Metabolic Diseases Unit, Wellcome Trust-MRC Institute of Metabolic Science, Level 4, Box 289, Addenbrookes Treatment Centre, Addenbrooke's Hospital, Cambridge CB2 0QQ, UK

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Editor-in-Chief

Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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