Aims & Scope: Obesity in childbearing age girls increased worldwide. Obesity and type 2 diabetes mellitus (T2DM) are metabolic disturbances whose prevalence shake-hands. Pre-gestational maternal obesity is a condition that associates with foeto-placental vascular dysfunction compromising the supply of nutrients to the developing foetus. Similar alterations are seen in this vascular bed in pregnant women that develop gestational diabetes mellitus. Along with the multiple factors increasing the risk of GDM are pre-gestational maternal obesity, maternal supraphysiological gestational weight gain, being obese and having developed GDM in a previous pregnancy. The mechanisms behind these alterations include insulin resistance, dysregulation of metabolic pathways such as L-arginine/nitric oxide signalling, adenosine/L-arginine/nitric oxide (ALANO) signalling, arginases/urea, inflammation, or endoplasmic reticulum stress. Worryingly, obesity and diabetes in pregnancy results in newborns that were in utero programmed for the development of child/juvenile or adult diseases showing higher risk of cardiovascular disease, obesity, overweight, and T2DM. Whether these alterations may be prevented by treating the women before they get pregnant or treating pregnant women in a more efficient manner is not fully unveiled. Chapters in this book will board the consequences at a cellular and molecular aspects of maternal obesity (before and during pregnancy), diabetes mellitus (pregestational and gestational), gestational diabesity (i.e. obese women that present with gestational diabetes mellitus). Clinical aspects of the mothers and children and protocols for the treatment of these diseases in pregnancy will be discussed. Since the clinical information of the patients correlate with metabolic parameters at a cellular and systemic level, several pieces of evidence addressing the pathophysiology of the obesity and diabetes in pregnancy will be opened for discussion.

Keywords: Obesity, Pregnancy, Type 2 Diabetes Mellitus, Molecular Mechanism.

Subtopics:
The subtopics to be covered within this issue are listed below:

Barbra De Vrijer (Canada) - Pregestational obesity and the placenta
David Hill (Canada) - Molecular and cellular mechanisms linking placenta, pancreas and adipose
Berthil Huppertz (Austria) - The trophoblast in pregnant women with obesity
Abigail Fowden (UK) - Maternal obesity during pregnancy on the offspring
Raheela Kahn (UK) - The myometrium in pregnant women with gestational diabetes
Alfonso Mate (Spain) - Lifestyle and maternal nutrition and healthy pregnancy
Padma Murthy (Australia) - Inflammasome and obesity
Estela Bevilacqua (Brazil) - Stromal cell-derived factor (SDF) 2 and endoplasmic reticulum stress response of trophoblast cells in hyperglycemic condition
Carlos Escudero (Ecuador) - Long term consequences of diabetes in neonates
Reinaldo Marín (Venezuela) - Obesity and preeclampsia: effects on oxidative stress
Andrés Poblete (Chile) - Obesity and gestational diabetes in pregnant care and clinical practice
Jorge Carvajal (Chile) - The myometrium in pregnant women with obesity
Luis Sobrevia (Chile) - Gestational diabesity and the vascular dysfunction

Schedule:

- Manuscript submission deadline: DECEMBER 31, 2019
- Peer Review Due: MARCH 31, 2020
- Revision Due: MAY 31, 2020
- Announcement of acceptance by the Guest Editors: JUNE 30, 2020
- Final manuscripts due: JULY 31, 2020
Contacts:

**Guest Editor: Professor Luis Sobrevia FPhysiol**

**Affiliation:** Cellular and Molecular Physiology Laboratory (CMPL)
Department of Obstetrics
Division of Obstetrics and Gynaecology

Marcoleta 391
Santiago 8330024, Chile
Tel (56-2) 2354 8117 (Dr Carolina Oliva, PA to L Sobrevia & Projects Manager)
Tel (56-2) 2354 8118 (Direct)
**e-Mail:** sobrevia@me.com, lsobrevia@uc.cl
E-Mail PA: carolinaolivagutierrez@gmail.com,
e-Mail Lab: cmplpuc@gmail.com, URL: www.cmpl.uc.cl

Honorary Professor
UQ Centre for Clinical Research (UQCCR)
Faculty of Medicine and Biomedical Sciences
University of Queensland
Herston QLD 4029, Australia
**e-Mail:** l.sobrevia@uq.edu.au

Honorary Professor
Faculty of Pharmacy
Universidad de Sevilla
Seville E-41012, Spain

**Email:** sobrevia@me.com