



IFPA 2025

Erfurt | 17th–20th September 2025



HOT TOPIC PARALLEL SYMPOSIUM

Thursday, September 18, 2025

1:30 p.m. – 3:30 p.m. | Kaisersaal

Placenta function in health and disease

- » **Understanding the disease signature of the placenta with single-nuclei resolution**
Qiaolin Deng (Stockholm, Sweden)
- » **Understanding Placental Dysfunction in Stillbirth**
Alex Heazell (Manchester, UK)
- » **Hypoxia and Immunometabolism in Preeclampsia**
Yang Xia (Changsha, China)
- » **Sex, alcohol, mental health, and the placenta**
Vicky Clifton (Brisbane, Australia)
- » **Endothelial-to-mesenchymal transition in the fetoplacental macrovasculature and microvasculature in pregnancies complicated by gestational diabetes**
Abigail Byford (Leeds, United Kingdom)
- » **Dissecting the mechanisms of syncytiotrophoblast regeneration using human placental organoids**
Ida Calvi (Basel, Switzerland)

CHAIRS

Yang-Ling Wang

Beijing, China

Leena Kadam

Portland, USA

Gitta Turowski

Oslo, Norway



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Tiny Talks, EV Talks: Messages that Shape Pregnancy

- » **Everything you never knew you needed to know about EVs**
Larry Chamley (Auckland, New Zealand)
- » **Extracellular Vesicles From M1 and M2 Macrophages Elicit Sexually Dimorphic Responses in the Human Placenta**
Beth Holder (London, UK)
- » **Membrane-bound mitochondrial DNA: a potential senescence signal in placenta tissue**
Alin Mishel Hernández Bustos (Jena, Germany)
- » **Placental extracellular vesicles promote cardiomyocyte maturation and fetal heart development**
Stephen Renaud (Kingston, Canada)
- » **Extracellular Vesicles: What are we actually studying?**
Carlos Salomon (Brisbane, Australia)
- » **EVT-exosomes inducing VSMC apoptosis through miR-143-3p and FAS ligand – with roles in spiral artery remodeling**
Gendie Lash (Guangzhou, China)
- » **sEV-mediated extrusion of harmful lipid peroxides from trophoblast cells in preeclampsia**
Isabella Caniggia (Toronto, Canada)
- » **Placental extracellular vesicles can impair the blood-brain barrier in the setting of preeclampsia**
Carlos Alonso Escudero Orozco (Chillán, Chile)

CHAIRS

José Martín Murrieta Coxca,
Jena, Germany

Gendie Lash
Guangzhou, China

Carlos Alonso Escudero Orozco
Chillán, Chile



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Decoding Placental Function: Insights from Animal Models

» Introduction

Pascale Chavatte Palmer (Jouy-en-Josas, France)

» Circadian Disruption and Fetal Growth Restriction: Placental Mechanisms in Environmental and Genetic Mouse Models

Çiler Çelik Özenci (Antalya, Turkey)

» BMAL1 Regulates the Initial Step of Embryo Implantation by Modulating Endometrial Adhesion and Migration

Masanori Ono (Tokyo, Japan)

» Circadian Timing of Maternal Hypoxia Influences Fetal Cardiac Transcriptomic Response

Katarina Babarikova (Bratislava, Slovakia)

» Retained Fetal Membranes in Large Animals: The Example of the Horse

Anna Rapacz-Leonard (Olsztyn, Poland)

» Uterine Ischemia/Reperfusion Injury Increases Oxidative Stress and Pathology in the Macaque Placenta

Logan Keding (Madison, USA)

» Fetal Growth Restriction Induces Dynamic, Sex-Specific Changes to Molecular Signatures in the Placenta-Heart Axis of the Near-Term Sheep

Janna Morrison (Adelaide, Australia)

» Placental crises: Disruptive selection and maternal under-investment as the foundations of mammalian placental evolution and dysfunction

Davis Laundon (Southampton, United Kingdom)

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Çiler Çelik Özenci

Antalya, Turkey

Pascale Chavatte Palmer

Jouy-en-Josas, France



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Friday September 19, 2025

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Pregnancy in vitro models: Shaping the Future of Innovation and Impact

- » **Stem cells and organoids in placental development and function**
Sandra Haider (Vienna, Austria)
- » **Models for Therapeutic Development**
Natasha de Alwis (Melbourne, Australia)
- » **New Approach methods using placental and feto-maternal interface organs on chips for preclinical trials during pregnancy**
Ramkumar Menon (Galveston, USA)
- » **Placental organ on chips for studying environmental risks**
Manuel Vidal (Manila, Philippines)
- » **Time-resolved cytokine secretion profile in an ex vivo dual-compartment model of human fetal membranes following inflammatory stimulation**
Luise Köpke (Rostock, Germany)
- » **From Placental Syncytium-on-Chip (PSoC) to Trophoblast Invasion-on-Chip (TloC): A Pumpless Microfluidic Platform to Study Trophoblast Migration and Endothelial Interactions in Placental Biology**
Ludivine Delon (Oslo, Norway)
- » **Discussion regarding the future of pregnancy in vitro models: How can we use this to shape future innovation to yield impact**
Nathalie Hannan (Melbourne, Australia)
Ramkumar Menon (Galveston, USA)
Sandra Haider (Vienna, Austria)

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Nathalie Hannan
Melbourne, Australia

Ramkumar Menon
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Global Environmental Pollutants: Challenges for Placental Function

- » **Placental Adaptation After Environmental Exposure – A Tale of Two Particles**
Phoebe Stapleton (New Brunswick, USA)
- » **Early Life Impact of Diesel Exhaust Particles: Placental Accumulation, Fetal Transfer, and Maternal-Fetal Crosstalk Disruption**
Tina Bürki-Tunherr (St. Gallen, Switzerland)
- » **Uptake and Toxicity of Micro- and Nanoplastics in the Human Placenta: Emerging Concerns for Maternal-Fetal Health**
Hanna Dusza (Utrecht, The Netherlands)
- » **Preconception and gestational maternal exposure to a mixture of short-half-life food chemicals altered fetoplacental development and placental function in a rabbit model, based on exposure data from the SEPAGES mother-child cohort.**
Anne Couturier-Tarrade (Jouy-en-Josas, France)
- » **PFOS Exposure Impairs cAMP-Mediated Vascular Function in Placental Chorionic Plate Arteries, Elevating Preeclampsia Risk**
Satish Kumar (Madison, USA)

CHAIRS

Nick Illsley

New Brunswick, USA

Stefan Hansson

Lund, Sweden

Tina Bürki-Tunherr

St. Gallen, Switzerland



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Crossing identities – the many shades of Microchimerism

- » **Microchimerism and cardiovascular diseases**
Daniel Pitz Jacobsen (Oslo, Norway)
- » **Infection in pregnancy modulates the transplacental transfer of maternal microchimeric cells**
Whitney Harrington (Seattle, USA)
- » **Trafficking across the placenta – the concept of the spatio-temporal corridor of MC**
Thomas Kroneis (Graz, Austria)
- » **Human ex vivo placenta perfusion for detection of microchimerism**
Diana Morales Prieto (Jena, Germany)
- » **Detection and characterization of maternal microchimeric cells in umbilical cord blood by HLA-targeted spectral flow cytometry cell sorting**
Rachel Quilang (Leiden, Netherlands)
- » **Imaging-based SNP detection for the spatial detection of microchimerism and maternal-fetal interactions in the placenta**
Emiel Slaats (Graz, Austria)

CHAIRS

Thomas Kroneis

Graz, Austria

Diana Morales Prieto

Jena, Germany



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HOT TOPIC PARALLEL SYMPOSIUM

Saturday September 20, 2025

1:15 p.m. – 3:15 p.m. | Kaisersaal

Effect of maternal health on placental vasculature; Listen to Mum!

- » **The importance of the maternal venous return in fetal demise**
Lopa Leach (Nottingham, UK)
- » **Cross talk of the feto-placental vasculature with the maternal metabolism**
Christian Wadsack (Graz, Austria)
- » **Maternal disease meets placental morphology**
Tanja Groten (Köln, Germany)
- » **Trophoblastic Epithelial-Mesenchymal Transition with Subsequent Fibrosis: A Cause of Placental Insufficiency in Hyperglycemic Pregnancies**
Lara Hausdorf (Jena, Germany)
- » **Impaired trans-placental oxygen transfer in pregnancies at high risk for stillbirth: Role of maternal venous return and induced hypoxia**
Dimitrios Amanitis (Nottingham, United Kingdom)

CHAIRS

Lopa Leach

Nottingham, UK

Christian Wadsack

Graz, Austria

Tanja Groten

Köln, Germany



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Saturday September 20, 2025

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Placental nutrient and drug transport in health and disease

» Introduction

Christiane Albrecht (Bern, Switzerland)

» Beyond the brain: The placenta as an interface for monoamine synthesis, transport, and metabolism

Rona Karahoda (Hradec Kralove, Czech Republic)

» Genetics, Parity, and More: Unraveling the Regulation of Placental Transporters in a Healthy Birth Cohort

Lauren Alksunes (New Brunswick, USA)

» Does placental vitamin D transport determine maternal and fetal vitamin D status?

Jane Cleal (Southampton, United Kingdom)

» Efficient iron transport to the fetus requires cell type specific adaptation of human placental cells

Raimund Widhalm (Vienna, Austria)

» A novel physiologically relevant model of the syncytiotrophoblast barrier for the study of trans-placental antibody transfer

Beth Holder (London, United Kingdom)

» Summary, discussion on which model is suitable for specific transport routes

Isabella Ellinger (Vienna, Austria)

CHAIRS

Isabella Ellinger

Vienna, Austria

Christiane Albrecht

Bern, Switzerland



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Saturday September 20, 2025

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The placental transcriptome in health and disease

- » **Pitfalls using scRNA seq and outlook to new tools looking at the human placenta**
Berthold Huppertz (Graz, Austria)
- » **Multi-omics of chorionic villus samples reveals early pregnancy placental dysfunction associated with preterm and term preeclampsia**
Ellen Menkhorst (Melbourne, Australia)
- » **Decoding how maternal signals regulate trophoblast invasion during human placental imaging using a high-content imaging screen**
Elisa Magistrati (Basel, Switzerland)
- » **Advances in profiling circulating RNA biomarkers in gestational diseases**
Pryia Pantham (San Diego, USA)
- » **Advances in scRNA seq and spatial transcriptomics of the human placenta**
Scott Lindsay-Hewett (San Diego, USA)
- » **The placental epigenome and fetal programming**
Alison Paquette (Seattle, USA)
- » **Panel Discussion**
Pryia Pantham (San Diego, USA)
Berthold Huppertz (Graz, Austria)

CHAIRS

Pryia Pantham
San Diego, USA

Berthold Huppertz
Graz, Austria