



The Joint Fetal and Neonatal Societies International Conference

19-21 June 2024

A joint meeting between the **Neonatal Society** and
the **Fetal & Neonatal Physiological Society**



Hosted by the Centre for Perinatal Research (CePR),
Monica Partridge Building, University Park,
University of Nottingham, NG7 2RD, UK



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jFNS 2024 Conference Venues

We are looking forward to welcoming you to jFNS which is being held in the stunning green campus of the University of Nottingham. The main conference venue is the Monica Partridge Building (Map ref A, building 62) where the plenary sessions occur as well as catering and exhibition areas. Parallel sessions are held in the nearby Sir Clive Grainger Building (Map ref B, building 16) a 5-minute walk from the main venue. **Please wear your badge at all times (essential for access and catering).**

The Team Competition will be held on the Wednesday at the University Campus at two venues (Map refs C & D) followed by a networking BBQ in the Senate Room of the Trent Building (Map Ref E). All venues are about 5-15 minutes' walk from each other through the beautiful campus grounds.

Google Maps PIN for main venue 52°56'21.2"N 1°11'52.5"W

Address: Monica Partridge Building, University Park, University of Nottingham, NG7 2RD, UK



Wed 19th June

Day 1 Highlights



- 0830 Registration and light breakfast**
- 0930 Welcome – Society Presidents**
- 0945 Keynote Lecture: Prof Georg Schmölzer**
University of Alberta, Canada
The Science of Newborn Resuscitation
- 1015 The Dawes Lecture: Prof Mark Hanson**
University of Southampton, UK
The early development of FNPS: "It's a difficult area"
- 1115 Coffee/Tea break**
- 1145 Oral papers 1) Brain 1** (Monica Partridge)
2) Neonatal Care (Sir Clive Grainger)
- 1315 Buffet lunch**
- 1415 Oral papers 3) Cardio-respiratory** (Monica Partridge)
4) Brain 2 (Sir Clive Grainger)
- 1530 Networking/Team Event**
- 1915 Social and networking BBQ – Trent Building**

Thu 20th June

Day 2 Highlights



- 0900 Keynote Lecture: Assoc Prof Atul Malhotra**
Monash University, Australia
*Translating Cell Therapies for Newborn Conditions:
Where are we and what lies ahead?*
- 0930 Keynote Lecture: Prof Penny Gowland**
University of Nottingham, UK
Perinatal discovery science using novel MRI approaches
- 1000** Coffee/Tea break
- 1030 Oral papers 5) Cardio-respiratory** (Monica Partridge)
6) FGR & Placenta (Sir Clive Grainger)
- 1230** Buffet lunch
- 1340 Early Career Research Long Oral Prize Session**
- 1440 Dr Sarah Bates, Quality Lead for BAPM**
Medela sponsored symposium talk
*Optimising maternal breast milk for preterm infants –
the national Toolkits from the BAPM*
- 1500** Coffee/Tea break
- 1530 David Harvey Fellowship: Prof Marian Knight**
University of Oxford, UK
*Determinants of neonatal outcomes from
pre-conception to birth*
- 1630 Neonatal Society Young Investigator Awardee**
Dr Logan Williams, Auckland, New Zealand
- 1700** Close of day
- 1930 Gala Conference Dinner – Colwick Hall**

Fri 21st June

Day 3 Highlights



- 0900 Keynote Lecture: Prof Eleanor Molloy**
Trinity College Dublin, Ireland
Therapeutic strategies for term and preterm brain injury: What does and doesn't help?
- 0930 Sir Peter Tizard Lecture: Prof Anthony Costello**
University College London, UK
How can we protect the health of newborn infants from climate change?
- 1030** Coffee/Tea break
- 1100 Oral papers 7) Neonatal Care** (Monica Partridge)
8) Nutrition & FGR (Sir Clive Grainger)
- 1230** Buffet lunch
- 1330 Oral papers 9) Fetal Environment** (Monica Partridge)
10) Perinatal Outcomes (Sir Clive Grainger)
- 1500** Coffee/Tea break
- 1530 Early Career Research Short Oral Prize Session**
- 1605 Keynote Lecture: Assoc Prof Beth Allison**
Hudson Institute of Medical Research, Australia
Uncovering the complex cardiovascular consequences of being born growth restricted
- 1635 Prizes and close of conference (1650)**

Wednesday 19th June

Kindly supported by

Plenary Session – Monica Partridge Building

Chair: Dino Giussani and Andy Ewer

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Technology for Life

0945-1015 Keynote Lecture

The Science of Newborn Resuscitation

Prof Georg Schmölzer, University of Alberta, Canada

Prof Georg Schmölzer was the inaugural Heart and Stroke Foundation/University of Alberta Professor of Neonatal Resuscitation and the Director of the Center for the Studies on Asphyxia and Resuscitation (CSAR) in Edmonton. He also works as a Neonatologist at the Royal Alexandra Hospital. Prof Schmölzer obtained his MD, Ph.D. and clinical training in Austria and Australia. In 2014 he completed a Banting Postdoctoral Fellowship at the University of Alberta. Prof Schmölzer's research focuses to i) understand physiological changes during fetal to neonatal transition, ii) improve diagnoses, mitigate risk and improve survival and quality of life for newborns, iii) use of emerging technologies during neonatal resuscitation, and iv) examine how these physiological changes can be used to improve short- and long-term outcomes of newborn babies.



1015-1115 The Dawes Lecture

The early development of FNPS: “It’s a difficult area”

Prof Mark Hanson, University of Southampton, UK

Mark Hanson is Emeritus Professor of Human Development and Health and BHF Professor at the University of Southampton, UK. He was a founder of the Fetal and Neonatal Physiological Society and the International DOHaD Society. He co-Chaired the FIGO Pregnancy and NCDs Committee and the Science and Evidence Working Group for the WHO Ending Childhood Obesity Commission. He chairs the Knowledge and Evidence Working Group of the Partnership for Maternal, Newborn and Child Health and also the Economics and Finance workstream (hosted by WHO). His research concerns nutrition and health across the life-course, starting before conception and with an increasing focus on global health and equity. He pioneered LifeLab to promote health literacy in adolescents. He advocates developmental science to inform public health policy.



1115-1145 Coffee Break and Exhibition

Oral Paper Parallel Sessions – Wed 19th June

Parallel Session: Brain 1 (Monica Partridge Building)

Chairs: Joanne Davidson & Gabrielle Crombie

Time	Title
1145	Intra-uterine inflammation and postnatal intravenous dopamine alters the neurovascular unit in the preterm lambs Nhi Tran, Monash University
1200	Cerebral oxygen saturations following melatonin monotherapy in a neonatal piglet model of inflammation-amplified hypoxia-ischaemia Helen Turner, University of Edinburgh
1215	Non-linear quantitative EEG measures: Biomarkers for evolving fetal brain injury M Beacom, University of Auckland
1230	Dynamic changes in blood pressure variability after hypoxia-ischaemia in preterm fetal sheep: potential biomarker for brain injury Simerdeep Dhillon, University of Auckland
1245	Distribution of severe cerebral palsy phenotypes, intrapartum cardiotocography patterns, and postnatal brain imaging findings – Soichi Magawa, Tokyo
1250	Effect of progesterone given before hypoxia-ischemia in near-term fetal sheep – Kelly Zhou, University of Auckland
1255	Do endothelial progenitor cells reduce blood brain barrier dysfunction following neonatal hypoxia ischemia? – Tayla Penny, Monash University
1300	Unresolved challenges and lesson learned: Developing a novel protocol for imaging the fixed fetal sheep brain – Sarah Hammond, University of South Australia
1305	Evolution of cerebellar injury after severe hypoxia-ischemia in preterm fetal sheep – Masahiro Nakao, University of Auckland
1310	IDR1018 Immunomodulatory Peptide for Postnatal Neuroprotection in an Ovine Model – Ellen Williams, University of Western Australia

1315-1410 Lunch and exhibition

Oral Paper Parallel Sessions – Wed 19th June

Parallel Session: Neonatal Care (Sir Clive Grainger Building)

Chairs: Chris Gale & Gemma Sullivan

Time	Title
1145	Timing of neonatal discharge and risk of unplanned PICU admission in children born <32 weeks in England and Wales Tim J van Hasselt, University of Leicester
1200	Parental report of pre-school language, attention and executive function: correlational structure of measures and applications to prematurity Rebekah Smikle, University of Edinburgh
1215	Effect of inflammation and invasive ventilation on the preterm kidney Lieke Hoogenboom, Maastricht University Medical Centre
1230	OPTimal Timing of antenatal Corticosteroid in early-onset fetal growth Restriction: results of the OPTICORE study Mette van de Meent, University Medical Center Utrecht
1245	The contribution of hypertensive disorders of pregnancy to neonatal unit admissions and iatrogenic preterm delivery < 34 weeks' gestation in the UK: a population-based study using the National Neonatal Research Database Frances Conti-Ramsden, Imperial College London
1250	Temperature acclimatisation during newborn care using a simulation model Beth Parker, University of Nottingham
1255	Increased non-invasive ventilatory support use in the first week of life for extremely preterm infants: a national cohort study – Hannah Farley, NPEU
1300	Absence of relational care: a meta-synthesis of parental experiences of newborn death and bereavement – Stuti Pant, Imperial College London
1305	Outcomes of The Most Premature Baby Priority Setting – Defining the most important areas of research for infants born <25 weeks' gestation C Roehr, NPEU

1310-1410 Lunch and exhibition

Oral Paper Parallel Sessions – Wed 19th June

Parallel Session: Cardio-respiratory (Monica Partridge Building)

Chairs: Emily Camm & Owen Vaughn

Time	Title
1415	Developing an extremely preterm lamb model for preterm lung-brain axis studies Y. Jane Choi, University of Western Australia
1430	Fetal hypoxia programmes mitochondrial function and metabolism leading to increased sensitivity to ischemia-reperfusion Kerri Smith, University of Manchester
1445	Inflammation, low lymphatic return and increased capillary leak contribute to hypovolemia after birth in preterm piglets Tam MT Nguyen TMT, University of Queensland
1500	Does <i>in utero</i> exposure to maternal asthma affect fetal airway development? Sarah Hammond, University of Adelaide
1515	Antenatal ciclesonide matures the preterm lung – establishing safety and efficacy of this alternative to antenatal corticosteroids in the sheep Kathryn Gatford, University of Adelaide
1520	Micro-RNA 21-5p protects neonatal rat cardiomyocytes from hypoxia-induced dysfunction by enhancing survival pathways Bernardo J. Krause, University of O'Higgins
1525	Catecholaminergic polymorphic ventricular tachycardia (CPVT) mouse model – Zarin Gias, University of Manchester

1530-1915 Neonatal Society vs FNPS Team Competition

For those registered with card – meet outside at Monica Partridge Building front entrance and follow conference volunteers

1915-2300 Networking BBQ – Senate Room, Trent Building, University Park

Oral Paper Parallel Sessions – Wed 19th June

Parallel Session: Brain 2 (Sir Clive Grainger Building)

Chairs: Kevin Goss & Subha Mitra

Time	Title
1415	Impact of seizures on neurovascular and neurometabolic coupling in the developing brain Kelly Harvey-Jones, University College London
1430	Neonatal amygdala microstructure and structural connectivity are associated with autistic traits at 2 years of age Kadi Vaheer, University of Edinburgh
1445	Early and extended erythropoietin monotherapy after hypoxic ischemic encephalopathy in South Asia: a multi-centre double-blind trial of feasibility Reema Garegrat, Imperial College London
1500	Human umbilical cord-derived mesenchymal stem cells as a therapeutic for neonatal stroke created using the photothrombotic model Jithoo Arya, Monash University
1505	Low vitamin C during pregnancy alters the neonatal hippocampal methylome and results in an ADHD-related phenotype at juvenility: preliminary findings in guinea pigs – Sharna Coker, University of Otago
1510	Intra-amniotic infection with Ureaplasma parvum causes serovar-dependent white matter injury in preterm fetal sheep – Dima Abdu, Monash University
1515	Validating novel phase contrast x-ray computed tomography neuroimaging technologies in the fetal sheep brain – Linda Croton, Monash University
1520	No apparent sex differences in response to therapeutic hypothermia after hypoxia-ischemia in the term-equivalent fetal sheep Alice McDouall, University of Auckland

1525-1915 Neonatal Society vs FNPS Team Competition

For those registered with card – meet outside at Monica Partridge Building front entrance and follow conference volunteers

1915-2300 Networking BBQ – Senate Room, Trent Building, University Park

Thursday 20th June

Kindly supported by

Plenary Session – Monica Partridge Building

Chair: Chris Gale



0900-0930 Keynote Lecture

Translating Cell Therapies for Newborn Conditions: Where are we and what lies ahead?

Assoc Prof Atul Malhotra, Monash University, Australia

Atul Malhotra is a senior neonatologist at Monash Children's Hospital; NHMRC Fellow and Associate Professor in the Department of Paediatrics, Monash University. His research focuses on improving respiratory and neurological outcomes of high-risk infants. He has been instrumental in the translation of preclinical therapies from the laboratory to the clinic, including regenerative cell therapies, having led multiple world-first trials of stem cells for neonatal conditions. He is the co-director of the Newborn Cell Therapies Group at Monash, and chair of the ESPR Special Interest Group on Neonatal Stem Cell Research. His other interests include medical device innovation/ artificial intelligence and running simulation-based education programs in Australia and around the world. He is co-founder of the global health interprofessional education program, ONE-Sim Education.



0930-1000 Keynote Lecture

Perinatal discovery science using novel MRI approaches

Prof Penny Gowland, University of Nottingham, UK

Penny Gowland is an MRI physicist at the Sir Peter Mansfield Imaging Centre at the University of Nottingham. She uses dynamic MRI methods to address important questions in whole human physiology. She has used MRI to study early human development, and in particular fetal development for many years. She will talk about new insights into placental function and placental dynamics offered by MRI and how this relates to birth outcomes.



1000-1030 Coffee Break and Exhibition

Oral Paper Parallel Sessions – Thu 20th June

Parallel Session: Cardio-respiratory 2 (Monica Partridge Building)

Chairs: Subha Mitra & Helen Budge

Time	Title
1030	Association between prematurity and cardiac remodelling in childhood Sandy Kirolos, Imperial College London
1045	Maturation of the Carotid Body Transcriptome in Fetal and Postnatal Life Emma Hodson, University of Cambridge
1100	Acute perinatal twin-to-twin transfusion before, during and after delivery in near-term sheep - Kelly Crossley, The Ritchie Centre
1115	Melatonin alters hypoxia-induced cardiac effects in newborn guinea pigs Emilio Herrera, Universidad de Chile
1130	miR-15b-5p, a miRNA programmed by maternal obesity, is released in cardiac extracellular vesicles that show selective tissue uptake Adriana Córdova-Casanova, University of Cambridge
1145	Single centre experience of Inhaled Nitric Oxide (iNO) use in extremely premature infants 2010-2023 – Angharad Flower, St George’s Hospital
1150	Volume Guarantee Ventilation in babies born < 32 weeks GA – Progress So Far? - Nonye Ezeh & Jessica Willetts, Birmingham City Hospital
1155	A Negative Extra-Thoracic Pressure Improves Lung Aeration and Function in Near-Term Rabbit Kittens at Risk of Developing Respiratory Distress Kelly Crossley, Monash University
1200	Fetal ventricular tachycardia and ventricular fibrillation detected with acute hypoxia caused by intermittent umbilical cord occlusions in sheep Lantto Juulia, Karolinska Institutet
1205	Relationship between Heart rate variability metrics in antenatal non-invasive fetal ECG - Claire Pegorie, St George’s University Hospitals
1210	Deep Learning-based Fetal Lung Segmentation from MRI for Fetal Growth Restriction – Zhen Yuan, King’s College London
1215	Acute respiratory physiological changes post initiation of Neurally adjusted ventilatory assist (NAVA) in preterm infants with evolving or established bronchopulmonary dysplasia (BPD) - Basma Mohamed, St George’s University Hospitals
1220	Maternal High Fat-High Energy Diet Impairs Non-Human Primate Fetal Lung Surfactant Maturation at 0.9 gestation – Mitchell Lock, University of South Australia
1225	Evaluating the accuracy of neonatal wearable technology in detecting apnoea and hypopnea in a simulated setting Amelia Noone, University of Adelaide

1230-1340 Lunch and exhibition

Oral Paper Parallel Sessions – Thu 20th June

Parallel Session: FGR & Placenta (Sir Clive Grainger Building)

Chairs: Paul Rozance & Nhi Tran

Time	Title
1030	Placental function of fetal growth restriction evaluated by T2-weighted and blood oxygenation level-dependent magnetic resonance imaging Naosuke Enomoto, NHO Mie Chuo Medical Center
1045	Cerebrovascular response to perinatal asphyxia in fetal growth restricted preterm lambs - Beth Piscopo, Monash University
1100	Human placental physiology investigations in pregnancies associated with stillbirth - Angelos Evangelinos, University of Manchester
1115	Concurrent IGF-1 and insulin infusions to the sheep fetus increase placental nutrient transporter expression – Jane Stemming, University of Colorado
1130	Brain and organ accumulation of curcumin-loaded nanoparticles in growth restricted newborn piglets – Julie Wixey, University of Queensland
1145	Administration of Proteins Secreted by the Placenta Markedly Improves Liver Outcomes in Premature Guinea Pigs Avery Kramer, University of Colorado
1150	Placental magnetic resonance imaging: T2 and T2* measurements in a sheep model of human pregnancy - Dimitra Flouri, University of Cyprus
1155	Cystic Fibrosis and Human Placenta: New Insights into placental anti-oxidant response - preliminary results - Nicholas Lucia, University of Turin
1200	Two-dimensional phase-contrast MRI reveals changes in uterine arterial blood flow in pregnant women administered tadalafil for fetal growth restriction - Masafumi Nii, Mie University School of Medicine
1205	The impact of increased maternal body mass index on placental mitochondrial function – Emily Camm, Monash University
1210	Fetal Cerebral Redistribution is Associated With Elevated Maternal Circulating S100 Calcium-Binding Protein B (S100B), in Early-Onset Fetal Growth Restriction - Gabrielle Crombie, University College London
1215	Impacts of maternal obesity on placental mitochondrial respiratory function Jenna Armstrong, University of Cambridge
1220	Low maternal plasma apelin in the second trimester is associated with adverse perinatal outcome in severe, early-onset fetal growth restriction Nathalie Braun, University College London
1225	Assessing Automated Vessel Segmentation Techniques of Feto-Placental Vasculature from MRI – Joanna Chappell, King's College London

1230-1340 Lunch and exhibition

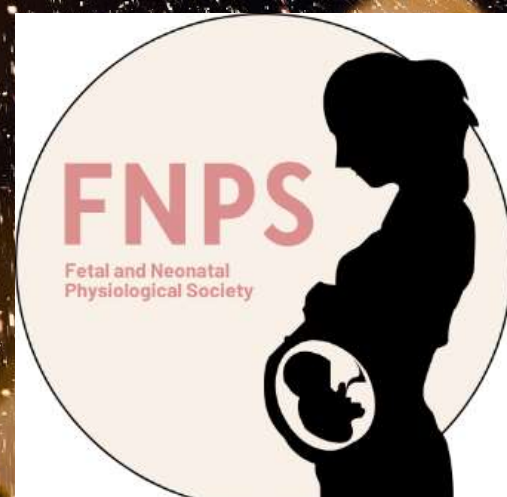
Oral Paper Session – Thu 20th June

Session: Early Career Researcher Long Oral Prize (Monica Partridge Building)

Chairs: Suzie Miller & Andy Ewer

Time	Title
1340	Impaired developmental programming of hippocampal neurons in fetal growth restricted lambs is restored with antenatal melatonin Tegan White, Hudson Institute of Medical Research, Australia
1355	Association of gestational day & perinatal practices on neonatal outcomes in infants <28 weeks: Retrospective 2010-2020 cohort study in England & Wales T'ng Chang Kwok, University of Nottingham, UK
1410	miR-21-5p Protects Embryos Against Developmental Hypoxia-induced Cardiac Dysfunction Ranya Kumar, University of Cambridge, UK
1425	Efficacy Ranking of Cytoprotective Therapies in Newborn Piglets following Inflammation-Amplified Hypoxia-Ischaemia: a Large Multidrug Preclinical Trial Raymand Pang, University College London, UK
1440	Medela sponsored symposium Optimising maternal breast milk for preterm infants – the national Toolkits from the BAPM Dr Sarah Bates, Quality Lead for British Association of Perinatal Medicine

1500-1530 Coffee/Tea and exhibition



Thursday 20th June

Kindly supported by

Plenary Session – Monica Partridge Building



Chair: Andy Ewer

1530-1630 David Harvey Fellowship

Determinants of neonatal outcomes from pre-conception to birth

Prof Marian Knight MBE, University of Oxford, UK

Marian Knight is Professor of Maternal and Child Population Health in the Nuffield Department of Population Health, University of Oxford, UK and the National Institute for Health and Care Research Scientific Director for Research Infrastructure. She is a public health physician whose research focuses on the care and prevention of severe complications of pregnancy and early life and addressing disparities in outcomes for women and babies from different population groups. She leads a parallel stream of work to improve the care of babies who undergo surgery in early life. Her work demonstrating inequalities in maternal mortality amongst women from Black, Asian and Mixed ethnic groups has led to a number of actions to improve care for pregnant women from ethnic minority groups. She also led the UK national study of pregnant women admitted with Covid-19 in pregnancy, contributing to the pandemic response to help ensure pregnant women receive an equitable standard of care to the non-pregnant population. She was elected to fellowship of the Academy of Medical Sciences in 2021 in recognition of her exceptional contribution to the advancement of medical science and awarded an MBE in the 2023 King's New Year Honours for services to maternal and Public Health.



1630-1700 Neonatal Society Young Investigator 2024: Dr Logan Williams

Structural and functional asymmetry of the neonatal cerebral cortex

Logan Williams is currently an FY1 doctor in Auckland, New Zealand. He just completed his PhD titled "Precision modelling of the human cerebral cortex across the lifespan" under the supervision of Dr. Emma Robinson and Professor A. David Edwards at King's College London. Logan is working towards a career as a clinician-scientist in neuroradiology with a focus on cortical organisation and neurodevelopment.



1700 Close of scientific day

7-12pm Gala Conference Dinner – Colwick Hall

Welcome drinks 7-8pm, Dinner 8-930pm, Live Band 930-1130.

Home time midnight.

Friday 21st June

Kindly supported by

Plenary Session– Monica Partridge Building



Chair: Andy Ewer

0900-0930 Keynote Lecture

Therapeutic strategies for term and preterm brain injury: What does and doesn't help?

Prof Eleanor Molloy, Trinity College Dublin, Ireland

Eleanor Molloy is the Professor and Chair of Paediatrics and Child Health in Trinity College Dublin, Ireland. She is a paediatrician and neonatologist based in Children's Health Ireland at Crumlin & Tallaght, the Coombe Hospital. The Molloy translational research laboratory evaluates and studies immunomodulation of systemic inflammation in newborn infants with brain injury and through childhood. Internationally she has served as the Secretary & President of the Irish American Paediatric Society and as the Irish representative on the European Board of Paediatrics: European Union of Medical Specialists (UEMS), Confederation of European Specialists in Paediatrics (CESP), Board member of the European Society for Paediatric Research. She was awarded Honorary Fellowship at the American Paediatric Society, a Professorial Fellowship by Trinity College and became the Associate Editor in chief for the journal "Paediatric Research". She is developing programmes in multiorgan care as well as functional motor care from the newborn period to adulthood following neonatal brain injury and sepsis in partnership families.



0930-1030 Sir Peter Tizard Lecture

How can we protect the health of newborn infants from climate change?

Prof Anthony Costello, University College London, UK

Anthony Costello trained in neonatal paediatrics under Professors Osmond Reynolds and Leonard Strang at UCL. He then joined the Centre for International Child Health and set up the Institute for Global Health at UCL. After serving as Director of the Department of Maternal, Child and Adolescent Health, WHO Geneva, he returned to University College London as Professor of Global Health and Sustainable Development. He is a founder and chair of the international Lancet Countdown for Climate Action and Health, and senior adviser to the Children in All Policies 2030 programme supported by WHO, UNICEF and the Lancet. His research has focused on health and social interventions to reduce maternal and newborn mortality, and latterly to improve nutrition and diabetes, in poor rural populations of low and middle income countries. He received the James Spence medal of the Royal College of Paediatrics and Child Health in 2011, and a BMJ Lifetime Achievement Award in 2019.



1030-1100 Coffee/Tea break and exhibition

Oral Paper Parallel Sessions – Fri 21st June

Parallel Session: Neonatal Care 2 (Monica Partridge Building)

Chairs: Helen Budge & Gemma Sullivan

Time	Title
1100	Evaluation of embedding CoolCuddle for HIE in usual practice and its impact on parent's mental health and bonding Ela Chakkarapani, University of Bristol
1115	Socio-economic and geographical variations in exclusive own mother's milk feeding during neonatal care Melissa-Sue Ryan, University of Nottingham
1130	The patterns of very preterm infants undergoing multiple postnatal transfers across the UK Shreya Singhal, Imperial College London
1145	A comparison of NICU and neonatal ambulance transfer sound frequency spectra Aarti Mistry, University of Nottingham
1200	Practice of Cranial Ultrasound scanning in newborns with maternal cocaine exposure: systematic review of the evidence base and retrospective review of practice in a tertiary neonatal unit Srinivas Nallagonda, Luton & Dunstable University Hospital
1205	Stooling habits of very and extreme preterm infants Leah Crabtree, University of Southampton
1210	A three part service evaluation of infants at high risk of metabolic bone disease of prematurity – moving from a phosphate-driven guideline to a PTH-driven guideline - Ilana Levene, John Radcliffe Hospital
1215	Wide Variation in the Availability of Neonatal MedTech in the UK Roz Simpson, University of Nottingham
1220	Inside Out! 10-year review of outcomes of infants born with abdominal defects - Nurshifa Shaari, University of Leicester
1225	Evolving neonatal delivery room technologies in the UK between 2010 and 2023 - Namita Anand-Bawa, Wexham Park Hospital

1230-1330 Lunch and exhibition

Oral Paper Parallel Sessions – Fri 21st June

Parallel Session: Nutrition & FGR (Sir Clive Grainger Building)

Chairs: Janna Morrison & Fieke Terstappen

Time	Title
1100	Obesity During Pregnancy Improves Fetal Outcomes During Maternal Acute Hypotension in an Ovine Model Rachel Crew, University of Cambridge
1115	Maternal, paternal and combined parental obesity impact fetal growth via parent-specific and combined effects on placental morphology and transport function Sachi Gwalani, University of Cambridge
1130	Sex-Specific Effects of a Maternal Obesogenic Diet High in Fat and Sugar on Offspring Adiposity, Growth Trajectory and Behaviour Emily Camm, University of Cambridge
1145	Interplay between maternal obesity and fetal hypoxia in mice pregnancy Denise S. Fernandez-Twinn, University of Cambridge
1200	Changes in fetal and maternal parameters in pregnancies early-onset FGR Mette van de Meent, University Medical Center Utrecht
1205	Defining the impact of cigarette smoke extract in mice as a model on reproductive fitness - Yasmin Azizbayli, University of Nottingham
1210	Deficiency of the mitochondrial E3 ubiquitin ligase MUL1 in mice results in developmental defects and impaired growth Bernardo Krause, University of O'Higgins
1215	Maternal obesity in pregnancy improves the fetal cardiovascular defence to acute hypoxia – Anne Cochrane, University of Cambridge
1220	Proteomics for identifying blood biomarkers in the growth restricted piglet Hannah Musco, University of Queensland

1225-1330 Lunch and exhibition

Oral Paper Parallel Sessions – Fri 21st June

Parallel Session: Fetal environment (Monica Partridge Building)

Chairs: Jan Derks & Kelly Zhou

Time	Title
1330	Sub-optimal paternal diet has a lasting influence on in vitro pre-implantation embryo development Hannah morgan, University of Nottingham
1345	Alterations in Oxidative Stress and Mitochondrial Structure in the Ovine Chronically Hypoxic Fetal Heart Katie Skeffington, University of Bristol
1400	Antenatal hypoxia or dexamethasone alter hepatic Cytochrome P450 activity in fetal and young adult sheep Janna Morrison, University of South Australia
1415	Dual Parental Periconceptional Low Protein Diet May Reduce Embryo Survival in Mice Jasmin Simpson, University of Nottingham
1430	Pharmacokinetics of L-arginine liposomes in pregnant rats: a novel therapeutic strategy to enhance nitric oxide bioavailability CM van Kammen, UMC Utrecht
1435	Endometrial preparation with or without corpus luteum for embryo transfer after egg donation is associated to different obstetric outcomes and differential expression of placental angiogenic biomarkers Marlisa Gatto, University of Turin
1440	Can growth-restricted lambs respond appropriately to changes in blood pressure? Potential mechanisms – Charmaine Rock, Monash University
1445	Temporal cardiovascular adaptations to placental insufficiency in growth restricted fetal sheep - Zahrah Azman, Monash University
1450	Hypoxic pregnancy alters adipose composition and adipocyte size distribution in the ovine fetus – Alison Forhead, University of Cambridge
1455	Fetal atrioventricular conduction abnormalities detected with acute hypoxemia and metabolic acidemia caused by intermittent umbilical cord occlusions in sheep - Lantto Juulia, Karolinska Institutet

1500-1530 Coffee/tea and exhibition

Oral Paper Parallel Sessions – Fri 21st June

Parallel Session: Fetal/Neonatal outcomes (Sir Clive Grainger Building)

Chairs: Chris Gale & Kevin Goss

Time	Title
1330	Fetal femur length at ~20 weeks of gestational age (wkGA) predicts preterm perinatal mortality independently of parental height Gordon Smith, University of Cambridge
1345	Improving nutritional intake ameliorates paternal diet-induced aberrations in fetoplacental development and maternal health Vipul Batra, University of Nottingham
1400	The combination of permissive anaemia with high-affinity haemoglobin increases the likelihood of oxygen-restricted metabolism during episodes of unstable oxygen saturation in very preterm infants CC Andersen, University of Adelaide
1415	Defining a “self-cleaning”, healing phenotype in the immediate newborn period - Michael Stark, University of Adelaide
1420	The clinical and cost-effectiveness of testing for group B streptococcus in pregnancy: a cluster randomised trial with economic and acceptability evaluations (GBS3): an update Kate Walker, University of Nottingham
1425	HELP! Hitting Every Lumbar Puncture – A quality improvement project Mervat Elyas, Leeds Teaching Hospital
1430	Living through a loss of agency: a hermeneutic phenomenological enquiry into parent’s lived experiences of bereavement and newborn death Stuti Pant, Imperial College London
1435	Comparison of local preterm respiratory and mortality outcomes in two tertiary neonatal centres in the United Kingdom Kieran Poland, University of Nottingham
1440	The clinical and cost effectiveness of tight versus less tight glucose control around the time of birth in pregnancies complicated by gestational diabetes (GILD) – Eleanor Mitchell/Kate Walker, University of Nottingham
1445	Effects of maternal sleep position and pregnancy conditions on fetal state John Thompson, University of Auckland
1450	Evaluating the metabolic impact of a standardised concentrated parenteral nutrition formulation Kavitha Hodalur-Rangaswamy, William Harvey Hospital
1455	Pre-labour risk prediction of birth-related brain injury using artificial intelligence - Pallavi Muraleedharan, Imperial College London

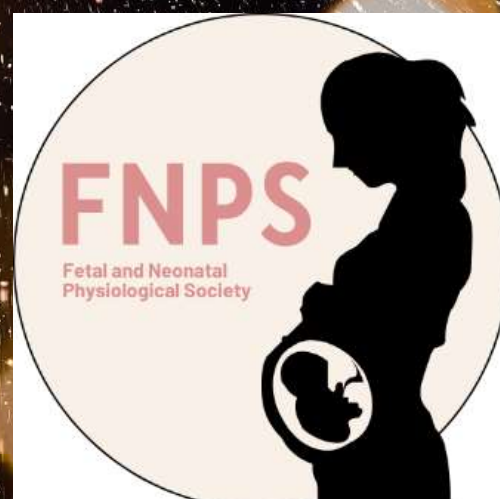
1500-1530 Coffee/Tea break and exhibition

Oral Paper Session – Fri 21st June

Session: Early Career Researcher Short Oral Prize (Monica Partridge Building)

Chairs: Andy Ewer & Suzie Miller

Time	Title
1530	Organ development in growth-restricted fetuses in the Reduced Uterine Perfusion Pressure rat model: a trinary vascular approach of brain, heart and kidney Kirsten Nijholt, Utrecht University, Netherlands
1537	Temporal profile and association of RNA-binding motif protein 3 (RBM3) with hypoxic-ischemic encephalopathy and adverse outcomes Constance Burgod, Imperial College London, UK
1544	Role of placental endocrine malfunction in the programming of renal dysfunction in offspring Shugi Li, University of Cambridge, UK
1551	The role of ionised calcium in monitoring for neonatal refeeding syndrome Ilana Levene, John Radcliffe Hospital, UK
1558	Investigating the impact of combined fetal hyperoxygenation and systemic α -adrenergic activation on fetal haemodynamics Jordan Minns, University of South Australia, Australia



Friday 21st June

Kindly supported by



Plenary Session – Monica Partridge Building

Chair: Graham Jenkin

1605-1635 Keynote Lecture

Uncovering the complex cardiovascular consequences of being born growth restricted

Assoc Prof Beth Allison, Hudson Institute of Medical Research, Australia

Dr Beth Allison completed her PhD at Monash University before undertaking a post-doctoral position at The University of Cambridge. Beth is now based at the Hudson Institute of Medical Research and is an NHMRC Emerging Leader and Research Group Head of the Perinatal Cardiovascular Physiology Research Group. Beth's primary research interest is the fetal and neonatal cardiovascular outcomes following exposure to sub-optimal uterine environments. Fetal growth restriction (FGR) is a common complication of pregnancy resulting in a fetus that fails to reach its genetically determined growth potential. Whilst the fetal cardiovascular response to acute hypoxia is well established, the fetal



defence to chronic hypoxia is not well understood. Growth restriction results primarily from a reduced oxygen and nutrient supply to the developing fetus, resulting in chronic hypoxia. The fetus adapts to chronic hypoxia by redistributing cardiac output via brain-sparing in an attempt to preserve function in the developing brain. Brain-sparing has significant, long term impacts on the developing fetal cardiovascular and cerebrovascular systems. Dr Allison's current research interests include the impact of being born FGR on the perinatal period where she asks – "can the growth restricted neonate respond appropriately when the transition to life outside the womb goes wrong?"

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