

48th Annual meeting of the Fetal and Neonatal Physiological Society

FNPS XLVIII

September 20th - 23rd 2022
MONTESILVANO - PE



ORGANIZING COMMITTEE

Diego Gazzolo

Dept. of Medicine & Aging Sciences,
University "G. D'Annunzio" Chieti - Italy

Anna Maria Nuzzo

Dept. of Surgical Sciences
University of Turin - Italy

Alessandro Rolfo

Dept. of Surgical Sciences,
University of Turin - Italy

SCIENTIFIC COMMITTEE

Ebe D'Adamo

University "G. D'Annunzio", Chieti - Italy

Marika Perrotta

University "G. D'Annunzio", Chieti - Italy

Valentina Bounous

University of Turin - Turin, Italy

Chiara Peila

University of Turin - Turin, Italy

FNPS MISSION STATEMENT

The FNPS stimulates discussion and exchange of ideas between physiologists, obstetricians and neonatologists. The FNPS considers an informal gathering and presentations of new and preliminary data, especially by investigators in training, essential to achieve goals.

The Society was founded in 1974 during an informal meeting in Oxford. Professor Geoffrey Dawes (1918-1996) and Dr. Gerhard (Bo) Gennser took the initiative and were made honorary members of the society in 1995.

The name of the annual conference (and society) has changed several times, reflecting the widening scope of the society:

1974-80 Conference on Fetal Breathing

1981-83 International Conference on Fetal Breathing and other Movements

1984-95 Society for the Study of Fetal Physiology

1996-date Fetal and Neonatal Physiological Society

Over the years the society has maintained its informal character and a lack of rigid structures. Those who have attended at least one of the previous three meetings are members of the society and will be informed about the next meeting. Abstracts for the Annual Meeting are requested two months before the meeting and are compiled in the Book of Abstracts to encourage recent and preliminary data to be presented.

The Organizational Coordinator will be selected by the Organizational Committee and shall serve the three years. The Organizational Committee shall consist of representatives from Africa, Asia, Australia, Canada, continental Europe, South America, the United Kingdom and the United States of America and shall be selected by the committee.

The Annual Meeting will be held in Europe, North America and the Southern Hemisphere, in June-September, as determined by the Organizational Committee. Approximately half of the meetings will be held in Europe.

Any residual funds from the prior meeting shall be passed on to the coordinator for the next meeting. Audit will not be required if the residual funds are less than 10,000 US\$. The (local) Organizing Committee shall have the right to solicit funds in the name of the Society from organizations for the purpose of providing financial support for students and fellow-in-training to attend the meeting of the society.

| 48th FNPS | meeting |

THURSDAY, SEPTEMBER 20th, 2022

- 2.30 pm **Registration**
- 5.30 pm **Welcome and Opening**
(Alessandro Rolfo, Diego Gazzolo, Anna Maria Nuzzo)
- 6.00 pm **ANNUAL GEOFFREY DAWES LECTURE:**
Chairs: *Alessandro Rolfo (Italy), Diego Gazzolo (Italy)*
Virtual and Augmented Reality – New Challenges for Perinatal Care
Prof. Anna Osello
*Department of Structural, Geotechnical and Building Engineering,
Politecnico di Torino, Turin - Italy*
- 8.30 pm **Welcome Dinner**

WEDNESDAY, SEPTEMBER 21st, 2022

- 9.00 am **ORAL SESSION I - CELLS & THERAPY**
Chairs: *Alessandro Rolfo (Italy), Chiara Novielli (Italy)*
Oral Talks (10+5 min)
- 9.00 am **Feasibility of umbilical cord blood collection for autologous cell therapy applications in extremely preterm infants.**
L. Zhou, C. McDonald, T. Yawno, T. Penny, S. L. Miller, **Graham Jenkin**, A. Malhotra.
The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, Australia; Department of Obstetrics and Gynaecology, Monash University, Melbourne, Australia
- 9.15 am **PIEZO1 upregulation by TNF- α : Pro inflammatory effects on mechanosensitive pathways in umbilical endothelial cells.**
Germán A. Arenas, J.G. Valenzuela, A.A. Paz, R. Iturriaga, C.G. Sáez, B. J. Krause.
Laboratorio de Neurobiología, Departamento de Fisiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile
- 9.30 am **Characterization of Milk Derived Mesenchymal Stromal Cells (MDMSCs): New Insight for Clinic Applications.**
Anna Maria Nuzzo, S. Sottemano, L. Moretti, K. Mareschi, G. Maiocco, A. Revelli, A. Coscia, E. Bertino, A. Rolfo.
Department of Surgical Sciences, University of Turin, Turin, Italy
- 9.45 am **Expanded Umbilical Cord Blood CD34+ Cells Are Immunomodulatory In A Rat Model Of Neonatal Brain Injury.**
Tayla Penny, A. Watt, Y. Pham, A. Sutherland, M. Smith, J. Lee, G. Jenkin, M. Fahey, S. Miller, C. McDonald.
The Ritchie Centre, Hudson Institute of Medical Research, Clayton, Australia; Department of Obstetrics and Gynaecology, Monash University, Clayton, Australia
- 10.00 am **The effects of early administration of umbilical cord blood cells after injurious ventilation on cerebral white matter injury.**
Nhi T Tran, K.Y.Y. Chan, T. Sepehrizadeh, P.C. Papagianis, M. de Veer, S.L. Miller, D.M. Alahmari, R. Galinsky, G.R. Polglase, C.A. McDonald.
The Ritchie Centre, Hudson Institute of Medical Research, Clayton, VIC, Australia; Department of Obstetrics and Gynaecology, Monash University, Clayton, VIC, Australia
- 10.15 am **Coffee Break + Posters viewing**

- 11.00 am **ORAL SESSION II – NEURODEVELOPMENT I**
Chairs: *Luc Zimmerman (Netherlands), Guido Wassink (New Zeland)*
Oral Talks (10+5 min)
- 11.00 am **The impact of SARS-CoV-2 on placental mitochondrial function and child neurodevelopmental outcomes: preliminary findings from a Victorian cohort study.**
Emily J Camm, T.R. Penny, C.A. McDonald, S.L. Miller, K.R. Palmer, R.A. Hill.
The Ritchie Centre, Hudson Institute of Medical Research, Clayton, Australia; Department of Obstetrics and Gynaecology, Monash University, Clayton, Australia
- 11.15 am **The sympathetic nervous system contributes to post-hypoxia-ischaemia cerebral hypoperfusion and suppression of neural activity.**
Simerdeep K. Dhillon, E.R. Gunn, M. Pederson, C.A. Lear, G. Wassink, J.O. Davidson, A.J. Gunn, L. Bennet
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 11.30 am **Utility of Electroencephalography and Magnetic Resonance Imaging for Detection of Inflammatory Brain Injury in the Neonatal Rat.**
Petra B. White, Y. Van de Looij, S. Ranasinghe, J.D. Prasad, S. Sizonenko, A.J. Gunn, L. Bennet, J. M. Dean.
Department of Physiology, University of Auckland, Auckland, New Zealand
- 11.45 pm **Linear and non-linear fetal heart rate variability measures: biomarkers for evolving fetal brain injury.**
Michael J. Beacom, C.A. Lear, B.A. Lear, S.K. Dhillon, V.J. King, T. Ikeda, A.J. Gunn, L. Bennet.
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 12.00 pm **The neuroprotective action of tacrolimus when given before or after the onset of neonatal hypoxic-ischemic brain injury in neonatal rat pups.**
Madeleine Smith, A. Sutherland, Y. Pham, T. Penny, G. Jenkin, M. Fahey, S. Miller, C. McDonald.
The Ritchie Centre, Hudson Institute of Medical Research, Clayton, Australia; Department of Obstetrics and Gynaecology, Monash University, Clayton, Australia
- 12.15 pm **Inflammation-induced loss of cortical interneurons is associated with reduced high frequency brain activity in near-term fetal sheep.**
Sharmony B Kelly, V.A. Zahra, G. Polglase, S. Miller, L. Bennet, J.M. Dean, A.J. Gunn, R. Galinsky.
The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, VIC, Australia; The Department of Obstetrics and Gynaecology, Monash University, Melbourne, VIC, Australia
- 1.00 pm **Lunch**

- 2.30 pm **ORAL SESSION III – CARDIOVASCULAR**
Chairs: *Amanda Sferruzzi Perri (UK), Ebe D’Adamo (Italy)*
Oral Talks (10+5 min)
- 2.30 pm **Early and late postnatal effects of hypobaric hypoxia during gestation in the vascular function of guinea pig.**
C. Marambio, A.A. Paz, S. Ruvira, T.A. Jiménez, F.A. Beñaldo, A. González-Candia, **Emilio A. Herrera**
Vascular Function & Reactivity Lab, Pathophysiology Program, ICBM, Faculty of Medicine, Universidad de Chile; International Center for Andean Studies (INCAS), Universidad de Chile
- 2.45 pm **Early Origins of Cardiovascular Dysfunction in an Embryonic Model of Obstructive Sleep Apnoea During Development.**
Jack. P.Barry, S. Perelmuter, Y. Niu, S.G. Ford, N.I. Cavell, A. Cochrane, G.A. Arenas, B.J. Krause, D.A. Giussani
Department of Physiology, Development, and Neuroscience, University of Cambridge, UK
- 3.00 pm **Dissociation between cardiovascular ageing and developmental programming of cardiovascular disease.**
Youguo Niu, A.D. Kane, B.J. Allison, N. Itani, C. Lusby, J.L. Tarry-Adkins, T. Ashmore, A.J. Murray, S.E. Ozanne, D.A. Giussani
Department of Physiology, Development and Neuroscience, University of Cambridge, UK
- 3.15 pm **Predicting minimum blood pressure from single decelerations in heart rate during umbilical occlusions in near-term sheep.**
John Tolladay, C. Lear, L. Bennet, A. Gunn, A. Georgieva
Oxford Labour Monitoring Group, Nuffield Department of Women’s and Reproductive Health, University of Oxford, UK
- 3.30 pm **Moderate developmental hypoxia increases cardiac reactive oxygen species production and sensitises the mitochondrial permeability transition pore to calcium.**
Kerri LM Smith, M.C. Lock, G.L.J. Galli
Division of Cardiovascular Sciences, University of Manchester, UK
- 3.45 pm **Coffee Break + Posters viewing**

- 4.30 pm **ORAL SESSION IV – NEURODEVELOPMENT II**
Chairs: *Emily Camm (Australia), Mitchell Lock (UK)*
Oral Talks (10+5 min)
- 4.30 pm **Persistent Cortical And White Matter Inflammation After Therapeutic Hypothermia For Ischemia In Near-Term Fetal Sheep.**
Kelly Q. Zhou, L. Bennet, G. Wassink, A. McDouall, M.A. Curtis, B. Hight, T.J. Stevenson, A.J. Gunn, J.O. Davidson
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 4.45 pm **Lack of benefit from slow rewarming after therapeutic hypothermia for ischemic brain injury in near-term fetal sheep.**
Alice McDouall, A. Davies, K.Q. Zhou, G. Wassink, L. Bennet, A.J. Gunn, J.O. Davidson.
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 5.00 pm **Delayed hypothermia for 24 hours provides neuronal, but not white matter, protection after mild cerebral ischemia in near-term fetal sheep.**
Guido Wassink, S. Harrison, A.J. McDouall, K. Te Whenua, M.R. Battin, K.Q. Zhou, L. Bennet, A.J. Gunn, J.O. Davidson.
Department of Physiology, Faculty of Medical and Health Sciences, University of Auckland, New Zealand
- 5.15 pm **Potential timing of intervention during labor to prevent fetal hypoxic brain injury.**
Masahiro Nakao, M. Ross, S. Magawa, S. Toyokawa, K. Ichizuka, N. Kayama, S. Satoh, N. Tamiya, A. Nakai, K. Fujimori, T. Maeda, H. Suzuki, M. Iwashita, A. Oka, T. Ikeda.
The Recurrence Prevention Committee, The JOCS JCQHC, Tokyo Japan; Dpt. Obstetrics and Gynecology, Mie University Graduate School of Medicine, Mie Japan; Dpt. Obstetrics and Gynecology, Sakakibara Heart Institute, Tokyo Japan
- 5.30 pm **Fetal creatine prophylaxis treatment for post-asphyxial electrographic seizures.**
Nhi T. Tran, M. Chatton, S.B. Kelly, R. Snow, D.W. Walker, S.J. Ellery, R. Galinsky.
The Ritchie Centre, Melbourne, Australia; Department of Obstetrics & Gynaecology, Monash University, Melbourne, Victoria, Australia.
- 6.00 pm **FNPS Executive Board Meeting**
- 8.30 pm **Dinner**

THURSDAY, SEPTEMBER 22nd, 2022

- 9.00 am **ORAL SESSION V – FETAL & PLACENTAL COMPLICATIONS**
Chairs: *Chiara Mandò (Italy), Anna Maria Nuzzo (Italy)*
Oral Talks (10+5 min)
- 9.00 am **Tadalafil treatment for fetal growth restriction: the long-term developmental prognosis.**
Shintaro Maki, M. Yamaguchi, Y. Tamaishi, S. Takakura, S. Magawa, M. Nii, T.Ikeda.
Mie University Hospital, Mie, Japan
- 9.15 am **Predicting long-term outcomes after hypoxia-ischemia in pre-term fetal sheep.**
Benjamin A. Lear, C.A. Lear, S.K. Dhillon, V.J. King, J.O. Davidson, A.J. Gunn, L. Bennet.
The Fetal Physiology and Neuroscience Group, Department of Physiology, The University of Auckland, Auckland, New Zealand
- 9.30 am **RNAseq analysis identifies PPAR signalling and calcium binding as key players in the hypoxic mouse placenta.**
Emma Siragher, J.S. Higgins, O.R. Vaughan, A.L. Fowden, A.N. Sferruzzi-Perri.
Centre for Trophoblast Research, University of Cambridge, UK
- 9.45 am **Evaluation of placental oxygenation by using blood oxygen level-dependent magnetic resonance imaging (BOLD-MRI): Establishment of placental function assessment methods and evaluation of fetal growth restriction (FGR)**
Shoichi Magawa, M. Nii, N. Enomoto, Y. Tamaishi, S. Takakura, S. Maki, H. Tanaka, M. Ishida, E. Kondo, H. Sakuma, T. Ikeda.
Department of Obstetrics and Gynecology, Mie University Faculty Medicine, Mie, Japan
- 10.00 am **The role of Piezo1 in the embryonic vasculature during healthy and complicated development.**
Anna L. K. Cochrane, G.A. Arenas, J.P. Barry, B.J. Krause, D.A. Giussani.
Physiology Development and Neuroscience, University of Cambridge, Cambridge, UK
- 10.15 am **Non-invasive fetal and postnatal cardiovascular monitoring in guinea pigs gestated under chronic hypobaria.**
F.A. Beñaldo, T.A. Jiménez, A.A. Candia, A.A. Paz, A.A. González-Candia, Emilio A. Herrera.
Vascular Function & Reactivity Lab, Pathophysiology Program, ICBM, Faculty of Medicine, Universidad de Chile; International Center for Andean Studies (INCAS), Universidad de Chile
- 10.30 am **Coffee Break + Posters viewing**

- 11.15 am** **ORAL SESSION VI – MATERNAL HEALTH, PRENATAL STRESS & FETAL DEVELOPMENT**
Chairs: *Emilio A. Herrera (Chile), Tomoaki Ikeda (Japan)*
Oral Talks (10+5 min)
- 11.15 am** **The effects of maternal weight during pregnancy: a single centre retrospective observational study.**
Valentina Elisabetta Bounous, F. Chiadò Piat, M. Mancarella, L. Fuso, A. Ballesio, G. Menato, N. Biglia.
Obstetrics and Gynaecology Unit, “Umberto I” Hospital, Department of Surgical Sciences, University of Turin, Turin, Italy
- 11.30 am** **Placental respiratory chain features in Obese Mothers with Gestational Diabetes Mellitus.**
Gaia Maria Anelli, A. Serati, M. Zocchi, M. Mandalari, C. Novielli, S. Castiglioni, V. Sala, I. Cetin, C. Mandò.
Department of Obstetrics and Gynecology, “Vittore Buzzi” Hospital, ASST Fatebenefratelli-Sacco, Milano, Italy; Department of Biomedical and Clinical Sciences, Università degli Studi di Milano, Milano, Italy
- 11.45 am** **Translocator protein stimulation in the postnatal period following prenatal stress elevates BDNF production and restores behavioural and myelination deficits to control levels.**
Gabrielle K. Crombie, H.K. Palliser, J.C. Shaw, B.A. Hanley, R.A. Moloney, J.J. Hirst.
School of Biomedical Sciences and Pharmacy, University of Newcastle, NSW, Australia; Mothers and Babies Research Centre, Hunter Medical Research Institute, Newcastle, NSW, Australia
- 12.00 pm** **Oxidative and epigenetic profiling in plasma of overweight and obese pregnant women.**
Chiara Novielli, A.M. Nuzzo, F. Lisso, L. Moretti, G.M. Anelli, G. Vernerio, A. Serati, A. Carafa, M. Mazzocco, A. Rolfo, I. Cetin, C. Mandò
Department of Obstetrics and Gynecology, “Vittore Buzzi” Hospital, ASST Fatebenefratelli-Sacco, Milano, Italy
- 12.15 pm** **Intra-Amniotic Exposure to Lipopolysaccharide Disrupts the Developing Circadian Rhythms of Ovine Fetuses.**
Claudia M. Pedulla, E. Williams, D. Blache, S.K. Maloney, P.J. Mark, C. Guthrie, J.J. Pillow.
School of Human Sciences, University of Western Australia, Perth, Australia
- 12.30 pm** **FHR evolution patterns and brain MRI findings in infants with severe cerebral palsy born in 28–33 weeks’ gestation.**
Masahiro Nakao, Y. Nanba, A. Okumura, J. Hasegawa, S. Toyokawa S, K. Ichizuka, N.Kakayama, S. Satoh, N. Tamiya, A. Nakai, K. Fujimori, T. Maeda, H. Suzuki, M. Iwashita, A. Oka, T. Ikeda.
The Recurrence Prevention Committee, The JOCSC JCQHC, Tokyo Japan; Dpt. Obstetrics and Gynecology, Mie University Graduate School of Medicine, Mie Japan; Dpt. Obstetrics and Gynecology, Sakakibara Heart Institute, Tokyo Japan

12.45 pm

Tracheal Occlusion with Self-Unplugging Hydrogel Improves Lung Outcomes in a Lamb Model of Congenital Diaphragmatic Hernia.

Mar Janna Dahl, A. Lavizzari, C. Veneroni, J.W. Davis, S. Robbiani, J.T.H. Wong, D. Savigli, L. Drahi, F. Mosca, P.B. Noble, R.L. Dellacà, J.J. Pillow.
School of Human Sciences, University of Western Australia, Perth, WA, Australia.

1.00 pm

Lunch

2.30 pm

POSTERS PRESENTATIONS**Chairs: Diego Gazzolo (Italy), Alessandro Rolfo (Italy)****1. Malaria in pregnancy alters the expression of genes involved in placental metabolism of thyroid hormones in a sex-specific way.**

K.N. Fontes, V.R.S. Monteiro, A.F. Dias, A.C. Chagas Valim, V. Müller de Oliveira Nascimento, D. Esteves Teixeira, A. Acácia de Sá Pinheiro, E. Bloise, **Tania M. Ortiga-Carvalho.**

Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Brasil.

2. Fetal programming of obese phenotype induced by artificial light at night is rescued by maternal melatonin treatment.

Diego Halabi, F. Corvalán, N. Méndez, K. Vergara, A. Vasquez, P. Ehrenfeld, F. Torres, C. Torres-Farfán.

Laboratorio Cronobiología del Desarrollo, Instituto de Anatomía, Histología y Patología, Facultad de Medicina, Universidad Austral de Chile (UACH), Valdivia, Chile.

3. Characterisation of cortical pyramidal interneurons after LPS exposure in late gestation fetal sheep.

Sharmony B. Kelly, I. Dudink, S.L. Miller, G.R. Polglase, A.J. Gunn, J.M. Dean, R. Galinsky.

The Ritchie Centre, Hudson Institute of Medical Research, Department of Obstetrics and Gynaecology, Monash University, Melbourne, VIC, Australia.

4. Effects of ganaxolone therapy on oligodendrocyte maturation in the preterm guinea pigs at childhood age.

J.C. Shaw, R.M. Dyson, H.K. Palliser, M.J. Berry, **Jonathan J. Hirst.**

School of Biomedical Sciences and Pharmacy, University of Newcastle, Newcastle, Australia; Mothers and Babies Research Centre, Hunter Medical Research Institute.

5. Assessment of Placental Anti-Oxidant Defense Markers in vaccinated and not vaccinated COVID-19 Third-Trimester Pregnancies.

Anna Maria Nuzzo, L. Moretti, S. Cosma, A. Revelli, C. Benedetto, A. Rolfo.

Department of Surgical Sciences, University of Turin, Turin, Italy.

6. Decreased tight junction expression in brain cortex of guinea pig neonate gestated in intrauterine hypoxia.

Alejandro Gonzalez-Candia, E.A. Figueroa, J. Frey, A. Paz, E.A. Herrera. *Laboratory of Fetal Neuroprogramming, Institute of Health Sciences, University of O'Higgins, Rancagua, Chile.*

7. Early Capillary Blood Parameters in Preterm and Term newborns.

Marika Perrotta, G. Levantini, E. D'Adamo, M. Librandi, M. Conte, C. Di Battista, D. Gazzolo. *Neonatal Intensive Care Unit, G. d'Annunzio University, Chieti, Italy.*

8. Neuroprotective effect of connexin hemichannel blockade with tonabersat after mild hypoxia ischemia in the neonatal rat pup.

Alice McDouall, S. Ranasinghe, G. Wassink, J.M. Dean, J.O. Davidson. *Department of Physiology, University of Auckland, New Zealand*

9. Inhibition of IL-6 using a Novel Peptide (HSJ633) Improves White Matter Injury in Preterm Fetal Sheep Exposed to Progressive Inflammation.

Sharmony B. Kelly, N. Tran, V.A. Zahra, A. Moxham, D.M. Olson, G.A. Lodygensky, C. Quiniou, S. Chemtob, R. Galinsky. *The Ritchie Centre, Hudson Institute of Medical Research, Department of Obstetrics and Gynaecology, Monash University, Melbourne, VIC, Australia.*

10. Impact of chronodisruption during gestation on vascular function and oxidative stress in adult rats.

Diego Halabi, V. Trafian, P. Bascur, K. Vergara, E.A. Herrera, A. Gonzalez-Candia, C. Torres-Farfan, N. Mendez. *Laboratorio Cronobiología del Desarrollo, Instituto de Anatomía, Histología y Patología, Facultad de Medicina, Universidad Austral de Chile (UACH), Valdivia, Chile.*

11. Physiological Circadian Rhythms in Preterm Lambs are Disrupted by Intra-Venous Exposure to Staphylococcus epidermidis.

Claudia M. Pedulla, A.L. Gurney, X.W. Chia, H. Powell, D.L. Savigni, E. De Jong, A. Lee, C. Christopherson, J. Gummer, A. Currie, R.E. Hancock, M. Nicol, N. Ghoori, J.J. Pillow. *University of Western Australia, WA, Australia.*

12. Early predictors of abnormal MRI patterns in asphyxiated infants: S100B protein urine levels.

I. Bersani, **Giorgia Gasparroni**, R. Patacchiola, A. Primavera, G. Lapergola, D. Panichi, A. Dotta, D. Gazzolo. *Neonatal Intensive Care Unit, G. d'Annunzio University, Chieti, Italy.*

13. Gestational Hypoxia decreased antioxidant capacity in the brain parenchyma of guinea pig newborns.

E.G. Figueroa, J. Frey, A.A. Paz, T.A. Jiménez, E.A. Herrera, **Alejandro Gonzalez-Candia**.

Laboratory of Fetal Neuroprogramming, Institute of Health Sciences, University of O'Higgins, Rancagua, Chile.

14. Impaired Expression of Mechanosensing Genes in Human Pregnancy Complicated by Fetal Growth Restriction and Chronic Hypoxia.

G. Arenas, E. Peñaloza, D.A. Giussani, Bernardo **J. Krause**.

Instituto de Ciencias de la Salud, Universidad de O'Higgins, Rancagua, Chile.

15. Postnatal pulmonary trajectories of antioxidant and vasodilator enzymes expression are affected by hypobaric hypoxic gestation in guinea pigs.

Adolfo A. Paz, S. Ruvira, T.A. Jiménez, F.A. Beñaldo, E.G. Figueroa, J. Frey, A.A. González-Candia, E.A. Herrera.

Laboratorio de Función y Reactividad Vascular, ICBM, Facultad de Medicina, Universidad de Chile, Santiago, Chile.

4.30 pm **Sporting event**

9.00 pm **Gala Dinner**

FRIDAY, SEPTEMBER 23rd, 2022

- 9.00 am **ORAL SESSION VII – PERINATAL COMPLICATIONS**
Chairs: Suzie Miller (Australia), Diego Gazzolo (Italy)
Oral Talks (10+5 min)
- 9.00 am **Does physiological-based cord clamping improve the cardiopulmonary transition at birth in growth restricted lambs?**
G.R. Polglase, M.I. Inocencio, S.M. Miller, V. Zahra, A. Sehgal, S.B. Hooper, **Beth J. Allison**.
The Ritchie Centre, Hudson Institute of Medical Research, Clayton, Australia
- 9.15 am **Developmental Hypoxia Increases Susceptibility to Cardiac Ventricular Arrhythmias in Adult Offspring.**
Mitchell C Lock, K.L.M Smith, Y. Niu, O.V. Patey, S.G. Ford, A.W. Trafford, D.A. Giussani, G.L.J. Galli
Division of Cardiovascular Sciences School of Medical Sciences, The University of Manchester, UK
- 9.30 am **Do squishy sheep have altered sleep? Development of sleep states in a new model of fetal growth restriction.**
Victoria J. King, S.K. Dhillon, B.A. Lear, M. Beacom, C.A. Lear, P.R. Stone, A.J. Gunn, L. Bennet.
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 9.45 am **A multi-modal approach for post-asphyxial seizure detection in pre-term fetal sheep.**
Olivia J Mills, S.K. Dhillon, E. Gunn, V.J. King, M. Beacom, C.A. Lear, J.O. Davidson, A.J. Gunn, L. Bennet.
Department of Physiology, The University of Auckland, Auckland, New Zealand
- 10.00 am **Nebulisation to simplify surfactant delivery for infants with breathing difficulties after birth.**
Allana Gurney, D. Savigni, J.W. Davis, Y.J. Choi, J. Pillow.
School of Human Sciences, University of Western Australia
- 10.15 am **Elevated Airway Liquid Volume At Birth Impairs Oxygenation And Lowers Arterial pH In Spontaneously Breathing Near-Term Lambs.**
Indya M. Davies, E.V. McGillick, K.J. Crossley, A.B. te Pas, K. Rodgers, I. Nitsos, A. Theil, V. Zahra, E.J. Pryor, S.B. Hooper.
The Ritchie Centre, Hudson Institute of Medical Research, Melbourne, Australia; Department of Obstetrics and Gynaecology, Monash University, Melbourne, Australia

SEPT 23rd, 2022

- 10.30 am **Brain connectivity deficits in fetal growth restriction are attenuated with maternal lactoferrin supplementation during pregnancy.**
Ingrid Dudink, P.S. Hüppi, S.V. Sizonenko, M. Ardalán, C. Mallard, Y. Pham, A.E. Sutherland, M. Castillo-Melendez, B.J. Allison, S.L. Miller.
The Ritchie Centre, Hudson Institute of Medical Research, VIC, AUS; Department of Obstetrics & Gynecology, Monash University, VIC, Australia
- 10.45 am **Coffee Break**
- 11.15 pm **AWARDS COMMITTEE MEETING**
- 12.30 pm **Closing Remarks**
- 1.00 pm **Lunch - Awards Presentation**





ORGANIZING SECRETARIAT & PROVIDER N° 3875

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