

NEONATAL/PERINATAL MEDICAL FORUM

NIPMF'24

10th

ANNIVERSARY
FORUM



BAKU, AZERBAIJAN

MARCH 7-10

Sponsored by:



Organizers:





WELCOME TO **NPMF 24!**



Prof. Virgilio P. Carnielli MD PhD

*Professor of Neonatal Pediatrics
Director of the Division of Neonatal Medicine
G. Salesi Hospital and Polytechnic University of Marche*

Virgilio Carnielli

The 2024 Neonatal/Perinatal Medical Forum (NPMF) continues the tradition of being a great academic occasion offering the latest advances in clinical care and research in Perinatology and Neonatology. This year we will have the opportunity to hear from leading scientists from around the globe the latest info on cardiorespiratory care, neurology, holistic care and more. In addition, we will have numerous hands-on workshops that will offer a unique opportunity to improve your practical skills and enjoy a lot of interaction.

Welcome and enjoy the Congress!



Prof. Katrin Klebermass-Schrehof, MD PhD

*Deputy Head of Division of Neonatology, Pediatric Intensive Care
and Neuropediatrics, Department of Pediatrics and Adolescent
Medicine
Medical University Vienna*

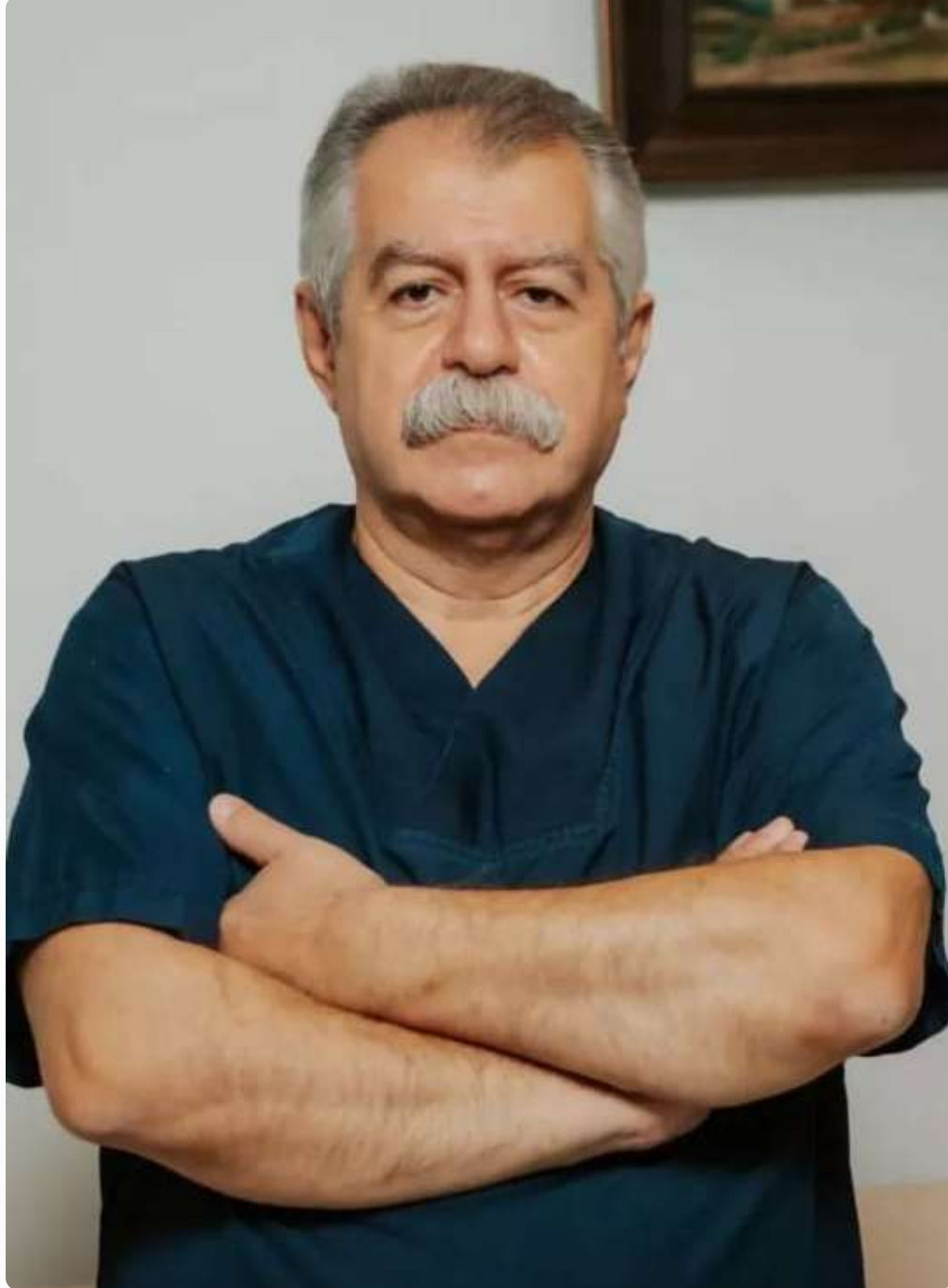
Klebermass-Schrehof

A warm welcome to all of you to this year's Neonatal-Perinatal-Medical Forum (NPMF 2024), taking place in Baku, Azerbaijan. This annual conference, held in different parts of the world every year, reunites neonatal specialists from all over the world and tries to address everyday problems in neonatal care with a research and evidence-based-medicine approach. Hands-on workshops and scientific lectures create a stimulating environment for exchanging experiences and improving care for our tiny patients.

Looking forward to meeting you all in Baku soon!



WELCOME TO **NPMF 24!**



Dr. Rustam Huseynov, MD

*Specialist of the Ministry of Health of Azerbaijan Republic
Head of the Neonatal Intensive Care*

Greetings to the participants and guests of the Forum and Thanks to the organizers. Wishing you fruitful discussions in the loop of the Forum. We hope that this meeting will contribute to the further development of neonatology in the country.



Dr. Erkin Rahimov, MD

*President of Azerbaijan Pediatric Society
Chief Pediatric Advisor to Ministry of Healthcare of Azerbaijan Republic*

On behalf of the Azerbaijan Pediatric Society I would like to welcome you all at the opening of Neonatal/Perinatal Medical Forum in Baku.

Thank you for joining us at this annual gathering of professionals in neonatology and perinatology. The Forum aims to facilitate the exchange of practical and scientific information among colleagues, to raise public awareness of important issues in our field and to promote innovation. We will discuss the most pressing problems and solutions of care for newborns, as well as focus on diagnosis and therapy in several specialized areas. I hope you have a productive and successful meeting and I wish you a very pleasant stay in our hospitable city.

CHAIRMAN



Prof. Virgilio P. Carnielli MD PhD

Chairman, scientific board member

Professor of Neonatal Pediatrics

Director of the Division of Neonatal Medicine

G. Salesi Hospital and Polytechnic University of Marche

Ancona, Italy



Prof. Katrin Klebermass-Schrehof, MD PhD

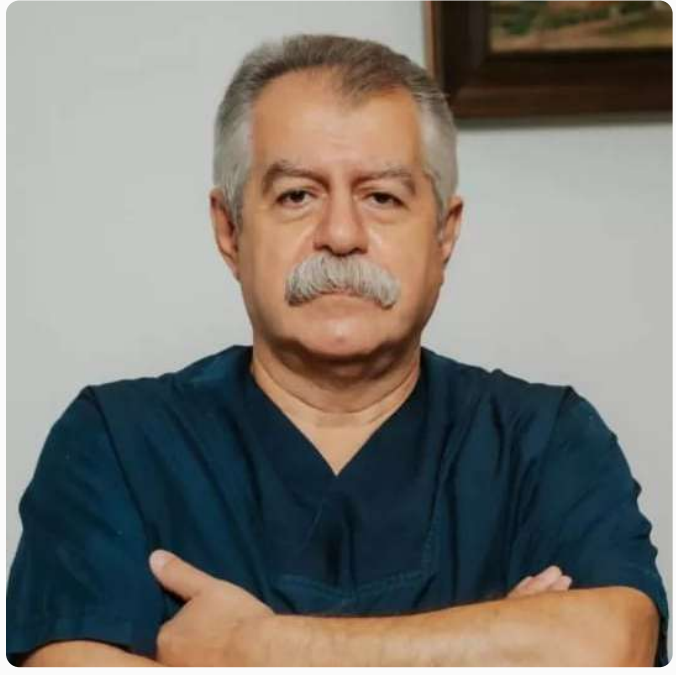
Vice Chairman, scientific board member

Deputy Head of Division of Neonatology, Pediatric Intensive Care and Neuropediatrics

Department of Pediatrics and Adolescent Medicine

Medical University Vienna

Vienna, Austria



Dr. Rustam Huseynov, MD

National Chairman

Specialist of the Ministry of Health of Azerbaijan Republic

Head of the Neonatal Intensive Care Unit

Scientific Research Institute of Obstetrics and Gynaecology

Baku, Azerbaijan



Dr. Erkin Rahimov, MD

National Chairman

President of Azerbaijan Pediatric Society

Specialist of the Ministry of Health of Azerbaijan Republic

Head of Pediatric Department, Baku Medical Plaza Hospitals

Baku, Azerbaijan

SCIENTIFIC BOARD



Prof. Boris W. Kramer, MD PhD

Clinical Professor

Poznan University of Medical Sciences

Poznan, Poland



Prof. Rangasamy Ramanathan, MBBS MD FAAP

Professor of Pediatrics, Division Chief, Division of Neonatal Medicine, Los Angeles General

Medical Center & PH GoodSamaritan Hospital

Director, NPM Fellowship, NICU & Neonatal Hemodynamics Program

Director, Neonatal Respiratory Therapy Services, LAC+USC Medical Center

Keck School of Medicine of USC

Los Angeles, California, US



Dr. David Sweet, MD FRCPCH

Consultant Neonatologist

Regional Neonatal Unit

Royal Maternity Hospital, Belfast

Northern Ireland, United Kingdom



Dr. Merran Thomson, BSc MB ChB MRCP FRCPCH

Honorary Consultant Neonatologist,

The Hillingdon Hospital London, United Kingdom

Technical Advisor for the Chiesi Foundation NEST Project, Board Member, Chiesi

Foundation

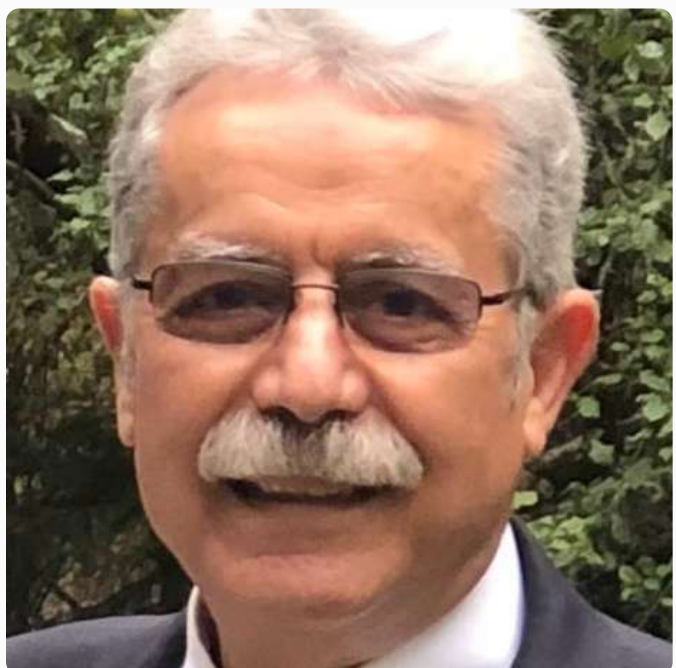
Parma, Italy



Dr. Sarah Berry MD MBChB
ADEPT Clinical Leadership Fellow
Neonatal Intensive Care Unit
Royal Maternity Hospital, Belfast
Northern Ireland, United Kingdom



Dr. Federico Bianco, DVM PhD
Head Special Care, Global Medical Affairs
Chiesi Farmaceutici SpA
Parma, Italy



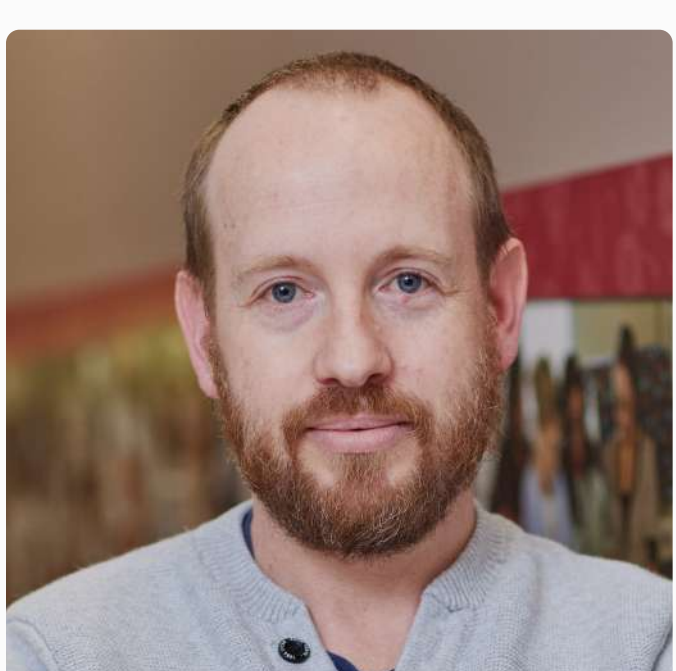
Dr. Mahmood Ebrahimi, MD RDCS
Clinical Instructor In Pediatrics
Keck School of Medicine of the University of Southern California
Los Angeles General Medical Center
Division of Neonatology
Los Angeles, California, USA



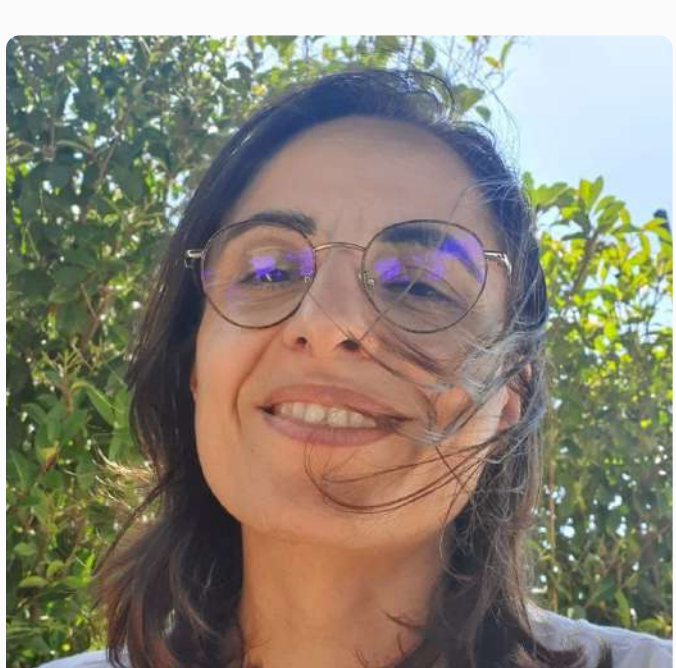
Dr. Tim Hundscheid, MD
Department of Neonatology
Amalia Children's Hospital
Nijmegen, The Netherlands



Prof. Florian Kipfmueller, MD PhD MHBA
Department of Neonatology and Pediatric Intensive Medicine
University Children's Hospital Bonn
Bonn, Germany



A/Prof. Brett J. Manley, MB BS (Hons.) PhD
Consultant Neonatologist, The Royal Women's Hospital in Melbourne
Department of Obstetrics and Gynaecology, The University of Melbourne
Melbourne, Australia



Mona Merhi, MD
Senior Consultant Neonatologist and Deputy Head of the NICU
Division of Pediatrics and Neonatal Critical Care
Centre Hospitalier du Sud Francilien
Corbeil-Essonnes, France



Prof. Luca A. Ramenghi, MD PhD
Professor of Pediatrics
Chief of NICU, Gaslini Children's Hospitals
Genoa, Italy



Dr. Shivani Shankar-Aguilera, MD
Consultant Neonatologist
Division of Pediatrics and Neonatal Critical Care
"A.Béclère" Medical Center,
Paris Saclay University Hospitals, APHP
Paris, France



Dr. Natalie Shenker, PhD BM BCh MRCS

Human Milk Foundation, Rothamsted Institute, Hertfordshire
Imperial College London, Department of Surgery and Cancer, IRDB, Hammersmith
Hospital

London, United Kingdom



Prof. Yogen Singh, MD, MA (Cantab), FASE, FRCPCH

Professor of Pediatrics, Division of Neonatology, Loma Linda University School of
Medicine, Loma Linda
Adjunct Clinical Professor, Stanford University School of Medicine and University of
Southern California

Director, TNE, Hemodynamics and POCUS, LLU Children's Hospital
Chair, ESPNIC Cardiovascular Dynamics Section and POCUS Working Group
California, USA



Dr. Maria-Luisa Tataranno, MD PhD

Department of Neonatology
University Medical Center Utrecht

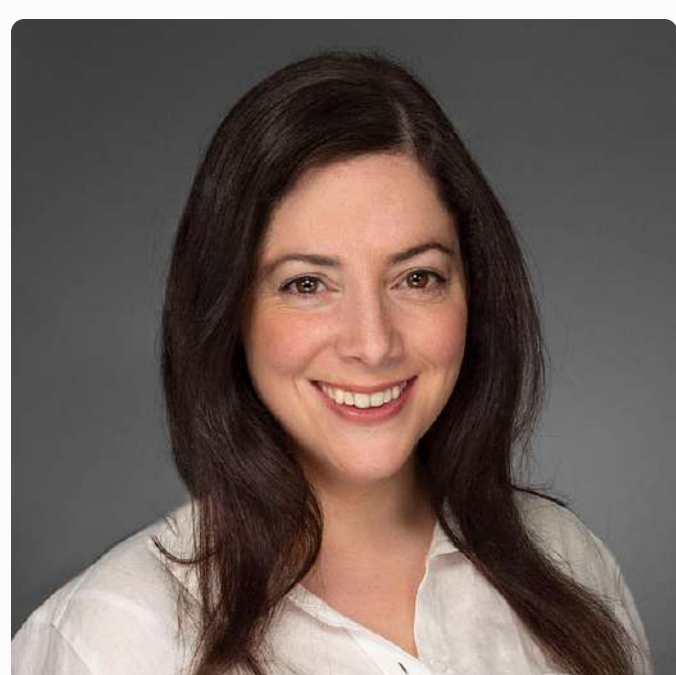
Utrecht, The Netherlands



Gillian Weaver, MBE BSc (Hons) Nutrition, Dip Diet

International Human Milk Banking Specialist and Consultant
Co-founder and Consultant, Human Milk Foundation and Hearts Milk Bank, Harpenden,
United Kingdom

Co-founder and former President, European Milk Bank Association
Milan, Italy



Lauren Wong, RN, IBCLC

Neonatal Nurse and International Board-Certified Lactation Consultant

Leighton Buzzard, United Kingdom



Dr. Nadya Yousef, MD MSc

Senior Consultant Neonatologist and Deputy Head of the NICU
Division of Pediatrics and Neonatal Critical Care,
"A.Béclère" Medical Center

Paris Saclay University Hospitals, APHP
Paris, France



PROGRAM

MARCH 7

PRE-WORKSHOPS

13:00-17:15 **NUTRITION**

ROOM DAN ULDUZU

13:00-14:00 **Optimizing Parenteral and Enteral Nutrition for Preterm Neonates**
Virgilio Carnielli

14:00-15:30 **Human Milk – Best Practice to Improve Outcome for the Preterm, Small or Sick Newborn (for nurses & doctors) PART 1**
Merran Thomson, Gilian Weaver, Lauren Wong

15:30-15:45 **COFFEE BREAK**

15:45-17:15 **Human Milk – Best Practice to Improve Outcome for the Preterm, Small or Sick Newborn (for nurses & doctors) PART 2**
Merran Thomson, Gilian Weaver, Lauren Wong

17:15-17:30 **COFFEE BREAK**

17:30-18:30 **SYMPOSIUM**

ROOM DAN ULDUZU

17:30-18:30 **The Role of IgM Enriched Immunoglobulins in the Management of Sepsis (*Biotest sponsored symposium*)**
Peter Griffiths



PROGRAM

MARCH 8

LECTURES

CHAIR: RANGASAMY RAMANATHAN, M. THOMSON

09:00-13:00 **CARDIO-RESPIRATORY**

ROOM DAN ULDUZU

09:00-09:20 **Welcome!**

Erkin Rahimov, Rustam Huseynov

09:20-09:50 **More on the RDS of Late Preterm Infants- Surfactant Deficiency?**

Virgilio Carnielli

09:50-10:20 **Nasal HFOV Ventilation, an Interesting Modality in the NICU**

Nadya Yousef

10:20-10:40 **Shall We Stop Talking about PDA or Not?**

Yogen Singh

10:40-11:00 **Why We Should Stop Talking about Treating the PDA**

Tim Hundscheid (virtual)

11:00-11:10 **Panel Discussion on PDA**

*Virgilio Carnielli, Rangasamy Ramanathan, Yogen Singh,
Tim Hundscheid (virtual)*

11:20-11:30 **COFFEE BREAK**

11:30-13:00 **HOLISTIC CARE**

ROOM DAN ULDUZU

11:30-12:00 **Introduction – Equitable Access to Human Milk for All Small and Sick Neonates**

Merran Thomson

12:00-12:10 **What's New in the World of Human Milk and What's on the Horizon?**

Natalie Shenker (virtual)

12:10-12:40 **Establishing Human Milk Banks – We Can Do It!**

Gillian Weaver

12:40-13:00 **Panel Question & Answer**

Merran Thomson, Gillian Weaver, Lauren Wong, Natalie Shenker (virtual)

13:00-14:00 **LUNCH**



PROGRAM

MARCH 8

WORKSHOPS

CHAIR: RANGASAMY RAMANATHAN, M. THOMSON

14:00-16:00 HANDS-ON WORKSHOP 1

ROOM DAN ULDUZU

Caring During Cooling
Katrin Klebermass-Schrehof
Florian Kipfmüller
Luca Ramenghi

ROOM NATAVAN

Functional Echocardiography in Neonates
Yogen Singh
Mahmood Ebrahimi
Rangasamy Ramanathan

ROOM FIZULI

An Introduction to Neonatal Lung Ultrasound
Nadya Yousef
Mona Merhi
Shivani Shankar-Aguilera

ROOM NESIMI

Less Invasive Surfactant Administration - Is There More Than One Way?
David Sweet
Boris Kramer
Sarah Berry

16:00-16:30 COFFEE BREAK

16:30-18:30 HANDS-ON WORKSHOP 2

ROOM DAN ULDUZU

Caring During Cooling
Katrin Klebermass-Schrehof
Florian Kipfmüller
Luca Ramenghi

ROOM NATAVAN

Functional Echocardiography in Neonates
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David Sweet
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Sarah Berry



PROGRAM

MARCH 9

LECTURES

CHAIR: VIRGILIO CARNIELLI, KATRIN KLEBERMASS-SCHREHOF

09:00-13:00 NEONATAL UPDATES

ROOM DAN ULDUZU

09:00-09:25 Steroids in Surfactant: PLUSS and Beyond
Brett Manley (virtual)

09:25-09:50 Round Table on Surfactant and Steroids
Virgilio Carnielli, Rangasamy Ramanathan, David Sweet, Brett Manley (virtual)

09:50-10:20 The Future of Non Invasive Ventilation
Rangasamy Ramanathan

10:20-10:40 Continuum of Care: Improving the Longterm Health Journey of Individuals Born Prematurely
Sponsored by Chiesi
Federico Bianco

10:40-11:00 COFFEE BREAK

11:00-12:30 NEUROLOGY

ROOM DAN ULDUZU

11:00-11:30 Hemodynamic Challenges in HIE and Meconium Aspiration Syndrome
Florian Kipfmüller

11:30-12:00 IVH at Different Gestational Ages - Neuroimaging and Pathophysiology
Luca Ramenghi

12:00-12:30 The Impact of Stress and Pain on Preterm Brain Development and Outcome
Maria Luisa Tataranno

12:30-13:30 LUNCH



PROGRAM

MARCH 9

WORKSHOPS

CHAIR: VIRGILIO CARNIELLI, KATRIN KLEBERMASS-SCHREHOF

13:30-15:30 HANDS-ON WORKSHOP 1

ROOM DAN ULDUZU

Caring During Cooling
Katrin Klebermass-Schrehof
Florian Kipfmüller
Luca Ramenghi

ROOM NATAVAN

Functional Echocardiography in Neonates
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ROOM FIZULI

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ROOM NESIMI

Less Invasive Surfactant Administration - Is There More Than One Way?
David Sweet
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Sarah Berry

15:30-16:00 COFFEE BREAK

16:00-18:00 HANDS-ON WORKSHOP 2

ROOM DAN ULDUZU

Caring During Cooling
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ROOM NESIMI

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David Sweet
Boris Kramer
Sarah Berry



MARCH 7

**HUMAN MILK – BEST PRACTICE TO IMPROVE OUTCOME FOR THE PRETERM,
SMALL OR SICK NEWBORN**

14:00-18:00

Merran Thomson, Gillian Weaver, Natalie Shenker

ROOM DAN ULDUZU

The workshop will cover the following:

- Best practice and support to enable mothers to establish lactation, maintaining a milk supply when their baby is unable to breastfeed and the successful transition to full breastfeeding prior to discharge.
- Best practice for the handling and storage of human milk.
- How does donor milk support a mother's lactation when her baby is on the NNU.

There will be plenty of opportunity for the participants to ask the experts questions and discuss practices.

OPTIMIZING PARENTERAL AND ENTERAL NUTRITION FOR PRETERM NEONATES

14:00-18:00

Virgilio Carnielli

ROOM DAN ULDUZU

The participants will familiarize themselves with the most recent guidelines on Parenteral Nutrition (2018) and on Enteral Nutrition (2022). Nealy each nutrient and clinical practices will be discussed interactively with case simulations. Clinical Cases will include “relatively heathy” newborns with different gestational ages and critically ill newborns with one or more complications often found in the Neonatal Intensive Care Units. More specifically Surgical Infants, Infants after Neonatal Asphyxia and during cooling, infants with sepsis and other metabolic derangements. The pros and cons of central vs peripheral lines, individualized vs standard Parenteral Nutrition solutions, maximize nutrient intake versus more conservative approaches in distinct phases of the enteral progression phases and of selected given critical illness will be discussed.



MARCH 8

LECTURES DIVIDED BY CARDIO RESPIRATORS AND HOLISTIC CARE

MORE ON THE RDS OF LATE PRETERM INFANTS- SURFACTANT DEFICIENCY?

09:20-09:50

Virgilio Carnielli

ROOM DAN ULDUZU

Respiratory Distress Syndrome in Late Preterm Infants and in Early Term Infants is frequently encountered in clinical practice given that the number of such infants is much larger than that of the infants born at much lower gestational ages. Some of these infants experience a rather mild condition (transient tachypnea of the newborn or TTN) while some others experience a severe form of respiratory distress that persists for days. It is unclear why this condition is rather variable and if delays in surfactant replacement therapy (RDS guideline xxx) if a developmental delay in surfactant maturation do occurs in some of these infants that do not routinely receive prenatal corticosteroid for the induction of fetal maturation. In addition, in other circumstances a proportion of these infants may suffer from some of the respiratory complications typical of the term infant such as pneumonia and meconium aspiration syndrome.

We will be presenting a new study conducted in later preterm infants and in term infants with RDS in which we analyzed the tracheal aspirates at the time of intubation for surfactant administration. Tracheal aspirates were measured for surfactant phosphatidylcholine, for surfactant specific proteins and for selected inflammatory markers including pro and anti-inflammatory cytokines. Additional measurements will include metabolomics and lipidomics. The results will be presented at the meeting.

NASAL HFOV VENTILATION, AN INTERESTING MODALITY IN THE NICU?

09:50-10:20

Nadya Yousef

ROOM DAN ULDUZU

The talk will give a short overview of the use of nasal high-frequency oscillatory ventilation (HFOV) and its applications in neonatology today.

My aim is to

- Introduce the modality of non invasive HFOV
- Discuss its indications in neonatology
- Present the latest data on HFOV in preterm infants



MARCH 8

LECTURES DIVIDED BY CARDIO RESPIRATORS AND HOLISTIC CARE

SHALL WE STOP TALKING ABOUT PDA OR NOT?

10:20-10:40

Yogen Singh

ROOM DAN ULDUZU

Persistent PDA is associated with increased mortality and increased comorbidities including acute pulmonary hemorrhage BPD, NEC and IVH. With advances in echocardiographic evaluation now we understand its impact on the hemodynamics and we can better identify the patients at risk of complications. Rather than stop talking about PDA, it's the time to ask how to identify the right patient for the right intervention at the right time!

WHY WE SHOULD STOP TALKING ABOUT TREATING THE PDA

10:40-11:00

Tim Hundscheid

ROOM DAN ULDUZU

In this con part I will cover the current evidence that to date failed to show beneficial effects on clinical outcome irrespective of the treatment modality or timing. There are growing concerns on adverse effects of pharmacological treatment and the trend towards transcatheter closure is not supported by evidence that this rather invasive treatment strategy is needed in the first place.

- Current evidence shows that, although treatment induces PDA closure, clinical outcome is not improved
- Growing concern on adverse effects of (pharmacological) treatment on outcome it is actually trying to prevent
- Trend towards increased percutaneous closure without clear indications at the moment, apart from congestive heart failure

PANEL DISCUSSION ON PDA

11:00-11:10

Virgilio Carnielli, Rangasamy Ramanathan, Yogen Singh, Tim Hundscheid

ROOM DAN ULDUZU

During the panel discussion, experts will discuss the methods to identify a hemodynamically significant PDA (hsPDA) and current controversies regarding the management of hsPDA.

The participants will be asked to share their experience and present their view.



MARCH 8

LECTURES DIVIDED BY CARDIO RESPIRATORS AND HOLISTIC CARE

THE NUTRITION OF MOTHERS' PROVIDING BREASTMILK FOR SMALL AND SICK NEONATES; DOES IT MATTER?

11:30-12:00

Gillian Weaver

ROOM DAN ULDUZU

Persistent PDA is associated with increased mortality and increased comorbidities including acute pulmonary hemorrhage BPD, NEC and IVH. With advances in echocardiographic evaluation now we understand its impact on the hemodynamics and we can better identify the patients at risk of complications. Rather than stop talking about PDA, it's the time to ask how to identify the right patient for the right intervention at the right time!

ESTABLISHING HUMAN MILK BANKS - WE CAN DO IT!

12:00-12:10

Gillian Weaver

ROOM DAN ULDUZU

The global growth in demand for donor human milk (DHM) is driving the increased establishment of human milk banks with approximately 800 currently operational in 60 countries. WHO recommendations for the feeding of preterm and low birthweight infants clearly advocate for the availability of DHM from milk banks that meet national standards with WHO global minimum standards being developed (anticipated publication date, 2024).

Optimal approaches for the establishment of sustainable human milk banks in different settings will be presented including:

- Determining the need for DHM and user acceptability
- Assessing optimal milk bank model and how best to integrate into current services
- Preparedness including locations, equipment and training



MARCH 9

LECTURES, DIVIDED BY NEONATAL UPDATES AND NEUROLOGY

STEROIDS IN SURFACTANT: PLUSS AND BEYOND

09:00-09:25

Brett Manley

ROOM DAN ULDUZU

Evidence from pre-clinical and clinical trials suggests that intratracheal budesonide, mixed with surfactant to deliver it to the lungs, may increase survival free of bronchopulmonary dysplasia in very preterm infants. This talk will present the results of the "PLUSS" trial, an international, multicentre, RCT of intratracheal budesonide mixed with surfactant that enrolled 1061 extremely preterm infants from 21 centres in 4 countries. The results will be discussed in the context of existing evidence, and of clinical and research implications.

ROUND TABLE ON SURFACTANT AND STEROIDS

09:25-09:50

Virgilio Carnielli, Rangasamy Ramanathan, David Sweet, Brett Manley

ROOM DAN ULDUZU

During this round table, scientific evidence from randomized clinical trials of using budesonide, a synthetic corticosteroid, with surfactant to prevent bronchopulmonary dysplasia will be discussed by the panelists. The participants will be asked to share their experience and present their view.

THE FUTURE OF NON INVASIVE VENTILATION

09:50-10:20

Rangasamy Ramanathan

ROOM DAN ULDUZU

Noninvasive ventilation (NIV) is increasingly used around the world in newborns needing respiratory support. However, there are still controversies regarding nasal interfaces used during NIV as well as the mode of NIV to improve outcomes. Use of different nasal interfaces and different modes of NIV will be presented.

At the end of this presentations, participants should be able to:

1. Discuss the advantages and risks associated with different nasal interfaces used in the delivery room during resuscitation
2. Discuss the different modes of NIV used in newborns
3. Discuss the benefits of NIPPV as a primary mode or secondary mode of respiratory support to decrease the need of intubation and invasive mechanical ventilation



MARCH 9

LECTURES, DIVIDED BY NEONATAL UPDATES AND NEUROLOGY

CONTINUUM OF CARE: IMPROVING THE LONGTERM HEALTH JOURNEY OF INDIVIDUALS BORN PREMATURELY

10:20-10:40

Gillian Weaver

ROOM DAN ULDUZU

Premature infants are at higher risk of developing chronic respiratory condition later on in life, in particular asthma and chronic obstructive pulmonary disease (COPD).

Very preterm, and particularly extremely preterm infants, have a higher likelihood of receiving intensive care and developing BPD and lung deficits are more pronounced in individuals who had BPD compared with preterm infants without BPD. Many BPD survivors have FEV1 % predicted values <80% later in life, an increased proportion of these children seem to have received a diagnosis of asthma by mid-childhood (Praprotnik et al. J Perinatol 2015).

Longer duration of mechanical ventilation and supplemental oxygen, and postnatal steroid exposure in the NICU are associated with lower lung function in childhood into the adulthood (Levin et al. Resp Res 2020). Therefore, in many BPD survivors, FEV1 will not reach the maximal value in early adulthood and the declining phase will start from substantially reduced maximal value, predisposing these individuals to develop COPD. A recent editorial considers BPD as the earliest and longest lasting obstructive lung disease in humans, and speculates that BPD in adult age could be a novel COPD endotype (Bonadies, Papi & Baraldi Eur Resp J 2022).

In light of these Chiesi has set up a project to address with both physicians and asthma and/or COPD patients their level of awareness on such risk factor and how the transmission of information on their medical history is managed throughout their life starting from neonatologists to pediatrician and moving to allergologists and pulmonologists. The results of these projects will be presented during the talk.



MARCH 9

LECTURES, DIVIDED BY NEONATAL UPDATES AND NEUROLOGY

HEMODYNAMIC CHALLENGES IN HIE AND MECONIUM ASPIRATION SYNDROME

11:00-11:30

Florian Kipfmüller

ROOM DAN ULDUZU

Neonates suffering from hypoxic ischemic encephalopathy and meconium aspiration syndrome often present with severe cardiac dysfunction and pulmonary hypertension. Although clinical assessment and abnormal vital signs provide valuable information on the hemodynamic status of affected neonates, echocardiography has become the main bedside technique in the evaluation of these patients. The talk provides overview on diagnostic and therapeutic concept using bedside echocardiography.

- Echocardiography
- Cardiac dysfunction
- Pulmonary hypertension

IVH AT DIFFERENT GESTATIONAL AGES - NEUROIMAGING AND PATHOPHYSIOLOGY

11:30-12:00

Luca Ramenghi

ROOM DAN ULDUZU

The meaning is significantly different when it affects very premature baby, less premature ones and baby near term of gestation. Grading of the severity, site of origin (germinal matrix ?, caudothalamic notch ?, choroid plexus ?), complications and severity of these complications and the capacity of disclosing unexpected brain lesions together with a different way of clinical onset and a different meaning of neurological outcome will be the basis of my presentation.



MARCH 9

LECTURES, DIVIDED BY NEONATAL UPDATES AND NEUROLOGY

THE IMPACT OF STRESS AND PAIN ON PRETERM BRAIN DEVELOPMENT AND OUTCOME

12:00-12:30

Marie Luisa Tatranno

ROOM DAN ULDUZU

Unlike a term infant who spends the third trimester in the relatively safe environment of the womb, a preterm infant is confined to an incubator, separated from his parents; in addition, preterm infants are also exposed almost continuously to physical and environmental stressors, as well as sensory deprivation due to reduced maternal care in the NICU. Repeated, prolonged exposure to stressful and painful stimuli can quickly exceed the infant's natural regulatory capacity, causing long-lasting changes in many biological processes, resulting in a re-programming of the neuroendocrine and neural systems, as well as causing changes in gene expression. The number of invasive procedures during admission is associated with decreased brain volumes and poorer motor and cognitive functioning. Therefore, the identification of mediators between stress/pain exposure and neurodevelopment is a critical step in developing targeted interventions to improve outcomes.

Bullet points:

- Preterm infants represent a highly vulnerable population for environmental exposures (stress, pain), with negative impact on neurodevelopment.
- In the last trimester of gestation, the preterm brain grows fast, making it more sensitive to the effects of stress and pain but also representing an important window of opportunity for treatment (sensory-driven brain plasticity)
- Optimizing the NICU environment could improve neurobehavioral outcomes for the hundreds of thousands of children born preterm each year



WORKSHOPS

CARING DURING COOLING

Katrin Klebermass-Schrehof, Florian Kipfmüller, Luca Ramenghi

ROOM DAN ULDUZU

In this workshop within case discussions practical issues during hypothermia treatment will be addressed and discussed:

- Neuromonitoring
- Neuroimaging
- Cooling strategies and devices
- Ventilation during cooling
- Hemodynamic assessment and treatment during cooling

FUNCTIONAL ECHOCARDIOGRAPHY IN NEONATES

Rangasamy Ramanathan, Mahmood Ebrahimi, Yogen Singh

ROOM NATAVAN

Targeted Neonatal Echocardiography (TnECHO) is increasingly recognized as a useful tool in assessment of hemodynamic status and management of cardiovascular compromise in neonatal and pediatric intensive care units and in cardiac intensive care units. However, the widespread use of TnECHO has been hampered by several obstacles including the limited opportunity to learn the skills.

In this workshop, we will have 3 mannequin-based haptic echocardiographic simulators capable of simulating a full range of neonatal two-dimensional, color flow Doppler, spectral Doppler, and M-mode echocardiograms. Simulator screen displays the full range of all the standard echocardiographic views and the side screen displays position and motion of the cutting planes through a three-dimensional heart model. In this workshop, the learner will be introduced to the 17 essential echocardiographic views with a hands-on approach using the simulator.

Learning Objectives:

1. Know the focused standard echocardiographic views required for rapid assessment of shock
2. Able to rapidly assess cardiac function on eyeballing and semi-quantitative assessment - distinguish normal from grossly reduced myocardial contractility, and to guide fluid versus inotropic therapy
3. Be able to assess PDA size, shunt and determine the shunt pattern



WORKSHOPS

AN INTRODUCTION TO NEONATAL LUNG ULTRASOUND

Nadya Yousef, Shivani Shankar-Aguilera, Mona Merhi

ROOM FIZULI

This interactive workshop will give a brief overview of the basics of neonatal lung ultrasound followed by a short practical session.

The objective of the workshop is to allow the participants to

- Understand the basics of a full neonatal lung ultrasound examination
- Interpret the main lung ultrasound artefacts
- Recognize the main patterns for pneumothorax, effusion, lung edema, RDS and TTN and consolidation/pneumonia

LESS INVASIVE SURFACTANT ADMINISTRATION- IS THERE MORE THAN ONE WAY?

David Sweet, Boris Kramer, Sarah Berry

ROOM NESIMI

We will discuss the different manners of administering surfactant to a spontaneously breathing preterm infant. We will focus on less invasive surfactant administration via thin catheter techniques as well as via laryngeal mask airway (SALSA). We will focus on clinical evidence, usefulness of protocols for the successful introduction of new techniques, and common problems like analgesia.



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