

3<sup>rd</sup> International Conference on

# Pediatrics & Pediatric Healthcare

April 27-28, 2023 | Amsterdam, The Netherlands

## Day-1

### Scientific Tracks & Abstracts



# Sessions

Pediatrics Nephrology | Neonatal Health | General Pediatrics

## Session Chair

**David C Stockwell**

Johns Hopkins University | USA

## Session Introduction

**Title: Benefit of B7-1 staining and abatacept for treatment-resistant post-transplant focal segmental glomerulosclerosis in a predominantly pediatric cohort: Time for a reappraisal**

**George W Burke** | University of Miami | USA

**Title: Standardised parenteral nutrition formulations for Neonates in Australia**

**Srinivas Bolisetty** | Royal Hospital for Women | Australia

**Title: Lo and behold: Origins and effects of early incubator shows**

**Thijs Gras** | Ambulance Amsterdam | Netherlands

Obstetrics and Gynecology | Pediatric Neurology | Pediatric Cancer

## Session Chair

**Kaminskaya Tatyana Svyatoslavovna**

State Budgetary Healthcare Institution | The Russian Federation

**Title: Metronomic chemotherapy for Burkitt Lymphoma in a patient with HIV**

**Pankaj Dwivedi** | National Cancer Institute | India

3<sup>rd</sup> International Conference

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## Benefit of B7-1 staining and abatacept for treatment-resistant post-transplant focal segmental Glomerulosclerosis in a predominantly pediatric cohort: Time for a reappraisal

**George W Burke**

University of Miami, USA

**Background:** Primary FSGS manifests with Nephrotic Syndrome and may recur following KT. Failure to respond to conventional therapy after recurrence results in poor outcomes. Evaluation of podocyte B7-1 expression, and treatment with abatacept (a B7-1 antagonist) has shown promise but remains controversial.

**Methods:** From 2012 to 2020, twelve patients developed post-KT FSGS with nephrotic range proteinuria, failed conventional therapy, and were treated with abatacept. Nine/ twelve (< 21 years old) experienced recurrent FSGS; three adults developed de novo FSGS, occurring from immediately, up to eight years after KT. KT biopsies were stained for B7-1.

**Results:** Nine KTRs (75%) responded to abatacept. Seven of nine KTRs were B7-1 positive, and responded with improvement/resolution of proteinuria. Two patients with rFSGS without biopsies resolved proteinuria after abatacept. Pre-treatment UPCr was 27.0 +/- 20.4 (median 13, range 8-56); follow-up UPCr was 0.8 +/- 1.3 (median 0.2, range 0.07-3.9, P< 0.004). Two patients who were B7-1 negative on multiple KT biopsies did not respond to abatacept, and lost graft function. One patient developed proteinuria while receiving belatacept, stained B7-1 positive, but did not respond to abatacept.

**Conclusions:** Podocyte B7-1 staining in biopsies of KTRs with post-transplant FSGS identifies a subset of patients who may benefit from abatacept.

### References

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2. D'Agati VD, Kaskel FJ, Falk RJ (2011) Medical progress Focal Segmental Glomerulosclerosis. *N Engl J Med* 365:2398–2411.
3. Choy BY, Chan TM, Lai KN (2006) Recurrent Glomerulonephritis after kidney transplantation. *Am J Transplant* 6:2535–2542.

### Biography

George W Burke is currently working as a Professor in the department of Miller School of Medicine, University in Miami Health system, USA. His research interests include Surgery. He is serving as an editorial member and reviewer of several international reputed journals. He is the member of many international affiliations. He has successfully completed his administrative responsibilities. He has authored of many research articles/books related to Surgery.

gburke@med.miami.edu

3<sup>rd</sup> International Conference

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## Standardised parenteral nutrition formulations for Neonates in Australia

**Srinivas Bolisetty**

Royal Hospital for Women, Australia

**Statement of the Problem:** The first consensus standardised Neonatal Parenteral Nutrition (PN) formulations were implemented in many Neonatal units in Australia in 2012. The second consensus update involving 49 units from Australia, New Zealand, Singapore, Malaysia and India occurred in 2017. The third and latest consensus update was conducted in January to May 2022 with the release of new formulations in June 2022.

**Methodology & Theoretical Orientation:** The latest consensus process occurred between January and May 2022. Consensus process included reconvening of the consensus group, systematic review of available evidence for each parenteral nutrient, translation of the evidence into pragmatic consensus formulations that cater for majority of clinical scenarios in NICUs. Physicochemical compatibility and stability of updated formulations were checked and confirmed compliant by a compounding pharmaceutical facility (Baxter Pharmaceuticals Pty Ltd).

**Findings:** The 2017 consensus aminoacid/dextrose formulations were updated. Formulations are developed to provide a minimum 2.0 g/kg/day and maximum 4 g/kg/day of amino acids at prescribed fluid rates of 60 mL/kg/day on day 1 to a maximum of 135 mL/kg/day as maintenance fluid volume. Latest formulations have improved Calcium (Ca) and Phosphate (P) content in these formulations. Ca and P contents in the formulations are increased and Ca:P ratios are optimized to 0.8:1 in the first 48 hours of life and 1:1 after the first 48 hours of life. Copper was added as trace element along with iodine and selenium to the formulations.

**Conclusion & Significance:** The 2022 PN formulations and guidelines developed by the Neonatal Parenteral Nutrition Consensus Group offer up-to-date evidence based PN to the NICU population. These practice guidelines do not account for every clinical situation, particularly for infants that are acutely unwell or unstable. The professional judgement of the health professional in these individual cases must take precedence.

### Recent publications

1. Bolisetty S, Osborn D, Schindler T, Sinn J, Deshpande G, Wong CS, Jacobs SE, Phad N, Pharande P, Tobiansky R, Luig M, Trivedi A, Mcintosh J, Josza E, Opie G, Downe L, Andersen C, Bhatia V, Kumar P, Malinen K, Birch P, Simmer K, McLeod G, Quader S, Rajadurai VS, Hewson MP, Nair A, Williams M, Xiao J, Ravindranathan H, Broadbent R, Lui K. Standardised Neonatal parenteral nutrition formulations - Australasian Neonatal parenteral nutrition consensus update 2017. *BMC Pediatrics*. 20(1):59, 2020 02 08.
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3. Bolisetty S, Pharande P, Nirthanakumaran L, Do TQ, Osborn D, Smyth J, Sinn J, Lui K. [Improved nutrient intake following implementation of the consensus standardised parenteral nutrition formulations in preterm neonates--a before-after intervention study.] *BMC Pediatr* [Internet]. 2014 [cited 2014 Dec 17]; 14:309

3<sup>rd</sup> International Conference

# PEDIATRICS & PEDIATRIC HEALTHCARE

April 27-28, 2023 | Amsterdam, The Netherlands

## Biography

Srinivas Bolisetty is the Medical Director and Senior Neonatologist at the Royal Hospital for Women, Sydney. His passion is in developing evidence-based guidelines through active collaboration with clinicians in the Australasian region. He chairs the Australasian Neonatal Parenteral Nutrition Consensus Group. He also chairs the Australasian Neonatal Medications Formulary group ([www.anmfonline.org](http://www.anmfonline.org)). He is also the New South Wales clinical lead for the NICU for COVID19 Council. He is fondly known among his peers as the king of consensus for his leadership and coordination skills in achieving consensus and developing network to region wide clinical guidelines. He is not only a full-time clinician but also an active clinical researcher with a number of publications in international journals.

[srinivas.bolisetty@health.nsw.gov.au](mailto:srinivas.bolisetty@health.nsw.gov.au)

3<sup>rd</sup> International Conference

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## Lo and behold: Origins and effects of early incubator shows

**Thijs Gras**

Ambulance Amsterdam, The Netherlands

Not the American ‘showman’ Martin Couney, but the French inventor Alexandre Lion laid in 1890 the foundation for infant incubators with living children featuring as a scientific attraction in international and world exhibitions or busy streets in cities. He combined Philanthropism, Patriotism and compassion into a commercial undertaking that saved lives. Thus, Lion and his imitators (like Couney) opened a non-clinical route for the use of infant incubators. This new course had an important impact on the clinical route that had started 10 years earlier in France with the obstetrician Étienne Stéphane Tarnier.

In this presentation, I would like to explore the origins of this non-clinical route, for this has received little attention so far. Like Tarnier, Lion’s story begins with an egg incubator, but his was more technically advanced, as was his infant version. Lion’s experiences with his first baby in May 1890 had a profound influence on his *modus operandi*. Shortly before entering the world of exhibitions, he developed a new, elegant version of his incubator that made him steal the show on International Exhibitions in Lyon (1894), Amsterdam (1895) and Berlin (1896). I will look in some detail how these three shows were set up and what were the results.

Although not everybody was as enthusiastic as Lion hoped or even expected, his shows did influence in the clinical world and his institutions and ‘shows’ served as living examples that were followed in Europe and elsewhere. One of these so-called spin-offs delivered us the so far only known Lion incubators to have survived till this day.

### Recent publications

1. Gras T, Alexandre Lion: The Forgotten Inventor of Incubator Shows. In: *Pediatrics* 2022 (September 1; 150(3): e2021054576.

### Biography

Thijs Gras (born 1962) completed his MA in medieval history in 1988, then changed his career into Nursing and now works for almost 30 years as a Specialized Ambulance Nurse in Amsterdam. He is co-editor of the National Dutch Ambulance Magazine and wrote about 20 books and many more articles about the history, practice and organization of ambulance care in The Netherlands and elsewhere. He recently took up research in the field of early incubator history, where he unearthed new information using hitherto unused sources. This led to a publication in *Pediatrics* in 2022.

tgras@xs4all.nl

3<sup>rd</sup> International Conference

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## Metronomic chemotherapy for Burkitt Lymphoma in a patient with HIV

**Pankaj Dwivedi, Atul Kapse, Chaitatali Bongulwar, Ankita Tamhane and S Banavali**  
National Cancer Institute, India

Burkitt Lymphoma (BL) is an aggressive type of Non-Hodgkin Lymphoma (NHL). Treatment for HIV-positive BL is similar to that for HIV-negative BL. On one hand intensive chemotherapy is integral part of Burkitts Lymphoma management with excellent cure rate, but on other hand it is associated with significant toxicities and high cost. Offering long-term intensive chemotherapy is difficult in resource-limited settings for above reasons. Oral Metronomic Chemotherapy (OMCT), though in vogue as a treatment modality, has limited evidence of its efficacy in HIV-positive BL. Here, we present the case of a child who was diagnosed with high-risk BL and HIV, and administered metronomic chemotherapy along with monthly intrathecal chemotherapy for one year. OMCT consists of 40 mg/m<sup>2</sup> of prednisolone divided into two doses for two weeks per month, 50 mg/m<sup>2</sup> of cyclophosphamide and 50 mg/m<sup>2</sup> of etoposide once a day for 21 days every month. Intrathecal methotrexate was given initially weekly till cerebrospinal fluid became clear of blasts (total 4) and then monthly. His HAART was continued during oral chemotherapy. Post completion of therapy FDG PET-CT showed complete metabolic response. Child is on regular follow up and after 27 post completion of therapy is doing well. This could be one of the rare case descriptions where an HIV-positive child with BL was cured with OMCT. In resource-limited settings, treatment with high-dose chemotherapy is challenging and the treatment-related mortality rate is high. There is an urgent need for alternative treatment when resources are limited and comorbidities exist. Though metronomic chemotherapy is not a standard of care for BL, it can be a potential subject for randomized controlled trials to qualify as an effective and affordable therapy for BL.

### Recent publications

1. Atallah-Yunes SA, Murphy DJ, Noy A. HIV-associated Burkitt Lymphoma. *Lancet Hematol.* 2020;7:E594–E600.
2. Brunnberg U, Hentrich M, Hoffmann C, et al. HIV-Associated malignant lymphoma. *Oncol Res Treat.* 2017;40:82–87.
3. Abdel Rahman H, Sedky M, Hamoda A, et al. Role of FDG-PET scan in the management of pediatric mature B cell non-Hodgkin's lymphoma. CCHE experience. *J Egypt Natl Canc Inst.* 2016;28:95–99.

### Biography

Pankaj Dwivedi has completed MD in pediatrics and did fellowship in Pediatric Oncology and Bone Marrow Transplant from Tata Memorial Hospital Mumbai India. He has been having 13 years of experience in Pediatric Oncology and have few publications at National and International Journals. Presently he is an In-charge and consultant in the department of Pediatric Oncology at National Cancer Institute, Nagpur, India.

drpankoo@gmail.com

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## Day-2

### Scientific Tracks & Abstracts





# Sessions

Obstetrics and Gynecology | Gynecology Surgery | Pediatric Gynecology

**Session Chair**

**Katie P Nguyen**

Riverside Community Hospital | USA

## Session Introduction

**Title: Obstructive Sleep Apnea is position dependent in young infants**

**Kirjavainen Turkka** | New Children's Hospital | Finland

Pediatric Pulmonology | Gynecology & Obstetrics | Pediatric Obstetrics | Pediatric Gynecology | Pediatric Development

**Session Chair**

**Gaafar Mohamed Abdel-Rasoul**

Menoufia University | Egypt

**Title: Cardiovascular injury and clinical features of Multisystem Inflammatory Syndrome in Children (MIS-C) related to Covid-19 in Vietnam**

**Nguyen Phung Nguyen** | University of Medicine and Pharmacy | Vietnam

**Title: The importance of grammar skills assessment in the children**

**Fatemeh Fekar Gharamaleki** | Tabriz University of Medical Sciences | Iran

3<sup>rd</sup> International Conference

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## Obstructive Sleep Apnea is position dependent in young infants

**Kirjavainen Turkka**

New Children's Hospital, Finland

**Background:** We have studied the sleep position dependency of obstructive sleep Apnea in infants.

**Methods:** We re-evaluated ten-year single pediatric national reference sleep center data in infants aged less than six months, with Polysomnography (PSG) performed in supine and side sleep positions. Three major groups were identified: 1) 67 infants with Pierre Robin sequence, 2) 28 infants with laryngomalacia, and 3) 72 infants without any known syndromes, genetic defects, or structural anomalies. Of these 72 infants, 24 (33%) were born prematurely, 10 (14%) have had a Brief Resolved Unexplained Event (BRUE), 8 (11%) have had a more severe Apparent Life-Threatening Event (ALTE) with subsequent resuscitation, and 8 (11%) were studied because of being a sibling of infant who had succumb do Sudden Infant Death Syndrome (SIDS). In most cases, PSG recording included one cycle of NREM and REM sleep in both sleeping positions.

**Results:** Comparison of breathing between supine and side sleeping positions was performed in PRS group at the median corrected age of 4 weeks (interquartile range (IQR) 3-6), laryngomalacia 7 weeks (IQR 5-12), and in group 3 at 4 weeks (IQR 2 – 8). Obstructive upper airway events were more frequent in all three groups of infants in the supine than in the side sleeping position: PRS 31 h-1 (IQR9 - 69) vs 16 h-1 (IQR 4 -41) ( $p = 0.007$ ), laryngomalacia 15 h-1 (IQR 5 - 26) vs 5 h-1 (IQR 1-18) ( $p = 0.005$ ), and Group 3 8 h-1 (IQR 4-20) vs 4 h-1 (IQR 0-10) ( $p < 0.001$ ). In all three groups, breathing was also less laborious ( $p = 0.01$ ) and end-tidal carbon dioxide level (EtCO<sub>2</sub>) lower in the side than in the supine sleeping position.

**Conclusions:** Obstructive upper airway events in young infants are more frequent when supine than when sleeping on the side.

### Recent publications

1. Obstructive sleep apnea in young infants: Sleep position dependence and spontaneous improvement. Kukkola, H-L. & Kirjavainen, T., Mar 2023, In: Pediatric Pulmonology. 58, 3, p. 794-803 10 p.
2. Caffeine is a respiratory stimulant without effect on sleep in the short-term in late-preterm infants. Seppä-Moilanen, M., Andersson, S. & Kirjavainen, T., Sep 2022, In: Pediatric Research. 92, p. 776–782 7 p.
3. Finnish children who experienced narcolepsy after receiving the Pandemrix vaccine during the 2009-2010 H1N1 pandemic demonstrated high level of psychosocial problems. Hovi, M., Heiskala, H., Aronen, E. T., Saarenpää-Heikkilä, O., Olsen, P., Nokelainen, P. & Kirjavainen, T., Apr 2022, In: Acta Paediatrica. 111, 4, p. 850-858 9 p.

### Biography

Kirjavainen Turkka has completed his PhD at the age of 26 years after working in Sydney under supervision of Colin Sullivan, the inventor of CPAP treatment of obstructive sleep Apnea. He is a Neonatologist and Pediatric Pulmonologist, and he has been a head of Pediatric Pulmonology and sleep laboratory team at New Children's Hospital, Helsinki, Finland since 2009.

turkka.kirjavainen@hus.fi

3<sup>rd</sup> International Conference

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## Cardiovascular Injury and clinical features of Multisystem Inflammatory Syndrome in Children (MIS-C) Related to Covid-19 in Vietnam

**Nguyen Phung Nguyen**

University of Medicine and Pharmacy, Vietnam

**Background:** This study aimed to describe the Cardiovascular Injury and clinical features of Multisystem Inflammatory Syndrome in Children (MIS-C) related to Coronavirus Disease 2019 (COVID-19) in Ho Chi Minh City, Vietnam.

**Methods:** This was a retrospective cohort study of children with MIS-C (from September 1, 2021 to February 28, 2022) in Children's Hospital 1, Ho Chi Minh City. Demographics, clinical history, significant underlying conditions, clinical manifestations, laboratory investigations, and medical management were analyzed.

**Results:** A total of 76 patients were included (median age, 5.9 years old, 2 months–16 years). The male/female ratio was 1.6/1. Most patients (75/76) had no previous medical conditions. The mean time from acute severe acute respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infection to symptom onset was 39 days. During an acute SARS-CoV-2 infection, these patients are either asymptomatic or mildly symptomatic. In addition to fever, gastrointestinal symptoms were also prominent, as observed in our study, with 75%, 73.7%, and 72.3% of patients presenting with abdominal pain, vomiting, and loose stools, respectively. The levels of inflammatory markers increased upon admission and returned to normal levels after treatment. Echocardiography revealed decreased myocardial contractility and coronary injury in 16 (21.1%) and 32 (42.1%) patients, respectively. Most cases (72/76) had no fever within 3 days of intravenous immunoglobulin (IVIG) and methylprednisolone treatment. No deaths occurred in this study. The mean duration of hospitalization was 7.2 days.

**Conclusion:** Cardiovascular involvement was observed in approximately 53.9% of the patients. Anti-Inflammatory Treatment with IVIG and methylprednisolone had a favorable short-term outcome. However, long-term follow-up studies on post-discharge MIS-C cases are needed to make appropriate treatment recommendations in the acute phase.

### References

1. Dufort E.M., Koumans E.H., Chow E.J., Rosenthal E.M., Muse A., Rowlands J. et al. Multisystem inflammatory syndrome in children in New York state. *N Engl J Med.* 2020; 383: 347-358
2. Feldstein L.R., Rose E.B., Horwitz S.M., Collins J.P., Newhams M.M., Son M.B.F., et al. Multisystem inflammatory syndrome in U.S. Children and adolescents. *N Engl J Med.* 2020; 383: 334-346
3. Whittaker E., Bamford A., Kenny J., Kaforou M., Jones C.E., Shah P., et al. Clinical characteristics of 58 children with a pediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2. *JAMA.* 2020; 324: 259-269.

### Biography

Nguyen Phung Nguyen is a well-respected Physician and Professor of Medicine who has dedicated his career to improving healthcare in Vietnam. He has extensive experience in clinical practice and research, and has been involved in many initiatives aimed at improving the health and wellbeing of the Vietnamese people. He is particularly interested in the prevention and treatment of Infectious Diseases, and has worked tirelessly to develop new treatments and vaccines. He is a well-respected Physician and professor of medicine who has dedicated his career to improving healthcare in Vietnam. He has extensive experience in clinical practice and research, and has been involved in many initiatives aimed at improving the health and wellbeing of the Vietnamese people. He is particularly interested in the prevention and treatment of Infectious Diseases, and has worked tirelessly to develop new treatments and vaccines.

Nguyenphung@ump.edu.vn

3<sup>rd</sup> International Conference

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## The importance of grammar skills assessment in the children

**Fatemeh Fekar Gharamaleki**

Tabriz University of Medical Sciences, Iran

Grammar is one of the main components of language as well as communicative and social interaction skills. Children with language impairments often have difficulties in many areas of linguistic skills, but grammar is particularly affected. We searched PMC, Web of Science, PubMed, Scopus, Medline, SID, and Ovid databases. The present information is available by reviewing the articles from 1990 to 2023 through the search of the resources. Grammar is one of the most fundamental components of language, rules of a language govern the sounds, words, sentences, and other elements, as well as their combination and interpretation. Grammar is reliable for predicting a child's literacy skills, academic processes, and adult communication skills. Grammar evaluation in children is complex, and its analysis requires appropriate tests and relevant expertise. Language and Grammar development is considered an essential part of mental development. Grammar is necessary for language learning and educational processes, and grammar inadequacy skills trouble learning processes. Grammar is the heart of language. As a hallmark of DLD, grammar development is an important area of need for these children. On the other hand, grammar is highly correlated with the development of other linguistic domains. Grammar is a reliable factor for predicting a child's literacy skills such as reading comprehension in the early stages. Grammar assessment is crucial for intervention. The majority of published language intervention studies indicate that intervention is generally successful, regardless of the targets or methods used. The ultimate goal of intervention research is to establish which method is the most effective, for which areas of language, for which children, and using which method of delivery. The most important variables within the children are likely to be age, severity, and pervasiveness of language difficulties and any co-occurring difficulties.

### Recent publications

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2. Fekar Gharamaleki, F., Ahadi, H., Dastjerdikazemi, M., Bagherpour, P., Darouie, A., Ebadi, A., ... & Karimijavan, G. (2021). Determinants of Language Impairment in Turkish-Persian Bilingual Children. *The Scientific Journal of Rehabilitation Medicine*, 10(5), 922-935.
3. Kahjoogh, M. A., Pishyareh, E., Gharamaleki, F. F., Mohammadi, A., Someh, A. S., Jasemi, S., & Zali, M. M. (2020). The Son-Rise Programme: an intervention to improve social interaction in children with autism spectrum disorder. *International Journal of Therapy and Rehabilitation*, 27(5), 1-8.

### Biography

Fatemeh Fekar Gharamaleki is studying for her Ph.D. at Social Welfare and Rehabilitation Sciences University, Iran. She is the Director of Tabriz University of Medical Sciences, Iran. She has over 70 publications cited in journals and books, her H-index is 5 and she has registered over 6 patents. Her research and writing have focused on the Azeri Turkish language and the assessment of developmental language disorders. She has developed the Azeri Turkish test of grammar perception and research in this field.

slp.fekar@yahoo.com