

OFFICIAL PROGRAM

Hosted by: APGAN

Co-Host: SickKids

Program-at-a-Glance

	TUESDAY OCTOBER 1, 2019			WEDNESDAY OCTOBER 2, 2019			THURSDAY OCTOBER 3, 2019			
8:30AM	OPENING REMARKS AUDITORIUM									8:30AM
9:00AM	PLENARY SESSION 1: SETTING THE STAGE AUDITORIUM			PLENARY SESSION 3: LIVER DISEASE 2 AUDITORIUM			PLENARY SESSION 5: GENERAL GASTROENTEROLOGY AUDITORIUM			9:00AM
9:30AM										9:30AM
10:00AM										10:00AM
10:30AM	COFFEE & TEA GALLERY			COFFEE & TEA GALLERY			COFFEE & TEA GALLERY			10:30AM
11:00AM	PLENARY SESSION 2: VACCINES AND GASTROINTESTINAL INFECTIONS AUDITORIUM		PARALLEL SESSION G: ACUTE & PERSISTENT DIARRHOEA 2 AUDITORIUM	PARALLEL SESSION H: HOST PATHOGEN INTERACTION AND ENTEROPATHY EVENT ROOM	PARALLEL SESSION I: TREATMENT OF ILL UNDERNOURISHED CHILDREN EVENT ROOM 2A/B	PARALLEL SESSION M: UNDERSTANDING THE PATHOPHYSIOLOGY OF ENVRONMENTAL ENTEROPATHY AUDITORIUM	PARALLEL SESSION N: MOLECULAR MECHANISMS OF GUT AND IMMUNE DYSFUNCTION EVENT ROOM 1	PARALLEL SESSION O: STUNTING EXEMPLARS FROM LOW AND MIDDLE-INCOME COUNTRIES EVENT ROOM 2A/B	11:00AM	
11:30AM									11:30AM	
12:00PM									12:00PM	
12:30PM	LUNCH & E-POSTER SESSION			LUNCH & E-POSTER SESSION GALLERY			LUNCH & E-POSTER SESSION GALLERY			12:30PM
1:00PM	GALLERY		1:00PM							
1:30PM	PARALLEL SESSION A: ACUTE & PERSISTENT DIARRHOEA 1 EVENT ROOM	PARALLEL SESSION B: LIVER DISEASE 1 EVENT ROOM 2A/B	PARALLEL SESSION C: UNDERSTANDING MALNUTRITION- ASSOCIATED PATHOPHYSIOLOGY EVENT ROOM 3A/B	PARALLEL SESSION J: NOVEL TESTS OF INTESTINAL FUNCTION AUDITORIUM	PARALLEL SESSION K: MICROBIOME AND HEALTH EVENT ROOM 1	PARALLEL SESSION L: LONG TERM NEURO-COGNITIVE EFFECTS OF EARLY LIFE NUTRITIONAL INSULTS EVENT ROOM 2A/B	DEBATE SESSION: CURRENT CONTROVERSIES IN GLOBAL PEDIATRIC GI AND NUTRITION AUDITORIUM			1:30PM
2:00PM										2:00PM
2:30PM										
3:00PM	COFFEE & TEA GALLERY			COFFEE & TEA GALLERY			CLOSURE OF MEETING			3:00PM
3:30PM	PARALLEL SESSION D:	PARALLEL SESSION E: PARALLEL			DI ENIADVEECCION A					3:30PM
4:00PM	INTESTINAL FAILURE AND REGENERATION	CHRONIC INTESTINAL INFLAMMATION: IBD AND EED EVENT ROOM 2A/B	SESSION F: MICRONUTRIENTS IN CHILDHOOD EVENT ROOM 3A/B	PLENARY SESSION 4: INFECTIONS AND ANTIBIOTICS IN VULNERABLE POPULATIONS AUDITORIUM						4:00PM
4:30PM	EVENT ROOM 1									4:30PM



Detailed Program

TUESDAY, OCTOBER 1, 2019

8:30AM

OPENING REMARKS

AUDITORIUM

Zulfiqar A. Bhutta, Co-Director of SickKids Centre for Global Child Health Michael Salter, Chief of SickKids Research Institute

Neelam Mohan. President of CAPGAN

9:00AM

PLENARY SESSION 1: SETTING THE STAGE

AUDITORIUM

Chair: Jay Berkley & Beatrice Amadi

Global Burden of Childhood Malnutrition: what do we know?

Nicholas Kassebaum, Institute for Health Metrics and Evaluation, USA

The Costly Lifelong Triple Burden of Early Childhood Enteric Infections (HAZdrop, COGhit & METsyn): Bridging Clinical & Lab Research Dick Guerrant, University of Virginia, USA

John Walker-Smith Oration: Advances in understanding the control of childhood diarrhoea mortality

Robert Black, Johns Hopkins University, USA

Invited Comment

John Walker-Smith

Learning Objectives: At the end of the session, participants will be able to:

- Assess the current burden of childhood malnutrition
- Illustrate the effect of malnutrition on the growth of children
- Demonstrate how to positively impact childhood mortality as a result of diarrhoea

10:30AM

COFFEE & TEA

GALLERY

11:00AM

PLENARY SESSION 2: VACCINES AND GASTROINTESTINAL INFECTIONS

AUDITORIUM

Chair: Tony Nelson

Progress and challenges in global rotavirus prevention

Jacqueline Tate, CDC, USA

Typhoid Fever

Andrew Pollard, University of Oxford, UK

Recent Advances in Enteric Vaccines

Duncan Steele, Bill & Melinda Gates Foundation

Learning Objectives: At the end of the session, participants will be able to:

- Trace the progress & demonstrate the advances in global virus prevention
- Identify the most up to date vaccine for typhoid fever
- Identify the work that non-profit organizations are doing in the field of enteric vaccines

12:30PM

LUNCH & E-POSTER SESSION

GALLERY

Diarrhoea Theme

1:30PM

PARALLEL SESSION A: ACUTE & PERSISTENT DIARRHOEA 1

EVENT ROOM 1

Chair: Steve Allen & Neelam Mohan

Cholera: state of the art

Firdausi Qadri, icddr-b, Bangladesh

Does promotion of Water, sanitation and hygiene practices make a difference? Lessons learned from the SHINE trial

Jean Humphrey, Johns Hopkins University, USA

Evaluation of a test and treat approach for acute severe pediatric gastroenteritis in Botswana

David Goldfarb, University of British Columbia, Canada



Learning Objectives: At the end of the session, participants will be able to:

- Analyze the most recent advancements in Cholera treatment in South Asia
- Indicate the efficacy of probiotics in the management of acute gastroenteritis
- Describe the primary & secondary outcome measure in sanitary & hygiene practice

General GI/Liver Theme

1:30PM PARALLEL SESSION B: LIVER DISEASE 1

EVENT ROOM 2A/B

Chair: Yaron Avitzur

Outcomes for Children after Liver Transplantation - Targeting Health Span

AND Life Span

Vicky Ng, SickKids, Canada

Oral Abstract: Spectrum, manifestation and management of hepatopulmonary syndrome in 150 consecutive living related pediatric liver

transplantation

Aaashay Abhay Shah

Pediatric NAFLD: A state of the art

Marialena Mouzaki, Cincinnati Children's Hospital, USA

Long-term risks for non-communicable diseases after severe malnutrition Debbie Thompson, University of the West Indies, Jamaica

Learning Objectives: At the end of the session, participants will be able to:

- Identify the severity of graft injury after childhood liver translation
- Recognize long terms risks associated with the quality of life & potential barrier of post-transplant stages
- Identify the long-term risks in pediatric patients who have suffered severe malnutrition

Malnutrition Theme

1:30PM

PARALLEL SESSION C: UNDERSTANDING
MALNUTRITION-ASSOCIATED PATHOPHYSIOLOGY

EVENT ROOM 3A/B

Chair: Iqbal Memon

Pathophysiology of Edematous Malnutrition: an overview and novel insights

André Briend, University of Tampere, Finland

Malnutrition and Immune Function

Agnes Gwela, University of Oxford, UK

Metabolic Function in Malnutrition

Robert Bandsma, SickKids, Canada

Oral Abstract: Plasma proteomics reveals markers of

metabolic stress in HIV SAM

Gerard Bryan Gonzales, Universiteit Gent, Belgium

Oral Abstract: Evaluating the Role of the Tryptophan-Nicotinamide

(TRP-NAM) Pathway in Severe Malnutrition

Guanlan Hu, Hospital for Sick Children, Canada

Learning Objectives: At the end of the session, participants will be able to:

- Describe the pathophysiological disturbances associated with malnutrition
- Summarize the state-of-the-art knowledge on the effects of malnutrition on metabolism
- Discuss the immunological effects of malnutrition

3:00PM COFFEE & TEA

GALLERY

Diarrhoea Theme

3:30PM PARALLEL SESSION D: INTESTINAL FAILURE AND

REGENERATION

EVENT ROOM 1

Chair: Oscar Gomez

The new reality of Intestinal failure and transplantation

Yaron Avitzur, SickKids, Canada

Oral Abstract: Kinase Signaling Defects responsible for MVID diarrhoea

Nadia Ameen

Oral Abstract: Using Exosomes to repair Malnutrition-Induced

Gut Barrier Dysfunction

Mohammad Karim Maghraby, SickKids, Canada

Roles of GLP1 and 2 on Intestinal Function and Regeneration

Patricia Brubaker, University of Toronto

Oral Abstract: Beneficial Effects of Glucagon-like Peptide-2 Receptor Agonist On Intestinal Barrier Function Among Undernourished Mice

Jibraan Fawad, University of Virginia, USA

Oral Abstract: Transcriptomic profiles of mucosal biopsies from children

with stunting and adults

Paul Kelly

Learning Objectives: At the end of the session, participants will be able to:

- Recognize the structure and important contribution of multidisciplinary care for pediatric intestinal failure
- Understand the management of long-term complications of surgical strategies with focus on anastomotic ulcers
- Determine whether these growth efforts exert synergistic effects on intestinal growth and function

General GI/Liver Theme

3:30PM **PARALLEL SESSION E: CHRONIC INTESTINAL**

INFLAMMATION: IBD AND EED

EVENT ROOM 2A/B

Chair: Sean Moore

IBD: state of the art

Anne Griffiths, Sickkids, Canada

Managing IBD in LMIC's

Vineet Ahuja, All India Institute of Medical Sciences, India

EED and its contribution towards chronic malnutrition in children Asad Ali, Aga Khan University, Pakistan

Learning Objectives: At the end of the session, participants will be able to:

- Apply the most recent advancements in IBD treatment in South Asia
- Demonstrate & examine the management of Irritable bowel syndrome in low- & middle-income countries
- Distinguish the similarities & differences in IBD & EED to determine the correct diagnosis

Malnutrition Theme

3:30PM **PARALLEL SESSION F: MICRONUTRIENTS IN CHILDHOOD**

EVENT ROOM 3A/B

Chair: Barbara Golden

Iron deficiency prevention in pregnancy and childhood Stan Zlotkin, SickKids Centre for Global Child Health, Canada

Vitamin D in pregnancy and infant outcomes in Bangladesh Daniel Roth, SickKids Centre for Global Child Health, Canada

Micronutrient deficiencies in early life

Philip Abiodun, Benin, Nigeria

Oral Abstract: The prevalence of nutritional deficiencies appears to be high among adolescent girls (15 to 19 years) in rural Pakistan

Jo-Anna Baxter, SickKids Centre for Global Child Health, Canada

- Have up to date knowledge of micronutrient deficiencies globally,
- Advise on likelihood of micronutrient deficiencies in children in both 'developed' and 'developing' countries,
- Advise on strategies to prevent iron deficiency in pregnancy and diagnose specific micronutrient deficiencies in young children in Canada and Nigeria.

WEDNESDAY, OCTOBER 2, 2019

9:00AM PLENARY SESSION 3: LIVER DISEASE 2

AUDITORIUM

Chairs: Vicky Ng

Challenges in achieving elimination of viral hepatitis globally

Jordan Feld, Toronto General Hospital, Canada

Treatment of viral hepatitis in children

Simon Ling, SickKids, Canada

Long-term graft injury after liver transplantation

Deirdre Kelly, Birmingham Children's Hospital, UK

Upsurge in applications to address donor-graft shortage in pediatric liver transplantation in India

Neelam Mohan, Sanjay Gandhi Postgraduate Institute of Medical Sciences, India

Learning Objectives: At the end of the session, participants will be able to:

- Extrapolate the challenges to public health at successfully elimination viral hepatitis on a global scale
- Identify the efficacy of treatment of viral hepatitis
- Discuss how donor graft shortages in India lead to an upsurge in applications

10:30AM COFFEE & TEA

GALLERY

Diarrhoea Theme

11:00AM PARALLEL SESSION G: ACUTE & PERSISTENT

DIARRHOEA 2

AUDITORIUM

Chair: Tahmeed Ahmed

MAL-ED: what did we learn

Margaret Kosek, Johns Hopkins University, USA

Recent advances in the management of diarrhoea

Stephen Freedman, Alberta Children's Hospital Research Institute, Canada

Oral Abstract: Efficacy of green banana mixed lactose-free diet in the management of persistent diarrhoea among 6 to 35 months old Bangladeshi children: a randomized controlled clinical trial Monira Sarmin, icddrb, Bangladesh

Oral Abstract: chemical water quality in feeding centers for SAM Syed Imran, York University, Canada

Learning Objectives: At the end of the session, participants will be able to:

- State how climate change threatens to undermine recent progress in reducing global deaths from diarrhoea disease in children.
- Understand the management of diarrhoea in Canada
- Trace the primary cause of EED due to living in conditions of poor quality

General/GI Liver Theme

11:00AM PARALLEL SESSION H: HOST PATHOGEN INTERACTION AND ENTEROPATHY

EVENT ROOM 1

Chair: Donald Bundy

Salmonella pathogenicity
John Brumell, SickKids, Canada

Emergent E. coli enteropathogenes
Oscar Gomez, University of Buffalo, USA

Probiotics and intestinal injuryPhil Sherman, Sickkids, Canada

Oral Abstract: A co-culture strategy to optimize probiotic biomanufacturing using metabolomics

Gregory Medlock, University of Virginia, USA

- Summarize the Pathogenesis of Salmonella gastroenteritis
- Discuss the nomenclature, pathogenesis, clinical manifestations, epidemiology and antibiotic resistance of E-coli
- List how probiotics, prebiotics and micronutrients influence the onset and progression of inflammatory bowel disease (IBD)



Malnutrition Theme

11:00AM PARALLEL SESSION I: TREATMENT OF ILL UNDERNOURISHED CHILDREN

EVENT ROOM 2A/B

Chair: Chris Damman

The CHAIN cohort - mortality risks in sick undernourished children Jay Berkley, KEMRI, Kenya

The CHAIN cohort - intestinal micro-organisms and function Kirk Tickell, University of Washington, USA

Treatment of severely malnourished young infants: novel insights Martha Mwangome, KEMRI, Kenya

Oral Abstract: Metabolome Associated with Mortality of Children with Complicated Severe Acute Malnutrition: a nested case-control study Bijun Wen, The Hospital for Sick Children, Canada

The use of early warning signs in children with severe acute malnutrition (SAM) Wieger Voskuijl

Learning Objectives: At the end of the session, participants will be able to:

- Better understand the biological and social reasons that cause malnourished acutely ill children to die at such high rates during and after hospitalization.
- Prioritize and guide the design of future clinical trials that will help reduce mortality in these vulnerable children.
- Reference norms for various laboratory tests which currently lack accepted normal threshold values.

12:30PM LUNCH AND E-POSTER SESSION

GALLERY

Diarrhoea Theme

1:30PM PARALLEL SESSION J: NOVEL TESTS OF INTESTINAL FUNCTION

AUDITORIUM

Chair: Asad Ali

Enteropathy biomarkers: How useful are they? Donna Denno, University of Washington, USA Oral Abstract: Prediction of mortality in severe acute malnutrition by faecal volatile organic compound analysis

Debbie van den Brink, University of Amsterdam, The Netherlands

Assessing intestinal imaging with tethered capsule endomicroscopy Gary Tearney, International Academy of Digital Pathology, USA

Oral Abstract: Appetite status of under five children in Bangladesh compared to their non-stunted peers: a community-based trial Naila Nurun Nahar, icddrb, Bangladesh

Oral Abstract: Evaluation of stool-based Xpert-MTB/RIF testing for the diagnosis of Tuberculosis in young children

Luke Uebelhoer

Learning Objectives: At the end of the session, participants will be able to:

- Indicate the reasons for the challenge of diagnosing EED
- Assess the benefits of pancre replacement therapy (PERT) in children with complexed severe acute malnutrition.
- Review the ability of optical coherence tomography to provide detailed images of subsurface structures in the upper gastrointestinal (GI) tract

General GI/Liver Theme

1:30PM PARALLEL SESSION K: MICROBIOME AND HEALTH

EVENT ROOM 1

Chair: Phil Sherman

Host microbiome interactions in health and disease Eran Elinav, Israel

Intestinal Microbiome and Malnutrition
Geoffrey Preidis, Baylor College of Medicine, USA

Harnessing the gut microbiota to treat childhood acute malnutrition Tahmeed Ahmed, icddr-b, Bangladesh

- Describe the interactions between the mammalian host, its intestinal microbiota, the immune system and their effects on health and disease.
- Define mechanisms through which early life undernutrition alters metabolism and to determine how undernutrition influences intestinal and liver function.
- Demonstrate the use of metagenomics to understand the genetic basis of malnutrition

Malnutrition Theme

1:30PM PARALLEL SESSION L: LONG TERM

NEURO-COGNITIVE EFFECTS OF EARLY LIFE

NUTRITIONAL INSULTS

EVENT ROOM 2A/B

Chair: Wieger Voskuijl

Oral Abstract: Low Fat-free Mass is an Important Predictor of 6-month Developmental Outcomes among Children with Severe Acute Malnutrition

Harriet Babikako

Oral Abstract: Nutrition, stimulation and hygiene education impact positively on development and growth, but not gut microbiota Prudence Atukunda

Oral Abstract: Moderate acute malnutrition is associated with changes in saccadic reaction times in 7 to 11 month-old infants in Sierra Leone

D. Taylor Hendrixson, Washington University - St. Louis, USA

Oral Abstract: A structural equation model of pathways between household income, care practices, and nutrition and development in children with severe acute malnutrition in Malawi
Allison Daniel, Hospital for Sick Children, Canada

Learning Objectives: At the end of the session, participants will be able to:

- Report the effects of undernutrition on child development
- Understand the relationships between nutritional stressors on neurocognitive function
- Value the role of nutrition on brain development and function

3:00PM	COFFEE & TEA
	GALLERY

3:30PM PLENARY SESSION 4: INFECTIONS AND ANTIBIOTICS IN VULNERABLE POPULATIONS

AUDITORIUM

Chair: Paul Kelly

Malnutrition and childhood infections
Jay Berkley, KEMRI, Kenya

Blanket antibiotic therapy for vulnerable pediatric populations: A debate

For: Mark Manary, Washington University - St. Louis, USA Against: Jim Tielsch, George Washington University, USA Moderator: Jay Berkley

Learning Objectives: At the end of the session, participants will be able to:

- Understand the role of infection in severe acute malnutrition
- Understand the potential problems of antibiotic resistance and dysbiosis in children in LMICs
- Assess the evidence that antibiotics can reduce overall mortality in some settings

THURSDAY, OCTOBER 3, 2019

9:00AM PLENARY SESSION 5: GENERAL GASTROENTEROLOGY

AUDITORIUM

Chair: Bhupinder Sandhu

Helicobacter Pylori: state of the art

Nicola Jones, Hospital for Sick Children, Canada

Global burden and recent advances in the management of celiac disease
Govind Kumar Makharia, All India Institute of Medical Sciences, India

Establishing a Pediatric GI fellowship program in Pakistan Huma Cheema, The Institute of Child Health, Pakistan

State of the art and novel tools to diagnose food allergies

Thomas Eiwegger, Hospital for Sick Children, Canada

- Demonstrate current knowledge of epidemiology of Coeliac disease in a global setting and be able to optimally diagnose and manage children with suspected Coeliac disease concordant with international guidelines.
- Describe state of art knowledge of global epidemiology of Helicobacter-pylori, methodology for diagnosis and options for treatment in both less and more developed countries.
- Apply knowledge of how to plan and go about establishing a GI fellowship program particularly in a country like Pakistan



10:30AM C

COFFEE & TEA

GALLERY

Diarrhoea Theme

11:00AM

PARALLEL SESSION M: UNDERSTANDING THE PATHOPHYSIOLOGY OF

ENVRONMENTAL ENTEROPATHY

AUDITORIUM

Chair: Peter Sullivan

A First 1000 Days Perspective on EED

Sean Moore, University of Virginia, USA

Artificial intelligence analysis of intestinal biopsies in EE

Sana Syed, University of Virginia, USA

Immunological dysfunction in EE

Chelsea Marie, University of Virginia, USA

What do biopsies tell us about function in EED?

Paul Kelly, Queen Mary University of London, UK

Learning Objectives: At the end of the session, participants will be able to:

- Elucidate underlying mechanisms of diarrhoea and undernutrition in a child's first 1,000 days
- Highlight he epidemiology, clinical and histologic classification of the entity, as well as discussing novel biomarkers and possible therapies.
- Describe the pathophysiology of EED and examine the evidence linking EED and oral vaccine failure

General GI/Liver Theme

11:00AM

PARALLEL SESSION N: MOLECULAR MECHANISMS OF GUT AND IMMUNE DYSFUNCTION

EVENT ROOM 1

Chair: Christina Lancioni

Monogenetic causes of chronic intestinal inflammation Aleixo Muise, Hospital for Sick Children, Canada

Oral Abstract: Impact of acute illness on whole-blood cytokine responses to pathogen-associated molecular products among young African children with and without severe-malnutrition

Luke Uebelhoer

Oral Abstract: A novel murine model of malnutrition enteropathy looking both at structure and function to investigate the role of autophagy Chris Versloot

Oral Abstract: Identification of Environmental Enteric Dysfunction (EED) in Pakistani children using novel approaches

Naieeha Talat Igbal, Aga Khan University, Pakistan

Learning Objectives: At the end of the session, participants will be able to:

- Identify the causes of chronic intestinal inflammation & the pathogenies of pediatric inflammatory bowel disease
- Understand the impact of pathogen-associated molecular products among young African children
- Novel approaches used amongst Pakistani children & the outcomes

Malnutrition Theme

11:00AM

PARALLEL SESSION O: STUNTING EXEMPLARS FROM LOW AND MIDDLE-INCOME COUNTRIES

FVFNT ROOM 2A/B

Chair:

Introduction to the Exemplars

Oliver Rothschild, Gates Ventures

Cross cutting analysis and implications for policy

Zulfigar A. Bhutta, SickKids Centre for Global Child Health, Canada

- Discuss better practices and the cost and benefits of scaling up programs to improve child feeding and prevent stunting
- Recognize the mechanisms underlying linear growth failure at different ages in lmic's
- Understand a case for support-led policy approach with a focus on integrated and structural factors to addressing the problem of undernutrition among children in lmic's





12:30PM LUNCH AND E-POSTER SESSION

GALLERY

1:30PM DEBATE SESSION: CURRENT CONTROVERSIES IN GLOBAL PEDIATRIC GI AND NUTRITION

AUDITORIUM

Moderator: Donald Bundy, LSTMH, UK

Mass Deworming: A debate

For: Judd Walson, University of Washington, USA Against: Vivian Welch, University of Ottawa, Canada

Learning Objectives: At the end of the session, participants will be able to:

- Describe the rationale, including cost-effectiveness, for empiric mass deworming as a strategy to reduce morbidity due to soil transmitted helminths (STH).
- Identify limitations of available data supporting health benefits of mass deworming, including an understanding of current evidence and challenges to interpretation of existing data.
- Describe the limitations of the current MDA platform in breaking the transmission of STH and the rationale for considering expanded MDA platforms in some geographic settings.

3:00PM CLOSURE OF MEETING



Toronto, Canada 1-3 October, 2019

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Co-Host: SickKids