



**Sheraton Wall Centre 1088 Burrard Street Vancouver**  
**All presentations are in Pavilion C&D**

**DAY 1: SUNDAY, SEPTEMBER 15, 2019**

**0745-0900 Registration & Breakfast**

**0900-0930 Welcome and Opening Address:**

- First Nations Territorial Welcome: Syexwaliya Ann Whonnock, Squamish Nation
- BC Ministry of Health: Bonnie Henry
- Introduction to INMIS 2019: Co-Chairs: Tobi Kollmann & Manish Sadarangani

**0930-1015 Opening Keynote**

**Session Chair: Dr. Manish Sadarangani**

**Protecting the next generation through neonatal and maternal immunization**

**Speaker: Dr. Shabir Madhi, University of the Witwatersrand, South Africa**

*Session Learning Objectives:*

1. Understand how maternal and neonatal immunization fit into the WHO Sustainable Development Goals
2. Describe the role of maternal and neonatal immunization in a healthy life trajectory for the first 1000 days
3. Understand the challenges of coordinated and sustainable global implementation of maternal and neonatal immunization programs

**1015-1115 Session 1 Protecting newborns and infants through maternal immunization**

**Session Chairs: Dr. Flor Munoz and Dr. Paul Heath**

*Session 1 Learning Objectives:*

1. Update on the progress towards the implementation of maternal immunization as a public health strategy to protect newborns and infants against serious infections
2. Describe efforts to introduce maternal vaccines in LMICs: Are current antenatal care services an adequate platform?
3. Understand the challenges and opportunities for the assessment of safety and effectiveness of maternal immunization through EMR and data linkage, including specific challenges in LMICs

**Maternal tetanus vaccination as a platform for the implementation of maternal immunization in LMICs**

**Speaker: Dr. Philipp Lambach, World Health Organization, Switzerland**

*Learning Objectives:*

1. Acquire insights into characteristics of health care delivery systems in Low and Middle Income countries
2. Deepen understanding of how several health system attributes correlate with performance in the delivery of vaccines to pregnant women
3. Discuss methods and international efforts to support countries assess/improve their maternal immunization systems

**Linking mothers and infants to assess the safety and effectiveness of maternal immunization**

**Speaker: Deshayne Fell, University of Ottawa, Canada**

*Learning Objectives*

1. Describe the types of electronic data that are used to perform large, population-based research on maternal immunization
2. Review the opportunities and challenges of using large linked databases for maternal immunization research
3. Highlight the major contributions to the evidence on safety and effectiveness of maternal immunization of studies using large linked databases

**1115-1145 BREAK, POSTER VIEWING & NETWORKING**

**1145-1245 Session 1 Submitted abstracts**

- “Maternal pertussis vaccination during pregnancy and early childhood outcomes in Ontario, Canada” Ms Megan Laverty University of Ottawa, Canada



- **“Effectiveness of inactivated influenza vaccination in pregnant women for prevention of influenza-associated hospitalization in their young infants: a case-control study”**. Dr. Marta Nunes University Of The Witwatersrand, South Africa
- **“A multi-country cohort study investigating adverse birth outcomes among women hospitalized with acute respiratory infection during pregnancy”**. Dr. Annette Regan Texas A&M University, USA
- **“A prospective study to evaluate the impact that method of gestational age determination has on the rates of key pharmacovigilance outcomes in The Gambia”**. Dr. Ed Clarke on behalf of Dr. Mustapha Bittaye MRC Unit The Gambia at the London School of Hygiene and Tropical Medicine, The Gambia

#### **1245-1345 LUNCH, POSTER VIEWING & NETWORKING**

##### **1345-1415 Session 2 Multi-disciplinary approach to improve maternal vaccine uptake**

**Session Chairs: Dr. Ed Clarke and Dr. Flor Munoz**

*Session 2 Learning Objectives:*

1. *Understand the potential impact of belief systems and cultural practices on vaccine uptake in pregnant women*
2. *Describe the hurdles and opportunities of translating research findings into government policy*
3. *Consider the role of maternal healthcare providers as advocates of maternal and neonatal vaccination: opportunities and challenges*

##### **“Translating research findings into government policy on maternal and neonatal immunization**

**Speaker: Dr. Rolando Ulloa-Gutierrez, Hospital Nacional de Niños, Costa Rica on behalf of Dr. Maria Avila-Aguero, Hospital Nacional de Niños, Costa Rica**

*Learning Objectives:*

1. *To understand the opportunities and barriers to translating research findings into national policy recommendations – a country perspective*
2. *To describe the process for translating national policy into practice in maternal and neonatal immunization. What are the barriers and how can they be overcome.*

##### **1415-1530 Session 2 Submitted abstracts**

- **“Motives for Maternal Immunisation Uptake in Urban and Rural Gambia”**. Ms. Penda Johm MRC Unit The Gambia at the London School of Hygiene and Tropical Medicine, The Gambia
- **“Healthcare provider interpretations of vaccine product monograph information regarding use in pregnancy”**. Dr. Karina Top Dalhousie University, Canada
- **“Beyond individual decision-making: The importance of policy and provider recommendation for maternal vaccine acceptance in a low- and middle-income setting”**. Dr. Neisha Sundaram London School of Hygiene and Tropical Medicine, UK
- **“Lessons learned, knowledge and perceptions of maternal and neonatal immunization in Latin America”**. Dr. Alba Vilajeliu Pan American Health Organization (PAHO)/WHO
- **“Factors that influence vaccination decision-making among pregnant women: a systematic review and meta-analysis”**. Dr. Eliz Kilich, Vaccine Confidence Project, London School of Hygiene & Tropical Medicine, United Kingdom

#### **1530-1600 BREAK, POSTER VIEWING & NETWORKING**

##### **1600-1700 Panel & audience discussion: Overcoming hurdles to increase maternal vaccination uptake**

**Session Chairs: Dr. Flor Munoz and Dr. Ed Clarke**

Panelist – Serese Marotta, Philipp Lambach, Deshayne Fell, Shabir Madhi, Rolando Ulloa Gutierrez

**1715-1735 First Nations performance: Eagle Dance, the Bassinette traditional song and the Hoop Dance curated by Marlise McCormack of Siegel Entertainment**

#### **1700-1830 OPENING RECEPTION, POSTER VIEWING & NETWORKING**



## DAY 2: MONDAY, SEPTEMBER 16, 2019

**0700-0830 Trainees' Meet the Expert Breakfast (registration required) in Junior Ballroom**

**0730-0830 Breakfast & Networking for conference delegates**

**0830-0930 Session 3 The mechanistic underpinnings of maternal and neonatal immunization**

**Session Chairs: Dr. Arnaud Marchant and Dr. Ofer Levy**

*Session 3 Learning Objectives:*

1. Illustrate the potential of systems immunology for the understanding of the immunobiology of the mother-infant dyad
2. Provide an update on the immunobiology of pregnancy and its relevance for vaccine responses
3. Provide an update on the rules and mechanisms underlying transplacental transfer of maternal antibodies

**Systems immunology of the mother-infant dyad**

**Speaker: Dr. John Tsang, National Institutes of Health, USA**

*Learning Objectives:*

1. Principles of systems immunology analysis of vaccine responses
2. Overview of immune changes associated with pregnancy and possible consequences for infant immunity and vaccine responses
3. Perspectives of systems immunology analyses of the mother-infant dyad

**Molecular and cellular basis of maternal antibody transfer**

**Speaker: Madeleine Jennewein, Harvard University, USA**

*Learning Objectives:*

1. Classical model of maternal antibody transfer and its limitations
2. Novel cellular and molecular players in maternal antibody transfer
3. Perspectives of systems immunology analyses of the mother-infant dyad

**0930-1030 Session 3 Submitted abstracts**

- **"Dissecting the Antibody-OME of Preterm and Term Newborns using Systems Serology"**. Dr. Sepideh Dolatshahi Massachusetts General Hospital, Ragon Institute of MGH, MIT and Harvard, USA
- **"Functionality of antibody against B. pertussis in acellular versus whole cell pertussis-vaccinated infants born to mothers who received Tdap during pregnancy: a randomised trial"**. Dr. Nasamon Wanlapakorn Chulalongkorn University, Thailand
- **"The effect of pertussis vaccination during pregnancy on the cellular immune response after primary and booster infant vaccination"**. Ms. Marjolein Orije University of Antwerp; Center for the Evaluation of Vaccination, Belgium
- **"Pregnancy-induced changes in antibody glycosylation and non-neutralizing functions"**. Dr. Marcela Passetti University of Maryland, USA

**1030-1100 BREAK, POSTER VIEWING & NETWORKING**

**1100-1200 Panel & audience discussion: How does the maternal-newborn immune dyad communicate?**

**Panel Chairs: Dr. Arnaud Marchant**

Panelists: John Tsang, Madeleine Jennewein, Tobi Kollmann, SingSing Way

**1200 -1330 LUNCH, POSTER VIEWING & NETWORKING**

**1330-1430 Rapid Fire Student/Trainee oral abstracts**

**Session Chair: Manish Sadarangani**

- **"Defining the timing for delivery of a maternal respiratory syncytial virus vaccine using antenatal care gestational age data among pregnant women in Kilifi, Coastal Kenya"** Ms Joyce Nyiro, Kemri-wellcome Trust Research Programme, Kenya Poster 77
- **"Respiratory syncytial virus associated hospitalisations in Australian infants: Essential data to inform future maternal**



**vaccination strategies”** Ms. Gemma Saravanos, National Centre For Immunisation Research And Surveillance, Australia  
Poster 83

- **“Assessing obstetrical and birth outcomes associated with maternal Tdap administration in Ontario, Canada”**  
Ms Romina Fakhraei, University Of Ottawa, Canada Poster 2
- **“Vaccine Hesitancy and Compliance of mothers with neonatal immunization in the global south: Evidence from some Infant Welfare Clinics in Ondo State, Nigeria”** Dr. Olajumoke Aladenola, Ondo State Ministry Of Health, Nigeria Poster 37
- **“STAT3 transfection restores lack of Th17 differentiation in neonatal CD4+ T cells”** Ms. Zohreh Sharafian,  
BC Children's Hospital Research Institute, Canada Poster 57

#### **1430-1530 Session 4 Promoting healthy infant life through optimizing neonatal immunization**

**Session Chairs: Dr. Elke Leuridan and Dr. Rolando Ulloa-Gutierrez**

*Session Learning objectives:*

1. Overview on role of current vaccines in the prevention of neonatal morbidity and mortality
2. Optimizing existing neonatal immunization strategies, including opportunities to protect preterm born infants
3. New neonatal vaccines and the role for infant health promotion

#### **Neonatal immunization: well begun is half done**

**Speaker: Dr. David Goldblatt, University College London, United Kingdom**

*Learning Objectives:*

1. Provide update on current status of neonatal vaccination/neonatal immunisation research in HIC and LMIC settings
2. Explore the potential benefits of early life immunisation and the settings in which this would be advantageous
3. Explore the possible disadvantages of neonatal immunisation, with a focus on the immunology of early life immunisation and the use of neonatal immunisation in the face of maternal immunisation

#### **Vaccination of premature infants**

**Speaker: Dr. Paul T Heath, St Georges University of London, United Kingdom**

#### **1530-1600 BREAK, POSTER VIEWING & NETWORKING**

#### **1600-1700 Session 4 Submitted abstracts**

- **“Early pneumococcal conjugate vaccination primes mucosal immune responses to subsequent pneumococcal polysaccharide vaccine in Papua New Guinean children”**. Dr. Rebecca Ford Papua New Guinea Institute Of Medical Research, Papua New Guinea
- **“Maternal pertussis vaccination and its effect on opsonophagocytic activity of infant pertussis specific antibodies up to 24 months of age: a randomised controlled trial”**. Ms Daan Barug Centre for Infectious Disease Control, National Institute for Public Health and the Environment (RIVM), The Netherlands
- **The Influence of Pertussis-containing Vaccines in Pregnancy on Antibody Responses to Primary and Booster Immunizations in Infants: Individual Participant Data Meta-analysis.** Dr. Bahaa Abu Raya Vaccine Evaluation Center, BC Children's Hospital Research Institute, University of British Columbia, Canada
- **“Licensed Bacille Calmette-Guérin (BCG) formulations differ markedly in bacterial viability, RNA content and innate immune activation”**. Dr. Kinga Smolen Boston Children's Hospital, USA

#### **1700-1730 Late breaker abstracts**

- **“BCG vaccination protects from neonatal sepsis through induction of emergency granulopoiesis”**. Mr Byron Brook, University of British Columbia, Canada
- **“Malaria Antigen Shedding in Breastmilk of Mothers from a Region with Endemic Malaria”**. Dr. Lieke Van Den Elsen The University of Western Australia, Australia

#### **1730-1930 EVENING RECEPTION, POSTER VIEWING & NETWORKING**



**DAY 3: TUESDAY, SEPTEMBER 17, 2019**

**0730-0830 Breakfast & Networking**

**0830-0930 Session 5 The next generation of neonatal and maternal immunization research**

**Session Chairs: Dr. Clare Cutland and Dr. Beate Kampmann**

*Session Learning Objectives:*

1. Understand infections currently causing global maternal and neonatal deaths & disability
2. Understand the current burden of maternal and neonatal antimicrobial resistance (AMR) and the potential of maternal and neonatal immunization in tackling global AMR
3. Review the future challenges in development of future vaccines

**Research needs for the next generation of maternal and neonatal vaccines: Lessons learned from the case study of maternal group B streptococcal disease**

**Speaker: Dr. Stephanie Schrag, Centers for Disease Control and Prevention, USA**

*Learning Objectives:*

1. Understand the global burden of GBS and the rationale for a maternal vaccine
2. Understand the pathway and the challenges in developing in GBS vaccines

**Tackling AMR through maternal and neonatal immunization**

**Speaker: Dr. Padmini Srikantiah, Bill & Melinda Gates Foundation, USA**

*Learning Objectives:*

1. Understand the current burden of maternal and neonatal antimicrobial resistance (AMR)
2. Understand the potential of maternal and neonatal immunization in tackling global AMR

**0930-1030 Session 5 Submitted abstracts**

- **“Safety and Immunogenicity of a Hexavalent Group B Streptococcus Conjugate Vaccine in Healthy Nonpregnant Adults: A First-in-Human Study”**. Dr. Kimberly Center, Pfizer Inc, USA
- **“Safety and Immunogenicity and Efficacy of Third Trimester Immunization with an Respiratory Syncytial Virus F Protein Vaccine for the Protection of Infants Over the First 180 Days of Life”**. Dr. Louis Fries, Novavax, Inc, USA
- **“Maternal-infant transfer of naturally-acquired antibodies for protection against Shigella”**. Dr Esther Ndungo, University of Maryland School of Medicine, USA
- **“Use of minimal invasive tissue sampling for determining the burden of neonatal mortality that is potentially vaccine-preventable”**. Dr. Shabir Madhi, University of The Witwatersrand, South Africa

**1030-1100 BREAK & NETWORKING**

**1100-1145 Closing Keynote:**

**Session Chair: Dr. Tobias Kollmann**

**The presumption of inclusion: lessons learned from maternal immunization against emerging infectious diseases**

**Speaker: Dr. Ruth Karron, Johns Hopkins University, USA**

*Learning Objectives:*

1. Consider how the interests of pregnant women and their offspring can be fairly and equitably addressed in the development, evaluation and deployment of vaccines against emerging pathogens
2. Consider how lessons learned in the context of emerging threats might be more broadly applied to issues related to the inclusion of pregnant women in biomedical research

**1145-1245 Audience discussion: Is the field on the right path? What are we missing?**

**Session Chair: Dr. Beate Kampmann**

**Panelists: Marta Nunes, Ajoke Sobanjo-TerMeulen, Nasamon Wanlapakorn, Ruth Karron,**

**1245-1300 Closing Remarks and Adjournment**



**INMIS Co-Chairs: Dr. Tobias Kollmann and Dr. Manish Sadarangani**

**1300-1700 IMPRINT (Immunising Pregnant Women & Infants Network) general meeting (Lunch will be served) Meeting will be held in the Junior Ballroom**

This meeting is organized by IMPRINT and is open to IMPRINT members and anyone who would like to find out more about/join IMPRINT visit: <http://www.imprint-network.co.uk/>

**IMPRINT Pump Priming Grant Completed Projects:**

- Chrissie Jones: Unravelling maternal protection: Factors affecting transplacental transfer of antibody from mother to infant
- Sudaxshina Murdan: Oral vaccines which generate immune responses in the vagina and prevent mother-to-baby transmission of infections during birth
- Sonali Kochhar: Evaluating the Field Performance and Validating Novel Case Definitions Designed to Harmonize Safety Monitoring for Immunization in Pregnancy in LMIC
- Qibo Zhang: Elucidating the effect of maternal immunisation on the subsequent development of T cell response following pertussis vaccination in infants

**IMPRINT Fellowships:**

- Shadia Khandaker: Towards the understanding of anti-Group B Streptococcus (GBS) protective immunity: characterisation of maternal sera in high- vs. low-GBS prevalence countries using humanised mice
- Alansana Darboe: Understanding interactions between Maternal IgG and Neonatal Innate Immune Cells (MINIC)
- Neisha Sundaram: Understanding the influence of public, provider, policy and contextual factors on maternal vaccine acceptance
- Dan Kajungu: Innovations for vaccine safety monitoring and improved maternal and neonatal immunization in rural Uganda (InVxSIM)
- IMPRINT Pump Priming Grants – Ongoing projects
- Beth Holder: The human placental perfusion model: advance in knowledge of maternofetal antibody transfer
- Simon Kimuda: Using in vitro mycobacterial growth inhibition assays as a tool to assess functional immune responses induced by VPM1002 vaccination in infants
- Merryn Voysey: Maternal transplacental antibody decay rates: an individual participant data meta-analysis
- Sam Martin: Vaccine Confidence Project and Media Monitoring

**IMPRINT Public Engagement Grants**

- Chinedu Iwu: Empowering Traditional Birth Attendants to increase the utilization of maternal and neonatal immunizations in Imo State, Nigeria
- Marie Yang: Capturing and exchanging multi-national perceptions of maternal and neonatal immunisation





5<sup>th</sup> International Neonatal & Maternal Immunization Symposium  
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[www.inmis.org](http://www.inmis.org)

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