



**INTERNATIONAL  
CONFERENCE ON  
GROUP B STREP  
2020**

**JULY 20-22, 2020**

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**PROMOTING AWARENESS  
AND PREVENTION OF  
GROUP B STREP DISEASE  
IN BABIES**



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# WELCOME

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Group B Strep  
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GROUP B STREP  
INTERNATIONAL

Welcome to the International Conference on Group B Strep (ICGBS) 2020! This event is being held in recognition of July as International Group B Strep Awareness Month which GBSI has been proud to sponsor for the past 20 years.

Globally, an estimated one in four pregnant women carry Group B *Streptococcus* (GBS). This type of bacteria is a major, yet preventable, cause of maternal and infant ill health. Not all babies exposed to GBS become infected, but, for those who do, the results can be devastating. GBS can cause babies to be miscarried, stillborn, born prematurely, become very sick, have lifelong handicaps, or die.

Thank you to our keynote speaker, Dr. Carol J. Baker, and our amazing presenters who have shared their expertise to make a difference for families worldwide. We also want to recognize Hologic as our Diamond Sponsor, our parent sponsors, and the many individuals who support our efforts year-round for making this conference possible.

Thank you for joining us to work towards minimizing the burden of perinatal GBS disease worldwide!

MARTI PERHACH  
GBSI CEO AND COFOUNDER

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# SCHEDULE

**MONDAY - JULY 20**

## KEYNOTE SPEAKER

**GBS Prevention: Past, Present and Future**  
Carol J. Baker, MD

## IDENTIFYING AND UNDERSTANDING GBS COLONIZATION

**Group B Streptococcus in babies, adults and animals: is there a link?**  
Ruth Zadoks, MSc, MRes, DVM, PhD

**American Society for Microbiology Updates and Recommendations for Laboratory Detection and Identification of Group B Streptococcus**  
Laura Filkins, PhD, D(ABMM)

**Colonization of Group B Streptococcus in the Cervicovaginal Mucosa**  
Lindsey Burcham, PhD

**Using transcriptomics to identify GBS colonization factors**  
Laura C. Cook, PhD

**Group B Streptococcus and the vaginal microbiota**  
Katy Patras, PhD

## PREVENTING PREGNANCY LOSS & DIAGNOSING CAUSE

**Finding the First Step Toward Stillbirth Prevention**  
Lindsey J. Wimmer, RN, PHN, MSN, CPNP, CPLC

**How to Diagnose the Cause of Pregnancy Loss Using Placental Examination**  
Harvey J. Kliman, MD, PhD



# SCHEDULE

**TUESDAY - JULY 21**

## **IDENTIFYING SIGNS OF INFECTION & PARENT SUPPORT**

### **Signs of GBS Disease: Eyes and Ears**

Carol J. Baker, MD

### **Investigation of perinatal death from a Pathologist's perspective: clinical considerations and interaction with parents**

Marta Cohen, MD, FRCPath, DMJ (Pathol), Dip Med Ed

### **Why stigma should not be forgotten in stillbirth prevention and awareness**

Danielle Pollock, PhD

## **REDUCING PRENATAL RISK**

### **Differential local and systemic immune responses between animals that clear a vaginal Group B Streptococcus infection compared to those that remain colonized**

Alison Carey, PhD

### **Probiotics for the Prevention of Antenatal GBS Colonization: A Systematic Review and Meta-analysis**

Lisa Hanson, PhD, RN, CNM, APNP, FACNM

### **Successful prevention of early preterm birth by pH-measurement as a self-care habit in the State of Thuringia**

Udo Hoyme, Univ.-Prof. Dr. med. habil. Prof. Dr. h.c.

### **Reducing the Risk of GBS Infection in Pregnant Women of Rural Communities, and Providing them Support**

Brianna Rochebrun, BS

# SCHEDULE

**WEDNESDAY - JULY 22**

## REDUCING PERIPARTUM RISK

**Comparison of methods of Induction in regards to potential seeding of group B Streptococcus**

James A. McGregor, MDCM

**Penicillin Allergy Testing: A Health Opportunity in Pregnancy**

Karen M. Puopolo, MD, PhD

**Streptococcus agalactiae – a multi-host pathogen causing neonatal disease worldwide, recent advancements in uncovering Group B streptococcal disease clusters**

Elita Jauneikaite, PhD, BSc (Hons)

**Antibody Transfer from Mother to Infant: The Physiology of Breast Milk**

Kirsty Le Doare, MD, PhD

**Late-onset Group B Streptococcus Infection: Timing is Everything**

Tara M. Randis, MD, MS

## PREPARING FOR A MATERNAL VACCINE

**Juno: a global genomic survey of Streptococcus agalactiae**

Dorota Jamrozy, PhD

**Implications of insufficient antenatal care coverage on the implementation of a Group B Streptococcus (GBS) vaccine**

Bethany Atkins, MBChB DTM&H DFSRH. Current student MSc TMIH  
Jonna Mosoff, BSFS, current MSc student

# PRESENTERS

## KEYNOTE SPEAKER



### **CAROL J. BAKER** MD

Dr. Carol Baker is professor of pediatrics, McGovern Medical School at the University of Texas Health Science Center, Houston. Her clinical research has focused on all aspects of group B Streptococcus (GBS) infections from the first description of early- and late-onset sepsis and meningitis in neonates and young infants to the discovery of critical epitopes in the capsular polysaccharides necessary for development of candidate conjugate vaccine candidates. Her policy work with the American Academy of Pediatrics in the early 1990s led to the development of the first Centers for Disease Control and Prevention (CDC) recommendation in 1996 for intrapartum antibiotic prophylaxis to prevent early-onset GBS disease in neonates, a policy in its current iterations that prevents more than 80 percent of early-onset disease. Her advocacy and then leadership role at the CDC Advisory Committee on Immunization Practices (ACIP) led to the prevention of infant pertussis disease through maternal immunization with Tdap.

Dr. Baker is a member of the National Academy of Medicine, a past-president of NFID and the Infectious Diseases Society of America (IDSA), and a former chair of ACIP. Among numerous honors, she received the John P. Utz Leadership Award from NFID; the Mentor Award, Society Citation for outstanding achievements in the field of infectious disease, and the Alexander Fleming Award for Lifetime Achievement from IDSA; and the Albert Sabin Gold Medal Award from the Sabin Vaccine Institute.

**PRESENTATIONS:**  
**GBS Prevention: Past, Present and Future**  
**Signs of GBS Disease: Eyes and Ears**

# PRESENTERS



## **BETHANY ATKINS**

**MBChB DTM&H DFSRH. Current student MSc TMIH  
Presenting with Jonna Mosoff**

Bethany and Jonna are current MSc students at the London School of Hygiene and Tropical Medicine. Jonna has a special interest in maternal infectious diseases and Bethany is a medical doctor with a special interest in global maternal health.

### **PRESENTATION:**

**Implications of insufficient antenatal care coverage on the implementation of a Group B Streptococcus (GBS) vaccine**



## **LINDSEY BURCHAM**

**PhD**

Lindsey Burcham received her Bachelor of Science in Microbiology and PhD in Biological Sciences at Mississippi State University. For her graduate work she studied the role of nutrient zinc on *Streptococcus pneumoniae* physiology and virulence. In 2018, she joined the laboratory of Dr. Kelly Doran at the University of Colorado School of Medicine for her postdoctoral training where she began studying Group B Streptococcus. Her current research aims to understand how GBS subverts host pressures during colonization and invasive disease.

### **PRESENTATION:**

**Colonization of Group B Streptococcus in the Cervicovaginal Mucosa**



## **ALISON CAREY**

**PhD**

Dr. Carey is the Streptococcal Research Group Leader at QUT, Brisbane. Her research focuses on understanding the maternal immune responses to vaginal GBS colonisation with the aim to reduce vaginal GBS colonisation.

### **PRESENTATION:**

**Differential local and systemic immune responses between animals that clear a vaginal Group B Streptococcus infection compared to those that remain colonized**

# PRESENTERS



## **MARTA COHEN**

**MD, FRCPath, DMJ (Pathol), Dip Med Ed**

Prof. Marta Cohen is a Consultant Paediatric Pathologist and Head of Department at Sheffield Children's Hospital NHS Trust. She is an MD, Fellow of the Royal College of Pathologists, and holds a Diploma in Medical Jurisprudence (Pathology) and a Diploma in Medical Education. She is a member and Past President of the International Association of Paediatric Pathology, which is affiliated to the IAP, a Fellow of the Royal Society of Medicine, a member of the Paediatric Pathology Society (former committee member), European Society of Pathology (former Chair), ESCMID: European Society of Clinical Microbiology and Infectious Diseases and ISPID: International Society for the Study and Prevention of Perinatal and Infant Death (Chair of the Scientific Committee of the recent world congress and former board member).

### **PRESENTATION:**

**Investigation of perinatal death from a Pathologist's perspective: clinical considerations and interaction with parents**



## **LAURA C. COOK**

**PhD**

Laura C. Cook is an Assistant Professor at SUNY Binghamton in New York. She earned her B.A. degree in English Literature and B.S. degree in Microbiology from the University of Minnesota in 2005. As an undergraduate, she worked in the laboratory of Dr. Patrick Schlievert for 3 years studying staphylococcal superantigen toxins. She stayed at the University of Minnesota to obtain her Ph.D. in Microbiology studying enterococcal conjugation and biofilm formation in the lab of Dr. Gary Dunny in 2006. Laura began her postdoctoral training at the University of Illinois–Chicago in the lab of Dr. Michael Federle in 2012. While there, she began her work with streptococci, examining cell-cell communication between streptococcal species and streptococcal-host interactions. In 2018, Dr. Cook moved to Binghamton University to begin a position as an Assistant Professor. Her lab focuses currently on two species of pathogenic streptococci, *S. pyogenes* and *S. agalactiae* and their interactions with host mucosal surfaces.

### **PRESENTATION:**

**Using transcriptomics to identify GBS colonization factors**

# PRESENTERS



## **LAURA FILKINS**

**PhD, D(ABMM)**

Laura Filkins is the Clinical Microbiology laboratory director at Children's Health in Dallas, Texas and Assistant Professor in the Department of Pathology at the University of Texas Southwestern Medical Center. She is also a member of the Subcommittee on Laboratory Practices for the American Society for Microbiology. Through this role in the American Society for Microbiology, she and ASM's team of clinical microbiologists provided updated laboratory guidelines for Group B Streptococcus testing earlier this year, and she will overview these updated recommendations with us today.

### **PRESENTATION:**

**American Society for Microbiology Updates and Recommendations for Laboratory Detection and Identification of Group B Streptococcus**



## **LISA HANSON**

**PhD, RN, CNM, APNP, FACNM**

Dr. Lisa Hanson is Professor and Director of the Marquette University College of Nursing, Midwifery Program. She practiced clinically as a nurse-midwife for over 30 years at the hospital setting where she conducts research. Since 2009, her program of research has been the studying of probiotics. She was recently funded by the National Institute of Health, National Institute of Child Health and Disease Prevention for a clinical trial to test the effectiveness of an probiotic to reduce prenatal GBS colonization.

### **PRESENTATION:**

**Probiotics for the Prevention of Antenatal GBS Colonization: A Systematic Review and Meta-analysis.**



## **UDO B. HOYME**

**Univ.-Prof. Dr. med. habil. Prof. Dr. h.c.**

Affiliation with the American IDSOG since 1979, former Visiting Professor at UW Seattle, main topics: STI, Bacterial Vaginosis, Prevention of preterm birth, PID.

### **PRESENTATION:**

**Successful prevention of early preterm birth by pH-measurement as a self-care habit in the State of Thuringia**

# PRESENTERS



## **DOROTA JAMROZY**

PhD

Doroata Jamrozy works at the Sanger Institute and she is a project manager for the Juno study. Her background is in bacterial genomics and using whole genome sequencing to study pathogen evolution.

### **PRESENTATION:**

**Juno: a global genomic survey of *Streptococcus agalactiae***



## **ELITA JAUNEIKAITE**

PhD, BSc (Hons)

Dr. Elita Jauneikaite is a Research Fellow at Imperial College London, where she leads research on bacterial pathogenesis, global trends in vaccine-preventable infection and antibiotic resistance using bacterial genomics, bioinformatics and molecular biology techniques.

Elita's research programme concentrates on investigating the global trends of disease-causing Group B *Streptococcus* (GBS) in humans and animals, with a focus on how GBS evolves over time, GBS transmission trends between different hosts and what are the antimicrobial resistance patterns present in disease and carriage GBS isolates.

### **PRESENTATION:**

***Streptococcus agalactiae* – a multi-host pathogen causing neonatal disease worldwide, recent advancements in uncovering Group B streptococcal disease cluster**



# PRESENTERS



## **HARVEY J. KLIMAN**

**MD, PhD**

Harvey J. Kliman is an MD, PhD graduate in Medicine and Cellular Biochemistry from the University of Chicago. He is currently a Research Scientist in the Department of Obstetrics and Gynecology, Yale University School of Medicine, and the Director of the Reproductive and Placental Research Unit with a special interest in infertility and pregnancy complications. He has over thirty-five years of anatomic pathology training with particular emphasis in electron microscopy, immunohistochemistry, endometrial and placental physiology and cellular biology. He has over ten patents, including the patent for the Endometrial Function Test® (EFT®)—“The soil test for the endometrium®” and “Method and system for determining placental volume.” His contributions in the field of placental research include the development of the “Kliman” method of trophoblast purification, research into the mechanisms of trophoblast differentiation and invasion, the role and genesis of syncytial knots, the discovery of fetal fibronectin in the placenta, and more recently, the clinical utility of abnormalities in placental villous growth patterns, especially trophoblast invaginations and inclusions, to diagnose genetic abnormalities in pregnancy, including autism. He developed the PlacentASD® Test, which is the only test that can determine the risk of Autism Spectrum Disorder (ASD) at birth.

In addition to his research and teaching activities at Yale, he also consults with doctors, patients and lawyers to evaluate complicated cases of unexplained infertility, pregnancy loss, and poor pregnancy outcomes.

An extensive website with articles, abstracts, lab activities, and past and present students and staff can be found at: [klimanlabs.yale.edu](http://klimanlabs.yale.edu)

### **PRESENTATION:**

**How to Diagnose the Cause of Pregnancy Loss Using Placental Examination**



# PRESENTERS



## **KIRSTY LE DOARE**

**MD, PhD**

Kirsty Le Doare is a UKRI Future Leaders Fellow and Professor of Paediatric Infectious Disease and Immunology, and Honorary Consultant in Paediatric Infectious Diseases at St George's, University of London. Her research focuses on the interactions between hosts and pathogens during the neonatal period, particularly Group B Streptococcus (GBS). She is interested in understanding why some babies get very ill and die from GBS disease and how we can harness protection transferred from mother to her baby via the placenta and in breast milk. Her group uses a variety of approaches to study GBS and other neonatal pathogens such as E. coli and Klebsiella, ranging from clinical studies and whole genome sequencing, to in vitro and in vivo models. Other aspects of her research focus on understanding how vaccination during pregnancy can prevent infections during the first 3 to 6 months of life, when babies are most vulnerable. She is chief investigator of the EDCTP PREPARE consortium which seeks to develop a maternal vaccination site in Uganda and the GASTON consortium, which seeks to develop standard reference reagents and assays to assist GBS vaccine licensure pathways.

### **PRESENTATION:**

**Antibody Transfer from Mother to Infant: The Physiology of Breast Milk**



## **JAMES A. MCGREGOR**

**MDCM**

Dr. James A. McGregor has served as Professor of Obstetrics and Gynecology practicing at UCLA, USC and the University of Colorado Hospital. Dr. McGregor practiced as a fully engaged obstetrician and gynecologist for forty years at Cedars-Sinai/UCLA, Tucson Medical Center and University of Colorado Hospitals until his retirement in 2010. He is currently on Group B Strep International's Board of Directors and shares his expertise with GBSI through giving presentations and talking to providers and parents at perinatal conference exhibits around the world.

### **PRESENTATION:**

**Comparison of methods of Induction in regards to potential seeding of group B Streptococcus**

# PRESENTERS



## **JONNA MOSOFF**

**BSFS, current MSc student  
Presenting with Bethany Atkins**

Bethany and Jonna are current MSc students at the London School of Hygiene and Tropical Medicine. Jonna has a special interest in maternal infectious diseases and Bethany is a medical doctor with a special interest in global maternal health.

### **PRESENTATION:**

**Implications of insufficient antenatal care coverage on the implementation of a Group B Streptococcus (GBS)vaccine**



## **KATHRYN PATRAS**

**PhD**

Dr. Katy Patras is an Assistant Professor at Baylor College of Medicine. Her lab focuses on biological interactions between bacterial pathogens, mucosal immunity, and the microbiota of the female urogenital tract. Her research group seeks to develop new therapeutic applications to prevent bacterial infection as well as to increase our knowledge of the molecular mechanisms dictating overall women's health. Today's talk focuses on the bacterium Group B Streptococcus and its interactions with the vaginal microbiota. maternal health.

### **PRESENTATION:**

**Group B Streptococcus and the vaginal microbiota**

# PRESENTERS



## **DANIELLE POLLOCK**

**PhD; Bachelor Psychology (Honours)**

Danielle's is a cross-discipline researcher incorporating a psychological understanding into evidence-based health care. During her PhD, she developed the Stillbirth Stigma Scale, which measured the prevalence and type of stigma in bereaved parents. Her work highlighted that over half of bereaved mothers faced stigmatising attitudes and beliefs, and these experiences included being discriminated, feelings of contagiousness, isolation and unable to embrace their motherhood identity. Furthermore, Danielle's work highlighted bereaved parents as advocates in changing the ingrained and fatalistic attitudes towards stillbirth held by clinicians, researchers, and government organisations. Her other research work includes exploring how government, non-government and health care professionals communicate with women about stillbirth. Danielle is an early career researcher at JBI, the University of Adelaide, and prides herself on community involvement, such as her role as co-founder of the ASAP (Australian Stillbirth for Awareness and Prevention), and member of the Still Aware Consumer Advisory board and CRE Stillbirth Steering Committee.

### **PRESENTATION:**

**Why Stigma should not be forgotten about in stillbirth awareness and prevention**



## **KAREN PUOPOLO**

**MD, PhD**

Karen M. Puopolo, M.D., Ph.D. is a neonatologist who specializes in neonatal infectious diseases. Dr. Puopolo is an Associate Professor of Pediatrics on the faculty of the University of Pennsylvania Perelman School of Medicine. She is a member of the Division of Neonatology at The Children's Hospital of Philadelphia, and Section Chief for Newborn Medicine at Pennsylvania Hospital. She lives in Swarthmore, Pennsylvania with her husband and their four children. Dr. Puopolo received her undergraduate degree in physics from Yale University, and went on to obtain her M.D. as well as a Ph.D. in molecular physiology from the Tufts University School of Medicine in Boston. She completed Pediatric residency and Neonatal-Perinatal fellowship training at Boston Children's Hospital. Dr. Puopolo was appointed to the faculty of Harvard Medical School from 2000-2014 where she was a physician and researcher at the Brigham and Women's Hospital. She is currently funded by the National Institutes of Health and the Centers for Disease Control and Prevention to study the impact of neonatal antibiotic exposures on the newborn and early childhood microbiome, and on infant and early childhood health.

### **PRESENTATION:**

**Penicillin Allergy Testing: A Health Opportunity in Pregnancy**

# PRESENTERS



## **TARA RANDIS**

**MD, MS**

Dr. Randis is The Pamela and Leslie Muma Endowed Chair of the Division of Neonatology at the University of South Florida. Her experiences as a neonatologist drive her research efforts, focused primarily upon understanding mechanisms by which maternal infections, such as Group B Streptococcus, contribute to adverse pregnancy outcomes and neonatal morbidity and mortality. By designing novel animal models of GBS vaginal colonization and ascending infection during pregnancy, she has explored the roles of specific microbial factors and the ensuing host immune response to the development of chorioamnionitis, preterm delivery and both early- and late-onset neonatal sepsis.

### **PRESENTATION:**

**Late-Onset Group B Streptococcus Infection: Timing Is Everything**



## **BRIANNA ROCHEBRUN**

**B.S, Health Education**

Brianna Rochebrun, hailing from Miami, Florida is a research intern with Miora Connection, having graduated from the University of Florida in 2018, and is currently completing post-baccalaureate studies at Florida Atlantic University. Her experiences including working and volunteering in rural health care, such as at UF Health, the Florida Department of Health at Alachua County, and as a medical assistant in Loxahatchee, Florida. These experiences, and witnessing the disparities for patients during these experiences has motivated her to pursue a career path centered on research and medicine. It is her goal to use the knowledge she learns and apply it towards better outcomes and systems for these communities in the future.

### **PRESENTATION:**

**GBS Colonization of Pregnant Women in Rural Communities**

# PRESENTERS



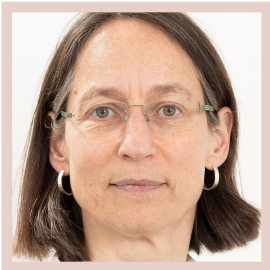
## **LINDSEY J. WIMMER**

**RN, PHN, MSN, CPNP, CPLC**

Lindsey Wimmer is the Executive Director of Star Legacy Foundation. She is a pediatric nurse practitioner who cared for families in a variety of settings before turning her focus to prevention and care of stillbirth and neonatal death. In her role, she provides continuing education to health professionals around the United States and assists with the research effort of Star Legacy Foundation. Ms. Wimmer is the mother of Garrett who was stillborn in 2004 and 3 living children.

### **PRESENTATION:**

**Finding the First Step Toward Stillbirth Prevention**



## **RUTH ZADOKS**

**MSc, MRes, DVM, PhD**

Professor Ruth Zadoks is Professor in Production Animal Health in the Sydney School of Veterinary Science. She is a veterinarian working in the areas of One Health and Food Security, and is interested in promoting the health, welfare and productivity of food-producing animals and the people that look after them or use their products.

Her main research interest is bacterial infectious disease of livestock, fishes and people. She uses DNA-based methods to refine the characterisation of disease-causing organisms. Such 'DNA fingerprinting' or 'strain typing', provides detailed insight into pathogen sources, transmission routes and disease manifestations.

Based on understanding these mechanisms, she provides advice to farmers, veterinarians and policy makers about ways to improve animal and human health and productivity. Her work on GBS spans six continents and even more host species and includes development of strategies and tools to reduce the risk of GBS in people and animals.

### **PRESENTATION:**

**Group B Streptococcus in babies, adults and animals: is there a link?**

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An innovative medical technology company primarily focused on improving women's health and well-being, Hologic enables healthier lives everywhere, every day, with clinical superiority that delivers life-changing diagnostic, detection, surgical and medical aesthetic products rooted in science and driven by technology.

### About Panther Fusion GBS Assay:

The Panther Fusion GBS assay detects Group B Streptococcus (GBS), a serious and sometimes fatal infection that poses a distinct threat to newborns born to infected mothers. This is a real time PCR assay for antepartum testing with vaginal and rectal swabs following 18-24 hours incubation in selective enrichment broth culture of Lim Broth or Carrot Broth. It features dual target detection of Cfb and SIP genes.

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ARE IN MY PRAYERS AND DEARLY LOVED FROM  
AFAR

OLIVER'S LITTLE WARRIORS  
IN HONOR OF OUR SON OLIVER, GBS  
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In a clinical trial, the Panther Fusion® GBS assay demonstrated **100% sensitivity** and **96.5% specificity** when compared to culture-based testing methods.<sup>1</sup>

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**References:** **1.** Panther Fusion GBS assay [US package insert]. AW-17997. San Diego, CA: Hologic, Inc., 2018. **2.** Shin JH and Pride DT. Comparison of Three Nucleic Acid Amplification Tests (NAATs) and Culture for Detection of Group B Streptococcus (GBS) from Enrichment Broth. *J Clin Microbiol*; 2019; JCM.01958-18. doi:10.1128/JCM.01958-18

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