

Keystone Symposia in Cape Town

Role of the Genital Tract Microbiome in Sexual and Reproductive Health

Southern Sun Cape Sun | Cape Town, South Africa | December 11–15, 2018

Scientific Organizers:

Janneke van de Wijgert, University of Liverpool and University Medical Center Utrecht, UK

Jeanne M. Marrazzo, University of Alabama at Birmingham, USA

Douglas S. Kwon, Harvard Medical School, USA

Jo-Ann S. Passmore, University of Cape Town, South Africa

Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

Bacteria and fungi residing in the female genital tract have been associated with elevated risks of HIV acquisition and transmission, pelvic inflammatory disease, miscarriage, preterm birth, and invasive maternal and neonatal infections. The increased availability of high-throughput genomic testing since the turn of the century has revealed a more detailed picture of these organisms than was possible when evaluation depended on microscopy and culture. The interrelationships between sexually transmitted infections, vaginal dysbiosis, vulvovaginal candidiasis, and vaginal pathobiont carriage are being elucidated, and their effects on the cervicovaginal mucosal barrier and immune system are being characterized. The mechanisms that may lead to adverse outcomes are being unraveled, and an increasing number of interventions are in clinical trials. In this meeting, the current understanding of female and male genital tract microbiology and immunology, including functional microbiology and biofilms, will be presented and knowledge gaps identified. Potential mechanisms leading to adverse outcomes, and a variety of potential prevention and/or treatment interventions, will be presented and discussed. The exponential progress made in recent years will hopefully lead to efficacious public health interventions to reduce the high prevalence of adverse sexual and reproductive health outcomes in women, especially in resource-poor settings.

Plenary Session Topics:

- Vaginal Microbiology
- Genital Tract Microbiology and Metabolomics
- Genital Tract Immunology
- Genital Tract Mucosal Defenses and Biofilms
- Genital Tract Microbiota Associations with HIV
- Genital Tract Microbiota Associations with Pregnancy and Neonatal Complications
- Vaginal Dysbiosis Prevention and Treatment Interventions I & II

Global Health Travel Award Deadline: Jul 10, 2018; Scholarship/Discounted Abstract Deadline: Aug 14, 2018; Abstract Deadline: Sep 12, 2018; Discounted Registration Deadline: Oct 11, 2018

Visit www.keystonesymposia.org/18S6 for more details.



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TUESDAY, DECEMBER 11

Arrival and Registration

WEDNESDAY, DECEMBER 12

Welcome and Keynote Address

Jeanne M. Marrazzo, University of Alabama at Birmingham, USA
Setting the Stage: An Overview of Advances and Controversies in Vaginal Microbiome Research

Vaginal Microbiology

Jacques Ravel, University of Maryland School of Medicine, USA
Progress Toward an In-Depth Understanding of the Vaginal Microbiome

David Fredricks, Fred Hutchinson Cancer Research Center, USA
The Vaginal Microbiota and Bacterial Vaginosis

Mariya Ivanova Petrova, KU Leuven, Belgium
role of Lactobacillus Iners in the Vaginal Microbiota

Short Talk(s) Chosen from Abstracts

Genital Tract Microbiology and Metabolomics

Caroline M. Mitchell, Massachusetts General Hospital, USA
Microbiota of the Female Upper Genital Tract

Aaron A. R. Tobian, Johns Hopkins University, USA
Male Genital Tract Microbiota: Insights into HIV Acquisition

Sujatha Srinivasan, Fred Hutchinson Cancer Research Center, USA
Metabolic Signatures of Bacterial Vaginosis

Short Talk Chosen from Abstracts

Poster Session 1

THURSDAY, DECEMBER 13

Genital Tract Immunology

Jo-Ann S. Passmore, University of Cape Town, South Africa
Overview of Female and Male Genital Tract Immunology in Relation to Microbiota

Jordan K. Kyongo, LVCT Health, Kenya
Associations between Vaginal Microbiota and Immune Mediators in the Vaginal Biomarkers Study in Kenya, South Africa and Rwanda

Rupert Kaul, University of Toronto, Canada
Targeting the Genital Microbiota to Optimize the Mucosal Immune Milieu

Paul J. Hertzog, Hudson Institute of Medical Research, Australia
The Role of IFN- ϵ in the Immune Homeostasis of the Female Genital Tract

Short Talk(s) Chosen from Abstracts

Genital Tract Mucosal Defenses and Biofilms

Melissa M. Herbst-Kralovetz, University of Arizona, USA
In vitro Systems to Study Genital Tract Mucosal Defenses

Hans Verstraelen, Ghent University, Belgium
Study of In Vivo Biofilms of the Female Genital Tract

Tania Crucitti, Institute of Tropical Medicine, Belgium
Vaginal Microbiota and Biofilms in a Clinical Trial of the NuvaRing in Rwanda

Short Talk Chosen from Abstracts

Poster Session 2

FRIDAY, DECEMBER 14

Genital Tract Microbiota Associations with HIV

Douglas S. Kwon, Harvard Medical School, USA
Overview of Genital Tract Microbiota associations with HIV, Including Potential Mechanisms

Lindi Masson, University of Cape Town Medical School, South Africa
Metaproteomics approaches to Understand Mucosal Inflammation and Target Cell Activation Associated with HIV Acquisition in African Women

Nichole R. Klatt, University of Washington, USA
Vaginal Bacteria Differentially Metabolize Antiretroviral Drugs – Evidence from Clinical Trials and in-vitro Studies

Thomas J. Hope, Northwestern University, USA
Deconvolution Microscopy to Study Interactions between Microbes and Mucosal Barriers and Mucus

Short Talk(s) Chosen from Abstracts

Genital Tract Microbiota Associations with Pregnancy and Neonatal Complications

Gregory A. Buck, Virginia Commonwealth University, USA
Overview of Genital Tract Microbiota associations with Pregnancy and Neonatal Complications (and Infertility), Including an Update on Vaginal Microbiome Consortium Studies

David MacIntyre, Imperial College London, UK
Vaginal microbiota and poor outcomes of pregnancy

David M. Aronoff, Vanderbilt University, USA
Leveraging New Tissue Models to Explore Host-Microbial Interactions in Chorioamnionitis

Short Talk Chosen from Abstracts

Poster Session 3

SATURDAY, DECEMBER 15

Vaginal Dysbiosis Prevention and Treatment Interventions I

Jennifer E. Balkus, University of Washington, USA
Overview of Antibiotic and Antifungal Interventions

Janneke van de Wijgert, University of Liverpool & University Medical Center Utrecht, UK
Systematic Review of Vaginal Probiotics

Craig R. Cohen, University of California, San Francisco, USA
Update on Live Biotherapeutic Trials to Prevent Vaginal Dysbiosis and HIV

Catriona Susan Bradshaw, Monash University, Australia
Partner Treatment Studies

Short Talk(s) Chosen from Abstracts

Vaginal Dysbiosis Prevention and Treatment Interventions II

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Sharon Hillier, University of Pittsburgh School of Medicine, USA

Effect of Sex Hormones on the Vaginal Microbiota and Multipurpose Prevention Technologies

Ziyaad Dangor†, University of the Witwatersrand, South Africa

Talk Title to be Announced

Adam J. Ratner, New York University School of Medicine, USA

Targeting Perinatal Pathogens in the Vaginal Microbiome

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

SUNDAY, DECEMBER 16

Departure