

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Global Priorities in Vaginal Health: Microbes, Mucosal Immunity and Interventions (EK3)

November 10-12, 2021 • Virtual at your computer

Scientific Organizers: Jeanne M. Marrazzo, Caroline M. Mitchell, Sujatha Srinivasan and Jordan Kyongo

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

WEDNESDAY, NOVEMBER 10

Grand Challenges Shared Session: Global Priorities in Reproductive Health Technologies/Applying a Transitional Lens to Global Health (7am Denver/Mountain Time Start)

Caroline M. Mitchell, Massachusetts General Hospital, USA
Next Generation Therapeutics to Create a Stable, Healthy Vaginal Microbiome

Kingsley C. Anukam, Nnamdi Azikiwe University, Nigeria
Cervico-Vaginal and Semen Microbiome from Couples Seeking Reproductive Health Care

Bhabatosh Dos, Translational Health Science and Technology Institute, India
Vaginal Microbial Signature in Birth Outcomes in the GARBH-Ini Pregnancy Cohort

Sinaye Ngcapu, CAPRISA, South Africa
The Roles of Genital Inflammation, Sexually Transmitted Infections, and the Genital Microbiome

Eric Armstrong, University of Toronto, Canada
*Impact of LACTIN-V (*Lactobacillus crispatus* CTV-05) on Genital Immunology following Standard Bacterial Vaginosis Treatment: Results from a Randomized Placebo-Controlled Trial*

Lindi Masson, Burnet Institute, Australia
GIFT: Genital Inflammation Test for HIV Prevention and Reproductive Health

Grand Challenges Shared Session: Pursuing an Inclusive Recovery: What It Looks Like and How We Got There (9am Denver/Mountain Time Start)

Anita Zaidi, Bill & Melinda Gates Foundation, USA
Welcoming Remarks

Melinda French Gates, Bill & Melinda Gates Foundation, USA
Keynote Remarks

Grand Challenges Shared Session: Impact of COVID-19 on Women (9:30am Denver/Mountain Time Start)

Roopa Dhatt, Women in Global Health, USA
Grand Challenges Spotlight Talk

Ajoke Sobanjo-ter Meulen, Bill and Melinda Gates Foundation, USA
Grand Challenges Spotlight Talk

Julie Mwabe, Executive Office of the President of Kenya, Kenya
Grand Challenges Spotlight Talk

Anita Zaidi, Bill & Melinda Gates Foundation, USA
Closing Reflection

Grand Challenges Shared Session: Keynote Remarks (10:05am Denver/Mountain Time Start)

Faisal Sultan, Special Assistant to the Prime Minister of Health, Government of Pakistan, Pakistan

Grand Challenges Shared Session: Closing Conversation (10:35am Denver/Mountain Time Start)

Trevor Mundel, Bill & Melinda Gates Foundation, USA

Ursula von der Leyen, European Commission, Belgium

Keystone Symposia Welcoming Remarks and Keynote Address (11am Denver/Mountain Time Start)

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

***Caroline M. Mitchell**, Massachusetts General Hospital, USA

***Sujatha Srinivasan**, Fred Hutchinson Cancer Research Center, USA

***Jordan K. Kyongo**, East Africa Research & Innovation Hub, Kenya

David N. Fredricks, Fred Hutchinson Cancer Research Center, USA
The Vaginal Microbiome: Progress and Promise

The Vaginal Microbiome: The Current Landscape (11:45am Denver/Mountain Time Start)

***Sinaye Ngcapu**, CAPRISA, South Africa

***Caroline M. Mitchell**, Massachusetts General Hospital, USA

Susan P. Holmes, Stanford University, USA

Modeling and Testing the Vaginal Microbiome in Longitudinal Studies

Sujatha Srinivasan, Fred Hutchinson Cancer Research Center, USA
Strategies for Studying the Vaginal Microbiome in Health and Disease

Janneke van de Wijert, University Medical Center Utrecht, Netherlands

Designing Human Studies and Clinical Trials: An Epidemiological Perspective

Rosanne Y. Hertzberger, VU University Amsterdam, Netherlands
Short Talk: Differences in Glycogen-Degrading Capacity of Vaginal Bacteria can Explain Lower Glycogen Levels during Dysbiosis

Kavita Agarwal, University of California, San Diego, USA
*Short Talk: *Fusobacterium Nucleatum* Boosts Growth of *Gardnerella Vaginalis* in Human Vaginal Communities*

Contraception and the Vaginal Microbiome (2pm Denver/Mountain Time Start)

***Jordan K. Kyongo**, East Africa Research & Innovation Hub, Kenya

Heather B. Japan, Seattle Children's Research Institute / University of Cape Town, USA

Microbiology and Contraception (ECHO, DMPA/Copper IUD); Adolescents in South Africa, High HIV Risk

Betsy Herold, Albert Einstein College of Medicine, USA

Interplay between Vaginal Microbiota and Innate or Pharmacological-Mediated Antimicrobial Activity

***Jeanne M. Marrazzo**, University of Alabama at Birmingham, USA
The Contraceptive Vaginal Ring: Impact on the Vaginal Microbiota and Soluble Immune Markers/Significance for Development of

Multipurpose Vaginal Rings

Myrna G. Serrano, Virginia Commonwealth University, USA
Short Talk: Differential Effects of Contraceptive Methods on the Vaginal Microbiomes of South African Women

Nina Radzey, University of Cape Town, South Africa
Short Talk: Genital Inflammatory Status and the Innate Immune Response to Contraceptive Initiation

THURSDAY, NOVEMBER 11

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Editor Q&A (8:30am Denver/Mountain Time Start)

Annette E. Fenner, Nature Reviews Urology, UK

Poster Session (9am Denver/Mountain Time Start)

Keynote Address (11am Denver/Mountain Time Start)

*Sujatha Srinivasan, Fred Hutchinson Cancer Research Center, USA

Yasmine Belkaid, NIAID, National Institutes of Health, USA

Talk Title to be Announced

Human Papilloma Virus, Dysplasia and the Genital Tract (11:45am Denver/Mountain Time Start)

*Jennifer E. Balkus, University of Washington, USA

*Caroline M. Mitchell, Massachusetts General Hospital, USA

Lenine Liebenberg, CAPRISA, South Africa

HPV Infection and HIV Acquisition Risk: Does the Vaginal Microbiome Play a Role?

Robert D. Burk, Albert Einstein College of Medicine, USA

The Immune Landscape of the Cervicovaginal Microbiome and HPV Natural History

Abu Bakar Siddik, University of Manitoba, Canada

Short Talk: High Level of Short-Chain Fatty Acids has Direct effects on the Barrier Function of Cervicovaginal Epithelial Cell Lines

Bowofoluwa Abimbola, Nigerian Institute of Medical Research, Nigeria

Short Talk: Human Papillomavirus (HPV) Surveillance in Nigeria: Evaluation of Self-Collected Cervical Swab Samples and Determining the Prevalence of HPV

HIV and the Genital Tract Microbiome (2pm Denver/Mountain Time Start)

*Jordan K. Kyongo, East Africa Research & Innovation Hub, Kenya

*Sujatha Srinivasan, Fred Hutchinson Cancer Research Center, USA

Jo-Ann S. Passmore, University of Cape Town, South Africa
Disconnecting Genital Inflammation and HIV Risk in Women

Lyle McKinnon, University of Manitoba, Canada

The Microbiome and Host Interactions at the Genital Mucosal Surface and Implications for HIV Acquisition and Transmission

Douglas S. Kwon, Harvard Medical School, USA

Vaginal Microbial Dynamics and Strain Variation in HIV Acquisition Risk

Taruna Madan, National Institute for Research in Reproductive Health, India

Short Talk: Distinct Impact of TLR Agonists on Vaginal Inflammation and HIV-1 Infectivity: Host-Protective Modulation by Human Surfactant Protein D

Marina Fujishima, University of Manitoba, Canada

Short Talk: Non-Optimal Bacteria Species Induce Neutrophil-Driven Inflammation and Epithelial Barrier Disruption in the Female Genital Tract

FRIDAY, NOVEMBER 12

Career Roundtable (9am Denver/Mountain Time Start)

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

Kimberly Y. Smith, ViiV Healthcare, USA

Heather B. Jaspán, Seattle Children's Research Institute / University of Cape Town, USA

Networking Lounge (10am Denver/Mountain Time Start)

Keynote Address (11am Denver/Mountain Time Start)

*Caroline M. Mitchell, Massachusetts General Hospital, USA

Emily P. Balskus, Harvard University, USA

Mining and Manipulating Microbial Metabolism in the Human Vagina

Advances in Therapeutics and Prevention (11:45am Denver/Mountain Time Start)

*Deborah M. Money, University of British Columbia, Canada

*Jordan K. Kyongo, East Africa Research & Innovation Hub, Kenya

Craig R. Cohen, University of California, San Francisco, USA
LACTIN-V and BV Recurrence

Caroline M. Mitchell, Massachusetts General Hospital, USA
Vaginal Microbiota Transplants

Jill Steinbach-Rankins, University of Louisville, USA

New Delivery Vehicles for Biologics and Antivirals for Bacterial and Viral STIs

Erica L. Plummer, Monash University, Australia

Short Talk: Concurrent Male Partner Treatment for Bacterial Vaginosis: A Pilot Study

Brianna Jesaveluk, Burnet Institute, Australia

Short Talk: Lactic Acid Produced by Vaginal Microbiota Enhances Cervicovaginal Epithelial Barrier Integrity by Promoting Tight Junction Protein Expression

Panel: Development and Regulatory Challenges and Opportunities (2pm Denver/Mountain Time Start)

*Jeanne M. MARRAZZO, University of Alabama at Birmingham, USA

Laurel A. Lagenaur, NIH and Osel Inc., USA

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

Kimberly Y. Smith, ViiV Healthcare, USA

Molly Broache, Becton, Dickinson and Company, USA

Lindi Masson, Burnet Institute, Australia

Barbara Van Der Pol, University of Alabama at Birmingham, USA

Kathleen Squires, Merck Research Laboratories, USA

Closing Remarks (Organizers) (3:30pm Denver/Mountain Time Start)