



Having IMPACTT 4: Advancing Microbiome Research Symposium Program

Malcolm Hotel, Canmore, AB, Canada
June 3-5, 2024

Monday – June 3, 2024

06:45 – 08:45 Breakfast (Stirling Grill, Glamis, Balmoral, & Inverness Rooms)
07:45 – 08:45 Registration (Pre-Function Foyer)

09:00 – 10:30 **Opening Remarks & Keynote Talk**
Chair: Dr. Kathy McCoy (Edinburgh Castle Room)

09:00 – 09:15 **Welcome Address & Land Acknowledgement**
Dr. Kathy McCoy | *University of Calgary, Canada*

09:15 – 10:15 **Priming for Life: The Microbiome as a Key Regulator of Brain & Behaviour**
Dr. John F. Cryan | *University College Cork, Ireland*

10:15 – 11:00 **AM Break (Pre-Function Foyer)**

11:00 – 12:30 **Session 1: Microbiome in Early Life**
Chair: Dr. Anita Kozyrskyj (Edinburgh Castle Room)

Plenary Talks

11:00 – 11:30 **Early life origins of autoimmunity: genes, microbes and immunity in type 1 diabetes**
Dr. Jayne Danska | *The Hospital for Sick Children, Canada*

11:30 – 12:00 **Maternal microbiota and neonatal skin barrier**
Dr. Mercedes Gomez de Agüero | *University of Würzburg, Germany*

Short Talks Selected from Abstracts

12:00 – 12:15 **Exposome attrition leads to transgenerational alterations in adaptive immune landscape**
Meggie Kuypers | *University of Toronto, Canada*

12:15 – 12:30 **Effect of the early-life premature microbiome on growth and neurodevelopment in mice in response to stress**
Dr. Van Ortega | *University of Calgary, Canada*

12:30 – 14:00 **Lunch Break (Stirling Grill, Glamis, Balmoral, & Inverness Rooms)**



14:00 – 15:30

Session 2: Innovative Approaches for Elucidating Microbiome Function

Chair: Dr. Karen Madsen (Edinburgh Castle Room)

Plenary Talks

14:00 – 14:30

Imaging the immune response and impact of the microbiome

Dr. Paul Kubes | *University of Calgary, Canada*

14:30 – 15:00

Antigen-level resolution of commensal-specific B cell responses

Dr. Oliver Harrison | *Benaroya Research Institute, USA*

Short Talks Selected from Abstracts

15:00 – 15:15

A genetic system for *Akkermansia muciniphila* reveals a role for mucin foraging in gut colonization

Dr. Lauren Davey | *University of Victoria, Canada*

15:15 – 15:30

Unraveling the functionality of microbiomes with novel computational and single-cell profiling approaches

Dr. Vanessa Dumeaux | *Western University, Canada*

15:30 – 16:00

PM Break (Pre-Function Foyer)

16:00 – 18:00

Flash Talks & Poster Session

Chair: Dr. Braedon McDonald (Edinburgh Castle Room)

Flash Talks Selected from Abstracts

16:00 – 16:30

Shirin Afroj | *University of Calgary, Canada*

Dr. Jacqueline Barnett | *University of British Columbia Okanagan, Canada*

Dr. Francisco Daniel Davila Aleman | *University of Calgary, Canada*

Hans Ghezzi | *University of British Columbia, Canada*

Connor Gianetto-Hill | *University of Guelph, Canada*

Dr. Rebecca Jeffery | *University of Oxford, UK*

16:30 – 18:00

Poster Session

(Pre-Function Foyer, Holyrood & Edinburgh Castle Rooms)



Tuesday – June 4, 2024

06:45 – 08:45 Breakfast (Stirling Grill, Glamis, Balmoral, & Inverness Rooms)
07:45 – 08:45 Registration (Pre-Function Foyer)

09:00 – 10:30 **Session 3: Harnessing the Microbiome** Chair: Dr. Joe Harrison (Edinburgh Castle Room)

Plenary Talks

09:00 – 09:30 **Tissue-protective roles of the microbiota during infection and inflammation**
Dr. Irah King | *McGill University, Canada*

09:30 – 10:00 **Cultivating Complexity: Harnessing Microbial Culture for Model Ecosystems**
Dr. Emma Allen-Vercoe | *University of Guelph, Canada*

Short Talks Selected from Abstracts

10:00 – 10:15 **Ecology of the human microbiome: how diversity in the microbiome protects against pathogens**
Dr. Erik Bakkeren | *University of Oxford, UK*

10:15 – 10:30 **With a little help from our [tiny] friends: modifying gut bacteria to detect malabsorption**
Juan Camilo Burckhardt | *University of British Columbia, Canada*

10:30 – 11:00 **AM Break (Pre-Function Foyer)**

11:00 – 12:30 **Special Topic: Microbiome Sequencing & Computational Development** Chair: Dr. Morgan Langille (Edinburgh Castle Room)

Plenary Talk

11:00 – 11:20 **Integrating Oxford Nanopore and NextFlow for real-time bacterial sequence analysis**
Dr. William Hsiao | *Simon Fraser University, Canada*

Short Talks

11:20 – 11:40 **Reducing false-positive taxa in metagenomes by coverage validation of reference genomes**
Dr. Robyn Wright | *Dalhousie University, Canada*

11:40 – 12:00 **Challenges and opportunities with integrating microbiome data with other metadata**
Geoff Winsor | *Simon Fraser University, Canada*

IMPACTT Update

12:00 – 12:30 **Defining the Effects of Sample Handling on Metagenomic Amplicon Sequencing and Culturomic Profiles of the Gut Microbiome**
Dr. Ali Mirza | *Simon Fraser University, Canada*

12:30 – 14:00 **Lunch Break (Stirling Grill, Glamis, Balmoral, & Inverness Rooms)**



14:00 – 15:30

Session 4: Microbiome, Metabolites & Disease

Chair: Dr. William Hsiao (Edinburgh Castle Room)

Plenary Talks

14:00 – 14:30

Bacterial bioenergetics shape metabolite production in the gut

Dr. Sam Light | *University of Chicago, USA*

14:30 – 15:00

The role of the gut environment in shaping the intestinal microbiota and disease outcomes

Dr. Carolina Tropini | *University of British Columbia, Canada*

Short Talks Selected from Abstracts

15:00 – 15:15

Are microbiome extracellular vesicles the missing connection to the gut-brain axis?

Dr. Riadh Hammami | *University of Ottawa, Canada*

15:15 – 15:30

Effects of lyophilized fecal filtrate compared to lyophilized donor stool in the treatment of recurrent *Clostridioides difficile* infection: a multi-center randomized trial

Dr. Dina Kao | *University of Alberta, Canada*

15:30 – 16:00

PM Break (Pre-Function Foyer)

16:00 – 18:00

Flash Talks & Poster Session

Chair: Dr. Braedon McDonald (Edinburgh Castle Room)

Flash Talks Selected from Abstracts

16:00 – 16:30

Jessica Josephson | *University of British Columbia Okanagan, Canada*

Simarpreet Kaur | *University of Calgary, Canada*

Dr. Maryam Kebbe | *University of New Brunswick, Canada*

Kathryn Strayer | *University of Calgary, Canada*

Athalia Voisin | *University of Manitoba, Canada*

Christopher Yau | *University of Toronto, Canada*

16:30 – 18:00

Poster Session

(Pre-Function Foyer, Holyrood & Edinburgh Castle Rooms)



Wednesday – June 5, 2024

06:45 – 08:45 Breakfast (Stirling Grill, Glamis, Balmoral, & Inverness Rooms)
07:45 – 08:45 Registration (Pre-Function Foyer)

09:00 – 10:30 **Session 5: Microbiome Regulation in Cancer & Cancer Therapy** Chair: Dr. Marie-Claire Arrieta (Edinburgh Castle Room)

Plenary Talks

09:00 – 09:30 **Understanding microbiota regulation of the tumor microenvironment and response to cancer therapy**
Dr. Romina Goldszmid | *National Institutes of Health, USA*

09:30 – 10:00 **Microbiota-Centered Interventions in Onco-immunology**
Dr. Meriem Messaoudene | *Université de Montréal, Canada*

Short Talks Selected from Abstracts

10:00 – 10:15 **The role of intestinal microbiome in CD19 directed CAR-T cell therapy**
Dr. Larisa Kovtonyuk | *University of Calgary, Canada*

10:15 – 10:30 **Viral predation guilds of the human gut**
Dr. Ann Gregory | *University of Calgary, Canada*

10:30 – 11:00 **AM Break (Pre-Function Foyer)**

11:00 – 12:00 **IMPACTT Mentee Talks** Chair: Dr. Laura Sycuro (Edinburgh Castle Room)

11:00 – 11:15 **Establishing a comprehensive logistics and sequencing framework for microbiome analysis in colorectal cancer patients in Newfoundland**
Dr. Akinola Alafiatayo | *Memorial University of Newfoundland, Canada*

11:15 – 11:30 **Long-lasting effects of commensal bacteria in innate immunity**
Dr. Aline Ignacio | *University of Calgary, Canada*

11:30 – 11:45 **Exploring dynamic microbial environments in UTI (Urinary Tract Infection) development**
Dr. Charlène Roussel | *Université Laval, Canada*

11:45 – 12:00 **Proteases from vaginal *Prevotella* species modulate endocervical barrier function**
Dr. Karen Lithgow | *University of Calgary, Canada*

12:00 – 12:30 **Closing Remarks & Awards**

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Dr. Kathy McCoy | *University of Calgary, Canada*



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