



Having IMPACTT 2: Advancing Microbiome Research

Symposium Program

Malcolm Hotel, Canmore, AB, Canada
June 2-3, 2022

Thursday – June 2, 2022

06:30 – 08:30 Breakfast (Stirling Grill, Glamis & Inverness Rooms)
07:30 – 08:30 Registration (Pre-Function Foyer)

Opening Remarks & Keynote Talk

Chair: Dr. Kathy McCoy (Edinburgh Castle Room)

08:30 – 09:00 **Welcome Address**
Dr. Kathy McCoy | *University of Calgary, Canada*

09:00 – 10:00 **Regulation of CNS inflammation by the gut microbiome**
Dr. Francisco J. Quintana | *Harvard Medical School, USA*

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

Session 1: Microbiome & Early Life

Chairs: Dr. Marie-Claire Arrieta & Dr. Anita Kozyrskyj (Edinburgh Castle Room)

Plenary Talks

10:15 – 10:45 **Antibiotic use during pregnancy: Influence on the gut microbiome, immune system development and asthma susceptibility in murine offspring**
Dr. Melanie Conrad | *Charité Universitätsmedizin Berlin, Germany*

10:45 – 11:15 **Early Life Microbiomes and Longer-Term Health Outcomes**
Dr. Trevor Lawley | *Wellcome Sanger Institute, United Kingdom*

Short Talks Selected from Abstracts

11:15 – 11:30 **Host genomics and exposure to human milk oligosaccharides are associated with the gut microbiota of infants with asthma in the CHILD Cohort Study**
Sara Stickley | *Queen's University, Canada*

11:30 – 11:45 **Intestinal protozoan *Tritrichomonas* induces transcriptional remodeling of the gut microbiome, which is accelerated in immunocompromised mice**
Ana Popovic | *The Hospital for Sick Children, Canada*

11:45 – 12:30 Lunch Break (Stirling Grill, Glamis & Inverness Rooms)



Session 2: Microbiome & Cancer

Chairs: Dr. Philippe Gros (Edinburgh Castle Room)

Plenary Talks

- 12:30 – 13:00 **Effects of diet on colorectal cancer-associated microbial ecosystems**
Dr. Emma Allen-Vercoe | *University of Guelph, Canada*
- 13:00 – 13:30 **A causal connection between T helper cell programming and dietary fibre that impacts development of autoimmunity**
Dr. Lisa Osborne | *University of British Columbia, Canada*

Short Talks Selected from Abstracts

- 13:30 – 13:45 **The gut microbiota modulates colonic healing after surgery in patients with colorectal cancer**
Roy Hajjar | *University of Montréal, Canada*
- 13:45 – 14:00 **Tumorigenic effect of inulin in ApcMin/+ mice depends on the presence of colibactin-producing bacteria**
Manon Oliero | *University of Montréal, Canada*

14:00 – 14:15 **PM Break (Pre-Function Foyer)**

Session 3: Microbiome, Critical Illness, & Infectious Disease

Chairs: Dr. Ian Lewis & Dr. Laura Sycuro (Edinburgh Castle Room)

Plenary Talks

- 14:15 – 14:45 **Under the influence: B cells, the microbiome and CNS inflammation in an animal model of MS**
Dr. Jen Gommerman | *University of Toronto, Canada*
- 14:45 – 15:15 **Meta-systems biology of the "immuno-microbiome" in critical illness and its role in infections and clinical outcomes**
Dr. Braedon McDonald | *University of Calgary, Canada*

Flash Talks Selected from Abstracts

- Flash Talks**
Giuliano Bayer | *University of Toronto, Canada*
Dr. Andrew Forgie | *University of Alberta, Canada*
Ali Mirza | *University of British Columbia, Canada*
Jacob Nearing | *Dalhousie University, Canada*
Jared Schlechte | *University of Calgary, Canada*
Dr. Caitlin Simopoulos | *University of Ottawa, Canada*
Anita Singh | *McMaster University, Canada*
Andrea Verdugo Meza | *University of British Columbia, Canada*

16:00 – 18:00 **Poster Session (Pre-Function Foyer, Holyrood & Balmoral Rooms)**

18:45 – 21:00 **Banquet Dinner (Edinburgh Castle Room)**



Friday – June 3, 2022

07:00 – 08:45 Breakfast (Stirling Grill, Glamis & Inverness Rooms)
08:00 – 08:45 Registration (Pre-Function Foyer)

IMPACTT Update

Chairs: Dr. Joe Harrison & Dr. Karen Madsen (Edinburgh Castle Room)

08:45 – 09:00 **Benchmarking Canadian microbiome science: From today's standard practice to tomorrow's frontiers**
Dr. Laura Sycuro & Dr. Olabisi Coker | *University of Calgary, Canada*

Session 4: Microbiome & Influences on Disease

Chairs: Dr. Joe Harrison & Dr. Karen Madsen (Edinburgh Castle Room)

Plenary Talks

09:00 – 09:30 **IBD and Celiac disease: Are there common microbial pathophysiological links and therapeutic targets?**
Dr. Elena Verdù | *McMaster University, Canada*

09:30 – 10:00 **Intestinal epithelial cell – microbe cross-talk in intestinal homeostasis**
Dr. Dana Philpott | *University of Toronto, Canada*

Short Talks Selected from Abstracts

10:00 – 10:15 **Microbiome and Immune profiling of a 1-year controlled human hookworm infection**
Dr. Alissa Cait | *Malaghan Institute of Medical Research, New Zealand*

10:15 – 10:30 **A gut commensal protozoan tunes pulmonary disease severity**
Dr. Kyle Burrows | *University of Toronto, Canada*

10:30 – 10:45 AM Break (Pre-Function Foyer)

Session 5: Bioinformatics & Multi-Omics

Chairs: Dr. William Hsiao & Dr. Celia Greenwood (Edinburgh Castle Room)

Plenary Talks

10:45 – 11:15 **Challenges in identifying robust biomarkers in human microbiome studies**
Dr. Morgan Langille | *Dalhousie University, Canada*

11:15 – 11:45 **Measurement error in microbiome data and its impact on replicability**
Dr. Amy Willis | *University of Washington, USA*



Short Talks Selected from Abstracts

- 11:45 – 12:00 **Proportionality-based association measures in count-based compositional data**
Dr. Kevin McGregor | *York University, Canada*
- 12:00 – 12:15 **From defaults to databases: parameter and database choice dramatically impact the performance of metagenomic taxonomic classification tools in low microbial biomass samples**
Dr. Robyn Wright | *Dalhousie University, Canada*

12:15 – 13:00 Lunch Break (Stirling Grill, Glamis & Inverness Rooms)

Keynote Talk

Chair: Dr. Paul Kubes (Edinburgh Castle Room)

- 13:00 – 14:00 **A Genetic Approach to Investigate Microbe-Host Interaction at the Molecular Level**
Dr. Chun-Jun Guo | *Weill Cornell Medicine, USA*

Session 6: Microbiome Short Talks

Chairs: Dr. Braedon McDonald & Dr. Markus Geuking (Edinburgh Castle Room)

IMPACTT Mentee Talks

- 14:00 – 14:15 **Using microbiome as a biomarker for personalized dietary fibre interventions in inflammatory bowel disease**
Dr. Heather Armstrong | *University of Manitoba, Canada*
- 14:15 – 14:30 **Inputs from the microbiota in the resolution of intestinal inflammation**
Dr. Kyle Flannigan | *University of Calgary, Canada*
- 14:30 – 14:45 **The impact of fermentable fibre-free versus inulin-enriched diets on spontaneous colitis development and the gut microbiome in Muc2^{-/-} mice**
Dr. Genelle Healey | *University of British Columbia, Canada*
- 14:45 – 15:00 **Revealing protein-level functional redundancy in the human gut microbiome using ultra-deep metaproteomics**
Dr. Leyuan Li | *University of Ottawa, Canada*

Short Talks Selected from Abstracts

- 15:00 – 15:15 **Gut microbiota-based vaccination uses NOD-RIPK2 immunity to improve long-lasting blood glucose control in obese mice**
Dr. Brittany Duggan | *McMaster University, Canada*
- 15:15 – 15:30 **Understanding host-bacterial and bacterial-bacterial interactions that support intestinal inflammation**
Rebecca Jeffery | *University of Oxford, United Kingdom*

15:30 – 15:45 PM Break (Pre-Function Foyer)



Keynote Talk & Closing Remarks

Chair: Dr. Kathy McCoy (Edinburgh Castle Room)

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| 15:45 – 16:45 | Vaginal microbiome and reproductive health
Dr. Deborah Money <i>University of British Columbia, Canada</i> |
| 16:45 – 17:00 | Closing Remarks
Dr. Kathy McCoy <i>University of Calgary, Canada</i> |

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Poster Presenters

- Poster 1 Giuliano Bayer | *University of Toronto, Canada*
- Poster 2 Andrew Forgie | *University of Alberta, Canada*
- Poster 3 Ali Mirza | *University of British Columbia, Canada*
- Poster 4 Jacob Nearing | *Dalhousie University, Canada*
- Poster 5 Jared Schlechte | *University of Calgary, Canada*
- Poster 6 Caitlin Simopoulos | *University of Ottawa, Canada*
- Poster 7 Anita Singh | *McMaster University, Canada*
- Poster 8 Andrea Verdugo Meza | *University of British Columbia, Canada*
- Poster 9 Ayodeji Samuel Ajayi | *Université de Montréal, Canada*
- Poster 10 Vugar Azizov | *Universitätsklinikum Erlangen, Germany*
- Poster 11 Arshpreet Bhatwa | *McMaster University, Canada*
- Poster 12 Dominique Bihan | *University of Calgary, Canada*
- Poster 13 Kirsty Brown | *University of Calgary, Canada*
- Poster 14 Diana Changirwa | *University of Calgary, Canada*
- Poster 15 Olabisi Coker | *University of Calgary, Canada*
- Poster 16 Thibault Cuisiniere | *Université de Montréal, Canada*
- Poster 17 Sonia Czyz | *University of Calgary, Canada*
- Poster 18 Marcela Davoli Ferreira | *University of Calgary, Canada*
- Poster 19 Michelle Dean | *University of Calgary, Canada*
- Poster 20 Vanessa DeClercq | *Dalhousie University, Canada*
- Poster 21 Dollina Dodani | *University of British Columbia, Canada*
- Poster 22 Sharon Dong | *University of Calgary, Canada*
- Poster 23 Marija Drikic | *University of Calgary, Canada*
- Poster 24 Yi (Edward) Fan | *University of Alberta, Canada*
- Poster 25 Zhi Yi Fang | *Queen's University, Canada*
- Poster 26 Claire Gerkins | *Université de Montréal, Canada*
- Poster 27 Chanel Ghesquiere | *University of British Columbia, Canada*
- Poster 28 Thais Glatthardt | *University of Calgary, Canada*
- Poster 29 Alessandra Granato | *The Hospital for Sick Children, Canada*
- Poster 30 Mackenzie Gutierrez | *University of Calgary, Canada*
- Poster 31 Diana Haider | *Dalhousie University, Canada*
- Poster 32 Alya Heirali | *University of Toronto, Canada*
- Poster 33 Aline Ignacio Silva | *University of Calgary, Canada*
- Poster 34 Baofeng (Justin) Jia | *Simon Fraser University, Canada*
- Poster 35 Tingting Ju | *University of Alberta, Canada*
- Poster 36 Larisa Kovtonyuk | *University of Calgary, Canada*
- Poster 37 Hannah Lantz | *University of Alberta, Canada*
- Poster 38 Sukyoung (Suzie) Lee | *University of Calgary, Canada*
- Poster 39 Karen Lithgow | *University of Calgary, Canada*
- Poster 40 Sijie (Nicole) Liu | *University of British Columbia, Canada*
- Poster 41 Pekka Määttänen | *Burman University, Canada*
- Poster 42 Emily Mercer | *University of Calgary, Canada*



Poster 43	Chunlong Mu <i>University of Calgary, Canada</i>
Poster 44	Van Orgtega <i>University of Calgary, Canada</i>
Poster 45	Stuti Patel <i>University of Calgary, Canada</i>
Poster 46	Roxanne Plante <i>Université Laval, Canada</i>
Poster 47	Tausha Prisnee <i>University of Alberta, Canada</i>
Poster 48	Rajibur Rahman <i>University of Alberta, Canada</i>
Poster 49	Hena Ramay <i>University of Calgary, Canada</i>
Poster 50	Laura Rojas <i>University of Calgary, Canada</i>
Poster 51	Laura Rojas <i>University of Calgary, Canada</i>
Poster 52	Isla Skalosky <i>University of Calgary, Canada</i>
Poster 53	Erin Strachan <i>University of Alberta, Canada</i>
Poster 54	Marcel van de Wouw <i>University of Calgary, Canada</i>
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Poster 56	Erik van Tilburg Bernardes <i>University of Calgary, Canada</i>
Poster 57	Yan Wang <i>University of California Los Angeles, USA</i>
Poster 58	Nadia Yorke <i>University of Calgary, Canada</i>
Poster 59	Kassandra Zachos <i>University of Toronto, Canada</i>