

Tentative Agenda - 2021 CRAFT Virtual Symposium

August 25: Biofabrication

- 8h40-9h00 Welcome remarks**
- Teodor Veres (National Research Council Canada [NRC])
 - Roman Szumski (VP Life Sciences, NRC)
- 9h00-9h45 Biofabrication keynote (live)**
- Matthias Lutolf (Swiss Federal Institute of Technology in Lausanne) - Engineering Epithelial Organoids-on-a-chip
 - Chair: Paul Santerre (UofT)
- 9h45-10h00 Break**
- 10h00-10h45 Selected biofabrication presentations (10-min recorded presentations followed by live Q&A with presenter)**
- 10h00: Albert Gevorkian (Eugenia Kumacheva/Edmond Young lab) - Actuation of Three-Dimensional-Printed Nanocolloidal Hydrogel with Structural Anisotropy
 - 10h15: Katya D'Costa (Paul Santerre lab) - Effects of Sodium Ascorbate on the Deposition of Extracellular Matrix Proteins: Towards Engineering a Vascular Graft
 - 10h30: Wuyang Gao (Guenther lab) - One-Step Formation of Protein-Based Tubular Structures for Functional Devices and Tissues
 - Chair: Axel Guenther
- 11h00-12h00 Poster session 1 (Posters #1 - #18)**
- 12h00-12h45 Lunch break**
- 12h45-14h30 CRAFT session: updates, new facilities and projects**
- 12h45: Updates from CRAFT (Axel Guenther)
 - 13h05: New CRAFT facility: Device Foundry (Dan Voicu, UofT)
 - 5-min Presentations from recipients of CRAFT Project Award followed by 3-min Q&A
 - 13h30: team 1
 - 13h40: team 2
 - 13h50: team 3
 - 14h00: team 4
 - 14h10: team 5

- 14h20: team 6
- Chair: Axel Guenther

14h30-14h45 Break

14h45-15h30 Fireside chat with PDF become company founder

- Daniela Marino (CEO and founder, Cutiss AG)
- Chair: Sushant Singh (Guenther Lab)

15h30-16h30 Industry Exhibit Hall

16h30-16h45 Closing remarks and awards announcement for poster session 1

- Axel Guenther

August 26: TOeP and Organ-on-a-Chip

9h00-9h45 Organ-on-a-chip keynote (live)

- Jason Burdick (University of Pennsylvania) - Microfluidics-generated Microgels for the Fabrication of Biomedical Granular Hydrogels
- Chair: Milica Radisic (UofT)

9h45-11h15 Trainee Networking Event

Confirmed VIP Guests

- Jason Burdick PhD, Organ-on-Chip Keynote Speaker; Robert D. Bent Professor, University of Pennsylvania, USA
- Yoon-Kyoung Cho PhD, Diagnostics Keynote Speaker; Full Professor, Biomedical Engineering, Ulsan National Institute for Science and Technology (UNIST)
- Matthias Lütolf PhD, Organ-on-a-Chip Keynote Speaker; Professor, Institute of Bioengineering, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- Ana Ramos PhD, R&D Scientist, BenchSci – Toronto
- Lorenzo Gutierrez PhD, Site Director, StarFish Medical – Toronto
- May Tsai PhD, Director of Regulatory Affairs, Baylis Medical – Mississauga
- Mehdi Shahini PhD, Senior Project Manager, Abbott – Ottawa
- Leanna Levine PhD, President & CEO, ALine Inc – Los Angeles
- Farnoud Kazemzadeh PhD, Co-Founder and VP Engineering, Vital Bio – Waterloo, Canada
- Byeong-Ui (Ben) Moon PhD, Research Officer, NRC – Boucherville
- Jimin Guo PhD, Research Officer, NRC – Boucherville

- Caroline Miville-Godin MASC, Technical Officer, Microfabrication Specialist, NRC – Boucherville
- Jason Davis MSc, IP Advisor, NRC
- Priyum Koonjul PhD, Client Relationship Leader, Medical Devices, NRC

11h15-11h30 Break

11h30-12h15 Selected TOeP trainee presentations (10-min recorded presentations followed by 5-min live Q&A)

- 11h30: Karl Wagner (Radisic lab) - Investigating the Role and Mechanisms of Extracellular Vesicle Signalling in Human Cardiac Tissue-on-a-Chip Models
- 11h45: Kayla Soon (Sara Nunes Vasconcelos lab) - Development and Characterization of Vessel Arteriovenous Malformations (AVM)-on-a-Chip
- 12h00: Zhengkun Chen (Kumacheva/Young labs)- Microfluidic arrays of dermal spheroids: a throughput screening platform for skincare products
- Chair: Alison McGuigan (UofT)

12h15-13h15 Lunch break

13h15-14h15 Poster session 2 (Posters #19-#36)

14h15-15h00 Selected organ-on-a-chip presentations (10-min recorded presentations followed by 5-min live Q&A)

- 14h15: Dawn Lin (Boyang Zhang/Shinichiro Ogawa labs) - A 3D vascularized liver model on the IFlowPlate™
- 14h30: Elena Refet-Mollof (Thomas Gervais lab) - HOnAChip (hypoxia on a chip) : Insights into treatment efficacy
- 14h45: Qinghua Wu (Radisic lab) - High-throughput Heart-on-a-chip Platform for Studies of SARS-CoV-2 Induced Myocardial Injury
- Chair: Edmond Young (UofT)

15h00-15h15 Break

15h15-16h30 TOeP business pitch competition (7-min recorded presentation followed by 7-min live Q&A with judges)

- 15h20: Kayla Soon/ Safwat Khan/ Omar Mourad
- 15h35: Katrina Vizely
- 15h50: Sina Kheiri/ Zhengkun Chen
- 16h05: Scott Campbell
- Chair: Christopher Dixon
- Judges:

- Wendy Naimark, Chief Technology Officer, Ripple Therapeutics
- John Reid, Executive Vice President Business Development, Nanology Labs Inc
- Jack Lee, Founder and Business Development, MDDT inc.

16h30-16h45 Closing remarks and awards announcement for poster session 2 and TOeP trainee presentations

- Milica Radisic

August 27: Diagnostics

9h00-9h45 Diagnostics keynote (live)

- Yoon-Kyoung Cho (Ulsan National Institute of Science and Technology) - Lab-on-a-disc for the Detection of Rare Cells, Extracellular Biomarkers and Beyond
- Chair: Aaron Wheeler (UofT)

9h45-10h45 Selected diagnostics presentations

- 9h45: Jenice Chen (Shana Kelley lab) - Disease monitoring of protease activity using a reagentless molecular pendulum
- 10h00: Jimin Guo (NRC) - Automation of Next Generation Sequencing Workflows on a Centrifugal Microfluidics Platform
- 10h15: Intesar Zalloum (Scott Tsai lab) - Controlled shrinkage of microfluidically-generated microbubbles by tuning lipid concentration
- 10h30: Lidija Malic (NRC) - Rapid and automated detection of SARS-CoV-2 using isothermal nucleic acid amplification

10h45-11h00 Break

11h00-12h00 Industry exhibit hall

12h00-13h00 Lunch break

13h00-14h45 NRC Pandemic Response Challenge Program – Selected work and clinical translation keynote

- 13h00: Introductory remarks from Jean-Francois Houle (NRC)
- 13h15: Warren Chan (UofT) - Assay for Instrument-less SARS-CoV-2 Rapid Diagnostic for Saliva
- 13h30: Alexandros Sklavounos (Aaron Wheeler lab) - Latex agglutination tests for rapid, instrument-free COVID-19 diagnostics in saliva

- 13h45: Evan Amalfitano (Keith Pardee lab) - Point-of-Need Diagnostics for COVID-19 Recovery
- 14h00: **CLINICAL TRANSLATION KEYNOTE (LIVE)**: Claudia dos Santos (UofT, St. Michael's Hospital) – Analytical validation and translation of COVID detection and patient stratification technologies for Critical Care.
- Chair: Jean-Francois Houle

14h45-15h00 Closing remarks and awards announcement for business pitch session and selected biofab, organ-on-a-chip and diagnostics presentations.

- Teodor Veres