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
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

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**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 (EFPL), 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 iFlowPlateTM
  • 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:
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