

## ***Genomics in Medicine—Emerging Technologies and Bioinformatic Challenges***

Faculty of Medicine, Dalhousie University, December 5-6, 2019

Collaborative Health Education Building, Room CHEB170

### **THURSDAY DECEMBER 5<sup>TH</sup>**

#### **9:15 AM                      Opening Remarks**

#### **SESSION 1 — BIOINFORMATICS TO BEDSIDE I (9:25 – 10:40 AM)**

**Chair:** Andrew Orr

9:25 - 9:50	Karen Bedard	<i>Clinical genomics and diagnostics</i>
9:50 - 10:15	Sarah Dyack	<i>Medical genetics at the IWK: who we are and what we do</i>
10:15 - 10:40	Paola Marignani	<i>Cancer transcriptomics</i>

#### **10:40-11:15 AM              Coffee Break + Posters + Vendor Displays**

#### **KEYNOTE 1 — 11:15 AM – 12:15 PM**

<b>STEPHEN SCHERER</b>	Hospital for Sick Children and University of Toronto	<i>Genomes to genes to outcomes in autism</i>
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#### **12:15-1:15 PM              Lunch + Posters + Vendor Displays**

#### **SESSION 2 — TECH PLATFORMS: OPTIONS AND OPPORTUNITIES (1:15 – 4:00 PM)**

**Chair:** Jon Jerlström Hultqvist

1:15 - 1:35	Mena Farag	<i>Illumina</i>
1:35 - 1:55	Adriana Suarez	<i>10X Genomics</i>
1:55 - 2:15	Sal Mazza	<i>PacBio</i>

#### **2:15-2:25 PM              Break**

2:25 - 2:45	Mat Nightingale	<i>CORES—Genomics Facility</i>
2:45 - 3:05	Alejandro Cohen	<i>CORES—Biological Mass Spectrometry Facility (BMS)</i>
3:05 - 3:15	David Malloy	<i>CORES—Zebrafish Facility</i>
3:15 - 3:25	Derick Rowter	<i>CORES—Flow cytometry</i>
3:25 - 3:30	Stephen Whitefield	<i>CORES—Cellular &amp; Molecular Digital Imagine Facility (CMDI)</i>
3:30 - 3:35	Mary Ann Trevors	<i>CORES—Electron microscopy</i>
3:35 - 3:40	Andrew Reid	<i>CORES—Brain Bank</i>
3:40 - 4:00	Morgan Langille	<i>Integrated Microbiome Resource</i>

#### **4:00 - 5:00 PM              CORES Tours**

#### **4:00 PM -                      Social events**

**FRIDAY DECEMBER 6<sup>TH</sup>**

**KEYNOTE 2 — 9:15 – 10:15 AM**

<b>HELEEN ARTS</b>	Department of Pathology & Lab Medicine, IWK Health Centre	<i>Ciliopathies</i>
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**10:15 - 10:45 AM Coffee Break + Posters + Vendor Displays**

**SESSION 3 — NEW TECH, NEW APPLICATIONS (10:45 – 12:00 PM)**

**Chair:** Wenda Greer

10:45 - 11:10	Andrew Orr and Mat Nightingale	<i>Structural variation in Mendelian disorders using the Bionano platform</i>
11:10 - 10:35	Landon Getz	<i>TN-Seq for probing bacterial pathogenesis</i>
10:35 - 12:00	Dudley Chung	<i>Genome editing with CRISPR-Cas9</i>

**12:00 - 1:00 PM Lunch + Posters + Vendor Displays**

**SPECIAL PRESENTATION — 1:00 – 1:20 PM**

<b>STEVE ARMSTRONG</b>	Genome Atlantic	<i>Genome Atlantic—mission and funding opportunities</i>
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**SESSION 4 — BIOINFORMATICS TO BEDSIDE II (1:20 – 2:35 PM)**

**Chair:** Leah Cahill

1:20 - 1:45	Manal Elnenaei	<i>Ultra low depth-WGS outperforms FISH in scope and resolution for detection of copy number abnormalities in multiple myeloma</i>
1:45 - 2:10	Johane Robitaille	<i>Genomics of inherited developmental retinal vascular disease and a tour of CGEM</i>
2:10 - 2:35	Rudolf Uher	<i>Polygenic scores in the prediction and prevention of mental illness</i>

**2:35-2:45 PM Break**

**SESSION 5 — MICROBIOMICS (2:45– 4:00 PM)**

**Chair:** Morgan Langille

2:45 - 3:10	Andrew Roger	<i>Genomics and metagenomics of <u>Blastocystis</u> in the human gut</i>
3:10 - 3:35	Katherine Dunn	<i>Metagenomics: perspectives from pediatric Crohn's disease</i>
3:35 - 4:00	Patrick Slaine	<i>Genomics of influenza virus</i>

**4:00 - 4:10 PM Poster awards + closing remarks**