

BioNet 2024

March 26th-28th, Banff, AB

Tuesday March 26th, 2024

Main Conference Room: Kinnear Centre 203

BioNet 2023 Opening Ceremony	
1:00-1:10pm	Welcome and opening remarks – Dr. Athan Zovoilis
1:10-1:20pm	BioNet Introduction – Dr. Eric Merzetti
1:20-1:30pm	Conference Kickoff – Matt Bryman
Session 1: Health Omics 1 – Moderator Dr. Ryan Mercer	
1:35-1:50pm	Dr. Pinaki Bose, University of Calgary <i>“Decoding MicroRNA Deregulation: Advancing Prognostication and Therapeutic Strategies in Oral Cancer”</i>
1:55-2:10pm	Dr. Britt Drogemoller, University of Manitoba <i>“The incorporation of automated phenotyping strategies to identify genes and pathways involved in sensory and metabolic hearing loss”</i>
2:15-2:30pm	Dr. Arvind Mer, University of Ottawa <i>“Advancing Precision Oncology: Machine Learning for Drug Response and Biomarker Discovery”</i>
2:35-2:45pm	Lilit Antonyan, University of Calgary <i>“Genetic association analysis of pediatric obsessive-compulsive behaviors, the role of imaging endophenotypes in mediating the relationship between genetic markers and quantitative symptom scores”</i>
Coffee Break – Outside KC203	
Opening Plenary – KC203	
3:30-4:05pm	Plenary Talk – Katrina Ingram, Ethically Aligned AI <i>“Data and AI Ethics: A socio-technical perspective”</i>
Session 2: Advanced Computational Approaches – Moderator – Dr. Richard LeDuc	
4:10-4:25pm	Dr. Jason de Koning, University of Calgary Title: <i>“TBD”</i>
4:30-4:45pm	Dr. Matthew Greenberg, University of Calgary <i>“A scalable approach to fitting ZINB-WaVE models to single-cell gene expression data”</i>
4:50-5:00pm	Kabita Baral, University of Calgary <i>“Power to detect episodic fitness shift at a small number of sites can be rescued with a covariate-informed branch-site type method”</i>
Opening Keynote – KC203	
5:05-5:50pm	Keynote Talk – Dr. Brett Trost, Sickkids <i>“Genomic architecture of autism from comprehensive whole-genome sequence annotation”</i>
Supper – KC 203	

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Wednesday March 27th, 2024

8:00-9:00am	Breakfast – Maple Leaf Room
The BioNet Outstanding Service Plenary Talk	
9:00-9:25am	Dr. Steven Jones, BC Cancer <i>“Long reads, phasing and epigenomics”</i>
Session 3: Health Omics 2 – Moderator: Dr. Georgia Balsevich	
9:30-9:45am	Dr. William Hsiao, Simon Fraser University <i>Title: “TBD”</i>
9:50-10:05am	Dr. Mohamed Helmy, University of Saskatchewan <i>“Integrating Structural Bioinformatics and Artificial Intelligence in Designing High-Specificity Antibodies for COVID-19 Vaccine Development”</i>
10:10-10:25am	Dr. Senthilkumar Kailasam, McGill University <i>“Ribosome footprint analysis workflow for studying neuronal stalled ribosome”</i>
10:25-10:35am	David Enoma, University of Calgary <i>“Evolution-directed association studies (EDAS) in brain disorders give insight into the biology of Schizophrenia”</i>
10:40-10:50am	Kevin Joannou, University of Alberta <i>“Thymic 4-1BB signals program the TCR $\alpha\beta^+$ CD8$\alpha\alpha$ intraepithelial lymphocyte population for survival”</i>
10:50 to 11:20am	Coffee Break – Outside KC203
Session 4: Microbial Omics – Moderator: Dr. Matthew Croxen	
11:20-11:35am	Dr. Tarah Lynch, Alberta Precision Laboratories <i>“A modular bioinformatics system for public health genomics”</i>
11:40-11:55pm	Dr. Viraj Muthye, University of Calgary <i>“The highly repetitive genome of Myxobolus sp., a myxozoan parasite of fathead minnows”</i>
12:00-12:10	Alyssa Butters, University of Calgary <i>“Colistin resistance and PmrB E123D and Y358N amino acid substitutions in Escherichia coli: A spurious association?”</i>
Sponsor Talk	
12:15-12:30pm	Sidki Bouslama, Illumina <i>“De novo bacterial assembly using Illumina long reads”</i>
12:30 to 1:30pm	Lunch – Outside KC203
Keynote – KC205	
1:30-2:15pm	Keynote Talk – Dr. Jérôme Waldspühl, McGill <i>“Leveling Up Citizen Science for Genomics”</i>
Session 5: Agricultural Omics – Moderator Dr. Kirill Krivushin	
2:25-2:40am	Dr. Robert Gruninger, Agriculture and Agri-Food Canada <i>“Isolation and characterization of Bacteroides species associated with the formation of liver abscesses in feedlot cattle.”</i>
2:45-2:55am	Ryan Gourlie, Agriculture and Agri-Food Canada <i>“Replication of the virulence gene ToxB in the fungal plant pathogen Pyrenophora tritici-repentis”</i>
3:00 to 3:30pm	Coffee Break / Group Photo – KC203
BioNet 2024 Poster Session – KC205	
3:30-4:45pm	Even Numbered Posters Present
4:45-6:00pm	Odd Numbered Posters Present
Supper – Out in Banff (not provided)	

Thursday March 28th, 2024

8:00-9:00am	Breakfast – Vistas Dining Room
Closing Plenary – KC203	
9:00-9:25am	Dr. Michelle Scott, Université de Sherbrooke <i>“Using machine learning to identify the expression determinants of small nucleolar RNAs”</i>
Session 6: Health Omics 3 – Moderator: Dr. Paul Gordon	
9:30-9:45am	Dr. Jennifer Geddes-McAlister, University of Guelph <i>“Disruption of ClpX reverts fluconazole susceptibility for Cryptococcus neoformans through modified heme and ergosterol production”</i>
9:50-10:05am	Dr. Rene Zahedi, University of Manitoba
10:10-10:25am	Dr. Igor Kovalchuk, University of Lethbridge <i>“Application of Drug Efficiency Index metric for analysis of post-traumatic stress disorder and treatment resistant depression gene expression profiles”</i>
10:25-10:35am	Travis Haight, University of Manitoba <i>“Nanopore Sequencing reveals a repetitive region in the Snhg14 locus that is connected with amyloid beta toxicity”</i>
10:35 to 11:05am	Coffee Break – Outside KC203
Round Table: Non-Academic Careers in STEM	
11:05-12:10pm	Sidki Bouslama – Illumina Athena Cochinamogulos – Genome Alberta Dr. Tarah Lynch - Alberta Precision Laboratories, Dr. Ryan Mercer – Alberta Innovates, Jim Slater – Cancer Care Manitoba,
12:15-1:00pm	Conference Closing Ceremonies – KC203
Awards / Final Comments	

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