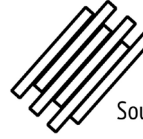
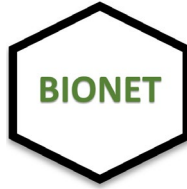




# The 2<sup>nd</sup> Annual BioNet Conference - Schedule



 **UNIVERSITY OF CALGARY**  
CUMMING SCHOOL OF MEDICINE  
Centre for Health Informatics



Southern Alberta Genome  
Sciences Centre

**Wednesday May 25th 2022**

<b>Opening Ceremony (ST140)</b>	
1:00-1:05pm	BioNet Introduction – Dr. Athanasios Zovoilis, BioNet Academic lead
1:05-1:10pm	Remarks– Dr. André Buret, Associate Vice President (Research) University of Calgary
1:10-1:15pm	Remarks – Dr. Dena McMartin, Vice President (Research) University of Lethbridge
1:15-1:20	Remarks – Dr. Gijs van Rooijen, Chief Scientific Officer Genome Alberta
1:20:1:25pm	Conference Kickoff – Dr. Eric Merzetti, BioNet Program Manager
<b>Session 1: Spotlight Session (ST140)</b>	
1:30-1:50pm	Dr. Quan Long - The University of Calgary “Discovering genetic basis of complex traits by utilizing “borrowed data-bridge””
1:50-2:10pm	Rodrigo Ortega-Polo - Agriculture and Agri-Food Canada “The Computational Analyses Research Support Unit of the Lethbridge Research and Development Centre”
2:10-2:30pm	Dr. Tarah Lynch – Alberta Precision Laboratories “COVID-19: A Catalyst for Change”
2:30-2:45pm	Short-talk: Dr. Ana Nikolic, University of Calgary “Sub-clonal Copy Number Variation and Chromatin State Heterogeneity in Cancer Single-cell Chromatin Accessibility Data”
<b>Coffee Break – Outside ST140</b>	
<b>Opening Keynote (ST140)</b>	
<b>“Pleasing People and Pathogens: Bioinformatics Battles”</b>	
3:30-4:30pm	Dr. Fiona Brinkman, PhD, FRSC Distinguished Professor, Molecular Biology and Biochemistry Dept Associate Professor, School of Computing Science, and Faculty of Health Sciences Simon Fraser University
<b>Session 2: Omics &amp; Human Disease 1 (ST140)</b>	
4:30-4:50pm	Dr. Marco Gallo – University of Calgary Title: TBD
4:50-5:10pm	Dr. Olga Kovalchuk – University of Lethbridge Title: TBD
5:10-5:25pm	Short-talk: Reid McNeil, University of Calgary “Evaluating DNA Amplifications and their effect on Squamous Cell Carcinoma Prognosis using The Cancer Genome Atlas”
5:25-5:40	Short-talk: Dr. Michael J Johnston – University of Calgary “Type B Ultra Long-Range Interactions in PFAs (TULIPs) represent recurrent epigenomic alterations in pediatric ependymoma”
6:00-7:00pm	<b>Dinner – TI 160</b>



8:00-9:00am	<b>Breakfast – Outside ST140</b>
<b>Session 3: Omics &amp; Human Disease 2 (ST140)</b>	
9:00-9:20am	Dr. Edwin Wang – University of Calgary “Predictive genomics, from understanding of genomics to predictive models”
9:20-9:40am	Dr. Laura Sycuro – University of Calgary “Piercing the fog of the gut-brain axis with metagenomics”
9:40-10:00am	Dr. Pinaki Bose – University of Calgary “In search of illusive oncogenic drivers in oral cancer”
10:00-10:20am	Dr. Gerlinde Metz – University of Lethbridge “Can't buy me love: epigenetic and metabolomic determinants of health linked to social isolation”
10:20-10:35am	Short-talk: Dr. Ankita Narang – University of Calgary “Whole-genome sequencing analysis of clozapine-induced myocarditis”
10:35-10:50am	Short-talk: Lilit Antonyan, University of Calgary “Genome-Wide Association Study of Pediatric Obsessive-Compulsive Behaviors, the Correlation with Imaging Endophenotypes”
10:55 to 11:25am	<b>Coffee Break – Outside ST140</b>
<b>Session 4: Microbial Omics (ST140)</b>	
11:25-11:45am	Dr. Ian Lewis – University of Calgary “Predicting the severity of infections via microbial proteomics: insights from a city-wide survey of blood stream infections over 20 years”
11:45-12:00pm	Short-talk: Dr. Peipei Zhang – Agriculture and Agri-Food Canada “Large scale genomic analysis of <i>Escherichia coli</i> genomes to characterize the transmissible locus of stress tolerance (tLST) and tLST harboring <i>E. coli</i> ”
12:00-12:15pm	Short-talk: Adaobi Ojiakor, University of Alberta “The evolutionary diversification of the <i>Salmonella</i> artAB toxin locus”
12:15-12:30pm	Short-talk: Chenhua Li, University of Calgary “A transcriptomic view of the molecular mechanisms that the lancet liver fluke uses to manipulate its hosts behavior”
12:30-12:45pm	Short-talk: Abhinaya Venkatesan, University of Calgary “Identification of a genetically divergent population of the human soil transmitted helminth <i>Trichuris</i> in Cote d'Ivoire that is unresponsive to albendazole-ivermectin combination treatment.”
1:00 to 2:00pm	<b>Lunch – Outside ST140</b>
<b>Poster Session 1 - Outside ST140</b>	
2:00-2:30pm	Even Numbered Posters Present
2:30-3:00pm	Odd Numbered Posters Present
<b>Session 5: Spotlight Session - Nanopore Sequencing (ST140)</b>	
3:00-3:20pm	Dr. Emily Herman, University of Alberta “A Snakemake workflow for detecting Bovine Respiratory Disease pathogens and antimicrobial resistance genes in third generation metagenomic sequencing data”
3:20-3:40pm	Dr. Athanasios Zovoilis, University of Lethbridge “NERD-seq a novel approach of Nanopore direct RNA sequencing”
3:40-4:00pm	Dr. Paul Gordon, University of Calgary “Is it signal or noise? Dissecting raw direct RNA data from nanopore devices”
4:00 to 4:30pm	<b>Coffee Break – Outside ST140</b>
<b>Session 6: Advanced Genomic Approaches (ST140)</b>	
4:30-4:50pm	Dr. Paul Stothard – University of Alberta “Bioinformatics for genetic improvement, management and conservation of livestock”
4:50pm-5:10pm	Dr. Jason de Koning – University of Calgary “The Population Genetics of Non-Equilibrium Molecular Evolution: A Unified Approach to Understanding Neutral and Non-Neutral Evolutionary Processes”
5:10-5:25pm	Short-talk: Dinghao Wang, University of Calgary “cLD: Rare-variant disequilibrium between genomic regions identifies novel genomic interactions”
5:25pm-5:40pm	Short-talk: Vladimir Avramovic, University of Calgary “Use of reference population data for resolving variants of unknown significance in hematopoietic genes”
5:40-5:55pm	Short-talk: Deshan Perera, University of Calgary “CATE: A fast and scalable CUDA implementation to conduct highly parallelized evolutionary tests on large scale genomic data”
6:00-7:00pm	<b>Dinner – TI 160</b>

# Friday May 27<sup>th</sup> 2022

8:00-9:00am	<b>Breakfast – Outside ST140</b>
<b>Session 7: Agricultural Omics (ST140)</b>	
9:00-9:25am	Plenary Talk: Dr. Tim McAllister – Agriculture and Agri-Food Canada “Genomic approaches to defining the molecular ecology of AMR across a “One-Health” continuum”
9:25-9:45am	Dr. Igor Kovalchuk, University of Lethbridge “Transgenerational response to heat in <i>Arabidopsis thaliana</i> - genetic and epigenetic components”
9:45-10:05am	Dr. Devin Holman – Agriculture and Agri-Food Canada “The swine gut microbiome and resistome in conventional and organic production systems”
10:05-10:20am	Short-talk: Dr. Elisabeth Richardson, University of Alberta “Microbiome analysis of tailings reclamation protocols in the Athabasca Oil Sands Region”
10:20-10:35am	Short-talk: Dr. Marta Gerasymchuk, University of Lethbridge “Rejuvenation Effects of Phytocannabinoids and Anti-aging Drugs on Dermal Fibroblasts During Aging”
10:35-10:50am	Short-talk: Sani Zehra Zaidi, University of Lethbridge “Genomic characterization of <i>Enterococcus hirae</i> from beef cattle feedlots and associated environmental continuum”
10:55 to 11:25am	<b>Coffee Break – Outside ST140</b>
<b>Session 8: Omics &amp; Human Disease 3 (ST140)</b>	
11:25-11:45am	Dr. James Wasmuth – University of Calgary “A hitchhiker’s guide to a parasite’s genome.”
11:45-12:05am	Dr. Maja Tarailo-Graovac, University of Calgary “Genome sequencing and complex disease mechanisms in rare disease patients”
12:05-12:25pm	Dr. Gane Ka-Shu Wong, University of Alberta “Drug targets and lead compounds in the era of “free” data for humans and biodiverse taxa”
12:25-12:40pm	Short-talk: Dr. Viraj Muthye, University of Calgary “Identification of mimicry between protein structures and its role in host-parasite interactions”
12:40-12:55pm	Short-talk: Luke Saville, University of Lethbridge “Processing of Alu and B2 SINE RNAs by Hsf1 is dysregulated in neuro-toxicity models and Alzheimer’s disease patients”
1:00 to 2:00pm	<b>Lunch – Outside ST140</b>
<b>Poster Session 2 – Outside ST140</b>	
2:00-2:30pm	Odd Numbered Posters Present
2:30-3:00pm	Even Numbered Posters Present
3:00 to 3:30pm	<b>Coffee Break – Outside ST140 – Group Photo</b>
3:30-4:30pm	PI Meeting (ST140) – BioNet and beyond, collaborative funding strategies in bioinformatics and omics research Students Meeting (ST148) – Round table discussion on graduate life in bioinformatics and omics
<b>Closing Keynote (ST140)</b> “Adventures in Long-read sequencing”	
4:30-5:30pm	Dr. Steven Jones – Professor, FRSC, FCAHS Co-Director & Head, Bioinformatics, Genome Sciences Centre British Columbia Cancer Research Centre
5:30-6:30pm	<b>Dinner – TI 160</b>
6:30-7:00pm	<b>Awards / Final Comments</b>