

PREP

Professional & Research Education Program

GRADUATE STUDENT RESEARCH DAY

May 17th - 18th, 2018



DALHOUSIE
UNIVERSITY

MEDICINE
150 YEARS

Part of Dalhousie's Bicentennial Celebrations

Dalhousie
MEDICAL RESEARCH
Foundation



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Faculty of Graduate Studies

Welcome to PREP Graduate Student Research Day

Graduate Student Research Day has been an annual event since 2005, when it began in the Faculty of Medicine. Now, this event invites participation from graduate students from across the University, who are involved in health research.

Normally held in May, this event typically receives over 80 abstracts, which are presented during this full-day of platform and poster presentations. Presentations are adjudicated by experienced researchers, in the spirit of helping students further develop their presentation and research skills. All Dalhousie graduate students are welcome to present their health-related research at this event.

In addition to providing an opportunity for students to present their research, this event allows a rare chance for these students to learn about other health research happening in their community and to develop research collaborations with others outside their fields of expertise.

This is one of the largest research showcases on Dalhousie University campus and promotes the importance and presence of the excellent research happening here.

The main objectives of graduate student research day:

- to help students and trainees enhance their awareness of ongoing research and opportunities
- to allow students and trainees an opportunity to critically assess the features of a good research project
- to provide students and trainees an opportunity to consider how research fits with the ongoing process of health education

Graduate Student Research Day is supported by:



Schedule of Events

Thursday, May 17th

- 6:30pm **Reception – Sir Charles Tupper Building, Main Foyer**
- 6:50pm **Welcome & DalMed150 in Health Research**
Dr. David Anderson, Dean, Faculty of Medicine
- 7:00-8:00pm **Graduate Student Excellence in Health Research – 2018 Awardees:**
Know thy enemy: making conflict work in oncolytic virus therapy
Derek Clements (Department of Pathology, Faculty of Medicine)
- Faculty of Health Awardee**

Friday, May 18th

- 8:30am **Poster Session – Master's & PhD programs (Tupper Foyer)**
- 10:00am **Platform Presentations – Master's programs (various locations – see p.7-9)**
- 11:30am **DalMed150 Keynote Address (Theatre A, Tupper Building)**
Understanding How Immunotherapy Works
Dr. Andre Veillette
Professor, Department of Molecular Oncology
Clinical Research Institute of Montreal
- 12:30pm **Lunch Provided (Tupper Foyer)**
- 1:30pm **Platform Presentations –PhD programs (various locations – see p.10-11)**
- 4:30pm **Awards & Tupper Mixer (Tupper Commons)**
Poster & platform presentation awards
(pizza and cash bar)

DalMed150 – Part of Dalhousie’s Bicentennial Celebrations

In 2018, Dalhousie’s Medical School celebrates 150 years of excellence in education, research and service in Maritime Canada. Next year, our medical community will partner to celebrate Dal Med’s many successes and achievements in these areas.

The basic science and clinical departments, and Dean’s Office units that collectively make our medical community, will be involved in this year-long celebration. We commemorate our anniversary by hosting signature events at the departmental and faculty level throughout 2018, to celebrate Medicine’s 150-year history.

Thank you for participating in our celebration by identifying an event – a lecture, symposium, or presentation – one of many 150th signature anniversary events to be hosted by our Faculty:

<https://medicine.dal.ca/news/medicine-celebrates-150-years.html>



DalMed150 Keynote Speaker – Dr. André Veillette

“Understanding how immunology works”

Dr. Veillette received his M.D. in 1982 from Laval University. He was a professor at the McGill Cancer Center at McGill University and is currently professor in the Department of Molecular Oncology at the Clinical Research Institute of Montreal. He is internationally renowned for his work on immune cell activation. In 1995, he was elected a member of the American Society for Clinical Investigation. He has received the André Dupont Young Investigator Award, the Merck Frosst Prize, and the Marcel-Piché Award. In 2002, he was named Canada Research Chair in Signaling in the Immune System; in 2007, he received the Léo-Pariseau Prize, a prize awarded by the Francophone Association for Knowledge and sponsored by Merck Frosst; in 2008, he was elected member of the Royal Society of Canada; and in 2009, he received the Hardy-Cinader Award from Canadian Society of Immunology and was elected member of Association of American Physicians.

Dr. Veillette has organized several international scientific meetings, including FASEB Science Research Conferences in 2003, 2005, 2013 and 2015, a Keystone Symposium and the 15th Meeting of the Society for Natural Immunity in 2015. Also, since 1999, he organized 10 conferences on Signal Transduction in Normal and Cancer Cells that were held in Banff, Canada.

Student Presentation Schedule

Poster Session – 8:30-10:00am, Tupper Lobby

poster #	Student	Department/ College/ School	Abstract Title	Research Area
1	Cameron, Breanne	Physiology & Biophysics	Single Cell Investigation of Mechanically-Induced Arrhythmias During Acute Ischemia	cardiovascular
2	Collett, Keon	Pathology	Modeling MLL-AF9 associated infant leukemia for high throughput drug screening	cancer
3	Colp, Morgan	Biochemistry & Molecular Biology	Development of an experimental model for studying lateral gene transfer in eukaryotes	molecular evolution
4	Veinot, Sarah	Microbiology & Immunology	Unraveling the Secrets of MK2 Activation by Kaposin B	cancer
5	Warkentin, Stefan	Biochemistry & Molecular Biology	Understanding the Transition of Aciniform Spider Silk from Soluble Proteins to Biomaterials with Medical Applications	biomaterials
6	Mereshchuk, Anastasiia	Biochemistry & Molecular Biology	Investigating the Role of Protein Interactions in the Mechanism of the Yeast Nuclear Plasmid Inheritance	medical biotechnology
7	Simmons, Jeffrey	Biochemistry & Molecular Biology	Investigation and production of recombinant pyriform silk	biomaterials
8	Goldenberg, Savrina	Health & Human Performance	Movement Related Increases in Blood Pressure During Arm Crank	biomechanics; cardiovascular
9	Grace, Nardeen	Microbiology & Immunology	Expression of NK Inhibitory and Activating Ligands on Lung Cancer Cells	immunology
10	Fokam, Danielle	Physiology & Biophysics	Is a local infection purely local?	immunology
11	MacQuarrie, Madison	Health & Human Performance	The power of participation: How might community partners sustain the Halifax Mobile Food Market	community health
12	Joyce, Kayla	Psychiatry	Changes in coping and social motives for drinking and alcohol consumption across the menstrual cycle	mental health
13	Kenward, Calem	Biochemistry & Molecular Biology	Exploring the link between structural features and anti-tumor effects of class IB Hydrophobins	structural biology
14	MacDonald, Tyler	Biochemistry & Molecular Biology	Hormonal upregulation of pro-survival genes in triple-negative breast cancer	cancer
15	Miller, Laura	Health & Human Performance	Physical Activity as a Predictor of Sleep Quality among Preschool-Aged Children	community health

poster #	Student	Department/ College/ School	Abstract Title	Research Area
16	Mohammadizadeh, Sheyda	Pharmacy	Effect of exercise on ademonsine catabolism and cardiovascular protection	cardiovascular
17	Loung, Chao-Yu	Pathology	Apple Flavonoids (AF4) as a Potential Selective Breast Cancer Treatment	cancer
18	Robinson, Alysia	Community Health & Epidemiology	Community Variation in Hospital Length of Stay: An Indicator of Community Care Integration	community health, epidemiology
19	Baillie, Jonathan	Physiology & Biophysics	Single Cell Studies of Mechanisms and Importance of Stretch Effects on Pacemaker Function	cardiovascular
20	Sulekha, Anamika	Biochemistry & Molecular Biology	Tracking the fibrillogenesis pathway of aciniform silk	structrural biology
21	Van Roon, Patricia	Communication Sciences and Disorders	Brain Responses to Detect Hidden Hearing Loss in Humans	auditory research
22	Scur, Michal	Microbiology & Immunology	NKR-P1B is required for resident alveolar macrophage development and function	immunology
23	Herod, Adrian	Microbiology & Immunology	Bacterivorous Protozoa as a Screening Model for Salmonella Virulence	Bacteriology
24	Barakat, Al Rashdi	Biology	The Role of Toll-Like Receptor 2 in Experimental Autoimmune Encephalomyelitis	immunology, neuroscience
25	Dawod, Bassel	Pathology	Examining the impact of TLR2 and cow's milk on oral tolerance development	immunology
26	D'Souza, Kenneth	Biochemistry & Molecular Biology	Autotaxin-Lysophosphatidic Acid Signaling Contributes to Obesity-Induced Insulin Resistance in Muscle and Impairs Mitochondrial Metabolism	immunology
27	Westhaver, Lauren	Pathology	Effect of mitochondrial damp on innate immune activation during ischemia reperfusion injury: a focus on natural killer cells	immunology

Platform presentations (Master's programs) – 10:00-11:30am

Time	Student	Affiliation	Abstract Title	Research Area
Room 2L-10, Tupper Building (2nd floor, Tupper Link)				
10:00	Moritz, Lauren	Health & Human Performance	Youth with a Physical Disability: Exploring how the Social and Physical Environments Influence Access to Formal Leisure & Educational Activities	community health
10:15	Short, Matthew	Health & Human Performance	Feasibility of an EMG-controlled Functional Electrical Stimulation Instrument	biomechanics
10:30	Searle, Jennifer	Nursing	Relationships and Stigma: The Experiences of 2SLGBTQ+ Service Users and Primary Care Providers	community health; mental health
10:45	Sinno, Jad	Psychiatry	Treatment preferences and experiences of adults living with anxiety, depression, or psychological distress in the Halifax Regional Municipality	mental health
11:00	Finlayson-Trick, Emma	Microbiology & Immunology	Investigating the role of bacterial HtpG in pediatric Crohn's disease	immunology, microbiology
Room G36, Tupper Building (main level, Tupper Link – behind Theatre A)				
10:00	Hargreaves, Breanna	Microbiology & Immunology	MicroRNA and Natural Killer cell interplay in Rheumatoid Arthritis	immunology
10:15	McKenna, Meagan	Pharmacology	Evaluating the effect of the cannabis monoterpene myrcene in a rat model of experimental arthritis	neuroscience
10:30	Castle, Elizabeth	Microbiology & Immunology	The viral protein Kaposin B elicits processing body dispersal by activating the cytoskeletal kinase ROCK	cancer
10:45	Nearing, Jacob	Microbiology & Immunology	Infectious complications are associated with alterations in the gut microbiome in pediatric patients with acute lymphoblastic leukemia	genomics, microbiome
11:00	Singh, Gillian	Microbiology & Immunology	Viral Protein Engagement of Selective Autophagy Pathways Controls Inflammatory Gene Expression	molecular biology; virology
11:15	Morin, Francis	Biomedical Engineering	The Effects of Optical Clearing Agents on Tympanoplasty Graft Materials for Use in Middle Ear Optical Coherence Tomography	biomedical engineering; medical imaging

Time	Student	Affiliation	Abstract Title	Research Area
Room 3H-1, Tupper Building (3rd Floor)				
10:00	MacNeil, Grant	Microbiology & Immunology	Kicking the Kap out of Kaposi's Sarcoma: Tools for Studying a Herpesvirus Protein	cancer; virology
10:15	Jones, Casey	Pharmacology	The gut virome of pediatric Crohn's Disease following exclusive enteral nutrition	microbiomics
10:30	Vidovic, Dejan	Pathology	Using a clinically-guided RNAseq screen to identify a functional lncRNA target in triple-negative breast cancer	cancer
10:45	Getz, Landon	Microbiology & Immunology	Linking Phenotype and Pathogen Genomics: Tn-Seq and Next Generation DNA Sequencing	pathogen genomics
11:00	Lamport, Anna-Claire	Pharmacology	Remyelination is accelerated by experimental autoimmune encephalomyelitis: A new mouse model for the elucidation of immune-mediated brain repair	neuroscience
11:15	Yousef, Tareq	Medical Neuroscience	Melanopsin immunoreactive neurons in the fish retina	neuroscience
Room 2L-7, Tupper Building (2nd Floor, Tupper Link)				
10:00	Chedrawe, Matthew	Pharmacology	Repositioning pioglitazone for the treatment of multiple sclerosis	neuroscience
10:15	Herod, Tyler	Biomedical Engineering	Microscale Vulnerabilities In The Lumbar Intervertebral Disc Annulus May Be Compensated For By Nanostructural Variations	biomechanics
10:30	Huynh, Thomas	Pathology	ChIP-ping Away at the Epigenetics Underlying Combination Treatment of Acute Promyelocytic Leukemia	cancer
10:45	Richardson, Melissa	Pathology	Fish Tales: Loss of STAG2 Promotes Metastasis of Ewing Sarcoma	cancer
11:00	Alkhamees, Abdulrahman	Periodontics	Assessing Osseointegration using Resonance Frequency Analysis and Reverse Torque Test: a Longitudinal Clinical Validation Study	implant dentistry

Time	Student	Affiliation	Abstract Title	Research Area
Room 2L-3, Tupper Building (2nd Floor, Tupper Link)				
10:00	Miller, Sally	Community Health & Epidemiology	Navigational Need and Access to Cancer Patient Navigators (CPNs) among Breast Cancer Patients in Nova Scotia	community health; epidemiology
10:15	Greene, Jennifer	Community Health & Epidemiology	Using a novel monitoring database to examine predictors of anti-retroviral treatment adherence and viral load in those attending an HIV clinic in Dar es Salaam, Tanzania	global health
10:30	Mathias, Holly	Health & Human Performance	Perceptions and Experiences of Access to Youth Mental Health Services and Supports in a Rural Nova Scotia Community	mental health
10:45	Saleh, Sara	Physiotherapy	Comparison between clinical evaluation and ultrasonography in detecting knee swelling in individuals with knee osteoarthritis	biomechanics
11:00	Carew, Allie	Community Health & Epidemiology	Is there an association between gestational diabetes mellitus and the future risk of cardiovascular disease?	cardiovascular; community health, epidemiology
Theatre C, Tupper Building (Main Level, Tupper Link)				
10:00	Ghimire, Anjali	Pharmacology	Sex-specific acute beneficial effects of an estrogen receptor agonist added to cardioplegic solution in adult and aging mouse hearts	cardiovascular
10:15	Feniyanos, Emile	Biomedical Engineering	Overload damage to human tendon collagen is independent of sex over 4 decades	biomechanics
10:30	Goldade, Seirin	Community Health & Epidemiology	Predicting the Development of Hypertension with Perinatal Data: A Study of Nova Scotian Women	community Health; cardiology
10:45	Allen, Brittney	Pharmacology	Role of adrenergic receptor signaling in embryonic ventricular cell proliferation and differentiation	cardiovascular

Platform presentations (PhD programs) – 1:30-3:00pm

Time	Student	Affiliation	Abstract Title	Research Area
Room 2L-3, Tupper Building (2nd Floor, Tupper Link)				
1:30	Slaine, Patrick	Microbiology & Immunology	Adaptive mutations in influenza A/California/07/2009 enhance polymerase activity and infectious virion production	virology
1:45	Jefferies, Keisha	Nursing	Exploring Leadership Experiences Amongst African Nova Scotian Nurses in Health Care	representation in nursing
2:00	Paynter, Martha	Nursing	Perinatal health outcomes of criminalized and incarcerated women in Canada	community health
2:15	Douglas, Gavin	Microbiology & Immunology	Differences in host gene expression linked to predicted shifts in microbial pathways in an inflammatory bowel disease cohort	microbial ecology; gene regulation
2:30	Aali, Maral	Physiology & Biophysics	The potential of iron chelation as adjunctive treatment for murine peritonitis-induced sepsis	immunology
2:45	Nunes, Abe	Psychiatry	Meta-analysis on Semantic and Neural Networks with `word2brain`	neuroscience
Room 2L-7, Tupper Building (2nd Floor, Tupper Link)				
1:30	Astle, Jasmin	Biomedical Engineering	Transmission electron microscopy reveals new details of collagen fibril damage during tendon overload	biomechanics
1:45	Hall, Shannon	Medical Neuroscience	Does chronic sleep restriction “wake up” immune cells in the brain?	neuroscience
2:00	Fernando, Wasundara	Pathology	Determination of antimetastatic activity and pharmacokinetic parameters of phloridzin docosahexaenoate (PZ-DHA) using in vitro and in vivo triple-negative breast cancer models	pathology
2:15	Semaniakou, Poliana Anna	Physiology & Biophysics	Decreased VIPergic innervation in duodenum tissue of C57Bl/6 CF mice	respiratory
2:30	Laflamme, Olivier	Medical Neuroscience	From left to right, a sensory afferent story	neuroscience

Time	Student	Affiliation	Abstract Title	Research Area
Theatre C, Tupper Building (main level, Tupper Link)				
1:30	Bydoun, Moamen	Pathology	S100A10, a Novel Biomarker in Pancreatic Ductal Adenocarcinoma	cancer
1:45	Nagarajan, Nandini	Microbiology & Immunology	Synaptopodin-2, a promyogenic marker required for the development of sarcomeric Z-disc of zebrafish	muscle performance
2:00	Pringle, Eric	Microbiology & Immunology	Alternative translation initiation in KSHV replication	microbiology
2:15	Clements, Derek	Pathology	Tumor microenvironment drives an immunosuppressive phenotype within OV-induced monocytic myeloid cells through CD38	cancer, immunology
2:30	DeBay, Drew	Medical Neuroscience	Butyrylcholinesterase genetic polymorphism and neuroimaging biomarkers in Alzheimer's Disease	neuroscience
2:45	Rajan, Vinothkumar	Microbiology & Immunology	An Enhanced Zebrafish Xenograft Platform to Study Hematopoietic Stem Cells and Patient-Derived Leukemia	cancer