

# Life Sciences Research Poster Day



**March 29<sup>th</sup>, 2019**

**Biosciences Atrium**

| <b>ANAT 499</b>          |   |                   |
|--------------------------|---|-------------------|
| <b>Name</b>              | <b>Poster Title</b>   | <b>Supervisor</b> |
| <b>Katelyn Bell</b>      | The Effect of Smoking on Mitochondrial Dynamics in the Placenta   | Dr. Smith         |
| <b>Melissa Holmes</b>    | Investigating the Role of Thymic Stromal Lymphopoietin in Endometriosis Pathophysiology                                 | Dr. Tayade        |
| <b>Kaitlyn January</b>   | ATM Inhibition Enhances STING Pathway Activation in Bladder Cancer Cell Lines   | Dr. Koti          |
| <b>Judith Kecskemeti</b> | Role of Innate Immune Memory in Risk of Cardiovascular Disease Following Pregnancy Complications                        | Dr. Graham        |
| <b>Autumn Maracle</b>    | The Role of Mitochondrial Fusion in the Regulation of the Tricarboxylic Acid Cycle                                      | Dr. Chan          |
| <b>Rachel Sue-A-Quan</b> | Investigating the PTEN-Associated Tumour Immune Microenvironment in Clear Cell Ovarian Carcinoma                        | Dr. Koti          |
| <b>Daphne (Kei) Tam</b>  | Tacrolimus Promotes First Trimester Villus Trophoblast Invasion and Migration <i>In Vitro</i> in a PGR-Dependent Manner | Dr. Kan           |
| <b>William Tran</b>      | Role of Innate Immune Memory in the Response to Immunotherapy of Bladder Cancer   | Dr. Graham        |

| <b>CANC 499</b>            |  |                   |
|----------------------------|--|-------------------|
| <b>Name</b>                | <b>Poster Title</b>  | <b>Supervisor</b> |
| <b>Joe Brown</b>           | Quantification of PIM1 Oncoprotein by Objective Immunofluorescence | Dr. LeBrun        |
| <b>Britney Jeyanayagam</b> | The Role of RET9 Receptor Tyrosine Kinase in Colorectal Cancer     | Dr. Mulligan      |

**CANC 499 Con't**

| <b>Name</b>              | <b>Poster Title</b>   | <b>Supervisor</b> |
|--------------------------|---|-------------------|
| <b>Shanel Mackay</b>     | The Effects of Acetylslyclic Acid, Metformin, and Oseltamivir Phospate on Extracellular Signal-Related Kinase Signalling in Pancreatic Cancer Cells | Dr. Szewczuk      |
| <b>Tristan Robertson</b> | The Effect of Extracellular Vesicles on Leukemic Cell Growth and Proliferation  | Dr. Abraham       |
| <b>Keara Sutherland</b>  | Therapeutic Intervention with Doxycycline and Metformin to Target <i>TET2</i> Mutation-Driven Pro-Inflammatory Macrophage Response                  | Dr. Rauh          |

**EPID 499**

| <b>Name</b>           | <b>Poster Title</b>  | <b>Supervisor</b> |
|-----------------------|--|-------------------|
| <b>Rachel Bentley</b> | Effects of Diagnostic Pathway of Oral Cavity Cancer on Stage at Diagnosis and Survival   | Dr. Groome        |
| <b>Alexa Boblitz</b>  | Access to Essential Medicines Within the Ethnic Health System in Eastern Myanmar   | Dr. Davidson      |
| <b>Kaitlin Boyd</b>   | Meat Derived Carcinogens and DNA Methylation in Colorectal Tissue  | Dr. King          |
| <b>Megan Butler</b>   | Women's Decision-Making Power over their Health Care and its Relationship to the Use of Modern Contraception in the Democratic Republic of the Congo | Dr. Bartels       |
| <b>Rachel Cassie</b>  | Hormonal Contraceptive Use and Suicidal Behaviour in University Females  | Dr. Stuart        |
| <b>Amy Choi</b>       | Intellectual and Developmental Disability as a Potential Risk for Polypharmacy in Adults Assessed for Home Care Services in Ontario                  | Dr. Oulette-Kuntz |

**EPID 499 Cont'd**

| <b>Name</b>              | <b>Poster Title</b>   | <b>Supervisor</b> |
|--------------------------|---|-------------------|
| <b>Andris Evans</b>      | Factors Associated with Low Study Participation for Women Living with HIV   | Dr. Woebeser      |
| <b>Kelly Goncalves</b>   | A Cost Analysis of the Implementation of the South East Health Integrated Information Portal (SHIIP)  | Dr. Johnson       |
| <b>Melani Maheswaran</b> | From Text-Boxes to Text-Fields  | Dr. Castleden     |
| <b>Caroline McKenna</b>  | An Investigation of Women's Decision-Making Power and Malnutrition in Their Children Under Five in the Democratic Republic of the Congo (DRC) | Dr. Bartels       |
| <b>Erin McLellan</b>     | Cost-Minimization Analysis of Remote Teleophthalmology: A Tablet-Based Low Vision Assessment Package Compared to Standard Clinical Assessment | Dr. Johnson       |
| <b>Kelsey Miller</b>     | Economic Burden of Low Vision Population in Ontario   | Dr. Johnson       |
| <b>Emma Mortimore</b>    | A Qualitative Discourse Analysis to Understanding Women's Gendered Experience in the Renewable Energy Sector in Canada                        | Dr. Castleden     |
| <b>Cora Nitert-Brown</b> | Cost Benefit Analysis of a Postoperative Pain Management Program in Rwanda  | Dr. Johnson       |
| <b>Jasmine Satosek</b>   | Utilizing a Frailty Index in the Cardiac Surgery Population for Medical Decision-Making   | Dr. Johnson       |
| <b>Bryanna Singh</b>     | The Impact of an Aging in Place Model on Loneliness and Falls Risk in an Elderly Population   | Dr. Bayoumi       |
| <b>Olivia Villeneuve</b> | Alcohol Use in Post-Secondary Students with a History of Sexual Assault   | Dr. Stuart        |
| <b>Anne-Marie Voyer</b>  | Clinic-Level Factors Associated with Appropriate Immunization Practice in Health Clinics in Eastern Myanmar                                   | Dr. Davidson      |

| <b>MICR 499</b>          |   |                   |
|--------------------------|---|-------------------|
| <b>Name</b>              | <b>Poster Title</b>   | <b>Supervisor</b> |
| <b>Devyani Bakshi</b>    | Evaluating the Influence of CpG and Interleukin-27 on Antigen Presenting Cell Activation  | Dr. Basta         |
| <b>Marika Camacho</b>    | Investigating How Prolonged IL-4 Activation of Macrophages Affect Their Immune Functions  | Dr. Basta         |
| <b>Ryan DeVrieze</b>     | Evaluating Antagonism Between GM-CSF and M-CSF in Murine Macrophages  | Dr. Gee/Dr. Basta |
| <b>Maddison Gahagan</b>  | The Effects of Sodium Chloride on Antibiotic Resistance in <i>Pseudomonas Aeruginosa</i>  | Dr. Poole         |
| <b>Kate Gray</b>         | Interleukin-27 Alters Human PMA-THP-1 Macrophage Polarization and Responsiveness  | Dr. Gee           |
| <b>Jesse Joynt</b>       | Circadian Rhythm of Chronic Low Back Pain   | Dr. Ghasemlou     |
| <b>Emily Li</b>          | Determining the Effect of IL-27 Treatment on Toll-Like Receptor 4 and 5 Signaling in Human Monocytes and Macrophages                                  | Dr. Gee           |
| <b>Jacob Melamed</b>     | <i>Cryptococcus Neoformans</i> : Enzymatic Functions of Cas34, Cap10, & Cap60 in Capsule Synthesis  | Dr. Brockhausen   |
| <b>Jethro Moneo</b>      | The Effect of Peroxide on Antibiotic Susceptibility of <i>Pseudomonas Aeruginosa</i>  | Dr. Poole         |
| <b>Pascale Patenaude</b> | Depletion of Sensory Neurons in a Mouse Model   | Dr. Ghasemlou     |
| <b>Cassidy Philips</b>   | Biochemical Characterization of WbpX and WbpY, D-Rhamnosyltransferases that Extend the Common Polysaccharide Antigen of <i>Pseudomonas Aeruginosa</i> | Dr. Brockhausen   |
| <b>Madeline Robinson</b> | Neuroimmune Mechanisms in Inflammatory Pain: The Cellular and Molecular Contribution of Dendric Cells   | Dr. Ghasemlou     |
| <b>Sara Stickley</b>     | An Exploration of the Genetic Variability of Mycobacterium Tuberculosis (MTB) from Canada   | Dr. Woeser        |

**MICR 499 Con't**

| <b>Name</b>          | <b>Poster Title</b>   | <b>Supervisor</b> |
|----------------------|---|-------------------|
| <b>Sara Stickley</b> | An Exploration of the Genetic Variability of Mycobacterium Tuberculosis (MTB) From Canada | Dr. Woebeser      |

**NSCI 499**

| <b>Name</b>                   | <b>Poster Title</b>  | <b>Supervisor</b>    |
|-------------------------------|--|----------------------|
| <b>Bailey Brant</b>           | Stress May Mediate the Effects of Glutamate on Extrinsic Intestinal Afferent Nerve Sensitivity                               | Dr. Vanner/Dr. Lomax |
| <b>Conor Donnelly</b>         | Humans Exploit Stimulus Regularities to Enhance Visual Working Memory Performance  | Dr. Blohm            |
| <b>Nicole Ferguson</b>        | Physiological Effects of Phoenixin on Nucleus of the Solitary Tract Neurons in Females                                       | Dr. Ferguson         |
| <b>Nazgol Kafaeei Shahbaz</b> | Optimizing ELISA to Quantify GM2A for Future Evaluation of Cancer Metastasis   | Dr. Walia            |
| <b>Edwin Kiarie</b>           | <b>Not Available at Time of Printing</b>   | Dr. Andrew           |
| <b>Kristen Lacelle</b>        | Characterization of the Biomechanical and Situational Aspects of High-Threshold Subconcussive Impacts in University Football | Dr. Cook             |
| <b>Alec Langlois</b>          | The Effect of Learning on Human Performance in the KINARM Robot's Reverse Visually Guided Reaching (RVGR) Task               | Dr. Scott            |
| <b>Andrew Lorimer</b>         | Pupil Modulations During Free Choice Reflect Internal Expectations   | Dr. Blohm            |
| <b>James Morden</b>           | Using Eye Movements to Assess Brain Function in Adults Living with Fetal Alcohol Spectrum Disorder                           | Dr. Reynolds         |
| <b>Jamil Muradov</b>          | <b>Not Available at Time of Printing</b>   | Dr. Levy             |
| <b>Justin Ng</b>              | An Issue Concerning BOLD fMRI Analysis of Functional Distinction in the Hippocampus  | Dr. Poppenk          |

| <b>NSCI 499 Con't</b> |  |                   |
|-----------------------|--|-------------------|
| <b>Name</b>           | <b>Poster Title</b>  | <b>Supervisor</b> |
| <b>Jacob Peller</b>   | Immunohistochemical Characterization of Murine Dogiel Type II Neurons in a Dss Model of Colitis                        | Dr. Kawaja        |
| <b>Andrew Prsa</b>    | OGD Induced Spreading Depolarization in Brain Slices Prepared at (5°C) and (34°C)                                      | Dr. Andrew        |
| <b>Jameson Rokeby</b> | White Matter Connection Profiles and Associated Network Properties Predict Learning Style in a Visumotor Learning Task | Dr. Gallivan      |
| <b>Alex Ryckman</b>   | Intrahecal Delivery of Gene Therapy to Correct Sandhoff Disease in a Mouse Model                                       | Dr. Walia         |

| <b>PATH 499</b>           |  |                   |
|---------------------------|--|-------------------|
| <b>Name</b>               | <b>Poster Title</b>  | <b>Supervisor</b> |
| <b>Melody Hariri</b>      | Predicting the Risk of <i>Clostridium Difficile</i> Recurrence Using a Microbiome Based Machine Learning Algorithm                           | Dr. Sheth         |
| <b>Sarah Hodge</b>        | Elucidating the Role of the ERM Family Adaptor Moesin in Breast Cancer Cell Migration, Invasion and Drug Resistance                          | Dr. Greer         |
| <b>Robbie Kloosterman</b> | An Analysis of the Hemostatic Stress Response in Type 1 VWD and Control BOEC   | Dr. James         |
| <b>Michael Luo</b>        | Clonal Gematopoiesis of Indeterminate Potential (CHIP) Affects Neutrophil Function   | Dr. Rauh          |
| <b>Katie Monteith</b>     | Von Willebrand Factor Storage and Secretion from Blood Outgrowth Endothelial Cells of Patients with Aortic Stenosis                          | Dr. James         |
| <b>Riya Soni</b>          | Investigation of S100 Proteins in Nasopharyngeal Aspirate Samples and Their Role in Respiratory Syncytial Virus (RSV) Bronchiolitis Severity | Dr. Sheth         |
| <b>Yuhan Yan</b>          | High Fat Diet in Hemophilia A Mice Affects Immune Response to RFVIII   | Dr. Lillicrap     |

| <b>PHAR 499</b>          |   |                            |
|--------------------------|---|----------------------------|
| <b>Name</b>              | <b>Poster Title</b>   | <b>Supervisor</b>          |
| <b>Christian Bile</b>    | Investigating the Effects of <i>In Utero</i> Benzene Exposure on Fetal Gene Expression of Xrcc5 and Xrcc6 | Dr. Winn                   |
| <b>Kaitlin Blaiklock</b> | Barriers and Trends to Surgical Booking Time Accuracy and Strategies for Improvement                      | Dr. Van Vlyman /Dr. Nitsch |
| <b>Michael Doerksen</b>  | <i>In Utero</i> Exposure of Rats to a Potent Heart Teratogen Changes Cardiac Gene Expression Domains      | Dr. Ozolins                |
| <b>Abrie Girgis</b>      | Assessment of Tricarboxylic Acid Cycle Enzyme Activities in Mitochondria of Aldh2-/-Mice                  | Dr. Bennett                |
| <b>Austin Lansing</b>    | Role of Dosing Strategy on Disease Profile in a Vitamin D-Induced Model of Vascular Calcification         | Dr. Adams                  |
| <b>Zhifan Liu</b>        | Histological Comparison of Vascular Calcification in the Thoracic Aorta of Two Experimental Rat Models    | Dr. Adams                  |
| <b>Joseph Mader</b>      | The Effect of <i>In Utero</i> Benzene Exposure on Fetal ERK1/2 and MSK1 Phosphorylation in CD-1 Mice      | Dr. Winn                   |
| <b>Matthew Yoon</b>      | <b>Not Available at Time of Printing</b>  | Dr. Bennett                |
| <b>Kristen Zamperoni</b> | Investigation of Potential DNA Damaging Effects of Sulforaphane in CD1 Mice                               | Dr. Massey                 |

| <b>PHGY 499</b>             |  |                    |
|-----------------------------|--|--------------------|
| <b>Name</b>                 | <b>Poster Title</b>  | <b>Supervisor</b>  |
| <b>Adam Boros-Rausch</b>    | Immune Profiling of Wild-Type and Interleukin-15 Knockout Rats in the Monocrotaline Model of Pulmonary Arterial Hypertension | Dr. Ormiston       |
| <b>Savio Cyril Kocherry</b> | Mechanisms of Ischemia-Induced Myenteric Neuron Death and Neuroprotection by GDNF  | Dr. Blennerhassett |



| <b>PHGY 499 Con't</b>   |   |                          |
|-------------------------|---|--------------------------|
| <b>Name</b>             | <b>Poster Title</b>   | <b>Supervisor</b>        |
| <b>Taylor Dodd</b>      | Tyrosine-Kinase Src Regulates Kv1.5 Potassium Channel Activity and Membrane Expression Through Interaction with the N-Terminus of the Channel | Dr. Zhang                |
| <b>Morgan Gregg</b>     | Right Atrial Collision Time: A Novel Marker of Propensity for Typical Atrial Flutter  | Dr. Redfearn/Dr. Zhang   |
| <b>Nick Grubic</b>      | Stress Echocardiography to Characterize Pulmonary Hemodynamics with Incremental Exercise (SEPHA): An Assessment of Novel Techniques           | Dr. Johri                |
| <b>Aisha Jansen</b>     | Ultrasound Grayscale Ranges to Determine Carotid Plaque Composition   | Dr. Johri                |
| <b>Brenton Kuka</b>     | Network Analysis of Gene Expression Data from Airway Epithelial Cells of Smokers and Non-Smokers  | Dr. Duan                 |
| <b>Victoria Loft</b>    | Frequency Analysis in ICD Patients for Risk-Stratification (FAIR)   | Dr. Redfearn             |
| <b>Eaamon Macneil</b>   | The Effect of Neonicotinoids on Identified Electrically Couple Cardiorespiratory Neurons from the Fresh Water Snail <i>Lymnaea Stagnalis</i>  | Dr. Magoski              |
| <b>Sanjay Solanski</b>  | <b>Not Available at Time of Printing</b>  | Dr. Johri                |
| <b>Justin Song</b>      | <b>Not Available at Time of Printing</b>  | Dr. Blennerhassett       |
| <b>Mark Szendrey</b>    | Protein Kinase C Activated Ubiquitination and Endocytosis of the Kv1.5 Channel  | Dr. Zhang                |
| <b>Alexandra Vlahos</b> | Predicting Adverse Cardiovascular Outcomes in Post-CABG Patients with Novel Time-Frequency Analysis   | Dr. Redfearn/Dr. Hashemi |
| <b>Johnathan Wong</b>   | Can Activity Tracker Measured Ambulation in a Postoperative Surgery Population Predict Patient Outcomes                                       | Dr. McMullen             |

| Independent Projects  |  |                      |
|-----------------------|--|----------------------|
| Name                  | Poster Title   | Supervisor           |
| <b>Brittany Boyd</b>  | Investigation of Novel Cat Peptide Antigen Desensitization (Cat-PAD) Peptide Immunotherapy Pre- and Post-Treatment to Identify Biomarkers Using the Nasal Allergen Challenge (NAC) | Dr. Ellis            |
| <b>Erika Campbell</b> | Knowledge Translation of Pregnancy-Related Cardiovascular Risk Indicators to Patients and Care Providers   | Dr. Smith            |
| <b>Courtney Cheng</b> | Comparing CRISPR HDR Efficiency in <i>C. Elegans</i> Using Single-Stranded Oligonucleotide vs. PCR Donor with ssDSNA Ends as Repair Templates                                      | Dr. Chin-Sang        |
| <b>Zoe Frank</b>      | Profiles of Reinforcement Learning Reflect Individual Differences in White Matter Structural Connectivity and Network Properties   | Dr. Gallivan         |
| <b>Beatrice Ho</b>    | The Use and Effectiveness of Fitness Trackers for Measurement and Instilling Behavioural Change Amongst School-Aged Children   | Dr. Janssen          |
| <b>Kristen Hart</b>   | Chronic Pain CB2 Receptor Activation Mapping in the Brain  | Dr. Dumont           |
| <b>Thalia Hua</b>     | Psychophysical Translations of Colour Stimuli for Visual Working Memory Models   | Dr. Blohm            |
| <b>Paul Ioudovski</b> | Mapping Psilocybin-Assisted Therapy Research: A Scoping Review   | Dr. Shore/Dr. Dumont |
| <b>Jay Kataria</b>    | Anti-Fibrotic Drugs Inhibit PDGF-Induced ISMC Growth and Control Collagen Expression   | Dr. Blennerhassett   |
| <b>Victoria Ki</b>    | Comparing HDR Efficiency with Various Repair Templates in <i>C. Elegans</i>  | Dr. Chin-Sang        |
| <b>Adam Levschuk</b>  | Who's Doing What: Probing the Activity of Bacteria Within Complex Microbial Communities  | Dr. Sheth            |
| <b>Blaire Magee</b>   | Using Evidence Based Behavioural Assessment to Quantify Individualized Proficiency in Football-Based Skills and Risk for SRC   | Dr. Cook             |

## Independent Projects Con't

| Name                     | Poster Title  | Supervisor             |
|--------------------------|---|------------------------|
| <b>Hallie Prescott</b>   | Characterization of the Innervation in Human Cervical Tissue  | Dr. Adams              |
| <b>Demille Odoardi</b>   | Peripheral Cytokine Levels and Allergic Outcomes for Prenatal and Postnatal Exposures to Cigarette Smoke, Particulate Matter, Dust, and Aerosols for Children Age 6 | Dr. Ellis              |
| <b>Ami Sangster</b>      | Mutually Exclusive DNA Damage Response and Chromatin Modification Mutations in Muscle Invasive Bladder Cancer   | Dr. Berman/Dr. Gooding |
| <b>Jillian Rodger</b>    | Obesity Impairs the Acute Response to an Oral Phosphate Challenge   | Dr. Adams              |
| <b>Katie Wade Alonso</b> | The Fetal Alcohol Resource Program: Community Education on Fetal Alcohol Spectrum Disorder  | Dr. Reynolds           |
| <b>Ruben Warkentin</b>   | Localization of PLCZ1: A Candidate Sperm Borne Oocyte Activating Factor   | Dr. Oko                |



LIFE SCIENCES