

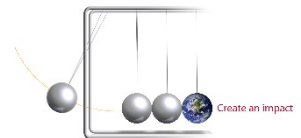
**The Nineteenth Annual Scientific Meeting for
Health Science Research Trainees
Faculty of Health Sciences
Queen's University**



**Wednesday, May 25th, 2016
Biosciences Complex**

Sponsored By

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Nicole Coverdale, Centre for Neuroscience Studies
Charlie Hinchmarch, Centre for Neuroscience Studies

Acknowledgments

A special thank you to Katherine Brennan-Rowcliffe and Alana Korczynski for their invaluable assistance in organizing this meeting.

The Nineteenth Annual Scientific Meeting for Health Science Research Trainees

Faculty of Health Sciences

Queen's University

Wednesday, May 25th, 2016

Biosciences Complex, Atrium and Room 1101

8:00 - 8:45am

Registration and A.M. Poster Set-Up (Odd Numbered Abstracts)
Biosciences Complex, Atrium

8:45 - 9:00am

Introductory Remarks

Dr. James Reynolds, Associate Dean, Graduate and Postdoctoral Education, Faculty of Health Sciences

Dr. Richard K Reznick, Dean, Faculty of Health Sciences and Director, School of Medicine

9:00 – 9:30am

Keynote Speaker

Dr. Gunnar Blohm
Associate Professor
Centre for Neuroscience Studies
Department of Biomedical and Molecular Sciences

"Disinhibition - a canonical cortical circuit motif?"

Oral Presentations – Session 1

Chair: Dr. Christopher Nicol

Cancer Research and Therapy

9:35 – 9:47am

A NOVEL ROLE OF CXCL10 IN THE TUMOUR IMMUNE MICROENVIRONMENT OF HIGH-GRADE SEROUS OVARIAN CANCER. Katrina Au (M Sc. 2016)¹, Peter Truesdell², Nichole Peterson³, Julie-Ann Francis³, Andrew Craig^{1,2}, Madhuri Koti^{1,2,3} ¹ Department of Biomedical & Molecular Sciences, Queen's University, Kingston, Canada² Cancer Biology & Genetics, Queen's University, Kingston, Canada ³ Department of Obstetrics and Gynaecology, Kingston General Hospital, Kingston, Canada (Abstract #20)

Cardiac, Circulatory, and Respiratory Sciences

9:47 – 9:59am **THE UREMIC TOXIN P-CRESOL REDUCES CELL SURFACE EXPRESSION OF HUMAN ETHER-A-GO GO-RELATED GENE (HERG) CHANNELS VIA THE UBIQUITIN LIGASE NEDD4-2.** Ellen Avery, Shawn Lamothe, Jun Guo, Tonghua Yang, Wentao Li, Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario Canada. (Abstract # 31)

Health Policy, Population Health, and Epidemiology

9:59 – 10:11am **CLINICAL PHENOTYPING DOES NOT DIFFERENTIATE HUNNER'S LESION SUBTYPE OF INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME (IC/BPS): A RELOOK AT THE ROLE OF CYSTOSCOPY.** R. Christopher Doiron, Victoria Tolls, Karen Irvine-Bird, Kerri-Lynn Kelly, J. Curtis Nickel, Department of Urology, Queen's University, Kingston, Canada (Abstract #44)

Inflammation, Infection and Immunity

10:11 – 10:23am **A NOVEL CIS-ACTING MRNA STABILIZATION PROTEIN PROMOTES EXPRESSION OF THE MEXAB-OPRM MULTIDRUG EFFLUX OPERON IN PSEUDOMONAS AERUGINOSA** Michael Fruci and Keith Poole, Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, K7L 3N6, Canada (Abstract #57)

10:25 - 10:45am **Coffee Break**

10:45am - 12:15pm **A.M. Poster Presentations (Author Attendance)**

12:15 - 1:00pm **Lunch, A.M. poster tear-down, P.M. poster set-up (Even Numbered Abstracts)**

1:00 - 2:30pm **P.M. Poster Presentations (Author Attendance), Tear-down**

Oral Presentations – Session 2

Chair: Dr. Charles Graham

Neuroscience Research

2:30 – 2:42pm **ENHANCEMENT OF GENE THERAPY TREATMENT FOR SANDHOFF DISEASE THROUGH COMPLIMENTARY DRUG THERAPY.** Evan JR. Woodley¹, K. Osmon², P. Thompson³, S. Karumuthil-Melethil⁴, S. J. Gray^{4,5} and J. S. Walia^{1,2,3*}. ¹Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, Canada, K7L 3N6 ²Centre for Neuroscience Research, Queen's University, Kingston, Ontario, Canada, K7L 3N6; ³Medical Genetics/Departments of Pediatrics, Queen's University, Kingston, Ontario, Canada, K7L 2V7; ⁴Gene Therapy Center, University of North Carolina, Chapel Hill, North Carolina, United States; ⁵Department of Ophthalmology, University of North Carolina, Chapel Hill, North Carolina, United States. (Abstract #72)

Protein Structure and Function

2:42 – 2:54pm **STRUCTURAL AND FUNCTIONAL CHARACTERIZATION OF HUMAN MITOCHONDRIAL ATYPICAL KINASES ADCK3 AND ADCK4.** Sohee Yun, Brody Wheeler, and Zongchao Jia. Department of Biomedical and Molecular Science, Queen's University, Kingston, ON, CANADA (Abstract #86)

Rehabilitation Science

2:54 – 3:06pm **THE ACTIVITIES-SPECIFIC BALANCE CONFIDENCE SCALE FOR OLDER ADULTS WITH DIABETES: CONVERGENT, DISCRIMINANT, AND CONCURRENT VALIDITY.** Patricia Hewston & Nandini Deshpande. School of Rehabilitation Therapy, Queen's University Kingston, Ontario, Canada. (Abstract #88)

Cardiac, Circulatory, and Respiratory Sciences

3:06 – 3:18pm **THIRTY MINUTES OF HANDGRIP EXERCISE ENHANCES BRACHIAL ARTERY DILATION IN RESPONSE TO TWO DIFFERENT SHEAR STRESS PROFILES.** Iain AC McPhee and Dr. Kyra Pyke, School of Kinesiology and Health Studies, Queen's University, Kingston Ontario (Abstract # 32)

3:20 – 3:45pm ***Coffee Break***

Oral Presentations – Session 3

Chair: Dr. James Reynolds

Health Policy, Population Health, and Epidemiology

3:45 – 3:57pm **IMPUTING MISSING ACCELEROMETER DATA FOR PHYSICAL ACTIVITY MEASUREMENT.** Lauren Paul and Dr. Michael McIsaac, Department of Public Health Sciences, Queen's University, Kingston, Ontario, Canada. (Abstract #45)

Inflammation, Infection and Immunity

3:57 – 4:09pm **EPIGENETIC ROLE IN DECREASED NEUROTROPHIN AND CONTRACTILE PROTEIN EXPRESSION IN PROLIFERATING INTESTINAL SMOOTH MUSCLE CELLS.** Quinn A. Bonafiglia, and M.G. Blennerhassett, GIDRU and Centre for Neuroscience Studies, Queen's University, Kingston, ON (Abstract #58)

Neuroscience Research

4:09 – 4:21pm **DOES BRAIN TISSUE OXYGENATION (BTO₂) PREDICT COGNITIVE DECLINE IN PATIENTS UNDERGOING HEMODIALYSIS? A FEASIBILITY STUDY.** Jessica Vanderlinden, Dr. Stephen Scott PhD, Dr. Rachel Holden MSc, MD, and Dr. J. Gordon Boyd, MD, PhD, Centre for Neuroscience Studies, Queen's University Kingston, Ontario Canada. (Abstract #73)

Cardiac, Circulatory, and Respiratory Sciences

4:21 – 4:33pm **THE LONG AND SHORT OF PHOSPHODIESTERASE 4D INHIBITION IN VASCULAR MYOCYTES.** Nathalie S. Butler, Bibiana M. Umana and Donald H. Maurice, Department of Biomedical and Molecular Sciences, Queen's University Kingston, ON, Canada. (Abstract # 33)

4:35 – 4:45pm ***Awards and Concluding Remarks***

5:00 – 7:00pm ***Reception at the Grad Club***
162 Barrie Street
Cash Bar/ Non-Alcoholic Punch
Hot hors d'oeuvres

Poster Presentations

Biomedical Engineering

EFFICIENCY OF CRISPR/CAS9-MEDIATED GENE EDITING OF *ARG1* IN CELL LINES AND PRIMARY CELLS. Garrett N. Baron, Yuan Yan Sin, and Colin D. Funk. Department of Biomedical and Molecular Sciences, Queen's University Kingston, Ontario Canada (Abstract #1)

SCARLESS GENE CORRECTION OF ARGINASE-1 DEFICIENCY IN MOUSE IPSCS USING CRISPR/CAS9-MEDIATED GENE TARGETING AND *PIGGYBAC* TRANSPOSON. Yuan Yan Sin, Phillipe Price, Crystal McCracken, Colin D. Funk, Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON K7L 3N6 Canada (Abstract #2)

Cancer Research and Therapy

VITAMIN D SIGNALLING AFFECTS MARKERS OF EPITHELIAL-MESENCHYMAL TRANSITION IN BREAST CANCER CELLS. Cara Inglese^{1,2}, Martin Petkovich^{1,2,3} ¹Dept. of Biomedical & Molecular Sciences, ²Dept. of Pathology & Molecular Medicine, ³Cancer Biology & Genetics Division, Queen's Cancer Research Institute, Queen's University, Kingston, ON.(Abstract #3)

IDENTIFYING ABERRANTLY METHYLATED GENES RESPONSIBLE FOR TAMOXIFEN-RESISTANCE IN BREAST CANCER. Catherine Crawford-Brown and Dr. Christopher R. Mueller. Department of Pathology and Molecular Medicine, Queen's University, Kingston Ontario. (Abstract # 4)

CHARACTERIZATION OF VARIANTS OF UNKNOWN SIGNIFICANCE (VUS) IN *BRCA1*. Daniel M. Kim¹, Ricardo D.S. Vidal¹, Harriet Feilotter¹, Scott K. Davey^{1,2}. ¹Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON. ²Cancer Biology & Genetics Division, Queen's Cancer Research Institute. (Abstract #5)

ENGINEERING A NOVEL INHIBITORY ANTI-TRBII ANTIBODY TO BLOCK TGF β 1-INDUCED EMT AND CANCER CELL INVASION. Daniel Newsted¹, Peter Truesdell¹, Sachdev Sidhu², Andrew Craig¹, ¹Queen's University; ²University of Toronto (Abstract #6)

DESIGN AND CHARACTERIZATION OF A PEPTIDE DISRUPTOR TO THE E2A-PBX1:CBP/P300 COMPLEX. David N. Langelan¹, Marina R. Lochhead¹, David P. LeBrun² and Steven P. Smith¹, Dept. of Biomedical & Molecular Sciences¹, Cancer Biology & Genetics Division, Queen's Cancer Research Institute², Queen's University, Kingston, ON (Abstract # 7)

PPAR γ LOSS INCREASES METASTASIS OF HER2+ BREAST TUMOURS. Elizabeth Lightbody D.¹, Newton, Hailey T.², O'Connell Katie M.², Rubino Rachel E.², Apostoli Anthony J.², SenGupta Sandip K.¹, and Nicol Christopher JB.^{1,3} ¹Departments of Pathology and Molecular Medicine; ²Cancer Biology and Genetics, Cancer Research Institute; and ³Biomedical and Molecular Sciences, Queen's University, Kingston, ON, Canada (Abstract #8)

INTERFERON INDUCED STAT1 ASSOCIATES WITH DIFFERENTIAL CHEMOTHERAPY RESPONSE IN HIGH-GRADE SEROUS OVARIAN CANCER. Gillian Reid-Schachter, Runhan Ren, Katrina Au, Peter Truesdell, Nichole Peterson, Charles Graham, Andrew Craig, Julie-Ann Francis, Madhuri Koti, Department of Biomedical and Molecular Sciences/Cancer Biology and Genetics Division/Queen's Cancer Research Institute/Queen's University, Department of Pathology and Molecular Medicine & Department of Obstetrics and Gynecology/Kingston General Hospital (Abstract #9)

GLUCOCORTICOID RECEPTOR PROMOTER METHYLATION AS A MARKER OF TAMOXIFEN RESISTANCE. Hilary E. Snider, Kirsten A. Nasset, Amelia M. Perri, Andrew G. Robinson, and Christopher R. Mueller. Department of Pathology & Molecular Medicine, Queen's University Kingston, Ontario Canada (Abstract #10)

CREATING AN INBUILT SUICIDE SYSTEM IN AAV CONSTRUCTS AS A SAFETY CHECK FOR TREATMENT OF POSSIBLE TUMOR DEVELOPMENT IN LONG-TERM GENE THERAPY STUDIES. Imtiaz Ahmad¹, Evan Woodley¹, Patrick Thompson² and Jagdeep S Walia^{2,1},¹Department of Biomedical and Molecular Sciences and ²Medical Genetics/Department of Pediatrics, Queen's University, Kingston, Ontario, Canada, K7L 2V7.(Abstract # 11)

EVALUATING EZRIN EXPRESSION DURING BREAST TUMOUR PROGRESSION: A POTENTIAL BIOMARKER OF BREAST CANCER METASTASIS. Jennifer Fish^{1, 3}, Abdi Ghaffari¹, Victoria Hoskin¹, Kevin Ren¹, Yolanda Madarnas², Sandip SenGupta¹, Stephen Pang³, Bruce Elliott¹. ¹Department of Pathology and Molecular Medicine, Queens University; ²Department of Oncology, Queens University; ³Department of Biological and Medical Sciences, Queens University Kingston, Ontario, Canada (Abstract #12)

THE ENDOTHELIAL CELL ROLE OF PPAR γ DURING BREAST TUMOUR ANGIOGENESIS. Jia Yue (Amelia) Shi^{1, 2}, Anthony J. Apostoli², Rachel E. Rubino³ and Christopher J.B. Nicol¹⁻³ ¹Depts. of Biomedical & Molecular Sciences, ²Pathology & Molecular Medicine, and ³Division of Cancer Biology & Genetics, Cancer Research Institute; Queen's University, Kingston, ON, Canada K7L 3N6 (Abstract # 13)

DEFINING GENE NETWORKS REGULATED BY MIR-206 THAT DRIVE TUMOUR PROGRESSION AND METASTASIS IN LUNG ADENOCARCINOMA. Kathleen Watt¹, Elena Voorand¹, Peter Truesdell¹, Neil Renwick², Andrew W.B. Craig^{1,1} ¹Department of Biomedical and Molecular Sciences; ²Department of Pathology and Molecular Medicine, Queen's University, Kingston ON, Canada (Abstract # 14)

DEVELOPMENT OF A BLOOD-BASED SCREEN FOR DETECTION OF BRCA1-ASSOCIATED BREAST CANCER. Katrina L. Cristall and Christopher R. Mueller. Department of Pathology & Molecular Medicine, Queen's University Kingston, Ontario Canada. (Abstract # 15)

PROGRAMMED DEATH LIGAND 1 (PD-L1) IMMUNE CHECKPOINT-MEDIATED STIMULATION OF MALIGNANT PHENOTYPES IN TUMOUR CELLS. Minassian L.M., MacDonald-Goodfellow S., van Warmerdam J., Farrell A., Koti, M., Siemens, D.R. and Graham, C.H. Department of Biomedical and Molecular Sciences (Abstract # 16)

PROTEIN-PROTEIN INTERACTIONS INVOLVING LYMPHOPOIETIC TRANSCRIPTIONAL REGULATORS IN ACUTE LYMPHOBLASTIC LEUKEMIA. Marina R. Lochhead, David N. Langelaa, Kyster Nanan, Steven P. Smith, David P. LeBrun, Division of Cancer Biology and Genetics, Cancer Research Institute, Queen's University, Department of Biomedical and Molecular Sciences, Queen's University (Abstract # 17)

MACROLIDE TOXIN MYCALOLIDE B IS A POTENT INHIBITOR OF HER2 CANCER CELL INVASION AND IS THE BASIS OF ACTIN TARGETED THERAPY FOR METASTATIC CANCERS. Rodette N Williams^{1,2}, Andrew WB Craig^{1,2}, and John S Allingham¹ ¹Department of Biomedical and Molecular Sciences; ²Cancer Biology & Genetics Division, Cancer Research Institute (Abstract # 18)

ALGORITHM DEVELOPMENT FOR THE PREDICTION OF POTENTIALLY LETHAL PROSTATE CANCER USING PRETREATMENT CLINICO-PATHOLOGICAL VARIABLES. Tamara Jamaspishvili (1,2), Palak Patel (1,2), Kathrin Tyryshkin (2), John Okello (1,2), David M. Berman (1,2), (1) Cancer Biology & Genetics Division, Queen's Cancer Research Institute, (2) Department of Pathology and Molecular Medicine, Queen's University (Abstract # 19)

RETROSPECTIVE POPULATION-BASED COHORT STUDY OF THE USE OF DOCETAXEL-BASED CHEMOTHERAPY FOR METASTATIC PROSTATE CANCER A. Lyndsay Harrison, Christopher M. Booth, Will D. King, William J. Mackillop. Department of Public Health Sciences, and Division of Cancer Care & Epidemiology, Queen's University, Kingston, Canada. (Abstract # 21)

THE ROLE OF CALPAINS-1/2 IN PROMOTING MAMMARY TUMORIGENESIS. James A. MacLeod, Stacy Visser-Grieve, and Peter A. Greer. Department of Pathology & Molecular Medicine, Queen's University, Kingston, Ontario, Canada. (Abstract # 22)

DIFFERENTIAL PHOSPHORYLATION OF STAT3A AND THE DOMINANT-NEGATIVE SPLICE VARIANT, STAT3B, IN CELL-TO-CELL ADHESION VS ONCOGENE EXPRESSION, Zaid Taha, Rozanne Arulanandam, Adina Vultur, Leda Raptis (Abstract #104)

Cardiac, Circulatory, and Respiratory Sciences

LEUKOCYTES IMPAIR EXPRESSION AND FUNCTION OF THE hERG K⁺ CHANNEL. Gianluca Sampieri, Shawn Lamothe, Jun Guo, Wentao Li, Stephen C. Pang, Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario Canada (Abstract # 23)

LEADING THE CHARGE IN SPROUTING ANGIOGENESIS: THE ROLES OF PDE4D IN REGULATING TIP CELL INVASION. Jodi MacKeil, Department of Biomedical and Molecular Science, Queen's University, Canadian Institutes of Health Research (Abstract # 24)

UTILITY OF BRACHIAL AND FEMORAL HUMAN CADAVERIC ARTERIES IN ASSESSING CALCIUM AND PHOSPHATE MINERAL PROFILES. Devon E. Stride M.Sc*; Jason G.E. Zelt M.Sc* & Dr. Michael A. Adams PhD. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, Canada. (Abstract # 25)

INVESTIGATING THE MECHANISM OF AUTOIMMUNE-RELATED LQTS; ANTI-RO52 REDUCES HERG FUNCTION. John Szendrey, Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario Canada. (Abstract # 26)

β-ARRESTIN-MEDIATED REGULATION OF THE hERG K⁺ CHANNEL. Matt Sangoi, Shawn Lamothe, Jun Guo, Tonghua Yang, Wentao Li, John Fisher, Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario Canada. (Abstract # 27)

DEVELOPMENT OF A STANDARD CAROTID ARTERY ULTRASOUND PHANTOM TO CHARACTERIZE PLAQUE VULNERABILITY. Olivia Yau and Amer Johri. Department of Biomedical and Molecular Science, Queen's University, Kingston, Ontario, Canada. (Abstract # 28)

THE INTERPLAY OF CAMP AND CALCIUM SIGNALING IN THE REGULATION OF PDE1C IN HUMAN VASCULAR SMOOTH MUSCLE CELLS. Paulina Brzezinska, Hao Xiao, Andrew J. Ross, Fabien Hubert, M. Bibiana Umana, Darrin M. Payne, Donald Maurice (Abstract # 29)

ACTIVATION OF SKELETAL M3 MUSCARINIC DESIGNER RECEPTOR EXCLUSIVELY ACTIVATED BY DESIGNER DRUG (DREADD) ALTERS HEART RATE AND ACTIVITY LEVELS IN THE MOUSE. Sandra G. Vincent, Jurgen Wess¹ and John T. Fisher². Department of Biomedical and Molecular Sciences, Queen's University² Kingston, ON, Canada and NIH-NIDDK¹. Supporting agency: Queen's Spear Endowment², CIHR² and NIH-NIDDK¹ (Abstract # 30)

THE INFLUENCE OF ACUTE HYPERGLYCEMIA ON ENDOTHELIUM DEPENDENT FLOW MEDIATED VASODILATION IN HEALTHY, SEDENTARY MALES. Jennifer Williams, Trevor King, Laura Sawula, Dr. Kyra Pyke. School of Kinesiology & Health Studies, Queen's University, Kingston, Ontario Canada. (Abstract # 34)

Health Policy, Population Health, and Epidemiology

THE ROLE OF NATURE IN THE EMOTIONAL HEALTH OF CANADIAN ADOLESCENTS. Caroline Piccininni, Valerie Michaelson, William Pickett, Department of Public Health Sciences (Abstract #35)

IS THERE A MEASURABLE ASSOCIATION OF EPIDURAL USE AT CYSTECTOMY AND POST-OPERATIVE OUTCOMES? A POPULATION BASED STUDY. R. Christopher Doiron,¹ Melanie Jaeger,² Christopher M. Booth,^{3,4,5} Xuejiao Wei,⁵ D. Robert Siemens^{1,3,5} Departments of Urology,¹ Anesthesiology and Perioperative Medicine,² Oncology,³ Public Health Sciences,⁴ Queen's University, Division of Cancer Care and Epidemiology, Queen's University Cancer Research Institute⁵, Kingston, Canada (Abstract #36)

SHIFTWORK, SLEEP DURATION AND THE METABOLIC SYNDROME AMONG FEMALE HOSPITAL EMPLOYEES. Jill Korsiak, Joan Tranmer, Michael Leung, Andrew Day, Michael M Borghese, Kristan J Aronson, Department of Public Health Sciences, Queen's University (Abstract #37)

ROUTINE FOLLOW-UP CARE AFTER CURATIVE TREATMENT OF HEAD AND NECK CANCER: PRELIMINARY RESULTS FROM THE PERSPECTIVE OF THE PATIENT. Kelly Brennan, Dr. Stephen Hall, Dr. Yingwei Peng, & Dr. Deb Feldman-Stewart, Department of Public Health Science, & Division of Cancer Care and Epidemiology(Supporting Agencies: Queen's University, CIHR, CCSRI) (Abstract #38)

DEVELOPING A CUSTOM GEOGRAPHY TO MAP CHLAMYDIA RATES. Liam W. Rémillard, Paul Belanger, Kieran Moore, Will Pickett, and Anna Majury, Public Health Sciences, Queen's University; KFL&A Public Health (Abstract #39)

MISPERCEIVED DRINKING NORMS AND HAZARDOUS DRINKING BEHAVIOURS IN UNIVERSITY FIRST-YEAR UNDERGRADUATE STUDENTS AND THE EFFECTS OF GENDER. Tasha A. Narain and Heather Stuart. Department of Public Health Sciences, Queen's University, Kingston, Ontario, Canada. (Abstract #40)

APPLICATION OF EMPIRICAL BAYES SMOOTHING TECHNIQUES TO BETTER INTERPRET CHLAMYDIA RATES IN ONTARIO. Liam W. Rémillard, Paul Belanger, Kieran Moore, Will Pickett, and Anna Majury, Public Health Sciences, Queen's University; KFL&A Public Health (Abstract #41)

EXAMINATION OF BODY IMAGE AMONG CANADIAN ADOLESCENTS: RELATIONS WITH PHYSICAL ACTIVITY LEVELS AND SCREEN TIME. Nicole Roberts, William Pickett. Department of Public Health Sciences, Queen's University. (Abstract #42)

EXPLORING AUTOCORRELATION TRENDS TO IDENTIFY CLUSTERS OF CHLAMYDIA IN ONTARIO. Liam W. Rémillard, Paul Belanger, Kieran Moore, Will Pickett, and Anna Majury, Public Health Sciences, Queen's University; KFL&A Public Health (Abstract #43)

VARIATIONS IN THE AVAILABILITY AND UTILIZATION OF COLONOSCOPY RESOURCES IN ONTARIO. Webber C, Flemming J, Birtwhistle R, Rosenberg M, Groome P. Department of Public Health Sciences (Abstract #46)

PREVALENCE AND PATTERNS OF SUGAR-SWEETENED BEVERAGE CONSUMPTION IN CANADIAN YOUTH: A FOCUS ON NUNAVUT Laura E. Davis, MSc¹, Colleen M. Davison, PhD, MPH^{1,1}Queen's Department of Public Health Sciences, 62 Fifth Field Company Lane, Queen's University, Kingston, Ontario, Canada K7L 3N6 (Abstract #47)

INVESTIGATING THE INFLUENCE OF COMPUTER-MEDIATED COMMUNICATION ON THE HEALTH OF CANADIAN YOUNG PEOPLE: A MIXED-METHODS STUDY Lindsay Favotto, MSc^{1,3}, William Pickett, PhD¹, Valerie Michaelson, DMin², Colleen Davison, PhD^{1,3} 1Department of Public Health Sciences, Queen's University, Kingston, Ontario, Canada 2School of Religion, Queen's University, Kingston, Ontario, Canada 3Kingston General Hospital Research Institute(Abstract #48)

Inflammation, Infection and Immunity

INTERLEUKIN-30 MEDIATES CYTOKINE PRODUCTION IN HUMAN IMMUNE CELLS Carlene Petes¹, Melissa Mariana², Yawen Yang¹, Nathalie Grandvaux², and Katrina Gee^{1,1} 1 Department of Biomedical and Molecular Sciences, Queen's University, Kingston ON, Canada, K7L3N6; ² Department de biochimie et médecine moléculaire, Université de Montréal, Centre de Recherche du CHUM (CRCHUM), Montréal PQ, Canada, H2X 0A9 (Abstract #49)

BACTERIAL GLYCOSYLTRANSFERASES THAT REQUIRE DIPHOSPHATE LIPID IN THEIR ACCEPTOR SUBSTRATES. Diana Czuchry, Walter A. Szarek, Inka Brockhausen, Department of Biomedical and Molecular Sciences and Department of Chemistry, Queen's University, Kingston, Ontario, Canada (Abstract #50)

EVALUATING THE ACTIVATION STATE AND TUMOUR-PROMOTING FUNCTIONS OF MACROPHAGES EXPOSED TO TUMOUR-DERIVED FACTORS. Kelly MacIsaac, Andra Banete, Rylend Mulder and Sam Basta, Department of Biomedical and Molecular Sciences, Queen's University Kingston, Ontario Canada (Abstract #51)

COMPARATIVE OUTCOMES OF THE NASAL ALLERGEN CHALLENGE (NAC) MODEL OF THE ALLERGIC RHINITIS CLINICAL INVESTIGATOR COLLABORATIVE (AR-CIC) VERSUS THE ENVIRONMENTAL EXPOSURE UNIT (EEU). Mark W. Tenn¹, Jenny Thiele^{1,2}, Daniel E. Adams^{1,2}, Lisa M. Steacy^{1,2}, Anne K. Ellis^{1,2}, ¹ Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, Canada, ² Allergy Research Unit, Kingston General Hospital, Kingston, Ontario, Canada (Abstract #52)

MAST CELLS PROMOTE AUTOINFLAMMATORY DISEASE PROGRESSION IN A CHRONIC MULTIFOCAL OSTEOMYELITIS MODEL. Jae Hoon Peter Lee¹, Stephanie Young¹, Namit Sharma¹, Violeta Chitu², E. Richard Stanley² and Andrew W.B. Craig¹, ¹Department of Biomedical and Molecular Sciences, Queen's University; ²Department of Developmental and Molecular Biology, Albert Einstein College of Medicine (Abstract #53)

CALCIFEDIOL ADMINISTRATION SUPPRESSES MARKERS OF INFLAMMATION AND FIBROSIS IN A MOUSE UNILATERAL URETERAL OBSTRUCTION MODEL OF KIDNEY FIBROSIS. Sara Hadi D.^{1,3}, Tracie Pennimpede³, Donald Cameron^{2,3}, Andrew Winterborn⁴, Martin Petkovich^{1,2,3}. Dept. of Pathology and Molecular Medicine¹, Dept. of Biomedical and Molecular Sciences², Division of Cancer Biology and Genetics, Cancer Research Institute³, University Veterinarian and Director of Animal Care Services⁴, Queen's University, Kingston, ON, Canada. (Abstract #54)

EVALUATING THE ROLE OF IL-33 IN THE PATHOGENESIS OF ENDOMETRIOSIS. Stephany P. Monsanto¹, Jessica Miller¹, SooHyun Ahn¹, Steven L. Young³, Bruce A. Lessey⁴, and Chandrakant Tayade^{1,2}, ¹ Department of Biomedical and Molecular Sciences, Queen's University, Canada, K7L 3N6, ² Department of Biomedical Sciences, Ontario Veterinary College, University of Guelph, Canada, N1G 2W1, ³ Department of Obstetrics and Gynecology, University of North Carolina, USA, 27514, ⁴ Department of Obstetrics and Gynecology, Greenville Health System, USA, 29605 (Abstract #55)

EXCHANGE OF *PTGS* GENES IN MURINE MODELS TO DISTINGUISH THE INDIVIDUAL PHYSIOLOGICAL FUNCTIONS OF CYCLOOXYGENASE ISOFORMS. Xinzhi Li, Vivienne Hsu, Laurel L. Ballantyne, Colin D. Funk, Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, Canada, K7L 3N6 (Abstract #56)

EVALUATING CYTOKINE PRODUCTION BY DIFFERENT MACROPHAGE SUBSETS IN RESPONSE TO VIRUS INFECTION. Torki Alothaimen, Sam Basta and Katrina Gee Department of Biomedical and Molecular Sciences, Queen's University Kingston, Ontario Canada (Abstract #59)

HISTOLOGICAL ANALYSIS OF PLACENTAL *SALMONELLA ENTERICA* SEROVAR TYPHIMURIUM INFECTION S Mohammad¹, KLC Wachholz^{2,3}, L Krishnan^{2,3}, SP Murphy⁴, B.A Croy¹, ¹Department of Biomedical and Molecular Sciences, Queens University, Kingston, ON; ²Department of Biochemistry, Microbiology and Immunology, University of Ottawa, Ottawa, ON; ³Human Health Therapeutics, National Research Council Canada, Ottawa, ON; ⁴Department of Obstetrics and Gynecology & Microbiology and Immunology, School of Medicine and Dentistry, University of Rochester, Rochester, NY (Abstract #60)

Neuroscience Research

CEREBRAL VASCULAR PATHOLOGIES AND EXECUTIVE DYSFUNCTION IN A NEW ANIMAL MODEL OF AGE-RELATED COGNITIVE IMPAIRMENT. Ahmed Elharram, R. David Andrew and Brian M Bennett. Department of Biomedical and Molecular Sciences and Centre for Neuroscience Studies, Queen's University, Kingston Ontario Canada K7L 3N6 (Abstract #61)

COGNITIVE BEHAVIOURAL THERAPY BASED GUIDED SELF-HELP IN COMBINATION WITH COGNITIVE REMEDIATION FOR PATIENTS WITH PSYCHOSIS. Dr. Farooq Naeem, Alyssa Hirji, & Natasha Alliston. Department of Psychiatry, Queen's University, Kingston, ON, Canada. (Abstract #62)

THE EFFICACY, SAFETY, AND TOLERABILITY OF PROBIOTICS ON THE MOOD AND COGNITION OF DEPRESSED PATIENTS. Caroline Wallace and Roumen Milev. Centre for Neuroscience Studies, Queen's University, Kingston, Ontario. (Abstract #63)

GROSS ANATOMICAL AND HISTOLOGICAL CHARACTERIZATION OF SOFT-EMBALMED NEURAL TISSUE. Diane Tomalty¹, Randy Ellis^{1,2,3}, Stephen C. Pang¹. ¹Department of Biomedical and Molecular Sciences, Queen's University; ²School of Computing, Queen's University; ³Human Mobility Research Centre, Queen's University (Abstract #64)

THE EFFECTS OF TRANSCRANIAL MAGNETIC STIMULATION ON OLFACTORY DEFICITS ASSOCIATED WITH DEPRESSION. Hannah C. Taalman¹, Roumen Milev², Yu Qing Liu¹, Elaine Choi¹. ¹ Centre for Neuroscience Studies, Queen's University, Kingston, ON, ² Department of Psychiatry, Queen's University, Kingston, ON (Abstract #65)

USING PUPIL RESPONSE TO ASSESS COGNITIVE FUNCTION ACROSS THE HEALTHY LIFESPAN. Jeff Huang, Matthew L. Smorenburg, Brian C. Coe, Chin-An Wang, and Douglas P. Munoz; Centre for Neuroscience Studies, Queen's University, Kingston, Ontario, Canada (Abstract #66)

IMPROVED PHENOTYPE IN ADULT SANDHOFF DISEASE MICE FOLLOWING INTRAVENOUS ADMINISTRATION OF SELF-COMPLEMENTARY ADENO-ASSOCIATED VIRAL VECTOR EXPRESSING A NOVEL HEXOSAMINIDASE ENZYME. Karlaina J.L. Osmon¹, E. Woodley², P. Thompson³, S. Karumuthil-Meethil⁴, S.J. Gray^{4,5} and J.S. Walia^{1, 2, 3*} ¹Centre for Neuroscience Studies, ²Dept of Biomedical and Molecular Sciences, and ³Medical Genetics/Departments of Pediatrics, Queen's University, Kingston, Ontario, Canada, K7L 3N6; ⁴Gene Therapy Center and ⁵Dept of Ophthalmology, University of North Carolina, Chapel Hill, North Carolina, USA (Abstract #67)

THE DEFAULT MODE NETWORK IN HEALTHY INDIVIDUALS: SYSTEMATIC REVIEW. Lauren Mak MSc and Roumen Milev MD, PhD, Department of Psychiatry, Queen's University, Kingston, Ontario, Centre for Neuroscience Studies (Abstract #68)

CORRECTION OF AB VARIANT GM2 GANGLIOSIDOSES WITH AAV9 GENE THERAPY IN A MOUSE MODEL. Meera Vyas¹, K. Osmon², P. Thompson³, J.S. Walia^{1,2,3}. ^{1,2}Center for Neuroscience Studies, ³Dept of Biomedical and Molecular Sciences, and ³Medical Genetics/Department of Pediatrics, Queen's University, Kingston, Ontario, Canada, K7L 3N6 (Abstract #69)

LOW BRAIN TISSUE OXYGENATION DURING THE RESUSCITATIVE PHASE OF CRITICAL ILLNESS IS ASSOCIATED WITH ACUTE NEUROLOGICAL DYSFUNCTION. Michael Wood, David Maslove, John Muscedere, and J. Gordon Boyd, Department of the Centre for Neurosciences Studies, Queen's University Kingston, Ontario Canada. (Abstract #70)

SLEEP ARCHITECTURE IN DEPRESSED PATIENTS TREATED WITH DESVENLAFAXINE. Tori-Rose Javinsky, Dr. Roumen Milev, Centre for Neuroscience Studies, Queen's University (Abstract #71)

EXECUTIVE FUNCTIONING AND EMOTIONAL PROCESSING DEFICITS IN ATTENTION-DEFICIT HYPERACTIVITY DISORDER AND BIPOLAR DISORDER Rachel Yep, Alina Marin, and Douglas P. Munoz (Abstract #74)

USING EYE MOVEMENTS TO ESTABLISH DISTINCT BIOMARKERS ACROSS THE HEALTHY LIFESPAN M. L. Smorenburg, R. Yep, B. C. Coe, D. C. Brien, & D. P. Munoz. Centre for Neuroscience Studies, Queen's University, Kingston, ON, Canada K7L 3N6. (Abstract #75)

THE EFFECTS OF INTERMITTENT THETA-BURST STIMULATION ON COGNITION IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER. Yu Qing Liu and Roumen Milev. Department of Neuroscience. Queen's University, Kingston, Ontario, Canada. (Abstract #76)

CIRCADIAN RHYTHM CONTROL OF NEUROPATHIC PAIN Kaitlyn Tresidder, Michael Kawaja, Ian Gilron, Nader Ghasemlou, Centre for Neuroscience Studies, Queen's University, Kingston, ON, Canada. (Abstract #77)

PEER VICTIMIZATION IS ASSOCIATED WITH ALTERED NEURAL RESPONSE TO SOCIAL EXCLUSION. Theresa A. McIver, Rachael L. Bosma, Aislinn Sandre, Sarah Goegan, Janell A. Klassen, Julian Chiarella, Linda Booij & Wendy Craig. Centre for Neuroscience Studies and Psychology Department. (Abstract #102)

THE TEMPORAL PROGRESSION OF ANXIETY- AND DEPRESSION-RELATED BEHAVIOURS IN AN ALDH2^{-/-} MOUSE MODEL OF ALZHEIMER'S DISEASE-LIKE COGNITIVE IMPAIRMENT. Nicole Czegledy, Ahmed Elharram and Brian Bennett. Department of Biomedical and Molecular Sciences, Queen's University. (Abstract #103)

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COPING STRATEGIES AND PSYCHOLOGICAL WELL-BEING AMONG BHUTANESE REFUGEES RESETTLED IN OTTAWA, CANADA. Anita Subedi, MNSc Student; Dana S. Edge, RN, PhD; Monakshi Sawhney, RN (EC), PhD; & Katie Goldie, RN, PhD, School of Nursing, Queen's University (Abstract #78)

PHENOL-EMBALMED LIMBS AS VASCULAR-ANASTOMOSIS MODELS. Danny Ly and Randy Ellis, Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, Canada (Abstract #79)

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SOLUTION CHARACTERIZATION OF THE TYPE-I COHESIN-DOCKERIN DUAL BINDING MODE. Alison L. Upsdell, Holly L. Spencer, David N. Langelaan, Steven P. Smith, Department of Biomedical and Molecular Sciences, Queen's University (Abstract #82)

CHARACTERIZING THE INTERACTION BETWEEN KRÜPPEL-LIKE FACTOR 4 AND CBP/P300. Brigid S. Conroy¹, David N. Langelaan¹, James G. Omichinski² and Steven P. Smith¹, ¹Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, Canada, K7L 3N6, ²Department of Biochemistry, Université de Montréal, Montréal, Québec, H3C 3J7 (Abstract #83)

EXPLORING THE CONSEQUENCES OF MUTATING THE HINGE REGIONS OF THE ORGANIC ANION TRANSPORTER, MRP1. Emma E. Smith, Gwenaëlle Conseil and Susan P.C. Cole. Department of Pathology & Molecular Medicine, Queen's University, Kingston, ON Canada (Abstract #84)

DEVELOPMENT OF NOVEL ASSAYS TO CHARACTERIZE UDP-GLUCOSE 4-EPIMERASE FROM THE ARCHAEON METHANOCOCCUS MARIPALUDIS. Sulav Sharma, Yan Ding, Diana Czuchry, Ken Jarrell, Inka Brockhausen (Abstract #85)

Rehabilitation Science

METHOD VERSUS METHODOLOGY: USE OF CASE STUDY BY REHABILITATION THERAPY PROFESSIONALS. Nicole Bobbette¹, Michael Kalu¹ and Atul Jaiswal¹. ¹Department of Rehabilitation Therapy, Faculty of Health Sciences, Queen's University, Kingston, Ontario Canada. (Abstract #87)

Reproductive and Sexual Function

HETEROGENEITY OF UTERINE NATURAL KILLER CELL PARTNERSHIPS IN EARLY MOUSE DECIDUA. Allison M. Felker and B. Anne Croy. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON (Abstract #89)

CHANGES TO PLACENTAL VASCULAR DEVELOPMENT IN ANP^{-/-} MICE. Claire E. Gallant¹, Nicole M. Ventura², Terry Li¹, M Yat Tse¹, Chandrakant Tayade¹ and Stephen C. Pang¹. ¹Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario and ²Department of Anatomy and Cell Biology, McGill University, Montreal, Quebec, Canada. (Abstract #90)

CHARACTERIZATION OF HEMATOPOIESIS IN MOUSE PLACENTA: TEMPORAL ASSESSMENT AND DISTRIBUTION PROFILE OF IMMATURE HEMATOPOIETIC CELLS OVER MID-GESTATION. Nathalia A Portilho^{1,2} (Ph.D. Candidate), Priscila T Guedes², Marcelo Pelajo-Machado², B Anne Croy¹. ¹Department of Biomedical and Molecular Research, Queen's University and ²Laboratory of Pathology, Oswaldo Cruz Institute/ Fiocruz. (Abstract #91)

RECOMBINANT HUMAN OVIDUCTIN BINDS TO HUMAN SPERM AND ENHANCES SPERM FERTILIZING COMPETENCE. Yuewen Zhao, Xiaojing Yang, Zongchao Jia, Robert L. Reid, Tamer M. Said, Alfonso P. Del Valle, Pierre Leclerc and Frederick W. K. Kan. Queen's University, Kingston, ON; The Toronto Institute for Reproductive Medicine, Toronto, ON; Laval University, Quebec City, QC. (Abstract #92)

THE EFFECTS OF VALPROIC ACID EXPOSURE ON P300, EGR1 AND STAT3 PROTEIN EXPRESSION IN P19 EMBRYONAL CARCINOMA CELLS Jordan K. Bricker¹ and Louise M. Winn^{1,2} ¹Department of Biomedical and Molecular Sciences, Graduate Program in Reproductive and Developmental Sciences, Queen's University, Kingston, Ontario. ²School of Environmental Studies, Queen's University, Kingston, Ontario. (Abstract #93)

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CREATING AN INDUCIBLE *IN VIVO* KNOCKDOWN MODEL TO BETTER UNDERSTAND THE ROLE OF P300 IN VALPROIC ACID-MEDIATED TERATOGENICITY. Denisha Puvitharan and Dr. Louise M. Winn. Department of Biomedical and Molecular Sciences. Queen's University, Kingston, Ontario, Canada. (Abstract #94)

LATENT CONGENITAL HEART DEFECTS AND PREDISPOSITION TO CARDIOVASCULAR DISEASE FOLLOWING POSTNATAL HYPERSTIMULATION OF ADRENERGIC RECEPTORS. Rebecca D. Maciver, Michael A. Adams, Louise M. Winn & Terence R. S. Ozolinš. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #95)

EFFECTS OF THE BENZENE METABOLITES, BENZOQUINONE AND HYDROQUINONE ON HL-60 HUMAN LEUKEMIA CELL DIFFERENTIATION AND IMPACT ON PU.1 TRANSCRIPTIONAL ACTIVITY Joseph P. Cozzarin Louise M. Winn, Department of Biomedical and Molecular Sciences (Abstract #96)

INVESTIGATING VALPROIC ACID-INDUCED ALTERATIONS TO NF- κ B IN P19 EMBRYONAL CARCINOMA CELLS. Christina L. Lamparter¹ and Louise M. Winn^{1,2}. ¹Department of Biomedical and Molecular Sciences, Graduate Program in Pharmacology and Toxicology, Queen's University, Kingston, Ontario. ²School of Environmental Studies, Queen's University, Kingston Ontario. (Abstract #97)

Women's and Children's Health Research

COMPOSITION OF HUMAN BREAST MILK IN AN ACUTE KIDNEY INJURY. Adam Chruscicki PhD¹, Christine White MD FRCP², ¹Faculty of Medicine, Queen's University, 15 Arch Street Kingston, Ontario, K7L 3N8, Canada, ²Division of Nephrology, Department of Medicine, Queen's University, 76 Stuart Street Kingston, Ontario, K7L 2V7, Canada (Abstract #98)

USE OF AN ADSFLT-1-INDUCED MOUSE MODEL OF PRE-ECLAMPSIA TO EXPLORE THE POTENTIAL OF CARBON MONOXIDE AS A GASEOUS THERAPEUTIC. Karalyn E McRae¹, Richard Casselman¹, Nichole Peterson¹ and Graeme N Smith^{1,2}. ¹Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Ontario, Canada and ²Department of Obstetrics and Gynecology, Kingston General Hospital, Kingston, Ontario, Canada. (Abstract #99)

Other

IMPACT OF COMPUTER AIDED ANIMATIONS (CAA) AND RETRIEVAL PRACTICE (RP) ON STUDENT LEARNING IN DEVELOPMENTAL ANATOMY. Sidra Shafique, Ron A. Easteal, Conrad Reifel Department of Biomedical and Molecular Sciences, Faculty of Health Sciences, Queen's University, Kingston, Ontario, Canada. (Abstract #100)

LIVER-DIRECTED KNOCKOUT AND TRANSGENE DELIVERY OF ARGINASE-1 IN MICE. Colin D Funk*, Laurel L Ballantyne*, Andreas Schulze. *Department of Biomedical and Molecular Sciences, Queen's University, Kingston ON (Abstract #101)