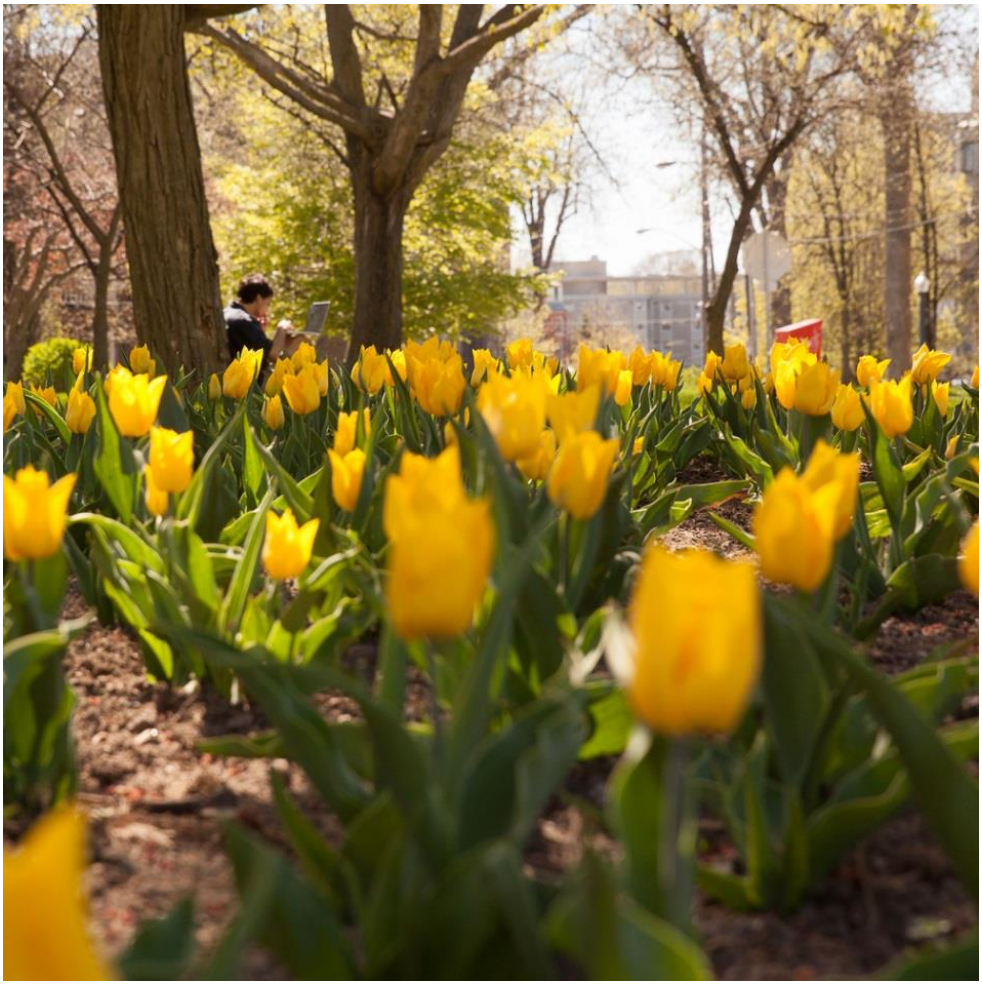
# The Seventeenth Annual Scientific Meeting for Health Science Research Trainees
# Faculty of Health Sciences
# Queen's University



**Tuesday, June 3rd, 2014**
**Biosciences Complex and School of Medicine Building**

**Sponsored by**

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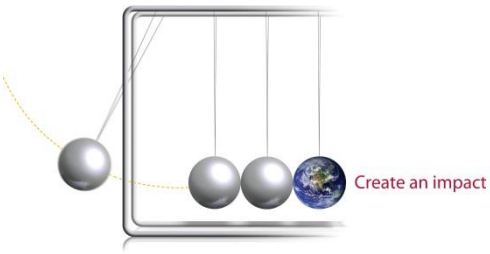

## Members of the Organizing Committee

Brian Bennett, Biomedical and Molecular Sciences
Andrew Craig, Biomedical and Molecular Sciences
Anita Lister, Biomedical and Molecular Sciences
Maha Othman, Biomedical and Molecular Sciences

## Session Chairs

Anne Croy, Biomedical and Molecular Sciences
Peter Greer, Pathology and Molecular Medicine
Tom Massey, Biomedical and Molecular Sciences

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| | | |
|---|---|---|
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| Nicole Ventura | Christopher Wynick | Yuewen (Sally) Zhao |

**Oral Presentation Adjudicators**

| | | |
|---|---|---|
| Abdi Ghaffari | Emily Hawken | Jeanne Mulder |

## Acknowledgments

Special thanks to Natalie Barnes for her invaluable assistance in organizing this meeting.

# The Seventeenth Annual Scientific Meeting for Health Science Research Trainees

# Faculty of Health Sciences

# Queen's University

Tuesday, June 3rd, 2014

Poster Presentations taking place in Biosciences Complex, Atrium

Oral Presentations taking place in School of Medicine Building, Room 032

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8:00 – 8:45 ***Registration and Poster Set-Up in Biosciences Complex, Atrium***

8:45 – 9:00 ***Introductory Remarks School of Medicine Building, Room 032***
Dr. Brian Bennett, 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 – 9:30 ***Keynote Speaker***
Dr. Alan Lomax
Departments of Medicine and Biomedical & Molecular Sciences
"Deciphering the dialogue between immune and nervous systems"

## *Oral Presentation – Session 1*

**Chair: Dr. Tom Massey**

Neuroscience Research

9:30 – 9:42 FINESSE: A PILOT SURVEY TO ASSESS THE DISTINCTION BETWEEN STIMULUS-DEPENDENT AND STIMULUS-INDEPENDENT PAIN SYMPTOMS IN NEUROPATHIC PAIN. David He[1], Ian Gilron[2], Ronald R. Holden[3], Brian Grant[4], [1]2015 MD Candidate, Queen's University [2]Departments of Anesthesiology & Perioperative Medicine, Biomedical & Molecular Sciences and Center for Neuroscience Studies, Queen's University, [3]Department of Psychology, Queen's University, [4]Department of Anesthesiology & Perioperative Medicine, Queen's University, Kingston ON. (Abstract #78)

Inflammation, Infection and Immunity

9:42 – 9:54 IL-27 ENHANCES IL-1B AND IL-23 EXPRESSION IN MONOCYTES. Christopher Wynick, Carlene Petes, Taylor Kain, and Katrina Gee. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #79)

Women's and Children's Health Research

9:54 – 10:06 PROMOTING AWARENESS OF BEST PRACTICES FOR FETAL ALCOHOL SPECTRUM DISORDER (FASD) IN PRIMARY CARE: THE ACTIONABLE NUGGETS™ STRATEGY. Naumann, D. N.[1], McColl, M.A.[1], Reynolds, J.N.[2], & Smith, K.M.[3] [1]School of Rehabilitation Therapy, Queen's University, Kingston, ON, [2]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, [3]Office of Continuing Professional Development, Queen's University, Kingston, ON. (Abstract # 80)

Reproductive and Sexual Function

10:06 – 10:18 THE ROLE OF PLACENTAL GROWTH FACTOR IN REGULATING FETAL BRAIN VASCULAR DEVELOPMENT. Matthew T. Rätsep, Bruno Zavan, Nicki Peterson, Leandra Tolusso, Vanessa Kay, Nicole Ventura, Stephen C. Pang, Albert Y. Jin, Michael A. Adams and B. Anne Croy. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #81)

Therapeutics and Toxicology

10:18 – 10:30 ALTERED mRNA EXPRESSION DOMAINS IN EMBRYONIC RAT HEARTS AFTER IN UTERO EXPOSURE TO A CHEMICAL THAT INDUCES A HIGH INCIDENCE OF VENTRICULAR SEPTATION DEFECTS (VSD). Rebecca D. Maciver*, Andrea D. Weston†, Nigel A. Brown‡, Terence R. S. Ozolinš*. *Department of Biomedical and Molecular Sciences, Graduate Program in Pharmacology and Toxicology, Queen's University, Kingston, ON, †Applied Biotechnology, Bristol-Myers Squibb, Wallingford, CT, ‡ Division of Biomedical Sciences, St. George's University of London, UK. (Abstract # 82)

10:30 – 10:45 ***Coffee Break (Biosciences Atrium)***

10:45 – 12:15 ***Poster Presentations (Odd Numbered Abstracts)***

12:15 – 1:00 ***Lunch***

1:00 – 2:20 ***Poster Presentations (Even Numbered Abstracts)***

2:20 – 2:30 ***Poster Tear Down***

# *Oral Presentation – Session 2*

**Chair: Dr. Anne Croy**

Neuroscience Research

2:30 – 2:42 MATERNAL HYPERTENSION PROGRAMS INCREASED STROKE SUSCEPTIBILITY IN ADULT OFFSPRING. Nicole M. Ventura[1], Nichole T. Peterson[2], M. Yat Tse[1], Albert Y. Jin[1,2], R. David Andrew[1], Stephen C. Pang[1]. [1]Department of Biomedical and Molecular Sciences, [2]Department of Medicine (Neurology), Queen's University and Kingston General Hospital, Kingston, ON. (Abstract #83)

Cardiac, Circulatory, and Respiratory Sciences

2:42 – 2:54 THE ROLE OF NEDD4 FAMILY INTERACTING PROTEINS (NDFIPS) IN THE REGULATION OF THE HUMAN ETHER-A-GO-GO RELATED GENE (HERG) – ENCODED POTASSIUM CHANNEL. Yudi Kang, Jun Guo, Tonghua Yang, Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #84)

Protein Structure and Function

2:54 – 3:06 MITOTIC KINESIN STRUCTURE DISPLAYS ELUSIVE 'RIGOR-LIKE' STATE OF THE MOTOR DOMAIN. Kritica Arora[1], Lama Talje[2], Ana Asenjo[3], Parker Anderson[2], Kaleem Atchia[2], Monika Joshi[1], Hernando Sosa[3], Benjamin Kwok[2], and John Allingham[1] [1]Department of Biomedical & Molecular Sciences, Queen's University, Kingston ON, [2]Department of Medicine, University of Montreal, Montreal QC, [3]Department of Physiology & Biophysics, Albert Einstein College of Medicine, Bronx NY (Abstract #85)

Health Policy, Population Health and Epidemiology

3:06 – 3:18 THE USE OF CLINICAL PREDICTION TOOLS IN PERSONALIZED CANCER PROGNOSIS AND TREATMENT DECISION MAKING AMONG CANADIAN CANCER CARE SPECIALISTS Emma E. Pillsworth; Alyson L. Mahar, Patti Groome, Department of Public Health Sciences, Queen's University Kingston, ON. (Abstract #86)

3:20 – 3:35 ***Coffee Break (School of Medicine Building, Lower Atrium)***

# *Oral Presentation – Session 3*

**Chair: Dr. Peter Greer**

Neuroscience Research

3:35 – 3:47 NEUROTRANSMISSION MODULATES NEUROGENESIS WITHIN THE ADULT ENTERIC NERVOUS SYSTEM. Jaudat Masood, Alan Lomax, Centre for Neuroscience Studies & Gastrointestinal Disease Research Unit. Queen's University & Kingston General Hospital. Kingston, ON. (Abstract #87)

Cancer Research and Therapy

3:47 – 3:59 OPPOSING ROLES FOR MAMMARY EPITHELIAL-SPECIFIC PPARγ SIGNALING AND ACTIVATION DURING BREAST TUMOUR PROGRESSION. Apostoli AJ[1]*, Roche J[1]*, Schneider M[1], SenGupta S[1], Di Lena M[1], Rubino R[2], Peterson N[2] and Nicol C.[1-2] [1]Department of Pathology and Molecular Medicine; [2]Division of Cancer Biology and Genetics, Cancer Research Institute (CRI); and Department of Biomedical and Molecular Sciences (Pharmacology and Toxicology), Queen's University, Kingston, ON. (Abstract #88)

Reproductive and Sexual Function

3:59 – 4:11 EFFECTS OF AN EXERCISE TRAINING PROGRAM AND FETAL OUTCOMES DURING ABERRANT INFLAMMATION IN PREGNANT RATS. Karina T. Kasawara, Tiziana Cotechini, Shannyn K. Macdonald-Goodfellow, Terence R.S. Ozolinš, Fernanda G. Surita, João Luiz Pinto e Silva, Chandrakant Tayade, Maha Othman, Charles H. Graham. Department of Obstetrics and Gynecology, University of Campinas, Campinas, SP, Brazil and Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #89)

Inflammation, Infection and Immunity

4:11 – 4:23 INDUCTION OF MMP-9 BY TNF IS REQUIRED FOR GDNF-INDUCED AXONAL PROLIFERATION. Kirsten Cirella, P.-Y. Gougeon, S. R. Lourenssen, and M. G. Blennerhassett. GIDRU and Dept. of Medicine, Queen's University, Kingston, ON. (Abstract #90)

4:25 – 4:35 Dr. Bruce Seet, President, Science to Business Network (S2BN)

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

5:00 – 7:00 ***Reception at The Grad Club, 2nd Floor***
162 Barrie Street, Kingston, ON
Cash Bar

# *Poster Presentations*

## BIOMEDICAL ENGINEERING

DELIVERY OF OSELTAMIVIR PHOSPHATE AND GEMCITABINE FROM POLY (D,L-LACTIC-CO-GLYCOLIC ACID) FOR THE TREATMENT OF PANCREATIC CANCER. Stephanie Allison, Jordan Ellis, Samar Abdulkhalek[1], Chelsea Lappan, Michael Hrynyk, Ron J. Neufeld and Myron R. Szewczuk[1]. Chemical Engineering; [1]Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #2)

CRISPR/CAS9-MEDIATED GENE EDITING IN ARGINASE-1 DEFICIENT MOUSE EMBRYONIC FIBROBLASTS. Phillipe Price, Angie Y.Y. Sin, Laurel L. Ballantyne, Kamalika Mukherjee, Tim St. Amand, Crystal McCracken, Colin D. Funk. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #55)

TARGETED GENOME ENGINEERING AT THE ARG1 LOCUS USING THE TALEN AND CRISPR/CAS9 SYSTEM. Yuan Yan Sin, Marco Morales, Crystal McCracken, Colin D. Funk. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #62)

## CANCER RESEARCH AND THERAPY

ENDOPHILIN II PROMOTES EGFR-INDUCED CELL INVASION AND TUMOUR METASTASIS IN HUMAN TRIPLE NEGATIVE BREAST CANCER. Tomas Baldassarre, Jalna Meens, and Andrew W. B. Craig. Department of Biomedical and Molecular Sciences, Queen's University, Kingston ON. Cancer Biology & Genetics Division, Queen's Cancer Research Institute, Kingston, ON. (Abstract #3)

INCREASED ARGINASE 1 EXPRESSION IN MYELODYSPLASIC SYNDROME (MDS) AND CHRONIC MYELOMONOCYTIC LEUKEMIA (CMML): POTENTIAL IMMUNOSUPPRESSION BY TET2-MUTANT MACROPHAGES. Alyssa Cull, MSc, Brooke Snetsinger,MSc, Iqra Mumal, BSc, Flora Shan, BSc, David Good, MD, FRCPC and Michael J. Rauh, MD, PhD. Department of Pathology and Molecular Medicine, Queen's University, Kingston ON. (Abstract #10)

REAL-TIME ELECTROMAGNETIC NAVIGATION FOR BREAST TUMOR RESECTION: PROOF OF CONCEPT. G. Gauvin[1], C.T. Yeo[2], T. Ungi[2], G. Fichtinger[2], J. Rudan[1], C.J. Engel[1] [1]Department of Surgery, Queen's University, [2]School of Computing, Queen's University, Kingston ON. (Abstract #19)

PROGNOSTICATION OF AGGRESSIVE PROSTATE CANCER BEHAVIOUR USING REVERSE-WARBURG EFFECT (RWE)-ASSOCIATED GENES. Ilinca Georgescu, Alexandria Haslehurst, Shamini Selvarajah and Paul C. Park. Department of Pathology and Molecular Medicine, Queen's University, Kingston ON. (Abstract #20)

ACTIVATED PHOSPHATIDYLINOSITOL-3 KINASE; AN ONCOGENE THAT INCREASES GAP JUNCTIONAL, INTERCELLULAR COMMUNICATION. Stephanie Guy, Mulu Geletu, Samantha Greer, and Leda Raptis. Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON.(Abstract #22)

THE ROLE OF THE EPITHELIAL TO MESENCHYMAL TRANSITION, AND ASSOCIATED GENES, AS PROGNOSTIC BIOMARKERS IN GLEASON SCORE 3+3 PROSTATE CANCER. Alexandria Haslehurst, Ilinca Georgescu, Shamini Selvarajah, Harriet Feilotter and Paul C. Park. Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON.(Abstract #24)

A MECHANISM OF NITRIC OXIDE (NO)-MEDIATED INHIBITION OF HYPOXIC RESPONSES IN TUMOUR CELLS. Judy Kim, Ivraym B. Barosum, D. Robert Siemens and Charles H. Graham. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #31)

PPAR$\gamma$ LOSS INCREASES DMBA-MEDIATED BREAST TUMOUR PROGRESSION IN MAMMARY EPITHELIAL TARGETED KNOCKOUT MICE. Elizabeth Lightbody[1], Anthony AJ[1], Rachel R[2], Di Lena M[1], Schneider M[1], SenGupta S[1] and Nicol C[1-2] [1]Department of Pathology and Molecular Medicine; [2]Division of Cancer Biology and Genetics, Cancer Research Institute (CRI); and Department of Biomedical and Molecular Sciences (Pharmacology and Toxicology), Queen's University, Kingston, ON. (Asbtract #35)

THE ROLE OF CALPAINS-1 AND -2 IN MAMMARY TUMOR ONSET AND PROGRESSION. James A. MacLeod, Jing Hu, Wai-chi Ho and Peter A. Greer. Department of Pathology & Molecular Medicine, Queen's University, Kingston, ON.(Abstract #39)

CADHERIN-11 FUNCTION IS REQUIRED FOR FULL NEOPLASTIC TRANSFORMATION OF MOUSE FIBROBLASTS BY VSRC. Stephanie Guy, Patrick Magee, Mulu Geletu, Rozanne Arulanandam, and Leda Raptis. Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON. (Abstract #40)

MODULATION OF BREAST CANCER GROWTH AND METASTASIS BY TUMOR CELL EXPRESSION OF CYTOKINES. Ma JM, Mullins G, Zheng CS and Greer PA. Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON. (Abstract #46)

SURGICAL PLANNING OF HEPATIC METASTASECTOMY USING RADIOLOGIST PERFORMED INTRAOPERATIVE ULTRASOUND. Dr. L. O'Malley, Dr. A. Menard, Dr. D. Jalink, Dr. S. Nanji. Queen's University. (Abstract #52)

HOW WELL DOES MRI PREDICT THE PRESENCE OF NECK DISEASE IN SQUAMOUS CANCER OF HEAD AND NECK? Umair Mahmood[1], Melody X. Qu[2], Omar S. Islam[3], Aamer Mahmud[2] [1]Life Science Program, Queen's University, Kingston, ON [2] Department of Radiation Oncology, Queen's University, Kingston, ON [3] Department of Diagnostic Radiology, Queen's University, Kingston, ON. (Abstract #56)

VASCULAR ENDOTHELIAL CELL-SPECIFIC DELETION OF PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR □ BLOCKS THIAZOLIDINEDIONE-INDUCED PLASMA VOLUME EXPANSION AND VASCULAR REMODELING IN ADIPOSE TISSUE. Skelhorne-Gross, GE, Akiyama, TE, Lightbody, ED, Rubino, RE, McNamara, LA, Sharma, N, Zycband, EI, Gonzalez, FJ, Liu, H, Woods, JW, Chang, RH, Berger, JP and Nicol, CJ. Queen's University, Kingston, ON. (Abstract #65)

THE TUMOR-SUPPRESSOR MICRORNA-206 TARGETS THE PRO-METASTATIC PROTEIN TOCA-1 AND SUPPRESSES CANCER CELL INVASION. Kathleen Watt, Peter Truesdell, and Andrew W.B. Craig. Cancer Biology and Genetics, Department of Biomedical and Molecular Sciences. Queen's University, Kingston ON. (Abstract #72)

## CARDIAC, CIRCULATORY AND RESPIRATORY SCIENCES

CHARACTERIZING CARDIOVASCULAR REACTIVITY TO MENTAL STRESS IN FEMALE HOSPITAL SHIFTWORKERS. Ira N. Carson, Morgan J. Batson, Joan E. Tranmer, & Kyra E. Pyke School of Kinesiology and Health Studies, Queen's University, Kingston, ON. (Abstract #6)

BLOOD OUTGROWTH ENDOTHELIAL CELLS FROM A TYPE 2B VON WILLEBRAND DISEASE PATIENT EXHIBIT INCREASED *EX VIVO* ANGIOGENESIS. Lara Casey[1], Mackenzie Bowman[1], Bibiana Umana[2], Don Maurice[2] and Paula James[1]. Department of Pathology and Molecular Medicine[1] and Department of Biomedical and Molecular Sciences[2], Queen's University, Kingston, ON. (Abstract #7)

MURINE AIRWAY SLOWLY-ADAPTING RECEPTOR RESPONSES TO LUNG INFLATION: A ROLE FOR SEROTONIN? Nicolle J. Domnik[1], Sandra G. Vincent[1], Ernest Cutz[2,3], John T. Fisher[1,4] [1]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON [2]Division of Pathology, Department of Paediatric Laboratory Medicine, The Research Institute, The Hospital for Sick Children, Toronto, ON [3]Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, ON [4]Department of Medicine, Queen's University, Kingston, ON. (Abstract #13)

SCORPION TOXIN BEKM-1 BLOCKS INTERNALIZATION OF HERG IN 0 $[K^+]_O$ Xi Han, Jun Guo, Wentao Li, Shetuan Zhang. Department of Biochemical and Molecular Sciences, Queen's University, Kingston, ON (Abstract #23)

HYPOXIA DECREASES $K_V1.5$ CHANNEL EXPRESSION AND FUNCTION THROUGH PROTEOLYTIC ENZYME UPREGULATION. Andrew Hogan-Cann, Jun Guo and Shetuan Zhang. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON (Abstract #27)

ASSESSMENT OF BLEEDING PHENOTYPE IN PT-VWD AND OTHER RBDS USING ELECTRONIC BLEEDING QUESTIONNAIRE (EBQ): A RETROSPECTIVE STUDY ON 55 SUBJECTS. Harmanpreet Kaur[1], Hanan Azzam [2], Margareth Ozelo[3], Stephen Scovil[4], Paula D James[5], Maha Othman[1,6] [1]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON; [2]Department of Clinical Pathology, Mansoura University, Egypt; [3]Faculty of Medical Sciences, University of Campinas, Sao Paulo, Brazil; [4]New Atom Technologies Inc., Kingston, ON; [5]Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON; [6]St Lawrence College, Kingston, ON. (Abstract #28)

THE MECHANISTIC RELATIONSHIP BETWEEN VON WILLEBRAND FACTOR, CELL-FREE DNA AND HISTONES IN ACUTE AND CHRONIC MODELS OF INFLAMMATION. A. Michels[1], S. Albánez[1], L.L. Swystun[1], K. Sponagle[1], P.D. James[2], T. Gould[3], P. Liaw[3] and D. Lillicrap[1] [1] Department of Pathology and Molecular Medicine, Queen's University, Kingston ON [2] Department of Medicine, Queen's University, Kingston ON [3] Thrombosis and Atherosclerosis Research Institute, McMaster University, Hamilton ON. (Abstract #44)

VON WILLEBRAND FACTOR AND PHARMACOKINETIC BEHAVIOR OF FACTOR VIII CONCENTRATES IN TREATMENT FOR HEMOPHILIA A PATIENTS. Kenichi Ogiwara, Laura Swystun, Ilinca Georgescu, Christine Brown, Angie Tuttle, Shawn Tinlin, Jayne Leggo, David Lillicrap, Department of Pathology and Molecular Medicine Richardson Laboratory, Queen's University, Kingston, ON. (Abstract #51)

## HEALTH POLICY, POPULATION HEALTH, AND EPIDEMIOLOGY

TRENDS IN PSYCHIATRIC EMERGENCY DEPARTMENT (ED) PRESENTATIONS IN A TERTIARY CARE CENTER IN ONTARIO, CANADA OVER A 5-YEAR PERIOD. Varinder S. Parmar, Ewa Talikowska-Szymczak, Emily Downs, Erin Meiklejohn, Dianne Groll. Department of Psychiatry, Queen's University, Kingston, ON.(Abstract #53)

ART MAKING IN PATIENTS WITH MENTAL ILLNESS. Barinder Singh, Department of Psychiatry, Queen's University, Kingston, ON. (Abstract #63)

ARE WE PREPARING RESIDENT DOCTORS TO MEET THE CHALLENGES OF WORKING IN A MULTICULTURAL SOCIETY IN CANADA? Barinder Singh, and Dianne Groll. Department of Psychiatry, Queen's University, Kingston, ON. (Abstract #64)

APPLICATION OF THE 2012 KDIGO GUIDELINE FOR CHRONIC KIDNEY DISEASE (CKD) STAGING HAS A SIGNIFICANT IMPACT ON RISK STRATIFICATION IN PREVALENT KIDNEY TRANSPLANT PATIENTS. Lan Song, M. Khaled Shamseddin, David Holland, Eduard Iliescu. Queen's University and Kingston General Hospital. (Abstract #68)

THIRTY (30) DAY READMISSION RATES IN OTOLARYNGOLOGY/HEAD AND NECK SURGERY: AN EXAMPLE OF A DEPARTMENTAL QUALITY IMPROVEMENT PLAN. Peng You, Russell Hollins, Stephen Hall. Department of Otolaryngology, Queen's University, Kingston, ON. (Abstract #76)

## INFLAMMATION, INFECTION AND IMMUNITY

ANTIVIRAL PROPERTIES OF CLASSICALLY AND ALTERNATIVELY ACTIVATED MACROPHAGES. Andra Banete, Rylend Mulder, and Sam Basta. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #4)

IS N-GLYCAN MODIFICATION AT VARIOUS SITES ON ARCHAELLIN FLAB2 NECESSARY FOR ARCHAELLA ASSEMBLY AND FUNCTION IN *METHANOCOCCUS MARIPALUDIS*? Yan Ding, Shin-Ichi Aizawa, Ken Jarrell, Department of Biomedical & Molecular Sciences, Queen's University, Kingston, ON. (Abstract #11)

INVESTIGATION OF BACULOVIRUS RNA POLYMERASE SUBUNIT PROTEIN-PROTEIN INTERACTIONS BY *IN VIVO* BIMOLECULAR FLUORESCENCE COMPLEMENTATION ASSAYS. Jessica Breznik, Nicola Johnson, Mustapha El-Ayoubi, Eric B. Carstens. Microbiology and Immunology Program, Department of Biomedical and Molecular Sciences, Queens University, Kingston, ON. (Abstract #14)

ARMR-PA3720-MEDIATED EXPRESSION OF THE *MEXAB-OPRM* MULTIDRUG EFFLUX SYSTEM IN *NALC* STRAIN OF *PSEUDOMONAS AERUGINOSA*: ROLE FOR PA3720 IN STABILIZING *ARMR* MRNA. Michael Fruci and Keith Poole. Department of Biomedical and Molecular Sciences. Queen's University, Kingston, ON. (Abstract #18)

ADMINISTRATION OF GLUCOCORTICOID DEXAMETHASONE DURING EARLY EXPOSURE TO FACTOR VIII PREVENTS THE DEVELOPMENT OF ANTI-FACTOR VIII ANTIBODIES IN A HEMOPHILIA A MOUSE MODEL. Maria Georgescu[1], Paul Moorehead[2], Alice van Velzen[3], Kate Sponagle[1], Birgit Reipert[4], Christine Hough[1], David Lillicrap[1] [1]Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON, Canada. [2]Janeway Children's Health and Rehabilitation Centre, St. John's, NL, Canada. [3]Emma Children's Hospital Academic Medical Centre, Amsterdam, The Netherlands. [4]Baxter Bioscience, Vienna, Austria. (Abstract #21)

ENDOGENOUSLY GENERATED ω3 FATTY ACIDS SUPPRESS INFLAMMATION BY INTERACTION WITH FFAR4 IN MICE. Xinzhi Li[1], Xinghui Che[1], Ying Yu[2], Colin D. Funk[1], [1]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, Canada, K7L 3N6, [2]Institute for Nutritional Sciences, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai 200031, China. (Abstract #34)

INVESTIGATING THE ROLE OF DONOR FECAL MICROBIOTA COMPOSITION IN THE SUCCESS OF FECAL BACTERIOTHERAPY FOR *CLOSTRIDIUM DIFFICILE* INFECTION. Julie A. K. McDonald, Curtis Noordhof, Elaine Petrof. Gastrointestinal Disease Research Unit, Department of Medicine, Queen's University, Kingston, ON. (Abstract #41)

EVALUATING A LABORATORY-LINKED TELEPHONE HEALTH HELPINE SURVEILLANCE SYSTEM FOR THE DETECTION OF CIRCULATING INFLUENZA VIRUSES. Danielle McGolrick, Allison Maier and Dr. Anna Majury. Department of Biomedical and Molecular Sciences. Queen's University, Kingston, ON. (Abstract #42)

SPLEEN-DERIVED MACROPHAGES ARE READILY POLARIZED INTO CLASSICALLY ACTIVATED (M1) OR ALTERNATIVELY ACTIVATED (M2) STATES. Rylend Mulder, Andra Banete and Sameh Basta. Department of Biomedical and Molecular Sciences, Queen's University Kingston, ON. (Abstract #45)

UL21 LOCALIZES TO THE INNER NUCLEAR MEMBRANE IN HSV-2 INFECTED CELLS BUT DOES NOT INFLUENCE NUCLEAR EGRESS COMPLEX LOCALIZATION. Arash Nassiri, Maxwell Sherry, Renée L. Finnen, Bruce W. Banfield. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #47)

THE ROLE OF IL-27 IN ENDOTOXIN TOLERANCE IN HUMAN MONOCYTIC CELLS. Carlene Petes, Christopher Wynick, and Katrina Gee. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract # 54)

ALPHAHERPESVIRUS UL31 RECRUITMENT TO SITES OF DNA DAMAGE IS REGULATED BY THE VIRAL SERINE/THREONINE KINASE US3. Maxwell R. Sherry, Arash Nassiri, Thomas J. M. Hay, Renee L. Finnen and Bruce W. Banfield. Department of Biomedical and Molecular Sciences, Queen's University, ON. (Abstract #61)

IDENTIFYING INFLAMMATORY PHASES OF ALLERGIC RHINITIS (AR) IN NAC PROTOCOLS. Mena Soliman[1], Jenny Thiele[1], Lisa Steacy[2], Marie-Eve Boulay[3], Angela Hillaby[6], Susan Waserman[5], Paul Keith[5], Harissios Vliagoftis[6], Louis-Philippe Boulet[3], Helen Neighbour[4], Anne K. Ellis[1,2] [1] Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, CA, [2] Allergy Research Unit, Kingston General Hospital, Kingston, ON, CA, [3] Institut Universitaire de Cardiologie et de Pneumologie de Quebec, Quebec City, QC, CA,[4] Firestone Institute for Respiratory Health, McMaster University, Hamilton, ON, CA,[5] Department of Medicine, McMaster University, Hamilton, ON, CA,[6] Pulmonary Research Group, University of Alberta, Edmonton, AB, CA. (Abstract #66)

## NEUROSCIENCE RESEARCH

ENERGETICS OF THE LOOMING RESPONSE IN THE LOCUST. Kevin P. Cross, R. Meldrum Robertson. Department of Biology, Queen's University, Kingston, ON. (Abstract #9)

NEUROPHYSIOLOGICAL TRACES OF L-DOPA-INDUCED DYSKINESIA IN THE BED NUCLEUS OF THE STRIA TERMINALIS OF 6-OHDA-LESIONED RATS. C.A. Di Prospero, M.Bastide, E.R. Hawken, M. Naughton, C.P. Normandeau, N.M Misljencevic, E. Bezard E.C. Dumont. Department of Biomedical & Molecular Sciences and Centre for Neuroscience Studies, Queen's University, Kingston, ON. (Abstract #12)

ALDEHYDE DEHYDROGENASE 2 (ALDH2) NULL MICE AS A MODEL OF AGE-RELATED COGNITIVE IMPAIRMENT AND ALZHEIMER'S DISEASE (AD). Ahmed Elharram, Yohan D'Souza and Brian Bennett. Department of Biomedical and Molecular Sciences and Centre for Neuroscience Studies, Queen's University, Kingston, ON. (Abstract #15)

ENTERIC NEURONS ARE SELECTIVELY SUSCEPTIBLE TO ISCHEMIA *IN VITRO.* Joanne Kearon, Sandra Lourenssen, M.G. Blennerhassett. Centre for Neuroscience Studies and GIDRU, Queen's University, Kingston, ON. (Abstract #30)

HALOPERIDOL-ENVIRONMENT INTERACTION MEDIATES EXPRESSION OF C-FOS PROTEINS IN THE VENTRAL PALLIDUM OF RATS. Lexy Schimmel, Emily Hawken, Eric Dumont, Tomek Banasikowski, and Richard J. Beninger. Center for Neuroscience Studies, Queen's University, Kingston, ON. (Abstract #59)

EFFECTS OF MET-1 ON PAIN SIGNALING DURING INFLAMMATION. Jessica Sessenwein, Julie McDonald, Elaine Petrof, Stephen Vanner, and Alan Lomax. Gastrointestinal Research Disease Unit, Queens University, Kingston, ON. (Abstract #60)

ROLE OF EARLY ACOUSTIC EXPERIENCE IN DEVELOPMENT OF THE RAT PRIMARY AUDITORY CORTEX. Chloe N., Soutar, Simon G., Rodier, Meaghan M. Wilkin, Janet L. Menard, & Hans C. Dringenberg. Department of Psychology, Queen's University, Kingston, ON. (Abstract #69)

STEREOLOGICAL ANALYSIS OF SPINAL CORD NEURONS INVOLVED IN PRIMATE FORELIMB MOTOR CONTROL. Nolan Wilson, Ken Rose, Stephen H. Scott. Centre for Neuroscience Studies. Queen's University, Kingston, ON. (Abstract #73)

DISTINCT SIGNALLING PATHWAYS MEDIATE GDNF EFFECTS ON SURVIVAL AND AXON EXTENSION IN ENTERIC NEURONS. Ralph T.T. Yeung, S. Lourenssen and M.G. Blennerhassett**.** Centre for Neuroscience Studies & Gastrointestinal Disease Research Unit**.** Queen's University & Kingston General Hospital**.** Kingston, ON. (Abstract #75)

## REHABILITATION SCIENCE

HEAD AND TRUNK CONTROL WHILE WALKING IN OLDER ADULTS WITH TYPE 2 DIABETES MELLITUS: EFFECTS OF COGNITIVE LOADING AND TIME CONSTRAINTS. Patricia A. Hewston, Etienne J. Bisson and Nandini Deshpande. School of Rehabilitation Therapy, Queen's University, Kingston, ON. (Abstract #25)

DEVELOPMENT OF A COMPREHENSIVE CLINICAL PRACTICE FRAMEWORK TO GUIDE EVIDENCE-BASED BREAST CANCER SURVIVORSHIP CARE WITHIN THE PRIMARY CARE SETTING. Marian Luctkar-Flude[1], Alice Aiken[2], Mary Ann McColl[2], Joan Tranmer[1]. [1]School of Nursing; [2] School of Rehabilitation Therapy, Queen's University, Kingston ON. (Abstract #36)

PRELIMINARY RESULTS OF A SURVEY EXAMINING THE IMPLEMENTATION OF KEY BREAST CANCER SURVIVORSHIP CARE GUIDELINES BY PRIMARY CARE PROVIDERS. Marian Luctkar-Flude[1], Alice Aiken[2], Mary Ann McColl[2], Joan Tranmer[2]. [1]School of Nursing, [2]School of Rehabilitation Therapy, Queen's University, Kingston ON. (Abstract #37)

INNOVATIVE ELECTRONIC CONTINUING MEDICAL EDUCATION (CME) FOR PHYSICIANS: ACTIONABLE NUGGETS ON SKILLSCRIBE. Smith, K. M.[1], McColl, M. A [2], Aiken, A. B. [2] Naumann, D. N.[1], McDiarmid Antony, L.[1] [1]Office of Continuing Professional Development, Queen's University, Kingston, ON, [2]School of Rehabilitation Therapy, Queen's University, Kingston, ON. (Abstract #48)

WRITTEN OR TYPED NOTE-TAKING AND MEMORY RETENTION: IMPLICATIONS FOR ELECTRONIC CONTINUING MEDICAL EDUCATION. Smith, K. M.[1], Naumann, D. N.[1], McDiarmid Antony, L.[1] [1]Office of Continuing Professional Development, Queen's University, Kingston, ON, [2]School of Rehabilitation Therapy, Queen's University, Kingston, ON. (Abstract #49)

INVESTIGATING SPATIAL ORIENTATION: COMPARING THE TEST-RETEST RELIABILITY OF 3 PROTOCOLS IN YOUNG AND OLDER ADULTS. Fang Zhang , Elsie Culham , Nandini Deshpande. School of Rehabilitation Therapy, Queen's University, Kingston ON. (Abstract #77)

## PATIENT CARE AND NURSING RESEARCH

PIONEERING AMBULATORY PERCUTANEOUS NEPHROLITHOTOMY: THE CANADIAN EXPERIENCE. Darren Beiko, Andrea Kokorovic, G. Gregory Roberts, Sylvia Robb, Mohamed A. Elkoushy, Sero Andonian. Department of Urology, Queen's University, Kingston, ON; Department of Surgery, Division of Urology, McGill University, Montréal, PQ.(Abstract #58)

SURGICAL PROCEDURE FEEDBACK RUBRIC FOR ASSESSING RESIDENT PERFORMANCE IN THE OPERATING ROOM: INTERIM RESULTS OF A VALIDITY STUDY. Ayca Toprak*[+], Sarah Jones[†], Andrea Winthrop*, Laura McEwen[‡] *Department of Surgery, School of Medicine Queen's University, Kingston, ON, ‡Department of Paediatrics, School of Medicine Queen's University, Kingston, ON +Faculty of Education, Queen's University, Kingston, ON, †Department of Surgery, Western University, London, ON. (Abstract #71)

## PROTEIN STRUCTURE AND FUNCTION

A COMPLEX OF THE KAR3 KINESIN AND A CIK1 HOMOLOG FUNCTION IN NUCLEAR POSITIONING AND SPINDLE STABILITY IN *CANDIDA ALBICANS.* Corey Frazer[1], Monika Joshi[1], Caroline Delorme[1], Darlene Davis[1], Richard J. Bennett[2] and John S. Allingham[1] [1]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, [2]Department of Molecular Microbiology and Immunology, Brown University, Providence, Rhode Island. (Abstract #17)

STRUCTURAL BASIS FOR COOPERATIVE RECRUITMENT OF CBP/p300 BY THE TRANSCRIPTION FACTOR E2A. David N. Langelaan[1], Alyssa C. Kirlin[1], Seth Chitayat[1], David P. LeBrun[2,3] and Steven P. Smith[1] [1]Department of Biomedical and Molecular Sciences, [2]Department of Pathology and Molecular Medicine and [3]Division of Cancer Biology and Genetics, Cancer Research Institute, Queen's University, Kingston, ON. (Abstract #33)

## REPRODUCTIVE AND SEXUAL FUNCTION

CARDIOVASCULAR AND HEMODYNAMIC EFFECTS OF PREGNANCY IN POSTNATAL RATS FOLLOWING EMBRYONIC EXPOSURE TO A CARDIAC TERATOGEN. Kristiina Aasa, Michael Adams, Terence Ozolinš. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #1)

ABERRANT MATERNAL INFLAMMATION CAN LEAD TO GESTATIONAL DIABETES AND INSULIN INSENSITIVITY DURING A PREECLAMPSIA-LIKE PREGNANCY. Maggie Chasmar, Xiaoxuan Zhao, Tiziana Cotechini, Shannyn K. Macdonald-Goodfellow, and Charles Graham. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #8)

ROLES OF NATURAL CYTOTOXICITY RECEPTOR-1 IN MAINTENANCE OF UNK CELL ACTIVATION AND STRUCTURE DURING MURINE PREGNANCY. Allison M Felker, PDA Lima and BA Croy. Department of Biomedical and Molecular Sciences, Queen's University, Kingston ON. (Abstract #16)

ADAPTATION OF THE NEONATAL MURINE RETINAL ANGIOGENESIS ASSAY FOR INVESTIGATING REGULATION OF DECIDUAL NEOANGIOGENESIS. Vanessa R. Kay and B. Anne Croy**.** Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #29)

ULTRASTRUCTURAL ANALYSIS OF PLACENTAL TISSUE AFTER SILDENAFIL AND HEPARIN TREATMENT IN A MODEL OF MOUSE ABORTION INDUCED BY LPS. Rayana Luna[1,2], Anne Croy[1], Christina Peixoto[2]. [1]Department of Biomedical and Molecular Sciences, Queen's University [2]Ultrastructure Laboratory - Aggeu Magalhães Research Center – FIOCRUZ,Brazil. (Abstract #38)

DEVELOPMENT OF A PLASTINATED PLACENTA COLLECTION FOR USE IN EDUCATIONAL MODULES. Karalyn E. McRae[1]; Gregory A.L. Davies[2]; Ronald A. Easteal[1]; and Graeme N. Smith[1,3] [1]Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON, [2]Fetal Assessment Unit, Kingston General Hospital, Kingston, ON, [3] Department of Obstetrics and Gynaecology, Kingston General Hospital, Kingston, ON. (Abstract #43)

IMPACT OF REDUCED UNK CELL NUMBERS ON PREGNANCY OUTCOME IN T AND B CELL COMPETENT MICE. Mackenzie Redhead and B. Anne Croy. Department of Biomedical and Molecular Sciences, Queen's University, Kingston, ON. (Abstract #57)

## THERAPEUTICS AND TOXICOLOGY

THE EFFECT OF VALPROIC ACID ON P300 EXPRESSION IN P19 EMBRYONAL CARCINOMA CELLS. Jordan K. Bricker[1], Christina L. Lamparter[1], and Louise M. Winn[1,2]. [1] Department of Biomedical and Molecular Sciences, Graduate Program in Pharmacology and Toxicology, Queen's University, Kingston, ON. [2] School of Environmental Studies, Queen's University, Kingston, ON. (Abstract #5)

ADVERSE EFFECT REPORTING IN RANDOMIZED CONTROLLED TRIALS OF GABAPENTIN AND PREGABALIN FOR ACUTE POSTOPERATIVE PAIN. Darryl Hoffer, Ian Gilron, Shannon Smith. Department of Anesthesiology and Perioperative Medicine, Queen's University Kingston, ON. (Abstract #26)

VALPROIC ACID-INDUCED ALTERATIONS IN CBP/P300 REGULATION IN P19 EMBRYONAL CARCINOMA CELLS. Christina L. Lamparter[1] and Louise M. Winn[1,2]. [1]Department of Biomedical and Molecular Sciences, Graduate Program in Pharmacology and Toxicology, Queen's University, Kingston, ON. [2]School of Environmental Studies, Queen's University, Kingston ON. (Abstract #32)

QUANTITATIVE STRUCTURE-ACTIVITY RELATIONSHIP MODELLING TO PREDICT DRUG INTERACTIONS BETWEEN ACETAMINOPHEN AND INGREDIENTS IN ENERGY DRINKS. Emese E. Somogyvari[1], Selim G. Akl[1], Louise M. Winn[2,3]. [1] School of Computing, Queen's University, Kingston, ON, [2] Department of Biomedical and Molecular Sciences, Graduate Program in Pharmacology and Toxicology, Queen's University, Kingston, ON, [3] School of Environmental Studies, Queen's University, Kingston, ON. (Abstract #67)

CHARACTERIZING THE DISPOSITION OF IOHEXOL: A MEASURE OF RENAL FUNCTION IN RATS. Noah Stern, Martin Kaufmann, Kim Laverty, Christine White, Rachel Holden, and Michael Adams. Department of Biomedical and Molecular Sciences. Queen's University, Kingston, ON. (Abstract #70)

## WOMEN'S AND CHILDREN'S HEALTH RESEARCH

PERINATAL FACTORS AFFECTING FOXP3 DNA METHYLATION IN UMBILICAL CORD BLOOD TREGS AND MONONUCLEAR CELLS. Michelle L. North[1,2], Vanessa Omana[1], Julie MacIsaac[3], Sarah Mah[3], Andrew Day[4], Jeffrey Brook[5], Michael Kobor [3,6], and Anne K. Ellis [1,2] [1]Departments of Medicine and Biomedical & Molecular Sciences, Queen's University, Kingston, ON, [2]Allergy Research Unit, Kingston General Hospital, Kingston, ON, [3]Centre for Molecular Medicine & Therapeutics, Child & Family Research Institute, Vancouver, BC, [4]Clinical Research Centre, Kingston General Hospital, Kingston, ON, [5]Environment Canada, Toronto, ON, [6]University of British Columbia, Vancouver, BC. (Asbtract #50)

AN 8-YEAR-OLD GIRL WITH A PERI-PITUITARY TUMOR CAUSING GROWTH HORMONE DEFICIENCY, TSH DEFICIENCY, AND PRECOCIOUS PUBERTY. Daphne Yau, David Seleman Saleh. Department of Pediatrics, Queen's University, Kingston ON, Division of Pediatric Endocrinology & Metabolism, Children's Hospital of Eastern Ontario, Ottawa, ON. (Abstract #74)