

## ***Senate Research Report***

*April 17, 2012*

### *Awards and Honours*

#### **Association of American Geographers: Biogeography Specialty Group**

##### **Henry Cowles Award**

Dr. John Smol (Biology) was a member of the team that won the Henry Cowles Award, given annually for excellence in publication on the general topic of biogeography. The team was co- led by Joshua Thienpont (Queen's PhD 2013), undergraduate student Holly Nesbitt, Dr. Michael Pisaric (Carleton University), Trevor Lantz (University of Victoria), Dr. Steven Kokelj (Aboriginal Affairs and Northern Development Canada), and Steven Solomon (Geological Survey of Canada).

*Awarded Feb 27, 2012*

#### **Canadian Cancer Society: Young Investigator Award**

Dr. Andrew Craig (Biomedical & Molecular Sciences and Queen's Cancer Research Institute) recently received the Canadian Cancer Society's 2011 Young Investigator Award. This award is given to a promising young Canadian investigator conducting research in Canada, and recognizes outstanding contributions to basic biomedical research that have the potential to lead to, or have led to, better understanding of cancer and its treatment.

*Announced March 23, 2012*

### *Research Funding*

#### External Awards:

##### **Academic Health Science Centres:**

##### **Alternate Funding Plans (AFP) Innovation Fund**

- Dr. Christine Armour (Paediatrics) received \$76,804 for the project, *Noninvasive Detection of Fetal Aneuploidy via Maternal Blood: A Pilot Study*.
- Dr. Damon Dagnone (Emergency Medicine) received \$82,500 for the project, *Validation of Simulation-Based Assessment Methodology for Evaluating Resuscitation Skills in Emergency Medicine Postgraduate Trainees*.
- Dr. Rachel Holden (Medicine – Nephrology) received \$87,000 for the project, *Vitamin K to Attenuate the Progression of Coronary Artery Calcification in Hemodialysis Patients; a Pilot Randomized Trial*.
- Dr. Roy Ilan (General Internal Medicine) received \$28,637 for the project, *An Interdisciplinary, Interdepartmental, Quality Improvement Intervention to Ensure Appropriate Care for Patients with Sepsis at Kingston General Hospital*.

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This research report is meant to be an illustration of research activity at Queen's University and is based on information provided to the Office of the Vice-Principal (Research) by the Faculties.

- Dr. David Pichora (Orthopaedic Surgery, Mechanical & Materials Engineering) received \$80,358 for the project, *Advanced 3D Imaging and Planning of Surgical Shoulder Reconstruction*.
- Dr. Michael Rauh (Pathology & Molecular Medicine) received \$82,500 for the project, *Towards Earlier Detection and Personalized Diagnosis in Myelodysplastic Syndromes (MDS): a SEAMO-driven Initiative of the Canadian MDS Consortium*.
- Dr. Robert Siemens (Urology, Biomedical & Molecular Sciences, Oncology) received \$77,395 for the project, *A Randomized, Placebo-Controlled Phase Two Study of the Effect of a Transdermal Nitric Oxide Mimetic on Biomarkers of Immune Escape in Prostate Cancer Patients*.
- Dr. Graeme Smith (Obstetrics & Gynaecology, Diagnostic Radiology, School of Medicine, Biomedical & Molecular Sciences) received \$86,956 for the project, *The Development, Implementation and Evaluation of a Postpartum Maternal Profile on Discharge Report*.
- Dr. Dallas Seitz (Psychiatry) received \$47,850 for the project, *Volunteers Adding Life in Dementia (VALID): A Person-Centered Intervention to Reduce Behavioral Symptoms and Improve the Quality of Life of Older Adults with Dementia*.

#### **Association of Theological Schools:**

##### **Lilly Research Grant**

- Dr. Tracy Trothen (School of Religion) received \$12,000 for the project, *Sport, Technoscience, and Religion: The Enhancement Debate Reconsidered*.

#### **Canada Foundation for Innovation:**

##### **Leaders Opportunity Fund Stream 2**

- Dr. John Allingham (Biomedical & Molecular Sciences) received \$55,786 for the project, *Applying the Power of Molecular Biophysics Approaches to Characterize the Functions of Natural Actin-binding Cytotoxins and the Molecular Performance of Novel Kinesin Motors*.
- Dr. Mohammad Zulkernine (School of Computing, Electrical & Computer Engineering) received \$50,000 for the project, *Methods and Tools for Building and Monitoring Reliable and Secure Software Systems*.  
*Publicly announced March 13, 2012*

#### **Canada Research Chairs Program**

- Dr. John Allingham (Biomedical & Molecular Sciences) received \$500,000 for the Tier 2 CRC Renewal *Canada Research Chair in Structural Biology*.
- Dr. Mohammad Zulkernine (School of Computing, Electrical & Computer Engineering) received \$500,000 for the Tier 2 CRC *Canada Research Chair in Software Dependability*.  
*Publicly announced March 13, 2012*

### **Canadian Institutes of Health Research (CIHR):**

#### **Operating Grant**

- Dr. Brian Amsden (Chemical Engineering) received \$100,000 for the project, *Biomimetic Scaffold for Ligament Tissue Engineering*.

### **Mitacs-Accelerate Graduate Research Internship Program**

- Dr. Selim Akl (School of Computing) received \$15,000 for the project, *Clinical Decision support Software for Prediction of Postoperative Atrial Fibrillation Following Cardiac Surgery*.
- Dr. Vic Pakalnis (Robert M. Buchan Department of Mining, School of Policy Studies) received \$15,000 for the project, *Bridging the Gap: Minerva Canada Teaching Module Project, Phase II*.
- Dr. James Reynolds (Biomedical & Molecular Sciences) received \$15,000 for the project, *Needs Assessment of Challenging Behaviours in Children with Fetal Alcohol Spectrum Disorders (FASD) and Coping Strategies from the Stakeholders' Perspective*.

### **Natural Sciences and Engineering Research Council of Canada (NSERC):**

#### **Collaborative Research and Development Grant**

- Dr. Mark Daymond (Mechanical & Materials Engineering) received \$320,000 over 4 years for the project, *Impact of Irradiation on Properties of in-core Pressure Boundary Material for SCWR*.

### **Natural Sciences and Engineering Research Council of Canada (NSERC):**

#### **Engage Grants**

- Dr. Yan-Fei Liu (Electrical & Computer Engineering) received \$25,000 for the project, *Digital Control Technology for High Performance AC-DC Converter*.
- Dr. Naraig Manjikian (Electrical & Computer Engineering) received \$24,930 for the project, *Innovative Middleware and Embedded Operating System Support for a Network Element Manager in Long-Haul Optical Communications Equipment*.
- Dr. Richard Oleschuk (Chemistry) received \$25,000 for the project, *Development of a Highly Sensitive Robust Fluidic Interface for the Ionics 3Q Molecular Analyzer*.

### **Ontario Centres of Excellence (OCE):**

#### **Competitive Proof of Principle (CPoP)**

- Dr. James Fraser (Physics, Engineering Physics & Astronomy) received \$152,375.60 for the project, *Inline Coherent Imaging for Laser Welding Applications*.

## Other News

### **Strategic Research Plan**

The second of the two-part draft Strategic Research Plan (SRP) was presented at a town hall on March 15. Participants had an opportunity to share their thoughts and comments following the presentation. Feedback from the community and further consultations with members of the research community will help finalize the plan, which will be presented to Senate for approval.

### **Queen's University Partners with Bombardier on a Unique Project**

Building and evaluating a section of new monorail test track in Kingston is providing a unique learning opportunity for Queen's civil engineering students through collaborative research with Bombardier Transportation's System Division in Kingston. Queen's professors, Dr. Amir Fam and Dr. Mark Green (Civil Engineering), and graduate student, Nik Wootton, are participants with the project. Other companies and organizations involved include: Anchor Concrete, McCormick Rankin, a member of MMM Group Limited, Trancels Pultrall and St. Lawrence College.

*Released March 15, 2012*