

## ***Senate Research Report***

***November 26, 2009***

### **Awards and Honours**

Professor Udo Schuklenk (Philosophy) has been selected by the Royal Society of Canada to head a prestigious new international panel on “End-of-Life Decision Making” in Canada, which could make a significant contribution to the public policy debate on this issue.

*Announced October 27, 2009*

### **Research Funding**

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

##### **NSERC Strategic Grants**

- Dr. Purang Abolmaesumi (School of Computing) received \$479,072 over three years for *Real-time imaging for ultrasound-guided prostate cancer biopsy*.
- Dr. Tassos Anastassiades (Biochemistry) received \$456,404 over three years for *N-acylated hexosamines as nutraceuticals: from shellfish to algae to mammalian bone and joint health*.
- Dr. Pascale Champagne (Civil Engineering) received \$412,000 over three years for *Development of an integrated anaerobic digestion - solid oxide fuel cell system*.
- Dr. Philip Jessop (Chemistry) received \$471,540 over three years for *Thermally-regenerative fuel cell for transportation*.
- Dr. Melissa Lafrenière (Geography) received \$597,475 over three years for *Modelling high arctic permafrost landscape stability and water quality for changing climate and resource development*.
- Dr. R. Kerry Rowe (Civil Engineering) received \$593,590 over three years for *Barrier systems engineering for environmental protection from emerging contaminants of concern*.
- Dr. Roel Vertegaal (School of Computing) received \$511,950 over three years for *Interaction Techniques for Non-planar and Flexible Computing Devices Based on OLED and E-Ink Display Technologies*.

### **NSERC Collaborative Research and Development Grants**

- Dr. Chandrakant Tayade (Anatomy and Cell Biology) received \$140,000 over two years for *Studies of the optimization of immune-promoted litter size enhancement in commercial swine*.

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

#### **OCE Interact Awards**

- Dr. Thomas Harris (Chemical Engineering) received \$15,560 for *Automation and Monitoring of AI Rolling Lines*.
- Dr. Brian Surgenor (Mechanical and Materials Engineering) received \$13,500 for *Novel Rapid Inspection and O-Ring Handling for Continuous Motion Machines*.

### **Canadian Breast Cancer Foundation**

Eight research projects and fellowships at Queen's recently received \$1,972,329 in funding from the Canadian Breast Cancer Foundation. The projects are improving knowledge about prevention, enhancing screening for earlier detection, improving breast cancer diagnosis, prognosis and treatment, and developing interventions to improve patient quality of life.

- Dr. Christopher Mueller (Biochemistry) \$753,385 for 2 projects over 3 years:
  - *Stress and Breast Cancer*, \$366,691 over 3 years
  - *BRCA1 and Cancer Stem Cell Biology*, \$386,694 over 3 years
- Dr. Andrew Craig (Biochemistry) for *Regulation of Breast Cancer Invasiveness by Cdc42-associated Adaptor Proteins*, \$439,780 over 3 years
- Dr. Xiaolong Yang (Pathology and Molecular Medicine) for *The role of LATS tumor suppressor in breast cancer*, \$391,164 over 3 years
- Dr. Matthew Parkinson (Epidemiology) for *The Effects of Thiazolidinedione Oral Hypoglycemic Agents on Breast Cancer Risk*, \$143,000 over 2 years
- Crista Thompson (Doctoral candidate) for *BRCA1 in Cancer Stem Cell Biology*, \$112,500 over 3 years
- Dr. Wai-chi Ho (Postdoctoral Fellow; Cancer Research Institute) for *Calpain as a novel therapeutic target in breast cancer*, \$95,000 over 2 years
- Jinghui Hu (Doctoral candidate) for *Regulation of invadopodia formation and BC cell invasiveness by Cdc42-interacting protein*, \$37,500 over 1 year

*Announced Friday October 23, 2009*

## Ontario Research Fund – Research Infrastructure Small Infrastructure Fund (SIF):

- Dr. Gunnar Blohm (Physiology, Centre for Neuroscience Studies), *Dynamics of sensorimotor computations for perception and action: modeling and experiments*, \$200,000
- Dr. Lauren Flynn (Chemical Engineering), *Tissue Engineering with Adipose-derived Stem Cells*, \$100,000
- Dr. John Peacey (Mining Engineering), *New Process Development for Complex Copper and Nickel Ores and Concentrates*, \$100,000
- Dr. Paul Martin (Biology), *Origins of Biodiversity*, \$120,000
- Dr. Gregory Jerkiewicz (Chemistry), *Infrastructure for the Search of Quantum Entanglement in Electrochemical Processes Involving Hydrogen*, \$199,390
- Dr. Amy Latimer (School of Kinesiology and Health Studies), *Developing Intervention Models and Dissemination Strategies for Promoting Physical Activity for Adults with a Mobility Impairment*, \$95,000
- Dr. Anne Ellis (Medicine), *Slowing the Allergy Epidemic Through Understanding and Prevention: A Dual-Themed Research Initiative in Atopy*, \$179,509
- Dr. Kyra Pyke (School of Kinesiology and Health Studies), *The Function and Structure of Human Arteries in Health, Stress and Disease*, \$80,000
- Dr. Jeremy Squire (Pathology and Molecular Medicine), *Cellular Genomics of Cancer*, \$494,649
- Dr. Zongchao Jia (Biochemistry), *Structural and Functional Analysis of Cancer-Related Proteins*, \$46,165
- Dr. Gabor Fichtinger (School of Computing), *Percutaneous Oncology Intervention Laboratory*, \$400,000
- Dr. Kim Woodhouse (Chemical Engineering), *Elastomeric Polymers for Tissue Engineering: Building Biomimetic Scaffolds*, \$125,000
- Dr. Yves Filion (Civil Engineering), *Enhanced Disease Surveillance for the Rapid Detection and Mitigation of Gastrointestinal Illness Outbreaks Caused by Drinking Water System Contamination*, \$150,000
- Dr. Joshua Pearce (Mechanical and Materials Engineering), *Ultra-High Efficiency InGaN Solar Photovoltaic Cells*, \$200,000
- Dr. Christopher Booth (Oncology), *Translating New Anti-Cancer Treatments into Population Benefit: A Provincial Chemotherapy and Outcomes Database*, \$78,624
- Dr. Elaine Petrof (Medicine), *Probiotics and Gastrointestinal Diseases*, \$180,000
- Dr. Christopher Bowie (Psychology), *Neurocognition and Functional Disability in Schizophrenia: Assessment and Intervention*, \$74,500

- Dr. William Nelson (Biology), *Laboratory and Field Equipment to Study Eco-Evolutionary Feedbacks in Coupled Ecological Systems*, \$131,200
  - Dr. John Cartledge (Electrical and Computer Engineering), *Signal Processing for Fiber-Optic Communications*, \$181,711
- Publicly announced November 13, 2009

### **Ontario Research Fund – Research Infrastructure Large Infrastructure Fund (LIF):**

- Dr. David Pichora (Surgery), *Integrated Technologies for Bone and Joint Health: Multi-centre Infrastructure Development Programme Phase 4*, \$696,481
- Dr. Kurt Kyser (Geological Sciences), Leading Edge Fund, *Effects of the Geosphere-Biosphere Interface on Element Migration in the Near-Surface Environment*, \$1,996,087
- Dr. Ian McWalter (CMC), Leading Edge Fund, *emSYSCAN - Embedded Systems Canada*, \$19,303,622
- Dr. Richard Holt (Mechanical and Materials Engineering), New Initiatives Fund, *Testing of Nuclear Materials in a Simulated Reactor Environment*, \$6,997,920
- Dr. John Cartledge (Electrical and Computer Engineering), Leading Edge Fund, *Laboratory for Broadband Optical and Wireless Systems (LBOWS)*, \$1,242,432 (NOTE: Led by McGill, the amount shown is the portion of funding for Queen's)
- Dr. Philip Jessop (Chemistry), New Initiatives Fund, *Toward a Health Environment: Green Chemistry and Green Chemicals*, \$269,918 (NOTE: Led by McGill, the amount shown is the portion of funding for Queen's)
- Dr. Kevin Robbie (Physics) New Initiatives Fund, *Thin Film Coating Initiative: Advancing Technology Development and Industrial Applications*, \$1,452,360

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