



VICE-PRINCIPAL (RESEARCH)

## *Senate Research Report*

*November 29, 2016*

### News

The second round of the [Queen's Research Opportunities Funds](#) (QROF) competition opened on October 24. The QROF represents a strategic investment in areas of institutional research strength that will provide researchers and scholars opportunities to accelerate their programs and research goals. Letters of Intent for the four funds (Research Leaders, International, Arts, and Post-Doctoral) are due December 1, 2016.

In the [2015 RESEARCH Infosource rankings](#), Queen's was the leader in national average research growth, increasing to \$187 million from 2014's \$148 million. Queen's also secured sixth place in research intensity, up from its previous 11<sup>th</sup> place.

Mr. Steve Carlisle, President and Managing Director of GM Canada, visited Queen's on November 11 as part of the [Principal's Forum](#) Distinguished Visitor series. His presentation focused on the importance of innovation in the automotive industry.

Dr. Reza Nosrati, a postdoctoral fellow in the department of chemical engineering, received the [2016 Douglas R. Colton Medal for Research Excellence](#) for his research on the fluid mechanics of male infertility treatment.

Dr. John Smol (Biology) has joined the new [Canadian Lake Pulse Network](#) as one of 18 researchers studying the past, present and future of Canada's lakes. The network has received \$5.5 million in research funding from Natural Sciences and Engineering Research Council.

The Office of the Vice-Principal (Research) is coordinating its second [Faculty Writing Retreat](#) on December 5, 2016 at the Donald Gordon Centre. The day will comprise of blocks of quiet writing time, a panel discussion, one-on-one grant proposal consultations, and small group discussions. The retreat creates an opportunity for all faculty to set aside dedicated time to work on writing and time management.

## Research Funding

Researcher	Department	Project Title	Amount
Canadian Institutes of Health Research – Foundation Grant			
Davies, Peter	Biomedical and Molecular Sciences	Discovery and engineering of ice-binding proteins for health applications	\$3,451,633
Munoz, Doug	Centre for Neuroscience Studies	Using the eye movement system to study brain function and dysfunction	\$3,748,892
CIHR – Project Grant			
Graham, Charles	Biomedical and Molecular Sciences	Acquisition of malignant phenotypes in tumour cells mediated by the PD-1/PD-L1 immune checkpoint	\$443,410
Ormiston, Mark	Biomedical and Molecular Sciences	Cellular and molecular mechanisms of Natural Killer cell-mediated vascular remodeling in pulmonary arterial hypertension	\$100,000
Pukall, Caroline	Psychology	A biopsychosocial investigation of Persistent Genital Arousal Disorder (PGAD) in women	\$180,000
Winn, Louise	Biomedical and Molecular Sciences	Mechanisms of in utero-initiated benzene toxicity	\$100,000
Cancer Research Society			
Massey, Thomas	Biomedical and Molecular Sciences	Impact of N-acetyltransferase genetic polymorphism on bioactivation of dietary heterocyclic aromatic amines in human colon mucosa	\$119,589
Kingston Resuscitation Institute			
Brennan, Erin	Emergency Medicine	Compression, continuity, and improving resuscitation training for medical students - protocol and rationale	\$4,930

Szulewski, Adam	Emergency Medicine	Understanding expertise in resuscitation	\$6,300
Mitacs – Accelerate			
Mechefske, Chris	Mechanical and Materials Engineering	Gearbox fault detection and failure prediction	\$15,000
Mousavi, Parvin	School of Computing	Deep learning for tooth wear monitoring of mining shovels	\$15,000
NSERC – Collaborative Research Development			
Kim, Il Yong	Mechanical and Materials Engineering	Monorail ceiling optimization for cost and performance	\$72,000
Kyser, Kurt	Geological Sciences and Geological Engineering	Lithium ore deposits	\$50,000
NSERC – Strategic Project			
Friesen, Vicki	Biology	Using modern genomics to minimize long-term impacts of resource development on Arctic seabirds	\$534,000
Jessop, Philip with co-PIs P. Champagne and M. Cunningham	Chemistry	CO2-triggered draw agents for forward osmosis	\$552,740
NCE – NeuroDevNet			
Reynolds, James	Biomedical and Molecular Sciences	Neuro-exergaming for all: Bringing fun, social engagement and physical activity to children with CP and children with FASD	\$9,800
Ontario Centres of Excellence – TalentEdge			
Cicarelli, Gabriel	Mechanical and Materials Engineering	Computational Fluid Dynamic (CFD) analysis of a novel rotary engine with variable compression ratio control	\$10,000
OCE – VIA Smart Computing R&D Challenge			

Maslove, David	Medicine	Powering clinical trials research through a secure and integrated data management platform	\$100,000
OCE – VIP I			
Gahremaninezhad, Ahmad	Robert M. Buchan Department of Mining	Development and techno-economic analysis of solvent impregnated resin (SIR) technology for separation of rare earth elements from dilute solutions	\$20,000
Kontopoulou, Marianna	Chemical Engineering	An examination of the role of processing variables upon the particulate morphology/distribution in a two phase mixing process	\$20,000
Rival, David	Mechanical and Materials Engineering	Combined experimental and numerical analysis of a pit turbine design	\$20,000
Stamplecoskie, Kevin	Chemistry	Solutions for class AAA standard photovoltaics measurements	\$20,000