



VICE-PRINCIPAL (RESEARCH)

Funding Table to accompany the September 27, 2016 Research Report to Senate

Researcher	Department	Project Title	Amount
Association of Hemophilia Clinic Directors of Canada			
Lillicrap, David	Pathology and Molecular Medicine	An investigation into the role of the gut microbiome in initiating or modulating a FVIII immune response	\$225,000
Burroughs Wellcome Fund			
Herzberg, Agnes	Mathematics and Statistics	Support for the publication of the proceedings of the Conferences on Statistics, Science and Public Policy	\$2,500
Canada First Excellence Research Fund			
CPARC, based at Queen's, Interim Director, Tony Noble	Physics, Engineering Physics and Astronomy	The Canadian Particle Astrophysics Research Centre (CPARC)	\$63,744,000 (over 7 years)
Canada Foundation for Innovation – John R. Evans Leaders Fund			
Duan, Qingling	Biomedical and Molecular Sciences & School of Computing	Integrative Systems Biology Investigation of Chronic Respiratory Diseases	\$150,000
Stamplecoskie, Kevin	Chemistry	Harnessing the power of light: Discovering new materials for optoelectronics, solar energy harvesting, and biomedicine	\$130,000
Canadian Allergy, Asthma and Immunology Foundation			

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 University Research Services.

September 27, 2016

Ellis, Anne	Medicine	Deconstructing the atopic march: the role of filaggrin in peanut allergy and allergic rhinitis	\$45,000
Canadian Hemophilia Society			
Lillicrap, David	Pathology and Molecular Medicine	The role of FVIII glycans on the immunogenic potential of FVIII concentrates	\$74,000
Canadian Institutes of Health Research			
Muscedere, John	Critical Care Medicine	CIHR Summer Program in Aging (SPA) 2016	\$75,000
CIHR – Knowledge to Action			
Masuda, Jeffrey	School of Kinesiology and Health Studies	RentSafe Knowledge-to-Action: Mobilizing intersectoral action to address housing-related health risks affecting low-income tenants	\$200,000
CIHR – Planning and Dissemination			
Castleden, Heather	Geography and Planning; Public Health Sciences	"Our ancestors are in our land, water and air": Community First - Sharing our stories of using a two-eyed seeing approach to research environmental health concerns with Pictou Landing First Nation	\$11,990
Moore, Kieran	Family Medicine	Building research capacity to reduce the burden of Lyme Disease in Canada	\$8,575
CIHR – Team Grant Transnational Research Projects on Rare Diseases (E-Rare-3 Joint Transnational Call)			
Lillicrap, David	Pathology and Molecular Medicine	Small antibody fragments as alternative tools in hemophilia care	\$318,171
Cilian Technologies Ltd. – Canada			
Birtwhistle, Richard	Family Medicine	Identifying military families and veterans in the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) database to study the health of military families and veterans	\$105,000
Glaucoma Research Society of Canada			

Jinapriya, Delan with co-PIs I. Engen, I. Dale	Ophthalmology	Randomized control trial of retrobulbar injection vs IV analgesia for transscleral diode laser	\$6,720 (Clinical Trial)
Jinapriya, Delan with co-PIs S. Irrcher, S. Isabella	Ophthalmology	Biometric and refractive status of a Canadian narrow angle patient population	\$20,000 (Grant)
Ministry of Research, Innovation and Science – Early Researcher Award			
Johri, Amer	Medicine	Vascular Imaging as a Barometer for Early Detection of Heart Disease (VIBE Program)	\$140,000
Rival, David	Mechanical and Materials Engineering	Flow-sensing flying and swimming robots for effective environmental siting of wind and hydro power	\$140,000
MRIS – Large Scale Applied Research Project			
Walker, Virginia with co-PIs S. Lougheed, P. de Groot, T. Babak	Biology	Towards a Sustainable Fishery in Nunavummiut	\$698,320
MRIS – Ontario Research Fund Research Infrastructure			
Braun, Alexander	Geological Sciences and Geological Engineering	Reservoir Monitoring Using Time-Lapse Superconducting Gravimetry	\$150,000
Colautti, Robert	Biology	Ecological Genomics of Plant Adaptations in Novel Environments	\$150,000
Duan, Qingling	Biomedical and Molecular Sciences & School of Computing	Integrative Systems Biology Investigation of Chronic Respiratory Diseases	\$150,000
Fichtinger, Gabor with co-PIs J. Rudan, C.J. Engel	School of Computing	Real-time Navigated iKnife System for Breast Cancer Surgery	\$358,342
Fitzpatrick, Lindsay	Chemical Engineering	Biomaterial host response analysis and engineering laboratory	\$125,000

Ghasemlou, Nader with co-PI J. Murdoch	Biomedical and Molecular Sciences & Anesthesiology and Perioperative Medicine	Neuroimmune Interactions in Pain	\$150,000
Ormiston, Mark	Biomedical and Molecular Sciences	Regenerative Cardiovascular Medicine Laboratory	\$175,000
Poppenk, Jordan	Psychology	Understanding and Harnessing Human Memory Retrieval	\$85,000
Rainbow, Michael	Mechanical and Materials Engineering	High-Speed Skeletal Imaging Laboratory	\$200,000
Reed, David	Medicine	Nutrient-Neural Signaling in the Colon: A Role in IBS	\$110,900
Stamplecoskie, Kevin	Chemistry	Harnessing the Power of Light: Discovering New Materials for Optoelectronics, Solar Energy Harvesting, and Biomedicine	\$130,000
Wells, Laura	Chemical Engineering	Laboratory for the Development of Bioresponsive and Interactive Ophthalmic Biomaterials	\$125,000
Mitacs - Accelerate			
Braun, Alexander	Geological Sciences and Geological Engineering	3-D UAV Magnetometry for Improved Target Characterization in Mineral Exploration	\$30,000
Fam, Amir	Civil Engineering	New Generation of Precast Sandwich Walls Using Ultra-High Performance (UHPC) Concrete and Fibre Reinforced Polymer (FRP) Connector	\$60,000
Ghahremaninezhad, Ahmad	Robert M. Buchan Department of Mining	Role of Dissolved Oxygen Concentration on Gold Recovery from Sulphide Ores via Cyanidation and Thiosulphate Leaching Processes	\$133,000
Levin, Yuri	Smith School of Business	Customer Lifetime Value Framework for the Banking Industry	\$213,333

MacDougall, Colin	Civil Engineering	Torsional Effects on Structural Self-Tapping Screws in Canadian Douglas Fir	\$15,000
Pharoah, Jon	Mechanical and Materials Engineering	CCM Roll Conditioning	\$15,000
Surgenor, Brian	Mechanical and Materials Engineering	Validation of a Machine Vision-based System for the Recognition of Indian Coins	\$15,000
Whitelaw, Graham	School of Environmental Studies; Geography and Planning	Environmental Monitoring Protocols for Phosphorus Monitoring in the Georgian Bay Biosphere Reserve	\$15,000
Natural Sciences and Engineering Research Council – Connect Grant Level 1			
Champagne, Pascale	Civil Engineering	Demonstration of algal wastewater treatment	\$2,485
NSERC – Discovery Grants			
Afsahi, Ahmad	Electrical and Computer Engineering	Efficient and Scalable Communication and System Software for Exascale Computing	\$150,000
Babak, Tomas	Biology	Molecular and Computational Tools for Investigating Genomic Imprinting	\$155,000
Baird, Michael	Chemistry	Organotransition Metal Chemistry and Catalysis	\$140,000
Barz, Dominik	Chemical Engineering	Rechargeable and Integrated Nickel/Metal Hydride Microbatteries for Portable Diagnostic and Environmental Monitoring Devices	\$135,000
Bakhshai, Alireza	Electrical and Computer Engineering	Highly-Efficient and Smart Power Electronics Systems for Long-Lasting Energy Storage Systems in Smart Grid Applications	\$200,000
Brockhausen, Inka	Biomedical and Molecular Sciences	Cryptococcus Neoformans: Synthesis of the Polysaccharide Capsule	\$145,000

Chan, Wai-Yip	Electrical and Computer Engineering	Perceptual Methods for Speech Communication	\$175,000
Cote, Graham	Biomedical and Molecular Sciences	Regulation of Myosin Function by Protein Kinases and Light Chains	\$145,000
Crudden, Cathleen	Chemistry	Novel Catalytic Transformations of Organoboron Species and the Development of Ultrastable Self-Assembled Monolayers on Metal Surfaces	\$625,000
Cumming, Brian	Biology	Paleolimnology and Environmental Change	\$175,000
Davies, Peter	Biomedical and Molecular Sciences	Adhesion Proteins: Structure-Function Relationships and Role in Bacterial Colonization and Biofilms	\$300,000
Davies, Theresa	Mechanical and Materials Engineering	Increasing Independence Through Access to Technology	\$175,000
Diederichs, Mark	Geological Sciences and Geological Engineering	Advanced Excavation Damage Zone Behaviour Prediction for Immediate and Delayed Construction Response During Deep Tunneling and Deep Geological Repository Development	\$375,000
Fichtinger, Gabor	School of Computing	Process Modeling of Ultrasound-Guided Needle Placement Interventions	\$250,000
Geramita, Anthony (d. June 22, 2016)	Mathematics and Statistics	Tensor Decomposition - An Algebraic and Geometric Approach	\$100,000
Giacomin, Alan	Chemical Engineering	Large-Amplitude Oscillatory Shear Flow of Polymeric Liquids	\$300,000
Gurd, Brendon	School of Kinesiology and Health Studies	Mechanisms Controlling Mitochondrial Content and Function in Skeletal Muscle	\$140,000
Hollenstein, Tom	Psychology	Regulation of the Emotion System: Concordance, Dynamics, and Time Scales	\$25,000
Hoult, Neil	Civil Engineering	Monitoring, Understanding and Assessment of Complex Structural Behaviour	\$140,000

Irwin, Judith	Physics, Engineering Physics and Astronomy	Galaxy Evolution and Environment -- Disk-Halo Outflows, Feedback and Magnetic Fields	\$100,000
Jamieson, Heather	Geological Sciences and Geological Engineering	Mineralogical Characterization for Reducing the Environmental Impact of Mining Rare Metals	\$225,000
Jeswiet, Jacob	Mechanical and Materials Engineering	Manufacturing: 1) Sustainable Manufacturing (Life Cycle Engineering), and 2) Metal Forming	\$125,000
Kontopoulou, Marianna	Chemical Engineering	Thermoplastic Biopolyesters with Enhanced Engineering Properties for Innovative Industrial, Automotive and Biomedical Applications	\$185,000
Lake, Kayll	Physics, Engineering Physics and Astronomy	New Approaches to the Study of Gravitation in Relativistic Astrophysics and Cosmology	\$240,000
Levit, Boris	Mathematics and Statistics	Unifying Nonparametric Regression and Optimal Design	\$65,000
Mansouri, Abdol-Reza	Mathematics and Statistics	Geometric, Topological, and Stochastic Approaches in Nonlinear Control Theory	\$80,000
Morin, Evelyn	Electrical and Computer Engineering	Integrated Biosignal Data Analysis for Performance Assessment	\$150,000
Mumford, Kevin	Civil Engineering	The Role of Gases in Groundwater Contamination and Remediation	\$110,000
Novakowski, Kent	Civil Engineering	Large-Scale Solute Transport in Fracture Networks	\$295,000
Oleschuk, Richard	Chemistry	Droplet-Based Analytical Chemistry Platforms Using Superhydrophobic and Superamphiphobic Surfaces	\$370,000
Piomelli, Ugo	Mechanical and Materials Engineering	Large-eddy Simulations of Complex Turbulent Flows	\$260,000

Raptis, Leda	Biomedical and Molecular Sciences	Role of the Signal Transducer and Activator of Transcription-3 in Epithelial Cell Differentiation	\$31,000
Rival, David	Mechanical and Materials Engineering	Measurement and Analysis of Unsteady Flows Using a Lagrangian Framework	\$260,000
Saavedra, Carlos	Electrical and Computer Engineering	Millimeterwave Integrated Circuits and Arrays for 5G Wireless Front-Ends	\$220,000
Sabbagh, Mark	Psychology	Neurocognitive Mechanisms of Developmental Change in Children's Theory of Mind	\$28,000
Sen, Paresh	Electrical and Computer Engineering	Performance Enhancement in Power Electronics, Converters, Inverters and Renewable Energy Systems	\$220,000
Skillicorn, David	School of Computing	Adversarial Data Analytics for National Security	\$145,000
Tschakovsky, Mark	School of Kinesiology and Health Studies	Role of the Cardiovascular System and the Brain in Determining Individual Tolerance to Exercise	\$160,000
Tu, Dongsheng	Public Health Sciences	Topics in Statistical Theory and Methods for Cancer Clinical Trials	\$150,000
Wu, Gang	Chemistry	Exploring New Frontiers of Oxygen-17 NMR Spectroscopy for Chemical and Biological Application	\$370,000
Yao, Zhongwen	Mechanical and Materials Engineering	Testing of Advanced Nanoparticle Dispersed Steels for Next Generation Reactors	\$160,000
Zechel, David	Chemistry	From Genes to Molecules: Mining Bacterial Genomes for New Enzyme Reactions	\$300,000
NSERC – Discovery Grant Accelerator Supplements			
Hoult, Neil	Civil Engineering	Monitoring, Understanding and Assessment of Complex Structural Behaviour	\$120,000
Monaghan, Jacqueline	Biology	Mechanisms Regulating Plant Immune Homeostasis	\$120,000

Rival, David	Mechanical and Materials Engineering	Measurement and Analysis of Unsteady Flows Using a Lagrangian Framework	\$120,000
Zechel, David	Chemistry	From Genes to Molecules: Mining Bacterial Genomes for New Enzyme Reactions	\$120,000
NSERC – Discovery Grant and Early Career Research Supplement			
Cellarosi, Francesco	Mathematics and Statistics	Statistical and Number-Theoretical Aspects of Dynamical Systems	\$105,000
Colautti, Robert	Biology	Ecological Genetics of Plant Adaptations to Novel Environments	\$175,000
McIsaac, Michael	Public Health Sciences	Statistical and Number-Theoretical Aspects of Dynamical Systems	\$90,000
Monaghan, Jacqueline	Biology	Mechanisms Regulating Plant Immune Homeostasis	\$220,000
Stamplecoskie, Kevin	Chemistry	Tailored Metal Nanostructures: Beyond Plasmon Excitation	\$135,000
NSERC – Discovery Grants Northern Research Supplements			
Jamieson, Heather	Geological Sciences and Geological Engineering	Environmental Geochemistry of Rare Metals in the Canadian North	\$75,000
NSERC – Engage Grants			
Cunningham, Michael	Chemical Engineering	Switchable Drying Agents for Industrial Solvents	\$25,000
Escobedo, Carlos	Chemical Engineering	Development of Tools for Non-Invasive Surgical Procedures	\$25,000
Ghahremaninezhad, Ahmad	Robert M. Buchan Department of Mining	The Separation Mechanism of Rare Earth Elements from Dilute Solutions by Application of Novel Solvent Impregnated Resins (SIRs)	\$25,000
MacDougall, Colin	Civil Engineering	Performance of engineered connection systems for Canadian timber	\$24,912

Mechefske, Chris	Mechanical and Materials Engineering	Automotive Door Closure Mechanism Acoustic Modeling and Experimental Verification	\$25,000
Rival, David	Mechanical and Materials Engineering	Combined experimental and numerical analysis of a pit turbine design	\$25,000
NSERC – Engage Plus Grants			
Kim, Il Yong	Mechanical and Materials Engineering	Validation of Adaptive Cycle Counting for Fatigue Damage and Improvement of Computing Efficiency	\$6,000
Liu, Yan-Fei	Electrical and Computer Engineering	Design of a world's smallest notebook computer power adaptor with USB quick charger	\$12,500
NSERC - PromoScience			
Colgan, Lynda	Faculty of Education	The Mathematics Midway	\$20,000
NSERC – PromoScience Supplements for Science Odyssey			
Colgan, Lynda	Faculty of Education	The Mathematics Midway	\$5,000
NSERC – Research Tools and Instruments			
Beauchemin, Diane with co-PIs H. Jamieson, K. Kyser	Chemistry	Ion Chromatography System for Multi-Element Speciation Analysis	\$66,249
Beninger, Richard with co-PIs H. Dringenberg, M. Olmstead, J. Menard	Psychology	Neurohistochemistry Processing and Imaging Suite	\$76,325
Champagne, Pascale with co-PIs M. Cunningham, P. Jessop	Civil Engineering	Continuous Centrifuge and FT-IR for the Large Scale Testing of Bio-Sourced Materials	\$103,692

Colautti, Robert with co-PIs J. Monaghan, S. Lougheed, C. Eckert, V. Friesen, T. Babak	Biology	Dedicated Computational Infrastructure for Assembly and Analysis of Complex Genomes in Non-Model Organisms	\$107,505
Fichtinger, Gabor with co-PIs P. Mousavi, J. Stewart, R. Ellis, M. Kunz	School of Computing	Spatially Navigated iKnife	\$148,810
Ghahremaninezhad, Ahmad	Robert M. Buchan Department of Mining	Electrochemical Quartz Crystal Microbalance	\$25,920
Hutchinson, D. Jean with co-PI M. Diederichs	Geological Sciences and Geological Engineering	Multi-Purpose High Speed, High Accuracy LiDAR Scanner for Surface and Underground Geomechanics Assessment in Harsh Environments	\$149,695
Kontopoulou, Marianna	Chemical Engineering	Compounding Equipment for the Environmentally Friendly Production of Sustainable Thermoplastic Materials and Composites	\$109,855
Loock, Hans-Peter	Chemistry	Inline Measurements of Water Contamination with a 3 Micron Laser	\$53,928
Rainbow, Michael with co-PIs P. Mousavi, K. Deluzio	Mechanical and Materials Engineering	A System for Real-Time Estimation of In Vivo Soft Tissue Properties	\$150,000
Rival, David with co-PIs A. Birk, A. Pollard, G. Ciccarelli	Mechanical and Materials Engineering	Ultra-high-speed Camera for Characterization of Complex Fluid Physics	\$139,975
Yao, Zhongwen with co-PIs M. Daymond, B. Diak	Mechanical and Materials Engineering	At State-of-the-art Strain Measurement System in Electron Microscope	\$90,963

Zhang, Shetuan with co-PIs J. Allingham, A. Lomax, K. Gee, N. Magoski, S. Basta, M. Koti	Biomedical and Molecular Sciences	Live Cell Imaging Platform for Dynamic Studies of Cellular Interactions	\$141,951
NSERC – Subatomic Physics			
Chen, Mark with co-PIs R. Martin, A. McDonald, A. Wright	Physics, Engineering Physics and Astronomy	SNO+ Data Taking and Operations: Years 1-2	\$726,500
Noble, Anthony with co-PI A. Wright	Physics, Engineering Physics and Astronomy	Search for Dark Matter with PICO	\$119,969
Rau, Wolfgang with co-PIs G. Gerbier, P. di Stefano	Physics, Engineering Physics and Astronomy	SuperCDMS SNOLAB Construction	\$131,000
Networks of Centres of Excellence Knowledge Mobilization Initiative – Grant Renewal			
Craig, Wendy	Psychology	Promoting Relationships and Eliminating Violence Network (PREVnet)	\$1,200,000
NeuroDevNet			
Reynolds, James	Biomedical and Molecular Sciences	At home wireless EEG seizure monitoring for FASD diagnosis	\$70,000
Physiotherapy Foundation of Canada			
Norman, Kathleen with co-PIs S. French, D. Barber	School of Rehabilitation Therapy	Improving primary care management of low back pain in Ontario: a feasibility study of using the STarT Back tool in Ontario	\$10,000
Shastri Indo-Canadian Institute Research Grant			

Dumas, Genevieve with co-PI A. Hemmerich	Mechanical and Materials Engineering	The Effects of Labour and Birth Positioning on Pelvic Dimensions: Gaining Further Insight to improve the Birth Experience	\$6,000
Social Sciences and Humanities Research Council – Banting Postdoctoral Fellowship			
Peacocke, Emma	English	Romanticism and the University (Supervisor, Shelley King)	\$140,000
SSHRC – Connection Grant			
Goodyear-Grant, Elizabeth	Political Studies	New frontiers in public policy: federalism and the welfare state in a multicultural world	\$24,161
King, Shelley	English	Secret /s and Surveillance – Canadian Society for Eighteenth-Century Studies – Société canadienne d'étude du dix-huitième siècle	\$24,680
Knutsen, Wenjue	Smith School of Business	Living in a world of blurring boundaries: an international workshop on organizational hybridity, cross-sectoral relationship, and network governance	\$20,950
SSHRC – Insight Development Grant			
Abbott, Brant	Economics	Economic Insurance and Redistribution when Growth is Endogenous	\$66,022
Brook, Julia	Dan School of Drama and Music	Promoting Equitable Access to Music Education in Canada: Examining the role and benefits of an El Sistema model for music education	\$63,739
Brower, Jacob	Smith School of Business	Rewards	\$40,540
Calluzzo, Paul	Smith School of Business	Who Coordinates Shareholder Votes? The Role of Proxy Advisors in Corporate Governance	\$59,480
Goerzen, Anthony	Smith School of Business	Global Supply Chain Management Practice - Environmental and Social Sustainability	\$54,150
Hou, Yu	Smith School of Business	Audit office switches and opinion shopping	\$66,030

Moneta, Fabio	Smith School of Business	Institutional Trading and Anomalies	\$52,916
Mosurinjohn, Sharday	School of Religion	Overload Aesthetics: Twenty-First Century Transformations in the Relationship of Boredom to Religion and Spirituality	\$21,165
Webber, Grégoire	Faculty of Law	Foundations of Law and the Common Good	\$58,181
The Savoy Foundation			
Frauscher, Birgit	Centre for Neuroscience Studies	Development of a 3-D atlas of normal brain activity to separate physiological from pathological EEG activity in human epilepsy	\$25,000
The World Bank			
Bartels, Susan	Emergency Medicine	Making sense of early marriage among Syrian refugee girls	\$149,965
Upper Canada Health Link			
Hogan, Kerry-Anne	School of Nursing	Advance Care Planning Initiative	\$13,5000