

**The University of Western Ontario
NSERC Discovery Grants
Successful Applications (Fall 2020 Intake)**

Investigator	Department	Title	Installment	Awarded Amount
Archibald, Lisa	Communication Sciences and Disordersf	Determining the cognitive, linguistic, and input features influencing oral language processing	1/5	28,000.00
Briens, Lauren	Chemical and Biochemical Engineering	Particulate Operations with Pharmaceutical and Agricultural Applications	1/5	28,000.00
Cameron, Lisa Elizabeth	Pathology	Hormonal Regulation of Immune Responses	1/5	32,000.00
Cami, Jan	Physics and Astronomy	The interaction of cosmic fullerenes with their environment: confronting models with observations	1/5	34,000.00
Capretz, Miriam	Electrical and Computer Engineering	Software Engineering for IoT Data-Driven Machine Learning Applications	1/5	35,000.00
Cornell, Brian	Robarts Research Institute	Assessing the contribution of a subcortical circuit for express visuomotor responses	1/5	40,000.00
de Lasa, Hugo	Chemical and Biochemical Engineering	Reaction Engineering for a New Era of Green Chemical Processes	1/5	46,000.00
Dhillon, Ajneet	Mathematics	Principal bundles in algebraic geometry	1/5	24,000.00
Gallagher, Sarah	Physics and Astronomy	Quasar Winds and Black Hole Growth at Cosmic Noon	1/5	34,000.00
Gillies, Elizabeth	Chemistry	New Designs for Degradable Polymers	1/5	105,000.00
Hampson, Elizabeth	Psychology	Androgens and Estrogens in the Human Nervous System	1/5	55,000.00
Hardy, Daniel	Physiology and Pharmacology	Mitochondrial dysfunction: A major player in hepatic development, function, and senescence.	1/5	28,000.00
Hedberg, Yolanda	Chemistry	Interfacial Chemistry and Corrosion of Alloys in Protein-rich Environments	1/5	34,000.00
Hoffman, Lisa	Medical Biophysics	Muscle homeostasis: role of the microvascular niche	1/5	33,000.00
Ilie, Lucian	Computer Science	Bioinformatics Algorithms for Protein Interactions and Applications	1/5	29,000.00
Johnson, James	Mechanical and Materials Engineering	Analysis and Development of Dynamic Loading Approaches for the Shoulder Implant-Bone Structure	1/5	46,000.00
Keir, Daniel	Kinesiology, School of	Chemoreflex control of breathing and the circulation	1/5	33,000.00
Khaghani Milani, Mostafa	Computer Science	Improving Users' Access to Quality Data	1/5	24,000.00
Khan, Zia	Schulich School of Medicine & Dentistry	Bone and fat: decoding the balancing act of ageing	1/5	28,000.00
Klinghoffer, Naomi	Chemical and Biochemical Engineering	Development of functionalized biochar based catalysts for production of low carbon fuels	1/5	28,000.00
Nehdi, Moncef	Civil and Environmental Engineering	Revolutionizing Canada's Aging Civil Infrastructure Assessment and Renewal: An Integrated, Multi-Scale, Remote Sensing, Data-Driven Approach	1/5	52,000.00
Ogden, Kelly	Mechanical and Materials Engineering	Mixing and Waves in Coastal and Estuarine Flows	1/5	27,000.00
Ouriadov, Alexei	Physics and Astronomy	Hyperpolarized ¹²⁹ Xe MRI: Development of hardware, software and its PET-based validation.	1/5	24,000.00
Pagenkopf, Brian	Chemistry - Chemistry	Design, Synthesis and Evaluation of Functional Benzosiloles and New Reactions of Strained Carbocycles	1/5	24,000.00
Parsa, Vijay	Communication Sciences and Disorders, School of	Speech and Music Quality: Perception and Prediction	1/5	28,000.00
Percival-Smith, Anthony	Biology	Phenotypic non-specificity of transcription factor function in <i>Drosophila melanogaster</i>	1/5	36,000.00
Prado, Marco	Robarts Research Institute	Neurochemical modulation of high level cognition	1/5	55,000.00
Ragogna, Paul	Chemistry	Main group molecules and materials: Pushing the limits for p-block chemistry	1/5	79,000.00
Rohani, Sohrab	Chemical and Biochemical Engineering	Experimental and computational studies of pharmaceuticals crystallization	1/5	46,000.00
Santoro, Domenico	Chemical and Biochemical Engineering	Advanced Wastewater Treatment Strategies for Potable Reuse in Health-Resilient Cities	1/5	26,000.00
Shooshtari, Parisa	Pathology	Developing computational, statistical and machine learning methods to uncover biological mechanisms of complex phenotypes	1/5	24,000.00
Soddu, Andrea	Physics and Astronomy	Role of brain dimensionality in altered states of consciousness.	1/5	24,000.00
Woolford, Douglas	Statistical and Actuarial Sciences	Data-Driven Wildland Fire Science with Applications to Fire Management Systems	1/5	24,000.00
Yang, Jun	Mechanical and Materials Engineering	3D Co-printing of Programmable and Adaptive Metamaterials with Built-in Electronics	1/5	39,000.00
Zhang, Jin	Chemical and Biochemical Engineering	Design, Fabrication, and Surface Modification of Multifunctional Nanocomposites Used for Advanced Biosensing Devices	1/5	39,000.00
Zhao, Yang	Mechanical and Materials Engineering	Development of High-Performance and Safe Next-Generation All-Solid-State Na Batteries	1/5	33,000.00
Zhou, Jigang	Mechanical and Materials Engineering	Nano-scale kinetic degradation mechanism of high-voltage LiNi _{0.8} Mn _{0.1} Co _{0.1} O ₂ cathodes in Li-ion	1/5	33,000.00