

Discovery Grants	Department	Project Title	Amount
Anderson, John	Computer Science	Dynamic Heterogeneous Multi-Robot Team Management in Dangerous Domains	\$100,000
Arino, Julien	Mathematics	Ecological and epidemiological modelling across multiple spatial scales	\$140,000
Baum, Stefi	Physics & Astronomy	A Multiwavelength Study of the Physics of the Intracluster Medium, Its Multiple Phases and AGN Feedback	\$105,000
Birouk, Madjid	Mechanical Engineering	Liquid fuel combustion: Droplets formation, vaporization and combustion	\$110,000
Burgess, Jacob	Physics & Astronomy	An Ultrafast THz Light Source for the Study of Correlated Materials at the Atomic Scale	\$150,000
Burgess, Jacob	Physics & Astronomy	Atomic scale dynamics of correlated materials and emergent quantum states	\$150,000
Daayf, Fouad	Plant Science	Molecular mechanisms of pathogen adaptation to plant defenses	\$195,000
Davie, James	Biochemistry & Medical Genetics	Histone arginine methylation and transcriptionally active chromosomal domains	\$140,000
Dekievit, Teresa	Microbiology	Biocontrol pseudomonads: interaction with the plants they protect and grazing predators that threaten their existence	\$200,000
Duncan, Robert	Plant Science	Discovering the Genetic Control of Nutrient Quality in Seed of Brassica Species	\$25,000
El-Salakawy, Ehab	Civil Engineering	Seismic Performance of FRP-Reinforced Concrete Columns	\$24,000
Fayek, Mostafa	Geological Sciences	Tracing metals from source to trap using traditional and non-traditional isotope systems	\$22,000
Ferguson, Ian	Geological Sciences	Electromagnetic imaging of lithospheric and environmental targets	\$110,000
Fiege, Jason	Physics & Astronomy	Integrated Models of Magnetic Fields and Gas Kinematics in Molecular Clouds	\$105,000
Fraser, Kevin	Biological Sciences	Advancing movement ecology research by establishing the Motus Wildlife Tracking System in Manitoba	\$87,750
Fraser, Kevin	Biological Sciences	Migration phenology and behaviour of songbirds	\$145,000
Garroway, Colin	Biological Sciences	An automated system for small mammal population monitoring	\$114,515
Gericke, Michael	Physics & Astronomy	Electron Detectors for High Precision Compton Polarimetry in Parity Violating Electron Scattering using HVMAPS	\$39,150
Ghahramani, Fereidoun	Mathematics	Generalized notions of amenability and derivations on Banach algebras related to locally compact groups	\$100,000
Goertzen, Andrew	Radiology	High resolution positron emission tomography (PET) insert systems for multimodality PET/magnetic resonance imaging	\$140,000
Gough, Kathleen	Chemistry	Vibrational spectrochemical imaging studies of materials from macro to nanoscale	\$225,000

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Isleifson, Dustin	Electrical & Computer Engineering	Technology Advancement for Microwave Remote Sensing of Sea Ice	\$120,000
Jackson, Michael	Pharmacology & Therapeutics	Molecular Determinants and Functional Consequences of Pannexin Mechanosensitivity	\$130,000
Jeffries, Kenneth	Biological Sciences	Physiological Signatures of Thermal Tolerance and Local Adaptation in Fishes	\$130,000
Johnson, Brad	Statistics	Sampling and Inference for Large Networks	\$70,000
Jones, Peter	Food Science	The role of diet derived fatty acid ethanolamines on body weight control	\$195,000
Kauppinen, Tiina	Pharmacology & Therapeutics	Signaling events regulating microglial functions and activation phenotypes	\$130,000
Kavgic, Miroslava	Civil Engineering	Coupling Phase Change Materials and Model Predictive Controls for Energy Efficiency and Thermal Comfort in Canadian Buildings	\$115,000
Kelly, Debbie	Psychology	Comparative Studies of Avian Cognition	\$160,000
Khafipour, Ehsan	Animal Science	Associations between Gut, Mammary and Vaginal Microbiomes in Dairy Cattle: Role in Health and Disease	\$195,000
Khajepour, Mazdak	Chemistry	Investigating How Inter-domain Interactions Influence The Protein Folding Process	\$130,000
Klonisch, Thomas	Human Anatomy & Cell Science	Novel roles of C1q tumor necrosis factor-related proteins (CTRPs) in relaxin receptor biology	\$170,000
Koper, Nicola	Natural Resources Institute	Effects of industrial activity and anthropogenic noise on grassland birds	\$165,000
Kordi, Behzad	Electrical & Computer Engineering	Online Electromagnetic Condition Monitoring Techniques for High Voltage Systems	\$185,000
Leung, Carson Kai-Sang	Computer Science	Mining interesting patterns from big data	\$115,000
Levin, David	Biosystems Engineering	Bioengineering Next Generation Biopolymers	\$120,000
Lobb, David	Soil Science	Enhancing the understanding and assessment of soil erosion and sedimentation through improvements to tracer techniques	\$235,000
LoVetri, Joe	Electrical & Computer Engineering	Algorithms and Systems for Electromagnetic and Ultrasound Inverse Problems	\$235,000
Mammei, Juliette	Physics & Astronomy	Measurement of a Lepton Lepton Electroweak Reaction (MOLLER): An Ultraprecise Measurement of the Weak Mixing Angle using Møller Scattering at Jefferson Laboratory	\$324,000
Mark, Brian	Microbiology	Ultraviolet (UV) light microscope for protein and nucleic acid crystal detection	\$110,702
Miller, Avery	Computer Science	The Effects of Locality on Efficient Distributed Computation	\$100,000
Mishra, Suresh	Internal Medicine	Illuminating the relationship between prohibitin and sex steroid hormones in adipocyte biology	\$140,000
Mizuno, Tooru	Physiology & Pathophysiology	The relationship between environmental factors and hypothalamic response to metabolic signals	\$125,000

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Moussavi, Zahra	Electrical & Computer Engineering	Acoustic Modeling of the Upper Airway using Breathing Sounds Analysis and Novel Medical Devices Development	\$94,300
Moussavi, Zahra	Electrical & Computer Engineering	Modeling, Signal Processing and the Design of Novel Instruments and Algorithms Applicable to the Respiratory System	\$185,000
Nemykin, Viktor	Chemistry	Non-Covalent Supramolecular Donor-Acceptor Array	\$225,000
O, Karmin	Animal Science	Biological impact of dietary components on nutrient absorption and metabolism	\$140,000
Ojo, Olanrewaju	Mechanical Engineering	Advanced Joining of Gamma Prime Precipitation Strengthened Cobalt-base Superalloy	\$185,000
Oleszkiewicz, Jan	Civil Engineering	Development of anammox and anoxic-aerobic granular biomass for advanced wastewater treatment at low temperatures	\$255,000
Pawlak, Miroslaw	Electrical & Computer Engineering	Machine Learning for Signal Analysis and System Modeling: Sparse and Event Driven Strategies	\$130,000
Perreault, Helene	Chemistry	Antibody Glycosylation by Mass Spectrometry	\$140,000
Pistorius, Stephen	Physics & Astronomy	Inverse Problems in Medical Imaging: Development and assessment of novel imaging applications for diagnosis and therapy.	\$180,000
Roth, James	Biological Sciences	Indirect effects in food webs at the Arctic's edge	\$165,000
Sankaran, Siddarth	Mathematics	Theta functions in differential and arithmetic geometry	\$105,000
Schreckenbach, H. Georg	Chemistry	Quantum Chemistry – Fundamental Insights and a Tool for Addressing Materials, Energy and Environmental Challenges	\$300,000
Shamseddine, Khodr	Physics & Astronomy	Analysis on non-Archimedean field extensions of the real numbers	\$70,000
Slevinsky, Richard	Mathematics	A new spectral method approach for singular integral equations	\$70,000
Sorensen, John	Chemistry	Connecting genes to molecules: Natural product biosynthesis in lichen	\$225,000
Stetefeld, Jörg	Chemistry	Structure-Property relationship of S-layer protein assemblies at extremophilic archea bacteria	\$28,000
Tachie, Mark	Mechanical Engineering	Investigation of Asymmetric Free and Confined Three-dimensional Turbulent Jets using Time-Resolved Tomographic Particle Image Velocimetry	\$220,000
Tranmer, Geoffrey	Pharmacy	Development of Novel Synthetic Methods Using Flow Chemistry Techniques	\$110,000
Triggs-Raine, Barbara	Biochemistry & Medical Genetics	Characterization of HYAL2 and non-HYAL2 dependent pathways of hyaluronan degradation	\$200,000
Uzonna, Jude	Immunology	Molecular Regulation of Inflammatory Cytokine Production in Macrophages	\$26,000

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Yang, Chengbo	Animal Science	Gut chemosensing and the regulation of nutrient absorption and barrier function in pigs	\$130,000
Zorboska, Nina	Mathematics	Operators on reproducing kernel Banach spaces of analytic functions	\$80,000
			\$9,090,417

Discovery Accelerator Supplements			
De Kievit, Teresa TR	Microbiology	Biocontrol pseudomonads: interaction with the plants they protect and grazing predators that threaten their existence	\$120,000
Kordi, Behzad B	Electrical & Computer Engineering	Online Electromagnetic Condition Monitoring Techniques for High Voltage Systems	\$120,000
Ojo, Olanrewaju A	Mechanical Engineering	Advanced Joining of Gamma Prime Precipitation Strengthened Cobalt-base Superalloy	\$120,000
			\$360,000

Scholarships and Fellowships

Name	Program	Department	Amount
Burgers, Tonya	PGSD3	Environment and Geography	\$63,000
Carther-Krone, Tiffany	PGSD2	Psychology	\$42,000
Doering, Matthew	CGSD3	Biological Sciences	\$105,000
Dubois, Patrick	CGSD3	Computer Science	\$105,000
Giesbrecht, Patrick	CGSD3	Chemistry	\$105,000
Grande, Giuseppe	CGSD3	Civil Engineering	\$105,000
Hasan, Mohammad Khalad	PDF	Computer Science	\$90,000
Khan, Deirdre	CGSD3	Biological Sciences	\$105,000
Kolesar, Tiffany	CGSD3	Physiology and Pathophysiology	\$105,000
McRae, Ewan	CGSD2	Chemistry	\$70,000
Narendra, Chaitanya	CGSD3	Electrical and Computer Engineering	\$105,000
Okeke, Emeka Boniface	PDF	Immunology	\$90,000
Quijada-Rodriguez, Alex R	PGSD2	Biological Sciences	\$42,000
Rigby, Sarah	PGSD2	Psychology	\$42,000
CGSM	Eligible Canadian institutions receive allocations of awards.	U of M allocated 17 awards =	\$297,500
			\$1,471,500

CGS D2/PGS D2 (two-year scholarship tenable during the first five years of doctoral studies);

CGS D3/PGS D3 (three-year scholarship tenable during the first five years of doctoral studies); and

PDF (two-year postdoctoral fellowship).

\$10,921,917