



University  
of Windsor

# Research Stimulus Fund Report 2016/17

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Office of the Vice-President, Research and Innovation

## Executive Summary

The University of Windsor's Strategic Research Plan sets the direction of the University of Windsor's research and scholarship enterprise and aspires to "create a more research-intensive university with graduate programs that build on academic and professional strengths" (*Thinking forward...Taking Action*, 2012). The Research Stimulus Funds (RSF) was established in 2013/14 with the intention that the RSF will aid in building the University's research enterprise. Under the purview of the Vice-President Research and Innovation (VPRI), the RSF provides annual funding of \$500,000 which is allocated among the Faculties. Now in its fourth year, the funds are utilized to build upon research strengths, promote future research collaborations, and enhance graduate training and experiential learning. The aggregate RSF funding for each of the individual Faculties is based on the three-year average of Tri-Council (NSERC, SSHRC and CIHR) funding dollars as calculated and reported by the Tri-agency Institutional Programs Secretariat.

Each of the Faculties distributed its allocated funding to individuals or groups of researchers whose projects or activities were selected by the Dean in consultation with the VPRI, a summary of which is outlined in this report. The RSF funds supported a diverse variety of research projects and activities, and allowed for the purchase of research infrastructure within the Faculties. The Faculty of Education awarded Research Stimulus Fund Grants to researchers for unique projects, as well as used funds to hold guest speaker seminars and workshops. The Faculty of Engineering supported a new Industrial Research Chair, provided scholarship funding and supported a student exchange program. The Faculty of Human Kinetics provided funding for the third year of a Golden Jubilee Research Excellence Award, which has the mandate to support and extend the research culture within the Faculty. The Faculty of Law provided a contribution to a SSHRC Connection Grant to host an international conference. The Faculty of Science utilized the funds for the second year of funding for two (2) Healthy Great Lakes Research Excellence Awards to expand and strengthen the research programs of the recipients, as well as funding several collaborative infrastructure grants and other research support. The Faculty of Arts, Humanities and Social Sciences (FAHSS) used the monies for the second year of a Viable, Healthy and Safe Community Research Excellence Award, to support several collaborative research grants, and to provide additional contribution towards an externally funded award. The Odette School of Business used the RSF funds for the fourth year of a Golden Jubilee Professorship award. Descriptions of each of the individual awards and funded activities/purchases are detailed in this report.

## Background

Funding from the Research Stimulus Fund (RSF), under the purview of the VPRI, is allocated to each of the individual Faculties based on its respective most-recent three-year average of Tri-Council (NSERC, SSHRC and CIHR) research revenue within each Faculty (as provided by the Tri-agency Institutional Programs Secretariat). The RSF funding is intended to be used to support the research enterprise, to invest in research infrastructure, and to provide strategic research grants or awards to faculty members in the individual Faculties who have the potential to attract additional external funding to the University.

## RSF-Funded Projects and Activities

### Education

The Faculty of Education has continued to invest in strengthening the research culture within the Faculty with contributions to research projects, as well as promoting research through special seminars and workshops open to both faculty and students.

#### **Dr. Geraldine Salinitri**

Dr. Salinitri was provided with funding of \$1,500 from the RSF for her project, *"LEADing Voices: A Narrative Journey of the Leadership Experience Program for Student Success."* The goal of the project is to disseminate knowledge on the impact of specialized field experience in reaching the achievement gaps in education by constructing a comprehensive textbook about the Leadership Experience in Academic Direction (LEAD) program, specifically looking to track its impact on all stakeholders. The textbook will be created using research based on theses written about the Pre-Service enrichment course.

#### **Dr. Clinton Beckford**

Dr. Beckford received \$1,500 for his project, *"Experiencing Difficulty? Racial and Cultural Influences on International Community Service Learning Experience."* This project aims to explore how racial and cultural minority participants, Black and Muslim teachers from Canada, experienced being part of the majority in Tanzania, East Africa. It will also examine how their racial and cultural identities are influenced and reshaped by their past and present experiences.

#### **Faculty of Education**

The Faculty of Education used a portion of the RSF funds (\$2,923) to hold guest speaker seminars and workshops for faculty and students to have discussions with leading experts in the field. Dr. Lian Zhang, Professor in Applied Linguistics at the School of English and International Studies, Beijing Foreign Studies University, was invited to speak with students and faculty on teacher learning and classroom discourse analysis. Dr. Kathryn Ricketts, Assistant Professor in Arts Education (Dance), University of Regina, was invited to give three mini residency workshops throughout March 2017 that were open to students and faculty from many departments on various narratives such as mind and body interactions.

## Engineering

The Faculty of Engineering has provided support for a new Industrial Research Chair, continued support for scholarship funding and facilitated collaborative workshops using RSF funding. These initiatives provide enriched opportunities for researchers and assist in providing enhanced training for students.

### **Dr. Hanna Maoh**

Dr. Maoh established in 2015/2016 *The Transportation Association of Canada Foundation and the Norman Esch Foundation Undergraduate Scholarships in Transportation Science and Engineering* through an agreement with the TAC and Esch Foundations and the Faculty of Engineering at the University of Windsor. Now in its second year, the Foundations have provided scholarship funding in the amount of \$12,500 per year with a matching amount contributed equally by the RSF funds and the Faculty of Engineering (\$6,250 each). The scholarships provide additional benefits to undergraduate students who are furthering their training in transportation engineering and science. Each year, five undergraduate students will receive \$5,000 through an internship for a four-month work term with the Transportation Systems Innovation Lab or other transportation-related research facilities within the Faculty of Engineering.

### **Drs. William Altenhof (PI) and Jennifer Johrendt**

Drs. Altenhof and Johrendt were provided with \$25,000 from the RSF funds to support the International Research and Training Group with Karlsruhe Institute of Technology. These funds facilitated an exchange-program for two Windsor students and two German students, and further provided training and workshop collaborations between the Karlsruhe Institute of Technology and the University of Windsor.

### **Dr. Ming Zheng**

Dr. Zheng received \$50,000 from RSF funds together with \$10,000 from the VPRI in support of his senior *NSERC/For/UWindsor Industrial Research Chair (IRC) in Clean Combustion Engine Innovations-Deterministic Ignition Control* at the University of Windsor. This new IRC program will perform fundamental and applied studies which aim to improve fuel efficiency, emphasize efficient ignition techniques, and modify mechanisms that modulate power to distribute the sites of energy release during ignition.

The Faculty of Engineering has committed a portion of the 2016-17 RSF funding in the amount of \$132,350 in support of the establishment of a Canada Excellence Research Chair (CERC) in Border Systems, if the application for the CERC is successful. As of the reporting date, the results of the submission are pending and accordingly, this research support will be itemized in a future report.

## Human Kinetics

The Dean of the Faculty of Human Kinetics encourages a strong research culture among faculty members, including events such as the annual Kinesiology Research Day involving undergraduate students. Due to the success of the Golden Jubilee Research Excellence Award created in 2014-15, the awardee has now received an extension of a further two years. This award provides funding in the amount of \$40,000 per

year with the current year funded through RSF funds of \$23,350, and \$16,650 from the Faculty of Human Kinetics.

**Dr. David Andrews**

Dr. Andrews, the awardee of the Golden Jubilee Research Excellence Award now in its third year, will continue to extend his efforts in advancing Kinesiology research, including promoting research, supporting Kinesiology Research Day, maintaining research equipment and software licenses, purchasing equipment and software, providing conference travel funds for undergraduate students, hiring research assistants, inviting guest speakers, and providing seed funds to faculty for research projects.

## Law

The Faculty of Law used RSF funds to support recipients of a SSHRC Connection Grant, providing additional funds for hosting a Criminal Law Conference. The Conference brought together policy makers, scholars and students and facilitated collaborative research and communication.

**Professor Sara Wharton and Dr. Sujith Xavier**

Prof. Wharton and Dr. Xavier received \$3,000 of RSF funds and \$10,000 from the Faculty of Law as contributions towards their SSHRC Connection Grant for an international conference on Transnational Criminal Law in the Americas. The conference was hosted by the Transnational Law and Justice Network (TLJN) at the University of Windsor and sponsored by the Canada Council on International Law and the American Society of International Law. The goal of this conference was to facilitate the exchange of knowledge, communication, and to foster partnerships between involved scholars, policy makers, representatives of Non-Governmental Organizations, and other individuals from both the Global North and South. The funds also supported the participation of emerging scholars and the training of students.

## Science

Last year the Faculty of Science awarded two Healthy Great Lakes Research Excellence Awards with the goal of increasing research capacity by growing internationally-recognized research programs through the fostering of new partnerships and research directions. These awards have a two year term at \$40,000 per year, and are now in their second year of funding.

### Healthy Great Lakes Research Excellence Awards

**Dr. Trevor Pitcher**

Dr. Pitcher's funding contributed to his research program, "*Freshwater Restoration Ecology Centre, LaSalle,*" and the construction of an addition to his research facility, now completed. The Freshwater Restoration Ecology Centre (FREC) aims to facilitate research related to the restoration of native species (e.g. fish, plants, invertebrates) to the Great Lakes. The Centre houses a state-of-the-art recirculating mecosystem to enable

large scale aquatic research projects, including the testing of hypotheses related to invasion biology, conservation breeding programs, and remediation efforts. The centre is situated on the Detroit River in the Town of LaSalle.

**Dr. Ken Drouillard**

Dr. Drouillard's award will enable him to pursue his work in his research program, "*Understanding microbial community – bioavailability interactions for persistent organic pollutants in Great Lakes sediment.*" This funding, now in its second year, will aid Dr. Drouillard in expanding his program and in forming new partnership initiatives. Also included in his program as collaborators are Drs. Chris Weisener and Jan Ciborowski, as well as an external collaborator, Dr. Chris Metcalfe at Trent University.

The Faculty of Science also invested in several collaborative infrastructure grants and other research support.

**Dr. Dennis Higgs**

Dr. Higgs was provided the sum of \$24,630 for ultrasound imaging equipment. This equipment is purchased for the benefit of researchers in Biological Sciences, including Drs. Daniel Heath, Dan Mennill, Stephanie Doucet, Oliver Love, Christina Semeniuk, Trevor Pitcher, Barbara Zielinski and Nigel Hussey. It will be used to non-invasively probe specimens; of importance is the ability to repeatedly examine samples, to examine at-risk species, and to examine throughout various developmental time periods without harming the samples.

**Dr. Ziad Kobti**

Dr. Kobti received \$38,000 of RSF funds and \$10,000 from Computer Science for the Multi-Disciplinary Computational Big Data Analysis Group, composed of Drs. Christie Ezeife, Asish Mukhopadhyay, Jessica Chen, Severien Nkurunziza, Zhiguo Hu, Robin Gras, Jianguo Lu, Mehdi Kargar, Daniel Heath, Myron Hlynka, and Hanna Maoh. This funding provided updates to the power data server acquired in 2014 using RSF funds, and will facilitate several new research projects and grow collaborations between users, as well as provide enhanced training to graduate students on data analysis.

**Dr. Robert Schurko**

Dr. Schurko was awarded \$46,748 for a Materials Studio Software upgrade along with Drs. Stephen Loeb, Charles Macdonald, Bulent Mutus, Jeremy Rawson and Simon Rondeau-Gagné. This software is used for modeling, simulating and visualizing atomic and molecular level structures properties and behaviours. The new upgrade will increase productivity, open research to new scientific avenues and assist in the training of HQP.

**Dr. Barbara Zielinski**

Dr. Zielinski was provided \$17,637 for a Peltier-cooled camera along with Drs. Huiming Zhang and Jeffery Dason. This camera will allow high speed, high sensitivity, and high resolution images and video to be captured to study calcium signaling at the cellular and subcellular level. This equipment will aid in training several undergraduate and graduate students on imaging cellular activity.

## Faculty of Arts, Humanities and Social Sciences (FAHSS)

The Faculty of Arts, Humanities and Social Sciences (FAHSS) supported several collaborative research projects and conferences, as well as invested in infrastructure. These funds support research within the community and will help facilitate the spread of knowledge through dissemination and training.

### **Dr. Brent Lee**

Dr. Lee's Viable, Healthy and Safe Community Research Excellence Award received its second year of funding in the amount of \$40,000. This award is funded jointly from RSF funds in the amount of \$20,000 and \$20,000 from the Office of the Vice-President, Research and Innovation (VPRI). Dr. Lee used the funds to support the Noiseborder Multimedia Performance Lab, designed for the exploration of potential artistic and technical relationships between sound and image in multimedia performance. Some of the ongoing projects include the In-Fuse series of multimedia performance events, the Noiseborder Ensemble, and Homstal.

### **Drs. Carlin Miller (PI), Christopher Abeare and Alan Scoboria**

Drs. Miller, Abeare and Scoboria received \$25,000 for a Collaborative Research Grant for their project, *"Improving Diagnosis and Recovery from Concussion Combining Novel and Established Methods."* This fund will allow the group to examine the effects of concussion on memory, attention, and emotional function. Further, the project proposes to increase productivity, foster new partnerships with other research groups and facilitate the training of graduate students.

### **Drs. Amy Fitzgerald (PI), Betty Barrett, Patti Fritz, and Nazim Habibov**

Drs. Fitzgerald, Barrett, Fritz and Habibov were awarded \$17,000 for a Collaborative Research Grant titled, *"Understanding and Addressing the Co-occurrence of Animal Abuse and Intimate Partner Violence in the Canadian Context: Moving the Research to the next level."* This award will further develop their research group and expand the limited knowledge base on the co-occurrence of abuse by surveying shelter residents, staff, and the general population. Findings will be compiled into a report and a Web portal will be developed to provide information to abuse survivors on shelters and programs for pets. The researchers plan to use this information to apply for a SSHRC Connection Grant to host a conference on the topic.

### **Drs. Robert Nelson (PI), Lee Rodney, Michael Darroch, Jamey Essex, Kim Nelson, and John Sutcliffe**

Drs. R. Nelson, Rodney, Darroch, Essex, K. Nelson and Sutcliffe received \$12,000 for a Collaborative Research Grant for their project, *"Reading the Detroit-Windsor Borderlands as a Microcosm of Racialized Spaces in Canada and the United States."* This fund will help to establish a three-year networking research program aimed at analyzing racialized spaces in Canada and the USA. In its first year, a workshop was held at the Detroit Museum of Contemporary Art focusing on cross-border urban research with participants from a variety of faculty departments, members of the Cross-Border Institute and students. The goal of this project is to establish a Borderlands Research Institute and a Borderlands Studies graduate program.

**Drs. Catherine Kwantes (PI), Ben Kuo, Gregory Chung-Yan and Suzanne Mcmurphy**

Drs. Kwantes, Kuo, Chung-Yan and Mcmurphy were provided with \$7,500 for a Collaborative Research Grant titled, *"Trust, Distrust, Trustworthyness and Untrustworthyness in Cultural Contexts."* This fund builds upon work done by the International Trustworthyness Study to publish a book of work, expand data collection across the country and European cultures, and explore the variation that exists within and across cultural contexts.

**Drs. Debra Jozefowicz (PI), Kevin Gorey, Sung Hyun Yun, Nazim Habibov and Robin Wright**

Drs. Jozefowicz, Gorey, Yun, Habibov and Wright were awarded \$3,000 for a Collaborative Research Grant to start a *"Social Work Research Center."* This Research Center will sponsor interdisciplinary research training, colloquiums, poster sessions, and collaborative writing groups. This award will also facilitate the training of undergraduate and graduate students in community-based learning and research.

**Drs. Guillaume Teasdale, Guy Lazure and Mirian Wright**

Drs. Teasdale, Lazure and Wright received \$3,000 in RSF funds and \$3,000 from FAHSS for a Collaborative Research Grant titled, *"Digitalizing History Research Group (DHRG)."* These funds will support three projects that share a concern with regional stories and borders, and link the digital historiography knowledge base. Two guest speakers were invited to give small "think-tank" talks and workshops with the faculty, students and members of the DHRG team: Dr. Karolyn Smardz Frost, Senior Research Fellow for African-Canadian History at the Harriet Tubman Institute, and Dr. James Elmborg, Director of Public Digital Humanities Graduate Certificate Program at the University of Iowa.

**Dr. Jerome Cohen**

Dr. Cohen was provided with a contribution of \$5,000 in RSF funding and \$5,000 from FAHSS for his project, *"Cognitive behaviour (memory/activity) test of UbiSol Q10 treatment in the transgenic AD mouse model,"* with co-investigator, Dr. Siyaram Pandey. This funding is for an extension of an initial pilot study testing the effects of UbiSol Q10 in preventing Alzheimer's disease in transgenic mice. Additional experiments will be performed using a newly purchased camera, which will be compatible with the Noldus EthO-vision software. Training of undergraduate and graduate students will also be supported.

**Dr. Michael Buroughs**

Dr. Buroughs received \$20,000 with \$10,000 coming from RSF funds and \$10,000 from the Office of Research and Innovation Services as a contribution to aid in establishing his research lab in Adult Clinical Psychology. The funding supports lab resources, software, video and sound equipment, and psychological measures for which one must pay for use rights, as well as funding to recruit participants.

**Dr. Steven Palmer**

Dr. Palmer received \$2,000 from RSF funds and \$1,500 from the VPRI as contributions towards his SSHRC Connection Grant, to host a conference titled, *"Knowledge Networks and Health Innovation in the Americas: An International Conference"*. Twenty-two research collaborators from across the Americas were assembled to discuss knowledge networks that had been responsible for innovations in medical research and public health practice in



the Americas in the past seventy years. Others involved in the event included scholars and students in Latin American and Health Studies, NGO actors in health, the general public, as well as University of Windsor undergraduate and Masters' students.

## Business

In 2013, the Odette School of Business awarded a Golden Jubilee Professorship, funded by the Faculty and the VPRI. Based on the successful results from the initial two-year period, this award was renewed for a further two-year term with funding of \$50,000 per year. Now in its fourth year, the funding was comprised of \$9,150 from the RSF, \$10,850 from the VPRI and \$30,000 from the Odette School of Business.

### **Dr. Francine Schlosser**

Dr. Schlosser's Golden Jubilee Professorship embraces a number of research activities, including: (i) preparing and disseminating topical and impactful research to both practical and academic audiences; (ii) researching, developing, and experimenting with innovative and collaborative student learning experiences; (iii) pursuing academic and practical service leadership opportunities; and (iv) developing a forum for entrepreneurial activities.