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## Introduction

With this first issue, the Research and International Office (RIO) is launching a new occasional report. This report is intended to highlight and to communicate the research and scholarship achievements of MSVU's faculty and students. It is not intended to replace the previous Research Office bulletin (*Research @ MSVU*), meaning the report does not contain announcements of research funding opportunities, research related events, and the like. These are all relayed to faculty as received and archived within the MSVU Research website. Rather, '*Research Matters @ MSVU*' is intended as a venue through which RIO and the Associate Vice-President (Research) will communicate general information about MSVU-related research and scholarship, will profile several faculty and student research and scholarship activities and achievements, and will highlight research development initiatives.

Several themes are emphasized in this first issue. Among these is a presentation of the scale, scope, and meaning of MSVU student involvement in faculty research. This is presented in a section titled '*Research Matters to Students @ MSVU*'. A variety of information is presented here,

including student research assistant profiles and testimonials as well as a general overview of the scale and meaning of student research assistantships. This information underscores the importance of the research assistant experience to enriching students' understandings of research processes and competencies, as well as to shaping their aspirations. These qualities also further underscore a unique opportunity within MSVU for undergraduates to engage with and further their learning through faculty research. We are intending to profile attributes of student research experiences in every issue of this report.

In addition, this issue presents an overview of funded research at MSVU. Over the last number of years MSVU's faculty have realized considerable success within a variety of external agencies at winning research funding support. I'm sure many know by now that MSVU ranks #1 among Canada's primarily undergraduate universities in the latest McLean's ratings for the percentage of faculty successful in securing research grants from within the Social Science and Humanities Research Council's (SSHRC) funding competitions. Our faculty's recent successes within Natural Sciences and Engineering Research Council (NSERC) and Canadian Institutes of Health Research

(CIHR) funding competitions have yet to show, largely as a result of how the calculations are made (i.e. 3 year rolling averages); but, there have been some recent, unprecedented achievements for MSVU and our science/health research faculty. We play a bit of communications catch-up in this first issue; so, you'll find all the specifics concerning 2004-06 outcomes. The forthcoming issues will only report on previous year and current successes.

Several of MSVU's faculty have also been very successful at securing research infrastructure funding from the Canadian Foundation for Innovation (CFI). These successes and the resulting investments are providing MSVU's faculty and students with leading-edge research tools and capacity, capacity that provides a critical foundation for sustaining and further developing MSVU research and scholarship. Hopefully, you will find this first issue of *Research Matters @ MSVU* to be informative and interesting. As always RIO is interested in learning of your impressions, as well as in receiving your thoughts on possible improvements.

Dr. Anthony Davis  
Associate Vice-President  
(Research)

## MSVU Canada Research Chairs

MSVU has now filled all of the Canada Research Chairs (CRC) originally allocated to the University by the CRC Secretariat.

Our faculty members' recent successes within SSHRC and NSERC research awards competitions should well position MSVU to receive a new SSHRC-related and, hopefully, a NSERC-linked CRC allocation during

the forthcoming Chairs redistribution processes. Such an outcome would further enable MSVU to enhance further its thematically-focused research-centred critical mass and capacity.

MSVU's Chairs include:

**Dr. Janice Keefe**, Department of Family Studies and Gerontology, CRC Tier II, \$500,000

**Dr. Dianne Looker**, Department of Sociology and Anthropology, CRC Tier I, \$1,400,000

**Dr. Marnina Gonick**, Faculty of Education and Dept. of Women's Studies, CRC Tier II, \$500,000 (approved 10/06)

**Dr. Patricia Williams**, Department of Applied Human Nutrition, CRC Tier II, \$500,000 (approved 10/06)

*CFI investments are providing MSVU with leading-edge research facilities and capacity, qualities that enable our faculty's research programs, that engage students in research, and that increasingly have become critical to our ability to attract and retain new faculty appointments.*

## MSVU Canadian Foundation for Innovation (CFI) Research Infrastructure Awards

The Canadian Foundation for Innovation (CFI) funds the development of research infrastructure (e.g. equipment and physical space renovations) in support of university faculty research programs. These are adjudicated, competitive awards. The following is a complete list to date of MSVU faculty CFI awards, including the titles of the research programs and the total value of the awarded infrastructure.

**Dr. Andrew Manning** (Faculty of Education), 2001, *Technology Learning Resource Centre* – total value: **\$304,205**

**Dr. Daniel Legacé-Séguin** (Department of Psychology), 2002, *Mount Saint Vincent University Social, Emotional, and Cognitive Development Observation and Interview Centre* – total value: **\$54,453**

**Dr. DeNel Rehberg Sedo** (Department of Public Relations), 2003, *Atlantic Canada Communication Issues Research Laboratory* – total value: **\$229,531**

**Dr. Aine Humble** (Family Studies and Gerontology), 2004, *Atlantic Research Centre for Family-Work Issues* – total value: **\$112,496**

**Dr. Aibing Xia** (Department of Chemistry), 2005, *Research Infrastructure for Synthesis and Applications of Novel Phosphine Chalcogenide Ligands in Late Transition Metal Catalysts* – total value: **\$111,780**

**Dr. Ian Pottie** (Department of Chemistry), 2005, *A New Look into the Henry Reaction* – total value: **\$171,455**

**Dr. Germán Avila Sakar** (Department of Biology), 2006, *Plant Growth Microscopy and Image Analysis* – total value: **\$374,608**

Canada Research Chair related...

**Dr. Janice Keefe**, Canada Research Chair (Tier II), Department of Family Studies and Gerontology, 2001, *Maritime Data Centre for Aging and Policy Research* – total value: **\$232,443**

**Dr. Diane Looker**, Canada Research Chair (Tier I), Department of Sociology and Anthropology, 2004, *The Atlantic Centre for the Study of Information Technology in Society* – total value: **\$339,410**

**Dr. Marnina Gonick**, Canada Research Chair (Tier II), Faculty of Education and Dept. of Women's Studies, *Atlantic Centre for Research and Education on Girls and Women* – total value approved (11/06): **\$244,174**

**Dr. Patricia Williams**, Canada Research Chair (Tier II), Department of Applied Human Nutrition, *Participatory Action Research and Training Centre on Food Security* – total value approved (11/06): **\$671,943**

As of December 2006, the total value of CFI-linked awards to MSVU and its faculty = **\$2,846,498**.

These investments are providing MSVU with leading-edge research facilities and capacity, qualities that enable our faculty's research programs, that engage students in research, and that increasingly have become critical to our ability to attract and retain new faculty appointments.

Several new CFI faculty initiatives are underdevelopment for the next competition cycles. We are also exploring the prospects for interdisciplinary team proposals.

## Researcher Profile: Dr. Andy Manning

### “The SIMergency Project”

A fire surges through a three-story building. Police cars race to the scene of a three-car pile-up. A hurricane hits full force, leaving destruction in its wake. In all these scenarios, the speed and skill of emergency crews often determine the difference between life and death.

Thanks to “SIMergency”, a simulation software project directed by MSVU’s Dr. Andy Manning, emergency personnel, the first responders in emergency situations, will soon gain a useful, viable, robust tool to help them deal with and manage life-threatening situations.

An online simulation focusing on incident and medical command is being developed by Dr. Manning and his team in conjunction with Brampton, Ontario’s Fire and Emergency Services and Emergency Medical Care Inc., Nova Scotia. A final prototype version is expected in November 2006. Dr. Manning believes the project is unique in Canada.

“The intended users for the platform work in a real-world environment where their decision-making skills need to be continuously honed. A wrong decision can cost someone his or her life,” states Dr. Manning, Associate Professor of Educa-

tion and head of the Technology Learning Research Centre at MSVU. “You can make a mistake on a simulation and lose seven lives, but they are virtual, not real.”

“Imagine becoming an expert at a video game where your reactions can help save real lives. The simulation developed allows people to practice their skills without putting them in danger,” states Dr. Manning. “You can make a mistake on a simulation and lose seven bodies but the seven bodies are virtual, not real.”

An online simulation on focusing on incident and medical command is being developed by Dr. Manning in conjunction with Brampton, Ontario’s Fire and Emergency Services and Emergency Medical Care Inc., Nova Scotia. Primary funding comes from a \$2.1 million Atlantic Innovation Fund grant. A final prototype version is expected in November 2006. Dr. Manning believes the project is unique in Canada.

Dr. Manning says the research on which the software is based is social learning theory –people learn from observing and modeling others. This research aims at helping organizations tap into the underlying knowledge that

employees use everyday – knowledge that isn’t written down but continually evolving and changing in reaction to ongoing situations.

One way this knowledge can be collected is through the project’s development of online, collaborative tools, including an area for blogs and a forum for threaded discussions. For example, a paramedic in Ecum Secum, Canso, Nova Scotia, and a firefighter in Brampton could work through the simulation at the same time, and then debrief together.

Primary funding comes from a \$2.1 million Atlantic Innovation Fund grant. The project’s technology partners are Sierra Systems and Collège Communautaire du Nouveau-Brunswick – Campus de Bathurst. The software has commercial potential but more importantly – it can help save lives.



*Dr. Andy Manning*

## MSVU Faculty National Research Council Funding Successes

### **Social Sciences and Humanities Research Council of Canada (SSHRC)**

#### **A. 2004-05**

**Dr. Janet Chute**, Department of Sociology and Anthropology, Aboriginal Research, Development Grant, \$25,000

**Dr. Peter Schwenger**, Department of English, *Literature between Waking & Dreaming*, \$30,443

**Dr. Donald Shiner**, Department of Business Administration and Tourism Hospitality Management, *CURA - Projecting the Housing Needs of Aging Atlantic Canadians*, \$993,672 (MSVU Co-Investigators Ms. Cathy Crouse and Dr. Janice Keefe)

Research and International Office, Aid to Small Universities, *Centre for Interdisciplinary Research on Human Development (CRIHD): Fostering Integration and Innovation*, \$89,994

#### **B. 2005-06**

**Dr. Leslie Brown**, Department of Sociology and Anthropology, *The Social Economy and Sustainability: Innovations in Bridging, Bonding and Capacity Building*, \$1,748,820 (MSVU Co-Investigators: Dr. Anthony Davis, Prof. Elizabeth Hicks, Dr. Janice Keefe, Dr. Kim Kienapple, Dr. Katherine Side, and Dr. Patricia Williams)

**Dr. Janice Keefe**, Department of Family Studies and Gerontology, *International Research Development Grant - Population Aging and Policy Initiatives: A Canada-China Collaborative Working Seminar*, \$24,930 (MSVU Co-Investigators: Dr. Nanciellen Davis, Dr. Aine Humble, Dr. Jeffery MacLeod, Dr. Hazel MacRae, Dr. Donald Shiner, and Dr. Janette Taper)

**Dr. Dianne Looker**, Department of Sociology and Anthropology, *INE - Radio Broadcasts and Teacher Workshops*, \$49,900

**Dr. Fernando Nuñez**, Department of Child and Youth Studies, *Uncovering Barriers and Support Mechanisms in the Education of Portuguese-Canadian Youth*, \$49,999

**Dr. Joseph Tharamangalam**, Department of Sociology and Anthropology, *Lessons in Human Development: A Comparative Study of Kerala and Cuba*, \$149,014

**Dr. Susan Walsh**, Faculty of Education, *Experiences of Female Teachers who are Immigrants to Atlantic Canada: Implications for Canadian Teacher Education Programs*, \$61,319 (MSVU Co-Investigator: Dr. Susan Brigham)

In summary, between 2004-06 MSVU faculty have won **\$3,223,091** in research awards from within SSHRC competitions.

### **Natural Sciences and Engineering Research Council of Canada (NSERC)**

#### **A. 2004-05**

**Dr. Germán Avila-Sakar**, Department of Biology, *The Influence of Herbivory on the Evolution of Plant Sexual Systems*, \$110,000

**Dr. Ian Pottie**, Department of Chemistry and Physics, *Exploring the Reactivity of Nitronates and the Inverse-Electron Demand Diels-Alder Reaction for Natural Product Synthesis*, \$66,000

#### **B. 2005-06**

**Dr. Hui Li**, Department of Mathematics and Computer Science, *Block-Structured Markov Chains and Various GI/G/s Queues and Retrial Queues*, \$70,000

**Dr. Tamara Franz-Odenaal**, Department of Biology, *Comparative craniofacial development and evolution*, \$60,000

**Dr. Tamara Franz-Odenaal**, Department of Biology, *Research Tools and Instruments, Laser ablation microscope system*, \$12,790

**Dr. Tamara Franz-Odenaal**, Department of Biology, *NSERC - University Faculty Award*, \$200,000

In summary, between 2004-06 members of MSVU's science faculty have won **\$518,790** in research awards from within NSERC competitions

### **Canadian Institutes of Health Research (CIHR)**

#### **A. 2004-05**

**Dr. Janice Keefe**, Department of Family Studies and Gerontology, *Consultation on Financial Compensation Initiatives for Family Caregivers of Dependent Adults*, \$15,000

#### **B. 2005-06**

**Dr. Theresa Glanville**, Department of Applied Human Nutrition, *Impact of Diet Quality on Body Mass Index: interrelationship among food choice behaviours, physical activity and food security status*, \$48,500

**Dr. Janice Keefe**, Department of Family Studies and Gerontology, *Planning the Amount of Human Resources Needed to Provide Chronic Home Care to Canada's Elderly 2001-2031*, \$239,396

In summary, between 2004-06 MSVU faculty members have won **\$302,896** in research awards from within CIHR competitions.

## Researcher Profile: Dr. Leslie Brown “Unveiling a Social Economy”

New research headed by Mount Saint Vincent University is revealing a vibrant yet largely hidden sector of Atlantic Canada’s economy. Known as the social economy, this community-driven sector offers everything from food and shelter to recreation, childcare, and financial services. And although it generates thousands of jobs and millions of dollars in the region, it is not well known or understood.

That’s changing, with the launch of a \$15 million pan-Canadian social-economy probe, funded by the Social Sciences and Humanities Research Council of Canada. Dr. Leslie Brown, associate professor of Sociology at Mount Saint Vincent University (MSVU) in Halifax, is heading the five-year, \$1.75 million Atlantic Canadian portion of the study: *The Social Economy and Sustainability: Innovations in Bridging, Bonding and Capacity Building*. She has galvanized a team of more than 70 researchers and community partners to uncover the workings of the region’s social economy.

“The social economy is a presence in all our lives, although we may not always recognize it,” says Brown. “It’s part of a self-reliant mindset that has a strong history in Atlantic Canada.” She explains that the social economy is part of the overall economy—with different goals like putting people before profits and developing enterprises focused on meeting community needs. “While some social-economy organizations do generate profits,” says Brown, “these profits are used to enhance the social objectives of the organization not to increase private wealth.”

Seth Asimakos, one of the study’s co-directors and manager of New Brunswick’s Saint John Community

Loan Fund points to his fund as a prime example of the social economy in action—average citizens invest in the fund. The financial returns are modest, yet the community gains are enormous.

“We re-lend our investors’ money to people who need a leg up to start a small business, get into housing, or get a job,” says Asimakos who also is the Atlantic coordinator of the Canadian Community Economic Development Network (CCED-Net), a partner in Brown’s project. “The fund also offers small business training.” In 2005 alone, the fund generated nearly \$700,000 in the Saint John economy, while saving taxpayers’ money that would otherwise have gone to social assistance.

Brown, Asimakos, and a third co-director, Penelope Rowe CEO of the Community Services Council in St. John’s, are working with Luc Theriault at the University of New Brunswick on one of six research streams that make up the Atlantic Canadian study—the mapping and policy cluster. “Our first aim is to identify and develop a profile of some of the region’s social economy players,” Theriault says. “Then we’ll examine policies to see if they promote or impede growth in the sector. Supportive policy is critical.”

Five other research clusters are focused on: food security, or securing access to healthy food produce using sustainable production methods (based at MSVU); resource management (based at Université de Moncton); marginalization (based at University of Prince Edward Island); financing and measuring the impact of the social economy (based at Saint Mary’s University); and communication, networking, and capacity building (based at Community Services Council).



*Dr. Leslie Brown*

According to MSVU’s Brown sustaining rural communities is a key contribution of the social economy. Take the Consumers’ Community Cooperatives (CCC), a food retail network. “From seeds to feed to packaging, the entire production process is conducted in the region,” says Brenda MacKinnon a Nova Scotia director of CCC. “People appreciate the social value of supporting food security and their own communities. It’s a big part of our marketing mix that fits with our focus on healthy food choices and fair trade.” She feels Brown’s study will demonstrate the value of the social economy to policymakers, and bring likeminded groups together.

“This is more than a research study,” Brown notes. “It’s a mobilization of people and ideas to solve pressing social and environmental problems. By building knowledge, tools and networks, we’re creating impetus that will drive new opportunities and growth in the social economy. MSVU is very happy to be leading this initiative”

## Other Externally-Funded Research

A considerable number of MSVU's faculty members have also experienced notable success at winning external funds in support of their research programs from sources other than the Research Councils. Among these are...

### A. 2004-05

Dr. Susan Brigham, Faculty of Education, Metropolis Atlantic, *Re-Symbolizing the Experiences of Immigrant Women*, \$2,992 (MSVU Co-Investigator: Dr. Susan Walsh)

Dr. Susan Drain, Department of English, *King's College London Library and Archives Visiting Fellowship*, \$2,000

Dr. Áine Humble, Department of Family Studies and Gerontology, Nova Scotia Health Research Foundation, *Capacity Grants - Involuntary Retirement: Well-Being in the Later Years*, \$1,055

Dr. Janice Keefe, Department of Family Studies and Gerontology, Nova Scotia Health Research Foundation, *Projecting the need for chronic home care*, \$9,985

Dr. Janice Keefe, Department of Family Studies and Gerontology, Alzheimer Society of Canada, *Assessing the Impacts of Cognitive Impairment on the Use of Formal and Informal Networks by Elderly Canadians*, \$149,459

Dr. Andrew Manning, Faculty of Education, ACOA-n Atlantic Innovation Fund, *The SIMergency Project*, \$2,100,000

Prof. Peter Mombourquette, Department of Business Administration and Tourism Hospitality Management, Atlantic

Canada Opportunity Agency, *Impact of Entrepreneurial Events on Student Perceptions*, \$2,750

Dr. Deborah Norris, Department of Family Studies and Gerontology, Nova Scotia Health Research Foundation, *Capacity Grant - Identifying the Service Needs of Person with Intellectual Disabilities*, \$10,000

Dr. Donald Shiner, Department of Business Administration and Tourism Hospitality Management, Nova Scotia Department of Community Services, *CURA - Projecting the Housing Needs of Aging Atlantic Canadians*, \$22,500

Dr. Patricia Williams, Department of Applied Human Nutrition, Public Health Agency of Canada, *Capacity Building for Food Security Through Mentoring*, \$346,773

### B. 2005-06

Dr. Jane Baskwill, Faculty of Education, Imagine Canada/Knowledge and Development Centre, *Expanding Volunteerism in Rural Schools in Nova Scotia: Promising Practices*, \$36,669

Dr. Susan Brigham, Faculty of Education, Metropolis Atlantic, *Bridging Program for Immigrant Teachers*, (MSVU Co-Investigator: Dr. Susan Walsh) \$4,767

Dr. Jane Gordon, Department of Sociology and Anthropology/Women's Studies, Imagine Canada/Knowledge and Development Centre, *The Role of Senior Volunteers in Sustaining Rural Communities*, \$49,989

Dr. Patricia Gouthro, Faculty of Education, Canadian Council

on Learning, *Active Citizenship for Women in Nova Scotia*, \$45,652

Dr. Áine Humble, Department of Family Studies and Gerontology, Nova Scotia Health Research Foundation, *When Care-giving Results in Involuntary Retirement: Well-Being in the Later Years*, \$113,409

Dr. Janice Keefe, Department of Family Studies and Gerontology, Human Resources & Skills Development Canada, *International Comparison of Compassionate Care (CC) Benefits*, \$23,000

Dr. Andrew Manning, Faculty of Education, InnovaCorp, *The SIMergency Project*, \$10,000

Dr. Deborah Norris, Department of Family Studies and Gerontology, Nova Scotia Health Research Foundation, *Identifying the Service Needs of Persons with Intellectual Disabilities*, \$19,343

Dr. James Sharpe, Faculty of Education, Canadian Council on Learning, *State of the Field Review*, \$95,664

Dr. Donald Shiner, Department of Business Administration and Tourism Hospitality Management, Canadian Mortgage and Housing Corporation, *CURA - Projecting the Housing Needs of Aging Atlantic Canadians*, \$40,000

Dr. Patricia Williams, Department of Applied Human Nutrition, Office of Health Promotion - Province of Nova Scotia, *Working Together for Ongoing Food Costing and Policy Solutions to Build Food Security*, \$40,000

(continued on page 7...)

*Between 2004-06 MSVU faculty members have won \$3,163,702 in support of their research from a wide variety of government agencies, foundations and non-governmental organizations.*

## Other Externally-Funded Research Continued...

Dr. Patricia Williams, Department of Applied Human Nutrition, Canadian Foundation for Dietetic Research, *Building Capacity for Food Security through Policy Change: Evaluating Outcomes*, \$14,980

Dr. Patricia Williams, Department of Applied Human Nutrition, Public Health Agency of Canada, *Healthier Food, Healthier People*, \$5,750

Dr. Aibing Xia, Department of Chemistry, Cotrell College Science Awards, *Synthesis and Catalytic Applications of Novel Bidentate N-Heterocyclic Carbenes (NHCs) in Aerobic Oxidation of Alcohols*, \$37,665

In summary, between 2004-06 MSVU faculty members have won **\$3,163,702** in support of their research from a wide variety of government agencies, foundations and non-governmental organizations. Admittedly, we are not confident that RIO records capture all of MSVU faculty success in this area. None the less, the known record of achievement is exceptional, and supports a critical component of our University's

research capacity and activity.

As a final note on this information, only MSVU faculty identified as Co-Investigators on MSVU-sited funded research have been specified above. A number of our faculty members hold similar positions within funded research that is sited at other local and/or national universities (e.g., Drs. Leslie Brown, Janice Keefe, Ian Pottie, and Patricia Williams), reflecting additional collaborative processes within which many are working.

As is evident from the above, over the last few years there has been a considerable increase in MSVU faculty members' participation in externally funded research. The scale and scope of this trend is evident fully in the graph presented below. At the time of writing, eighty-eight MSVU faculty members have been identified by the RIO as achieving support for their research in one way or another through external funding. Put another way, almost two in every three of the University's faculty are participating in externally

funded research. This level of engagement and the accomplishment it represents underscores some of the new vitality evident throughout the University. This activity translates into a set of extremely positive outcomes ranging from a remarkable increase in research-centred learning opportunities for MSVU graduate and undergraduate students, through new local, regional, national, and international research collaborations, to a plethora of scholarly academic and non-academic research communications. In turn, these qualities fuel increased likelihood of success for our faculty members' externally adjudicated research proposals and enhancement of the University's reputation. Currently, almost two in every three of MSVU's faculty are participating in some form of externally funded research (see the graph below). These qualities contribute fundamentally to the University as a meaningfully and engaging site of knowledge generation and knowledge communication.

*In summary, between 2004-06 MSVU faculty members have won \$518,790 in research awards from NSERC and \$302,896 in research awards from within CIHR competitions.*

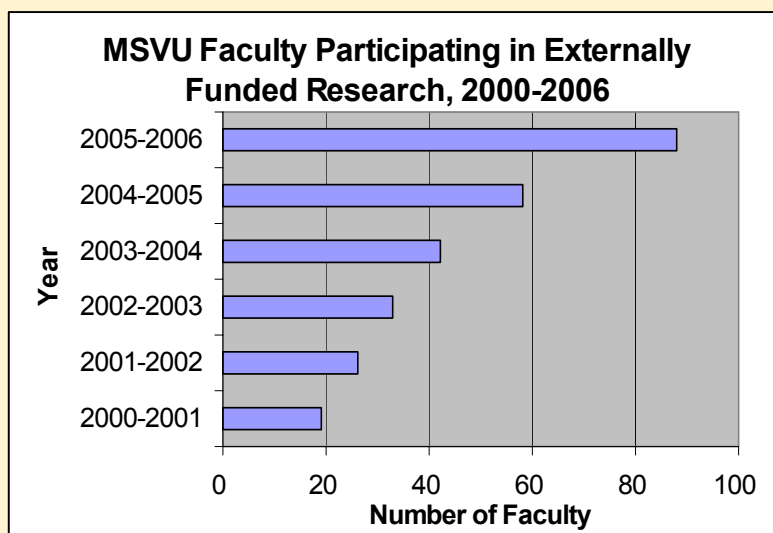


Figure 1—MSVU Faculty Participating in Externally Funded Research,

## Researcher Profile: Dr. Ian Pottie

### “Chemical Reaction Action”

Dr. Ian Pottie acknowledges that his research could help medical researchers develop new drugs to battle the various diseases, infections and widespread health issues facing the world. For him, the most rewarding part of his research is imagining that the life of one individual may be improved because of his work.

Dr. Pottie is an Assistant Professor in MSVU's Department of Chemistry/Physics. As a synthetic chemist, he uses small molecules as “two-by-fours” to build larger chemical structures.

In the fall of 2005, Dr. Pottie was awarded a Canada Foundation for Innovation grant of \$68,582. During summer 2006, he will work with a team of undergraduate students on his research, which builds on the

Henry Reaction.

Discovered more than 100 years ago, the Henry Reaction is a classic carbon-carbon bond-forming chemical reaction that builds both right- and left-handed molecules, which is known as a racemic mixture. If reaction conditions could be found to produce only one of these molecules (one enantiomer), it has the potential to be used as a base for a number of chemical processes.

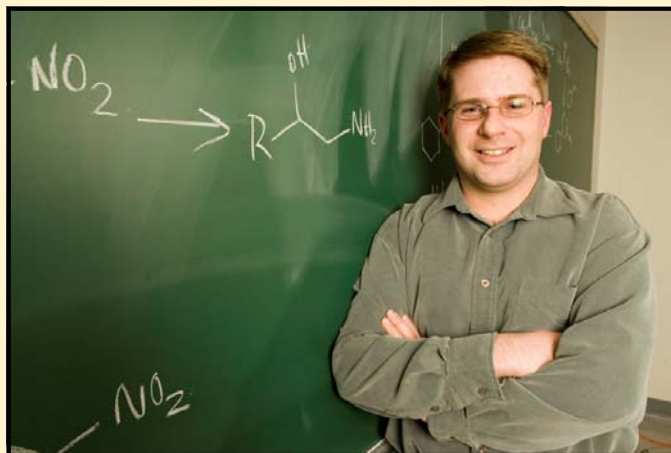
“If this project is successful, the chemical synthesis of a single enantiomer using our methodology would be a significant development for this chemical reaction,” states Dr. Pottie. “This work will have an economic impact in the chemical industry, making the production of chemicals which use this reaction more economical and efficient.”

Preliminary results were presented at the International Conference of Organic Chemistry this past June. Student researcher Frank MacDonald is currently compiling details of the initial improvement to the reaction in a manuscript, to be submitted to an expert journal in 2007.

Whether it's cheaper, newer and better drugs; plastics; paints or any of the other items we use in our everyday lives that are based on chemistry, the chemical reactions being investigated in Dr. Ian Pottie's research laboratory hold great promise.

*“This work will have an economic impact in the chemical industry, making the production of chemicals which use this reaction more economical and efficient.”*

Dr. Ian Pottie



Dr. Ian Pottie

## Internal Funding

MSVU's Committee on Research and Publications distributes the University's internal research support resources through three annual adjudications of faculty research and scholarship proposals.

Increasingly, the University's internal research support resources are being employed to provide start-up funding for new faculty appointees and to 'seed' research initiatives that offer considerable promise for future success within external research funds competitions. The Committee also attaches a priority to supporting productive MSVU researchers whose work ordinarily does not require the levels of funding available through external sources.

Listed below are the MSVU faculty who have received support from the Committee over the last two years.

### A. 2005-06

Dr. Janice Keefe, *Population Aging and Policy Initiatives in Canada and China*, \$5,000.00

Prof. Karen Blotnick, *Nova Scotia Gambling Centre*, \$1,000.00

Dr. Brook Taylor, *A Camera on the Banks: The Marine Photography of Frederick William Wallace*, \$500.00

Dr. Adriana Benzaquén, *Encounters with Wild Children*, \$500.00

Dr. Lenore Kuo, *Mail Order Brides and Public Policy*, \$2,495.00

Dr. Mary Jane Harkins, *Beyond the University Walls: Exploring Student Teaching Placements in Rural Nova Scotia from the Perspectives of the Student Teacher*, \$9,332.58

Dr. Arthur McCalla, *Catholic Traditionalist Histories of Religions*, \$10,000.00

Prof. Amy Thurlow, *The Language of Organizational Change*, \$7,017.66

Dr. Jamie Metsala, *The Relation Between Young Children's Vocabulary Development....*, \$10,000.00

Dr. Nancy Bartlett, *A Study on the Relation Between Aggression, Victimization, Gender and Sexual Orientation*, \$4,496.50

Dr. Elizabeth Bowering, *Use of Technology to Enhance Student Feedback in Distance Education*, \$1,434.00

Dr. Joan Turner and Dr. Carmel French, *Parent's Responses to their Mildly Ill Child: A Pilot Study Exploring Influences on Parents' Child Care Choices*, \$3,951.00

Dr. Amalie Fröhlich, *Pore Sensilla in the Compound Eyes of Petrobius Brevistylis*, \$6,999.00

\*\*Dr. Michelle Eskritt, *The Influence of Notational Development on Memory in Children....*, \$18,591.75

Dr. François-Xavier Eygun, *La Pointe aux Rats*, \$6,578.00

Total funds dispersed = **\$87,895.49**

\*\* This is a decision made by the Committee on Research and Publications to provide Dr. Eskritt with a one year additional extension on her remaining SSHRC resources as a consequence of a delay in research, i.e., Parental Leave .

### B. 2004-05

Dr. Germán Avila-Sakar, *Fitness Consequences of Herbivory on Unisexual Mutants of Arabidopsis Thaliana*, \$10,304

Dr. Frank Bennett, *Super Simple Block Design*, \$4,602

Dr. Adriana Benzaquén, *Aid to Scholarly Publications*, \$500

Dr. Susan Brigham, *The Role of Education in the Lives of Jamaican Overseas Domestic Workers*, \$8,586

Dr. Kathy Darvesh, *Computational Chemistry as Applied to Potential Substrates for the Aryl Acylamidase Activity of Butyrylcholinesterase*, \$414

Drs. Kathy Darvesh, Hui Li, and Frank Bennett, *Computational Program*, \$2,336

Drs. Nanciellen Davis, Norman Okihiro, and Hazel MacRae, *Patient Autonomy, Health Information and the Role of Pharmacists*, \$6,575

Dr. Kenneth Dewar, *Frank Underhill: Essayist and Public Moralist*, \$4,645

Dr. Roni Gechtman, *National Cultural Autonomy in the Making: the Implementation of the Jewish Labour Bund's National Program in Interwar Poland*, \$10,840

Dr. Wanda George, *Community Resident Attitudes Towards Tourism Following UNESCO World Heritage Site Designation*, \$4,149

Dr. Patti Gouthro, *Sisters in Crime*, \$7,724

Dr. Reina Green, *Shakespeare on Location: Place, Performance and Perception*, \$9,760

Dr. Reina Green, *Women in Theatre: The Maritime Experience*, \$5,734

Dr. Janice Keefe, *Projecting the Amount of Human Resources Needed to Provide Chronic Home Care to Canada's Elderly*, \$2,500

Dr. Daniel Lagacé-Séguin, *Play Partners? Role of Maternal and Paternal Emotional Styles*, \$4,431

Dr. Valda Leighteizer, *Lives of Gay Lesbian, Bisexual or Transgendered Youth*, \$8,512

Dr. Ron MacKay, *Gene Flow Between a Rare Nova Scotia Plant and its Common Relative*, \$10,025

Dr. Earl Martin, *Invitro Examination of the Combined Effects on Cholinesterases*, \$5,000

Dr. Sheilagh Martin, *Immune Challenge in Rat Pups and Maternal Behavior*, \$3,700

Rebecca Green is in the final stages of her Masters of Science degree in Applied Human Nutrition. She was attracted to MSVU from Ontario by the opportunity to work as a graduate student with Dr. Patricia Williams on food security research.

“...I’ve been a part of every aspect of research and feel much more prepared to complete my thesis and go out and conduct research on my own.” Rebecca plans on eventually teaching within a post-secondary environment, noting “...my experience as an RA has definitely contributed to this.”

Dr. Robert McDonald, *The Design and Synthesis of Cholinesterase Inhibitors Derived from Phenothiazin...*, \$5,000

Dr. David Monaghan, *The Cinematic Jane Austen*, \$4,639

Dr. Allan Neilsen, *I am Where I am: Multiple perspectives on sense of place and self at work*, \$5,000

Dr. Fernando Nuñez, *Researching the Education and Economic Status of the Portuguese-Canadian Community*, \$7,058

Dr. Donovan Plumb, *The Learning City in a Planet of Slums*, \$4,574

Dr. Ian Pottie, *The Lewis-Acid Catalyst of Trimethylsilyl Nitro-nates*, \$6,868

Dr. Meredith Ralston, *Hope in Heaven*, \$12,608

Dr. DeNel Rehberg Sedo, *Beyond the Book: Cultures of Reading*, \$12,202

Dr. Peter Schwenger, *Aid to Scholarly Publications*, \$500

Dr. Don Shiner, *Housing Options for the Aging Population*, \$580

Dr. Anna Smol, *Aid to Scholarly Publications*, \$500

Dr. Anna Smol, *Tolkien and Myths of Heroism*, \$5,015

Dr. Larry Steele, *Aid to Scholarly Publications*, \$500

Dr. Marie Tarpent, *Penutian Group of Aboriginal Language Families of Western North America*, \$5,000

Dr. Joseph Tharamangalam, *Success Stories in Human Development and Poverty Alleviation: Comparing Cuba with Kerala*, \$4,890

Dr. Joan Turner, *Aid to Scholarly Publications*, \$500

Dr. Donna Varga, *Early 20th Century Discourses of Nature and Ideologies of Childhood Innocence*, \$4,330

Dr. Susan Walsh, *Interrogating Difficult Experiences in Teaching through an Arts-Informed Inquiry*, \$4,258

Drs. Jeff Young and Wendy Doyle, *Aid To Scholarly Publications*, \$500

Dr. Jeff Young et. al., *Practicing Public Firm Accountants and Workplace Learning*, \$4,735

Dr. Rhoda Zuk, *Organized Protest Against Racist Children's Books in the U.S. (1940-1970) & the U.K. (1970-1985)*, \$4,840

Total funds dispersed = **\$204,434**

As reflected above, MSVU internal research funds support a very diverse array of research and scholarly activities. The priorities in the adjudication of these funds are to provide new appointees with research support, to support the development of externally funded research programs, and to provide support for research that does not require the greater level of funding available from external sources.

## Research Matters to Students @ MSVU

In a complimentary effort to document general attributes of the scale and scope of student engagement with and support through funded research, RIO staff combed through the available records in order to document the numbers, category (graduate/undergraduate student), and gross income of student research assistants (RAs) between 2003-04 and 2006-07. We have now set up a database to which information about RAs will be added as made available.

The results from this initial search are presented in Figure 2. These data, even though likely a considerable underestimation, tell a very important story for the quality of MSVU research, faculty, and students. Since 2003-04, MSVU has experienced an over 6-fold increase in graduate student research participation (7 to 41 grad RAs), a more than doubling in the number of undergraduate RAs (16 to 39), and an over 6-fold increase in the

annual research dollar support for student RAs (\$82,000 to \$520,000). Since 2003-04, at least 236 students (115 graduate students and 121 undergraduate students) have earned over \$1,331,000 through student research assistantships. Put another way, in this current year at least 4% of MSVU's fulltime graduate and undergraduate students were or are engaged in and supported by our faculty members' funded research.

In fact, well over 80% of MSVU graduate students hold or have held RAs and many, if not most, advanced majors and honors degree students access RA appointments in the last years of their studies. This is a laudable record of accomplishment, with the trends suggesting continued growth in the scope and scale of RA opportunities over the coming years. For instance, we already know that over \$320,000 in externally funded research is dedicated to supporting at least 41 RAs during fiscal 2007-08.

But these data communicate little about the substantial meaning of RA experiences for MSVU students. The RAs describe their experiences as involving a broad range of activities that concern practically every aspect of university research processes. For instance, many reported that they participated in activities such as literature reviews, research design, data gathering (including interviews), and data analyses. A considerable number, especially science undergraduates, noted that they were provided with opportunities to prepare research posters and oral presentations for conferences and to earn research paper authorship credits.

As these observations and testimonials attest, faculty research assistantships provide students with access to tremendously enriched educational experiences. These experiences provide students with enhanced understandings of research and scholarly practices, they develop specific research and professional skill sets, and they assist students to define and to achieve their educational aspirations. Faculty research and scholarship, while important in assuring student exposure to current knowledge within classroom and lab settings, also contributes critically to the intellectual and skill formation of students keen to pursue their livelihoods within re-

search, academic or professional settings. This contribution of faculty research and scholarship, particularly through research assistantships, is essential to assuring that highly qualified students are recruited to academic research discipline and professional vocations. Indeed, it is difficult to imagine how the production of knowledge and the achievement of research-informed knowledge would proceed without the contributions of university faculty research and scholarship to supporting and preparing students.

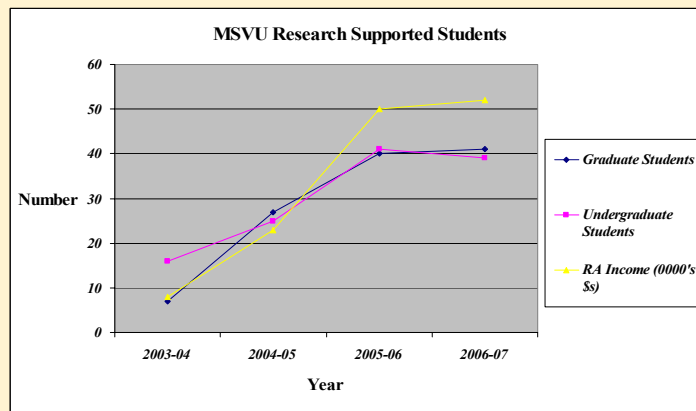


Figure 2 —MSVU Research Supported Students

## Student Profile: Joann Doran MA, Psychology

Joann Doran is completing her MA in School Psychology under the supervision of Dr. Elizabeth Church. She is also the recipient of the prestigious Social Science and Humanities Research Council of Canada MA Fellowship which supported her 1<sup>st</sup> year of study.

Over the last months, Joann has been working as a research assistant for Drs. Susan Brigham and Walsh, professors in MSVU's Faculty of Education. She notes that her RA "...gave me an up-close look at the thought processes involved in conceptualizing a project, and initiated a passionate interest in certain methodologies."

Joann also observes that her time as an RA told her lots about "... what it must be like to be a professor in the academy...that there is a lot more involved...than [just] teaching."

For Joann the RA also provided her with a valued mentor who provided the sort of support and encouragement that "...always made me feel I could do whatever needed to be done." Joann plans to develop a career as a school psychologist and educator once she has completed her degree.



Joann Doran, MA student Psychology

## Student Profile: Jill McSweeney MA, Gerontology

From Halifax and a graduate of Queen Elizabeth High School, Jill McSweeney is in the first year of her MA in Gerontology. She has come to MSVU after completing her BA in Psychology at St. Mary's University.

Jill chose the MSVU Gerontology program because she wants to study with Dr. Janice Keefe, MSVU's Canada Research Chair in Caregiving and Aging. She obtained her initial RA position with Drs. Aine Humble and Keefe on entering the graduate program.

Jill notes that the RA "... allows you to relate what you learn in class to first-hand experience...allows

you to become involved in discussions about the applications of theory, policy and statistics...and...allows you to understand the material at another level."

Jill plans on studying for a Ph.D. with a view to developing a university research and teaching career. Her RA has already provided her with a broad range of experience and opportunity, including participation in research and conference presentations.

For Jill, RA opportunities "... look great on applications and CVs. If you have previous research experience you become an excellent candidate for schools, employers and other professional endeav-

ors...I've gained excellent data analyst experience, excellent writing experience...as well as gaining both professional tools and social tools, I've also gained experience which I can use in the future for applying to other schools and jobs."



Gerontology student, Jill McSweeney

## Student Profile: Amy Richard BSc, Psychology

Amy Richard is in the final year of her B.Sc. degree in Psychology. She has been working as an RA with Dr. Elizabeth Bowering of MSVU's Department of Psychology. For Amy, the RA has provided a "...more practical knowledge of the research process." As an RA she has been provided with opportunities to participate in research, complete literature searches, create data bases, analyze data, and prepare material for conference presentation.

In Amy's view, the RA experience enriches her learn-

ing through "...extending my knowledge of certain academic topics... [and]...the research process." She has no doubt about the fact that the RA opportunities "...will be extremely beneficial to my future career...my practical knowledge and experience as an RA will be seen as something that will benefit me in a graduate program...and provide me with an asset for acceptance into the program."

Amy's future plans include applications for further study in either occupational therapy or graduate studies. "I have worked for two professors at

MSVU...extremely good work references...for applying to a graduate program and...for future jobs."



Psychology Student, Amy Richard

*"...I've also gained experience which I can use in the future for applying to other schools and jobs."*

*Jill McSweeney*

## Student Profile: Jake Yorke

### BSc, Chemistry

Science was always a focus for Jake Yorke, third-year MSVU Chemistry student, when attending Parrsboro Regional High school in Nova Scotia. His decision to attend MSVU was clinched with the recommendation of his cousin, an MSVU science graduate.

"My cousin has worked and taught at top level universities around North America and she said MSVU was the best experience she has had," says Jake. "You don't hear a lot about science at MSVU but I know the Chemistry program taught me more than I imagined and I don't regret my decision for a second."

Jake was awarded a MSVU President's scholarship (up to \$34,000 over four years), which is offered to students who excel in their high school years and demonstrate leadership skills. He also was received a DataTec scholarship in his second year (which provides tuition relief). He applied for and won an NSERC Undergraduate Student Research Assistantship (USRA) to work with Dr. Aibing Xia, Assistant Professor in the Department of Chemistry and Physics. As an USRA, Jake spent 16 weeks last summer in the lab.

"I worked with Dr. Xia ... studying how to make organic reactions used in drug synthesis more efficient. I

was supervised but was also able made my own decisions. Being able to apply what you are learning in chemistry by working in research is not common and I really liked it. This experience has changed my ideas about where I want to go with my graduate education."

Jake will be applying for another USRA this summer and is doing his Honors thesis with Dr. Xia. He plans to go to into medicine, which he says, he's been interested in forever, but with his student research experience is looking at combining medicine and research.

"I now have experience with research, presentations and literature reviews. My experience will be invaluable in applying for further education. Beyond these benefits, the closer bond with a professor means someone in the field you are interested in can vouch for your skills, a great advantage over other students."

Jake's experiences as a student research assistant at MSVU are part of a success story concerning the scope and scale of student involvement in faculty research that has largely gone unnoted and uncelebrated. The RIO has begun to document the student research assistant experience in a variety of ways. First a few

words on our approach to this. We started with a request that faculty forward to RIO the names and e-mail addresses of student research assistants employed during the 2006-07 fiscal year. Faculty members graciously identified and provided contact information for fifty-five current year student research assistants (RAs). These were sent a brief questionnaire that asked several questions about the characteristics of their experiences and about their thoughts on what the RA appointment has meant for their education and their aspirations.

Twenty-four students returned the completed survey, with many providing detailed remarks on what the RA experience has meant for them. Seven graduate and undergraduate students were selected from among those who consented to participate in a follow-up conversation. All of the attributed and non-attributed student observations presented here were arrived at through this process.

*"I now have experience with research, presentations and literature reviews. My experience will be invaluable in applying for further education."*

Jake Yorke



Jake Yorke, Chemistry Student

## What Student Research Assistants are Saying About Research @ MSVU

"Many undergrad students in...larger universities do not have the opportunity to work in a lab...as these positions are given to grad students. Here at MSVU, we are able to do research..."

*3<sup>rd</sup> year Chemistry*

"I earned money doing something I enjoyed and learned from."

*4<sup>th</sup> year Biology*

"I intend to pursue a PhD following my MA and having experience with established professors will no doubt help my chances."

*MA Women's Studies*

"My RA position has provided me with additional research experience that has broadened my knowledge of the research process..."

*3<sup>rd</sup> year Psychology*

"...you become an excellent candidate for schools, employers and other professional endeavors..."

*MA Gerontology*

"...[my professors] are extremely good work references that I will now be able to use, both for applying to graduate programs and ...for future jobs."

*4<sup>th</sup> year Psychology BSc*

"...the small class sizes at MSVU...allow the professor to get to know their students' abilities better..."

*4<sup>th</sup> year Psychology*

"I was able to receive training that...will be useful in graduate school and in my career."

*4<sup>th</sup> year Honors Chemistry*

"It allowed me to work and be in school. It has exposed me to different methods of research."

*MEd School Psychology*

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