

# New Emerging Teams in Aging: Innovation and Impact



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**T**he Canadian Institutes of Health Research (CIHR) was created in 2000 to transform health research in Canada by funding more research on targeted priority areas; building research capacity and training the next generation of health researchers; and focusing on knowledge translation, so that the results of research are transformed into policies, practices, procedures, products and services. It fell to the inaugural Scientific Directors of the 13 CIHR Institutes to develop the tools that would enable Canada's scientific community to drive this transformation.

The Institute of Aging spearheaded the development of the New Emerging Teams (NETs) funding program. It was designed to address complex health issues – such as those presented by aging – through the collaborative efforts of scientists and stakeholders from multiple disciplines, while building research capacity and training emerging scholars.

In all, the Institute of Aging invested \$12.7M in 14 New Emerging Teams working on research themes that cover the full spectrum of CIHR's mandate, from biomedical, clinical, health services to population health research.

The NET was an untested concept and as these teams have now come to the end of their original grants, the Institute of Aging has revisited each of them with questions about the challenges and rewards of team science in aging, as well as about the products and impacts of the science itself. Each of the Team Leads was interviewed by a writer who followed a standard set of questions.

I am pleased to present to you the 'stories' of the 14 New Emerging Teams funded in whole or in part by the Institute of Aging. I think you will find each story both compelling and informative: for the innovative science that is now positioned to improve the health of older Canadians, for the insights of these experienced scientists, and for the tales of how the research got done.

Anne Martin-Matthews  
Scientific Director  
Institute of Aging  
Canadian Institutes of Health Research



In 2002, CIHR's Institute of Aging undertook a novel funding initiative: the New Emerging Team (NET) Program.

The NET Program provided five-year grants to support the further growth of small, existing teams or the formation of new teams of independent researchers undertaking multi-disciplinary research in Canadian research institutions. NET grants were intended to build capacity in new and developing areas of research and give researchers the building blocks required to successfully apply for future funding.

The objectives of the Program were to:

- create or develop new competitive research teams that show potential for successfully applying for other infrastructure team funding in the future;
- foster multi-disciplinary and cross-theme research in areas of focus, such as aging;
- train and establish new investigators in these areas; and
- create a team environment that favours the development of new, fundable research projects.

Funded teams conducted research relevant to the five research priorities of the Institute of Aging:

- healthy and successful aging
- biological mechanisms of aging
- aging and maintenance of functional autonomy
- cognitive impairment in aging
- health services and policy related to older people.

NET grants were non-renewable five-year awards, subject to satisfactory progress review at three years. The grants were to be used to support:

- operating costs for the proposed new collaborative research projects;
- establishment funds and salary of new

investigators (within the first five years of their independent research careers) joining the team;

- salaries of research trainees (graduate and postdoctoral) and other personnel whose participation will enhance the collaborative research productivity of the Team;
- costs of data collection and maintenance of information holdings directly related to the Team research program;
- costs of networking activities, including collaboration, planning, and research exchange activities directly related to the Team's research program, and extra travel funds required for members and trainees separated by a significant distance;
- the salary of a professional coordinator and/or administrative assistant;
- salaries for technicians and other research personnel;
- equipment purchase, and maintenance contracts.

In 2003, the Institute of Aging released *Enhancing Aging Research Capacity in Canada*, a publication in which the leaders of the New Emerging Teams, or NETs, funded by the Institute of Aging presented their research and capacity-development plans. Now, in *New Emerging Teams in Aging: Innovation and Impact*, the Institute of Aging presents the teams at the end of their five-year grants – their accomplishments, their challenges and their visions for the future. The final chapter presents a summary of their thoughts on the benefits and challenges of operating in a team environment, as well as their words of advice for those contemplating building – or funding – a research team.

As this report attests, the investment that the Institute made in New Emerging Teams has paid dividends both in terms of the strength of the research community in aging in Canada and in terms of research results that will make a difference to the health and well-being of older Canadians. 🍁



*NET Grant: Optimising End-of-Life Care for Seniors  
Team Leader: Dr. Pierre Allard*

**I**n the beginning, there were some interested investigators, scattered across the country.

Today, the palliative and end-of-life research community is larger, stronger and more integrated. And, says Dr. Pierre Allard, that is the great success of this NET.

“When we began, research capacity was very early on, right across Canada. Very few people identified themselves as palliative care researchers,” says Dr. Allard, who is Director of the Palliative Care Research Group at the Élisabeth Bruyère Research Institute in Ottawa. “This was one of the objectives of the NET, to build research capacity.”

For Dr. Allard, the measure of the NET’s success would be to have, at the end of the grant, individuals established as investigators, getting their own funding, and ready to contribute to the Canadian research agenda in the field long past the life of the grant. By that measure, he says, the NET was a success.

He points to the School of Nursing at the University of Ottawa, where four members of the team have integrated palliative and end-of-life care as a central element in the school’s doctoral program.

“This will proceed long after the life cycle of the NET,” Dr. Allard points out.

He also points to Dr. Mary-Lou Kelley, who joined the team as a student in social work. Now, she is the director of Lakehead University’s Centre for Education and Research in Aging and Health, focusing on palliative care in rural settings, long-term care facilities and among aboriginal communities. Through her work in this area, she is also training a whole new generation of students, some of whom will also become part of what Dr.



Allard calls “the umbrella” joining all researchers focused on different elements of palliative and end-of-life care.

In fact, says Dr. Allard, this NET was never intended to be the start of a team that would continue working together forever. Rather, he saw it as a jumping off point for people to carry forward their individual investigations, with the option of forming teams as needed. He is proud of the fact that each member of the team has received his or her own individual funding and believes that the cooperative environment of the NET, with mentoring from established researchers, helped young researchers achieve this milestone earlier and more easily than they would if they were working in isolation.

“Young researchers at the beginning of their careers are often alone, without guidance,” says Dr. Allard. “The people in our group did not have that problem, and this made a huge difference.”

The team’s success also lies in the fact that there is no longer a need for such a team, with a specific mandate to build research capacity. So, when the NET grant ended in early 2009, the team ceased to exist.

“This is something we’ve discussed at length,” says Dr. Allard. “But the context has changed. Our challenge was to bring people together in an area that was not recognized. And though there’s the potential for new teams in specific areas, we, as a group, have completed our task.”



### HIGHLIGHTS

#### Capacity Building:

1. The NET funding provided an opportunity to train three students who are now members of the Faculties of Nursing at the University of Ottawa and McMaster University. They are continuing with their contributions to the palliative and end-of-life research community and extending the work of the Optimising End-of-Life Care for Seniors team.

#### Research Advancement:

2. NET member, Dr. Mary Lou Kelley received a \$1 million grant from the Social Sciences and Humanities Research Council (SSHRC) in 2009 entitled 'Improving quality of life for people dying in long-term care homes', a project that will develop, implement and evaluate an approach to delivering palliative care using participatory action research. It will also support a network that will develop knowledge, resources and expertise among researchers based at four universities (Lakehead University, McMaster University, the University of British Columbia and the University of Ottawa), one community college (Confederation College), four long-term care homes in two Ontario communities (Thunder Bay and Hamilton) and more than a dozen community organizations.

#### Knowledge Transfer and Exchange:

3. A workshop hosted by the Élisabeth Bruyère Research Institute in 2008 entitled "Adapting the CCSMH\* National Guidelines on the Assessment and Treatment of Delirium in Seniors for Implementation and Research in Palliative Care Settings" brought together a group of experts and stakeholders from across Canada in the fields of delirium, end-of-life care and aging to review the CCSMH National Guidelines and develop policy recommendations on end-of-life care. This was also a first step in establishing a research agenda and collaborative partnerships for the implementation and evaluation of the new delirium and end-of-life care guidelines for seniors.

4. The team wrote several peer-reviewed publications, including a guest editorial focusing on end-of-life care of the elderly, published in the Autumn 2007 issue of the Journal of Palliative Care.

#### Team members:

**Pierre Allard**, MD, PhD, Élisabeth Bruyère Research Institute, Ottawa

**Keith Wilson**, PhD, The Ottawa Hospital Rehabilitation Centre

**Mary Lou Kelley**, PhD, Lakehead University

**Kevin Brazil**, PhD, McMaster University

**Manal Guirguis-Younger**, PhD, Saint Paul University, Ottawa

**Frances Legault**, PhD, University of Ottawa

**Susan Brajtman**, PhD, University of Ottawa

**Christine McPherson**, PhD, University of Ottawa

**Marg McKee**, PhD, Lakehead University

**Sharon Kaasalainen**, PhD, McMaster University

#### For more information:

[www.bruyere.org/bins/content\\_page.asp?cid=12-144-145-148&lang=1&pre=view](http://www.bruyere.org/bins/content_page.asp?cid=12-144-145-148&lang=1&pre=view)

\*CCSMH= Canadian Coalition for Seniors' Mental Health



## *NET Grant: Family Caregiving in Palliative and End-of-life Care*

*Team Leader: Dr. Kelli Stajduhar*

**F**or a new investigator just starting out, there's no better support system than a team.

That's certainly been Dr. Kelli Stajduhar's experience. Dr. Stajduhar, an assistant professor in the School of Nursing at the University of Victoria, was the co-lead (with McGill University's Robin Cohen) in this NET. But, while being the leader, she was also among the most junior members of the team. And the mentorship opportunities she found on her team have propelled her career forward in a way that wouldn't have been possible without that support.

"It has been phenomenal for me in terms of mentorship," she says. "The senior scientists were more than generous."

Team meetings, she said, were used as an opportunity for proposal review, which, Dr. Stajduhar says, translated into success at the funding table.

"I would give a review of my proposal and they would tear it apart. It was like a grants panel," she says. "And all of the grants I've applied for have been funded. And I know of at least three of the team who have been successful in the open grant competition who might not have been otherwise."

One of those funded grants is a review of Canada's Compassionate Care Benefit. Dr. Stajduhar is particularly proud of this project because of its potential to affect national policy. The researchers have involved Human Resources and Skills Development Canada from the beginning, which has enabled them to make recommendations to the department as the research progresses.

This ability to affect policy, to affect the health-care system, is important to Dr. Stajduhar.



"I came to academia in 2004, after working in the health system," she says. "And, to be honest, I wasn't keen on academia because I didn't see the applied relevance of the funded research. When research is funded by taxpayers, we should ensure that what we're doing has some impact on Canadians."

That's been the appeal of her work in palliative and end-of-life care.

"One thing is certain – we're all going to die and someone is going to have to care for you," she says. "Our program is about helping people give care without compromising their own health – and to understand that it's OK if they don't want to be a caregiver."

For instance, when Dr. Stajduhar first started working in this area, there was a strong emphasis on dying at home – it was the "gold standard", she says. But when Dr. Stajduhar talked to the family members who were responsible for caregiving, she found that many of them were not as convinced of its value. Dr. Stajduhar was able to talk about her findings with her local health authority – and, as a result, they opened up 10 more palliative care beds.

"I know it's not just my work, but people are starting to talk about palliative care differently," she says. And that, to her, is what makes academic research such a good place to be. 🍁



### HIGHLIGHTS

#### Capacity Building:

1. Numerous trainees involved in the NET received awards, including fellowships and scholarships and further research funding. They participated in meetings and conferences and published papers in peer-reviewed journals.

#### Research Advancement:

2. Team members received many additional research grants totalling more than \$2M towards advancing research in this area. Granting bodies included CIHR, the Canadian Foundation for Women's Health, the National Cancer Institute of Canada, the Michael Smith Foundation for Health Research and the Social Sciences and Humanities Research Council of Canada.

#### Knowledge Transfer and Exchange:

3. The team laid significant groundwork to disseminate results for uptake into the health services and policy arena. Most notably, a communications consultant was engaged to assist with media training, prepare executive summaries, press releases and advise on dissemination strategies.
4. Several of the projects were featured in major newspapers across the country (e.g., Globe and Mail, Vancouver Sun, Montreal Gazette) and NET members have done radio and TV interviews, including an interview on the CBC national news.
5. Team members are involved in the National Steering Committee of the Canadian Hospice Palliative Care Association. This committee's focus is on family caregiver issues and is actively engaging both Health Canada and Human Resources and Development Canada in research evaluating the Compassionate Care Benefit.
6. The NET website ([www.coag.uvic.ca/eolcare](http://www.coag.uvic.ca/eolcare)) provides a useful venue for dissemination of findings and information about its research and family caregiving issues in both English and French. The team has also produced several reports for health authorities and the public.

7. Team members have published multiple articles in peer-reviewed journals and made presentations to a wide range of audiences in Canada and internationally.

#### Team members:

**Kelli Stajduhar**, PhD, University of Victoria

**Robin Cohen**, PhD, McGill University

**Daren Heyland**, MD, Queen's University

**Priscilla Koop**, PhD, University of Alberta

**Allison Williams**, PhD, McMaster University

**Mary-Ellen Macdonald**, PhD, McGill University

#### For more information:

[www.coag.uvic.ca/eolcare/kelli\\_stajduhar.htm](http://www.coag.uvic.ca/eolcare/kelli_stajduhar.htm)





**NET Grant: Team for Individualizing Pharmacotherapy in Primary Care for Seniors (TIPPS)  
Team Lead - Dr. Lisa Dolovich**

Lisa Dolovich thought her research team was focusing on medication use in seniors. Little did she know that the Team for Individualizing Pharmacotherapy in Primary Care for Seniors, or TIPPS, would actually turn out to be a laboratory for best practices in interdisciplinary team research.

The team, centred at McMaster University, received a NET grant to examine a wide range of issues related to seniors and their medications.

Their work had many positive results, including data supporting the placement of pharmacists in family physicians' offices and the development of prompts for physicians to remind them that older adults don't clear drugs through their kidneys as efficiently as younger people, meaning they may need lower dosages of some medications.

"We really learned a lot about patients' experiences in taking medication and what might be important in developing strategies for medication adherence," says Dr. Dolovich, an associate professor in the Department of Family Medicine at McMaster.

But their work also advanced the science of interdisciplinary research, says Dr. Dolovich. The team's research coordinator, Kalpana Nair, ended up pursuing her PhD thesis on the functioning of interdisciplinary teams. According to Dr. Dolovich, the title of the initial article published on this research says it all: *It's All About Relationships*.


The research found that the decision to conduct interdisciplinary research is highly influenced by interpersonal and relationship-related factors, and that most researchers preferred to engage in interdisciplinary research with individuals with whom they had already established professional relationships.



This is borne out by Dr. Dolovich's experience. At the beginning, her team was made up of researchers from McMaster, something about which the group received some criticism. And while the team expanded to develop close collaborations with people from other institutions, Dr. Dolovich says that having the same institutional home was extremely important at the beginning of its work.

"We made a conscious decision to be locally focused," she says. "It was hard enough developing relationships among people who had not routinely worked together before when we all came from one institution. Bringing in people from farther afield would be a lot to take on."

One of the biggest challenges, Dr. Dolovich says, was learning to speak the language of people from other disciplines. Now, having learned to successfully speak with one another, the team members will be able to continue the process, having received further CIHR funding.

"We think there's such a need to look at drug safety and effectiveness. It's very important, especially in older adults," Dr. Dolovich says. "There's also so much to learn about using technology to optimize medication use. For instance, we've looked at using electronic health records to improve diabetes and cardiovascular care, but there's so much more to do." 



## HIGHLIGHTS

### Capacity Building:

1. In addition to the successful training of students across a number of disciplines, the team has subsequently received a \$1.8M CIHR Strategic Training Initiative in Health Research (STIHR) grant, entitled 'Choosing, Using and Losing Medications in Older Adults: A Research Training Program Bridging Biosciences, Clinical, Population Health and Health Policy Research.'

### Research Advancement:

2. The TIPPS team received external funding (\$24,377,077) to conduct a total of 66 studies during the timeframe of the CIHR NET grant.

### Knowledge Transfer and Exchange:

3. Publications in peer-reviewed journals focused on the practice implications of the team's research including:
  - integrating pharmacists into family physician practices;
  - enhanced medication use as part of interventions to improve chronic disease management;
  - better pain management in long term care;
  - patients' perspectives on using medications, and
  - understanding how family physicians approach prescribing insulin to patients.
4. The project team developed a formal network to enable connection and collaboration among researchers, patients, family physicians, community pharmacists and others interested in improving medication use in primary care for older adults. This TIPPS Network currently includes 405 primary care physicians, 95 community pharmacists, 61 nurses and 72 patients in the Hamilton-Toronto-Niagara region. Interested parties in Canada and internationally receive the TIPPS Newsletter and can share views on the TIPPS website.

### Team members:

**Lisa Dolovich**, PharmD, McMaster University  
**Gina Agarwal**, MBBS, McMaster University  
**Chris Butler**, MD, McMaster University  
**Anne Holbrook**, MD, McMaster University  
**Sharon Kaasalainen**, PhD, McMaster University  
**Janusz Kaczorowski**, PhD, McMaster University  
**Mitchell Levine**, MD, McMaster University  
**Alexandra Papaioannou**, MD, McMaster University  
**Lehana Thabane**, PhD, McMaster University

### For more information:

[www.tippsnetwork.ca/lisa\\_dolovich.php](http://www.tippsnetwork.ca/lisa_dolovich.php)



*NET Grant: Implementation and Evaluation of a Comprehensive Pain Assessment and Treatment Program for Seniors*  
Team Leader: Dr. Thomas Hadjistavropoulos

Most researchers note with pride the academic journals in which their articles appear. The University of Regina's Thomas Hadjistavropoulos does the same – but he also can direct you to Amazon.com, where his most recent publication is available – and accessible – to anyone.

Psychology professor Dr. Hadjistavropoulos, together with fellow psychologist Dr. Heather Hadjistavropoulos, is co-editor of *Pain Management for Older Adults: A Self-help Guide*. He and his colleagues based the book on work they conducted as part of their NET.

The book's publication is the most public manifestation of the team's success. But Dr. Hadjistavropoulos is equally proud of his team's other accomplishments. One study the team conducted, for instance, required nurses in long-term care facilities to complete pain assessment checklists several times a week for their elderly patients with dementia. The researchers found, not surprisingly, that regular completion of the checklists increased the use of pain medication, helping address the undertreatment of pain among seniors with dementia. Nurses also reported that the incidence of pain-related behaviours was reduced among these patients. Importantly, the researchers found that completing the checklist also reduced stress among the nurses, possibly due to calmer patients and fewer behavioural disturbances, but also to nurses' having less uncertainty when assessing pain among these patients.

Another significant accomplishment, says Dr. Hadjistavropoulos, was the development of consensus recommendations on assessing pain in older patients. These recommendations, published in the *Clinical Journal of Pain* and signed by some 25 of the world's major pain



experts, address the physical, psychological, emotional and other aspects of pain. Now, members of the team are planning to take these and other related consensus recommendations to major centres across Canada to seek reactions from physicians, nurses and administrators.

The impressive results the team has achieved, Dr. Hadjistavropoulos says, are a direct result of the team-based funding it received from CIHR-IA.

"Pain is such a complex experience, it has to be addressed from a multidisciplinary standpoint," he says. "As a psychologist, I can't look at the physical aspects of pain on my own. I need to collaborate with nurses, physicians, physical therapists, etc. It's a must."

And, thanks to the widespread attention this innovative funding model received, the team was able to form links with researchers from across Canada.

"I feel now I have a network of collaborators in several parts of Canada that makes my work much, much easier," Dr. Hadjistavropoulos says.

The NET grant has had other benefits as well. Dr. Hadjistavropoulos had hoped that his university would establish a gerontology research centre – a first for Saskatchewan – within the grant's five-year lifespan. The university was so impressed by the proposals from Dr. Hadjistavropoulos and members of his team, however, that it



established the centre in the grant's first year. And, in spring 2008, members of the team, along with additional co-investigators, received one of the largest provincial grants ever awarded in Saskatchewan, to study quality-of-life issues among older adults in long-term care, including pain. This is evidence, Dr. Hadjistavropoulos says, of how success breeds success. 🍁

### HIGHLIGHTS

#### Capacity Building:

1. Several of the trainees from this team received funding and completed theses and dissertations related to the NET grant. Most of these trainees are also co-authors of NET-related publications.

#### Research Advancement:

2. As a direct result of the NET, the University of Regina established the first and only gerontology research centre in the province of Saskatchewan. The Centre on Aging and Health is now funded by the University's central operating budget. In addition to working with the community and facilitating research in aging and health, the Centre has founded the only master's degree program in gerontology in Saskatchewan.
3. Team members have expanded collaborative networks and generated new funding, including a \$2.4M grant from the Saskatchewan Health Research Foundation entitled 'Research and Community Alliance for Quality of Life in Long Term Care'.

#### Knowledge Transfer and Exchange:

4. Authoritative consensus research papers discussing the assessment and management of pain in older adults were published in major journals, in addition to multiple articles in peer-reviewed journals and conference presentations at both national and international meetings.
5. Practical and useful publications directed toward seniors and health professionals were important elements of this team's knowledge transfer and exchange. One example of this is a self-help book for older persons suffering from chronic pain.

#### Team members:

**Thomas Hadjistavropoulos**, PhD, University of Regina

**David Malloy**, PhD, University of Regina

**Michael MacLean**, PhD, University of Regina

**Heather Hadjistavropoulos**, PhD, University of Regina

**Robert McCulloch**, PhD, Saskatchewan Institute of Applied Technology

**Ken Craig**, PhD, University of British Columbia

**Romayne Gallagher**, MD, University of British Columbia\*

**Lynn Beattie**, MD, University of British Columbia\*

**Lisa Lix**, PhD, University of Saskatchewan\*

**Ron Martin**, PhD, University of Regina\*

**Liz Harrison**, PhD, University of Saskatchewan\*

**Sandra Le Fort**, PhD, Memorial University of Newfoundland\*

\* Added as consultants/collaborators for different aspects of the project

#### For more information:

[http://uregina.ca/hadjistt/NET\\_Index.htm](http://uregina.ca/hadjistt/NET_Index.htm)



*NET Grant: Transitions and Dementia – Bridging Gaps in Service Provision*  
*Team Leader: Dr. Neil Drummond*

**H**e may be a transplanted Scot, but Dr. Neil Drummond has taken to research in a Canadian context, with all the challenges that implies.

“Distance, time zones – these are the sort of challenges Canadians are pretty adept at dealing with,” says the University of Calgary researcher. “It pretty much comes with the country.”

Dr. Drummond’s NET was composed of dementia researchers in Calgary, Toronto, Vancouver and Ottawa. And that made it challenging.

“Research is a social activity,” says Dr. Drummond. “It happens because people talk to each other, trust each other. You need time to build relationships – time and contact.”

The team has focused on the nature of transitions in dementia care, because these “are where people fall through the cracks,” Dr. Drummond says.

Transitions occur throughout the dementia experience, beginning when a person goes from the stage of realizing that something isn’t right, to having a firm diagnosis of dementia. Other transitions happen around changes in caregivers, the type of care given, the place care is given (in the family doctor’s office, a long-term care facility, etc.) or the organization providing care – right up to the point of entry into a palliative care program. And while change is hard for all of us, it’s particularly difficult for patients with dementia, according to Dr. Drummond, because they have a hard time processing what’s going on around them.

Dr. Drummond would like to see the results of the team’s work translated into better care for people with dementia – but, he says, it takes a



photo: JF Photography

long time to translate research into practice. Still, it is happening.

For instance, the team conducted one study that showed that family doctors, overall, do a very good job caring for their patients with dementia, but aren’t as good at dealing with issues around driving or supporting caregivers. The findings of that study have informed the development of new guidelines in the 3rd Canadian Consensus Conference on the Diagnosis and Treatment of Dementia.

The team has just been awarded a joint CIHR/ Alberta Heritage Foundation for Medical Research (AHFMR) grant to continue its work with a three-year cohort study. Team members will identify people recently diagnosed with dementia and follow them for at least three years, and hopefully beyond that, to see how they are experiencing transitions. And the team has added an international dimension, working with colleagues in the United Kingdom, Europe, the United States and Australia to see if they can learn from each other about how best to manage transitions in dementia care.

And, says Dr. Drummond, the impact of the team’s work isn’t limited solely to dementia care.

“Our focus is dementia, but much of our work can apply to a whole range of diseases and conditions,” he says. 🍁



## HIGHLIGHTS

### Capacity Building:

1. This unique team provided transdisciplinary research training with a focus on gerontology for graduate students (MSc and PhD), family medicine residents and summer students. Additional funding from CIHR, AHFMR and the University of Calgary supported these endeavours.

### Research Advancements:

2. The team developed programs of theoretical and empirical research including:
  - a. expectations related to dementia and their influence on professional and lay behaviours, attitudes and outcomes;
  - b. cultural influences on the pathway to a diagnosis of dementia (funded by the Social Sciences and Humanities Research Council -SSHRC);
  - c. the management of dementia by family physicians;
  - d. case management for dementia; and
  - e. Canadian Dementia Care and Health Outcomes Cohort Study (funded by CIHR and the Alberta Heritage Foundation for Medical Research).

### Knowledge Transfer and Exchange:

3. By engaging researchers with clinicians and policy makers, as well as representatives from local Alzheimer's Societies, this team has established a highly functional and continuing multi-disciplinary, multi-centred (Calgary, Edmonton, Vancouver, Ottawa, St. Catherine's and Toronto) program on transitions in care for dementia.
4. The team's research led to the development of the Banff Collaboration, an international (Canada, United States, United Kingdom, Netherlands, Belgium, Germany, Australia) group of researchers in dementia care, which is advancing a slate of multi-national collaborative studies.
5. Contributing to the Third Canadian Consensus Conference on the Diagnosis and Treatment of

Dementia and influencing caregiver training and support programs held by Alzheimer's Societies were significant outputs of this team. From its inception, the team pursued active engagement of community, hospital and regional health policy makers in the research process in order to influence care pathways and system development. The team also disseminated their research findings through scientific meetings and peer-reviewed journals.

### Team members:

**Neil Drummond**, PhD, University of Calgary  
**Jean Kozak**, PhD, University of British Columbia  
**Gillian Surrie**, PhD, University of Calgary  
**James Silvius**, MD, University of Calgary  
**William Dalziel**, MD, University of Ottawa  
**Carole Cohen**, MD, University of Toronto  
**Marlene Reimer**, PhD, University of Calgary  
**Cam Donaldson**, PhD, University of Calgary  
**Barbara Schulman**, Sisters of Charity of Ottawa Health Services  
**Barbara Howson**, Calgary Health Region  
**Dorothy Pringle**, PhD, University of Toronto  
**Michael Eliasziw**, PhD, University of Calgary  
**Nick Pimlott**, MD, University of Toronto

### For more information:

[www.ucalgary.ca/dementianet/research.html](http://www.ucalgary.ca/dementianet/research.html)



*NET Grant: Development and Evaluation of Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas*  
Team Leader: Dr. Debra Morgan

One quarter of Canada's seniors live in rural areas. And when they need care for dementia, it usually isn't available nearby. They and their families have to travel, often multiple times, to where the care is.



The University of Saskatchewan's Dr. Debra Morgan is leading a team that, with support from a CIHR NET grant and other funding sources, has developed a new and better way to provide care to these seniors. The team established the Rural and Remote Memory Clinic in Saskatoon as a "one-stop shop" where seniors with dementia can see all the specialists they need in a one-day visit, from neurologists to physical therapists. At the end of the day, they meet with the entire team to learn the results of their assessments and get recommendations for treatment.

"People have commented on this," says Dr. Morgan. "They like that the process is integrated and coordinated, not just a raft of specialists who never talk to each other."

After five years of practice and rigorous evaluation, the team is in discussions with the provincial and regional health authorities to make the clinic a permanent feature of the Saskatchewan health care environment.

This, says Dr. Morgan, is an indication of the clinic's success; she calls it "one of our legacies". But, she says, the team was also a success, particularly for the students who joined as part of their training.

"This is a living example of inter-professional collaboration, clinical care and interdisciplinary research," she says. "The students have been able to participate in collaborative patient-centred care and to see how research is applied in practice."

The clinic has evolved over time to adapt to new evidence. For instance, the team evaluated whether follow-up by Telehealth was as effective as in-person follow-up. Four years of carefully randomizing patients into one of the two methods of follow-up produced data that indicate that the two work equally well, and that patients and their families appreciate the convenience of Telehealth. So now, follow-up by Telehealth is part of the clinic's protocol.

Part of the project's success, Dr. Morgan says, has been the involvement of decision makers from the very beginning. Prior to implementing the clinic, the team travelled to 14 rural and remote communities to consult with local health-care providers about their needs and the feasibility of the team's plans for the clinic. With their input, the team was able to ensure their research direction was relevant to users' needs. And that relevance, in turn, has meant that health authorities are receptive to "adopting" the clinic.

Indeed, if the province and the regional health authorities agree to make the clinic into a regional program, its future as far as patient assessment and treatment is concerned would be assured. But Dr. Morgan and her team also want to ensure that the research aspect of the clinic continues. To that end, she has applied for, and received, an Applied Chair in Health Services and Policy Research from CIHR's Institute of Health Services and Policy Research. With a 28-person Expert Advisory Committee as a resource, the team will be able to ensure that its research



direction continues to be relevant to the needs of these decision makers.

“We’ve learned a lot, but there’s more that we can do and want to do,” she says. 🍁

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### HIGHLIGHTS

#### Capacity Building:

1. Five junior faculty have joined the original team and have been mentored by senior team members, including Dr. Morgan.
2. Six medical/physical therapy students have completed related summer projects funded by the College of Medicine.
3. Twenty clinical psychology students have completed placements with the Rural and Remote Memory Clinic and many others have participated in interdisciplinary education, practice, and research in the weekly clinic and other NET activities (e.g., monthly research rounds and annual retreats attended by 20-25 co-investigators, research personnel, and students).
4. Eight trainees, covering four disciplines, have published peer-reviewed papers from their research with the team. With the support of the new Applied Chair in Health Services and Policy Research (2009-2014), additional trainees are being recruited.
5. A post doctoral fellow joined the team in 2009 to examine strategies to improve detection and diagnosis of dementia in primary care for rural and remote seniors.

#### Research Advancement:

6. Building on the results of the CIHR New Emerging Team grant, Dr. Morgan was awarded an Applied Chair in Health Services & Policy Research, funded jointly by the CIHR Institute of Health Services & Policy Research and the Saskatchewan Health Research Foundation in 2009. This five-year \$925,000 program will focus on ‘Healthcare Delivery Across the Continuum for Rural and Remote Seniors with Dementia’.

#### Knowledge Transfer and Exchange:

7. Stakeholders were involved in all stages of the research process. For example, the team travelled to 14 rural and remote communities to consult with community-based health care providers prior to implementing the Rural and Remote Memory Clinic. A Decision Maker Advisory Council, including representation from a wide range of stakeholders such as front-line caregivers, family members, administrators, government, not-for-profit organizations, and regional health authority representatives, was formed for the Applied Chair research program.
8. The team’s evidence that one-stop interprofessional assessment supplemented by telehealth was both a feasible and an acceptable model of care, led to recognition from the Saskatoon Health Region, the Alzheimer Society of Saskatchewan, and members of the Saskatchewan Legislative Assembly. In 2009, the team submitted a proposal to Saskatchewan Health to provide ongoing funding for the Rural and Remote Memory Clinic.
9. The team also published many articles in peer-reviewed journals and made multiple presentations to a wide range of audiences.

#### Team members:

**Debra G. Morgan**, PhD, University of Saskatchewan  
**Margaret Crossley**, PhD, University of Saskatchewan  
**Andrew Kirk**, MD, University of Saskatchewan  
**Carl D’Arcy**, PhD, University of Saskatchewan  
**Norma J. Stewart**, PhD, University of Saskatchewan  
**Jay Biem**, MD, Lakeshore General Hospital, Montreal  
**Dorothy Forbes**, PhD, University of Western Ontario  
**Sheri Harder**, MD, Loma Linda Medical Center , California  
**Jenny Basran**, MD, University of Saskatchewan  
**Vanina Dal Bello-Haas**, PhD, University of Saskatchewan  
**Lesley McBain**, PhD, First Nations University of Canada  
**Megan O’Connell**, PhD, University of Saskatchewan

#### For more information:

[www.cchsa-ccssma.usask.ca/ruraldementiacare/memoryclinic.htm](http://www.cchsa-ccssma.usask.ca/ruraldementiacare/memoryclinic.htm)





## *NET Grant: Health and Aging in Rural Environments*

*Team Leader: Dr. Pamela Hawranik*

As an associate professor in the Faculty of Nursing at the University of Manitoba, Dr. Pamela Hawranik is naturally interested in the provision of health services in different situations. But without a pharmacist on her team, she wouldn't have looked so intensely at the problems older adults in rural areas have with their medications.

"We probably would have identified some of the links without being part of a team, but we likely would not have taken the next steps to look at these things more closely," says Dr. Hawranik.

The NET, based at the University of Manitoba, brought together Dr. Hawranik with her nursing experience, sociologist Dr. Laurel Strain, pharmacist Dr. Ruby Grymonpre and physician and geriatrician Dr. Phil St. John. Their goal was to examine the differences in health services and utilization among older adults living in various rural areas in order to determine the issues and obstacles in delivering services both to these rural seniors and to their caregivers. Finally, the team wanted to assess new health promotion strategies targeting rural seniors.

Their goals were ambitious, Dr. Hawranik says, and they likely couldn't have been achieved by each researcher working independently.

"It helped to take the issues further," she says. "It reduced the time we needed to explore a larger number of issues."

And there certainly was no shortage of issues to explore. Older adults in rural settings have fewer services available to them, including the services that would let them stay in their homes longer. And when they have to move to more supportive housing, they often have to leave their communities. Weather and long distances



Photo: Blaise MacMullin

mean that it's difficult for home-care workers to get to their clients, and hard for the seniors to travel to pick up prescriptions or see health-care professionals.

One of the most interesting findings of the team's work was that health regions are responding to the needs of their seniors with innovative strategies, such as mobile crisis vans that make regular rounds of towns and villages or travelling health fairs, where health care workers set up information booths at community centres or town halls. Dr. Hawranik continues to work with her colleagues to test some of these innovations more widely, to develop the evidence to help disseminate regional ingenuity further.

While all the team members had known each other before they began work, they had never worked as a team before. So the first year of their five-year funding was spent, Dr. Hawranik says, on getting to know each other better.

"It took a while to get into the multi-disciplinary frame of mind," she says. "It's so important that you be comfortable with each other, and trust that each other will do the work they need to do." 🍁



### HIGHLIGHTS

#### Capacity Building:

1. The NET team funding allowed the establishment of an interdisciplinary team based in two Prairie Provinces whose primary focus is on health and aging in rural environments.
2. The team provided rural aging training opportunities for master's and doctoral students at both the University of Manitoba and the University of Alberta, in addition to mentorship and support for new faculty members in aging at both universities.

#### Research Advancement:

3. The NET led to the development of research programs, funded by CIHR and Alberta Heritage Foundation for Medical Research, examining variations in the health of rural older adults and their use of health services. Challenges and barriers related to rural service delivery to older adults and their unpaid caregivers were identified by the research, which in turn led to innovative strategies for promoting the health and well-being of this population.

#### Knowledge Transfer and Exchange:

4. The team prepared a comprehensive monograph, titled, *Aging in Rural Canada: An Annotated Bibliography, 1985-2005*. This extensive document is a valuable resource for researchers interested in rural aging and is available without charge, in both print and online formats ([www.aging.ualberta.ca/Aging%20in%20Rural%20Canada\\_for%20website.pdf](http://www.aging.ualberta.ca/Aging%20in%20Rural%20Canada_for%20website.pdf)).
5. Findings from this research were published as peer-reviewed scientific papers and in community newsletters; presentations were given at local, national and international conferences.

#### Team members:

**Pamela Hawranik**, PhD, University of Manitoba

**Laurel Strain**, PhD, University of Alberta

**Philip St. John**, MD, University of Manitoba

**Ruby Grymonpre**, PharmD, University of Manitoba

**Alex Clark**, PhD, University of Alberta

**Bonnie Dobbs**, PhD, University of Alberta

#### For more information contact

Pamela Hawranik at:

[phawranik@athabascau.ca](mailto:phawranik@athabascau.ca)



**NET Grant: Canadian Driving Research Initiative for Vehicular Safety in the Elderly (CanDRIVE)  
Team Leader: Dr. Malcolm Man-Son-Hing**

With the creation of CIHR in 2000, the definitions of what constituted health research broadened – and Dr. Malcolm Man-Son-Hing was there to take advantage of this broadening.

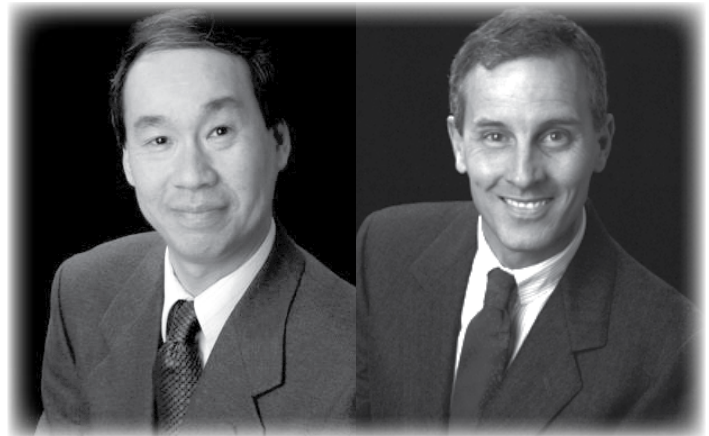
“The way medical research was defined in the past, this never would have been funded,” says the Élisabeth Bruyère Research Institute scientist.

“This” refers to CanDRIVE NET. And with the NET grant, Dr. Man-Son-Hing and his team have demonstrated beyond a shadow of a doubt that driving, for seniors, is all about health – the health conditions that interfere with their ability to drive.

The results speak for themselves. CanDRIVE is responsible for policies on driving and dementia developed by the Canadian Council of Motor Transport Administration (CCMTA), an umbrella organization comprising all provincial and territorial Ministries of Transport as well as Transport Canada, the Canadian Medical Association (CMA) and the Canadian Consensus Conference on Dementia. CanDRIVE also participated in developing the 7th edition of *Determining Medical Fitness to Operate Motor Vehicles*, a CMA publication that physicians across Canada use to determine when their patients should no longer be driving.

“We have provided more explicit guidance in an area where there previously was little guidance,” says Dr. Man-Son-Hing. “We are in the process of enabling health care professionals to protect the safety and quality of life of older drivers.”

It’s not always the case that research findings translate so dramatically into policies and guidelines that are actually used. Dr. Man-Son-Hing attributes his team’s success to the NET



funding. First, it allowed the team to bring together a network of researchers from across Canada. This network consisted of researchers who, while they all shared an interest in driving and older adults, had no way of developing a coordinated, systematized approach.

Second, having the team infrastructure allowed the development of partnerships, with seniors’ associations, Ministries of Transport, safety councils and others. The partnerships provided a kind of “reality check”, helping to ensure that the research undertaken through the NET was relevant.

These partnerships will also serve the team well as it moves into its next phase. The researchers have been awarded a CIHR Team Grant that will be, Dr. Man-Son-Hing says, the “definitive study of older drivers”.

“We are going to follow one thousand older drivers for five years,” he says. “We will be able to learn what, exactly, makes older people safe or unsafe on the road.”

And, he adds, because of the partnerships the team has already established with seniors’ organizations, these organizations will feel like partners in the new prospective cohort study – and not its targets. 🍁



## HIGHLIGHTS

### Capacity Building:

1. There have been numerous trainees involved in the CanDRIVE research program from an array of disciplines, including occupational therapy, epidemiology, psychology, and geriatric medicine. Many have continued on with subsequent research in the domain of driving and aging research, and have created scales, tools, workshops, and related programs in their advanced academic work.

### Research Advancement:

2. The success of the CanDRIVE project earned the team a \$5.5M Team Grant from CIHR entitled 'Driving in Older Persons (CanDRIVE II)'. The objective of CanDRIVE II is to conduct innovative, methodologically sound, practical clinical research that can be translated into policy renewal and improved clinical practice, and that will help maximize the health and independence of older adults.

### Knowledge Transfer and Exchange:

3. CanDRIVE members sit on numerous medical advisory committees at different Ministries of Transportation and routinely provide advice to the Canadian Council of Motor Transport Administration (CCMTA), an umbrella organization comprised of all provincial and territorial Ministries of Transport in addition to Transport Canada.
4. CanDRIVE contributed to the development of:
  - a Driving Dementia Toolkit;
  - an Older Driver Resource Guide for Physicians;
  - Canadian Medical Association's 7th edition of *Determining Medical Fitness to Operate Motor Vehicles*;
  - the Canadian Consensus Conference on Dementia – Driving Section;
  - many national and international workshops on assessing medical fitness to drive.
5. During its NET grant funding, CanDRIVE researchers published 89 peer-reviewed papers and made 181 local, national and international scientific presentations.

### Team Members:

**Malcolm Man-Son-Hing**, MD, Élisabeth Bruyère Research Institute, Ottawa

**Shawn Marshall**, MD, Ottawa Hospital

**Frank Molnar**, MD, Élisabeth Bruyère Research Institute, Ottawa

**Ian Stiell**, MD, Ottawa Health Research Institute

**Keith Wilson**, PhD, Ottawa Hospital

**Cassandra Crowder**, MA, Coordinator, Élisabeth Bruyère Research Institute, Ottawa

### For more information:

[www.candrive.ca](http://www.candrive.ca)



## *NET Grant: End-of-Life Care and Vulnerable Populations*

*Team Co-Leaders: Dr. Harvey Chochinov and Dr. Deborah Stienstra*

Imagine two circles. In one, the social scientists; in the other, the health scientists. Now imagine they overlap just the smallest bit.

That's where you'll find Harvey Chochinov and Deborah Stienstra.

Their NET is tackling the difficult, but important, issue of vulnerability at the end of life. Team members have brought together their expertise in palliative care, disability studies, education, anthropology, among others, to better understand how vulnerable people experience end of life and the unique challenges and barriers they face in getting the care they need.

The learning curve involved in bringing all of these academic areas together, says Dr. Chochinov, was "extraordinarily steep."

And, beyond the challenge of marrying different academic disciplines was the yet-greater challenge of integrating health-care providers and people with disabilities – two groups whose history incorporates more distrust and suspicion than cooperation.

Says Dr. Stienstra, "We had to create a space for conversations to occur, to sit beside each other."

Dr. Chochinov holds the Canada Research Chair in Palliative Care. He is a Distinguished Professor of Psychiatry at the University of Manitoba and a member of CIHR's Governing Council. Dr. Stienstra is a Professor in Disability Studies at the University of Manitoba.

As a social scientist, Dr. Stienstra says, she isn't part of the traditional CIHR constituency. But dealing with the tensions that arise from different



disciplines coming together was, she says, "transformative, productive, energizing, exciting. It's changed how we practice, how we think."

"It's much easier to talk about teams than it is to actually live them," says Dr. Chochinov. But he and Dr. Stienstra took it seriously right from the start.

The key ingredient for making a team work?

"It takes a great deal of humility," says Dr. Chochinov. "Humility and patience. Being able to say that my way isn't necessarily the best way allows an opening for learning new perspectives and approaches."

Their approach – lots of time and space for conversation, lots of willingness to accept others' points of view – has borne fruit, says Dr. Stienstra.

"We have created an unprecedented dialogue between the disability and palliative care communities," she says. "These issues were not on the radar of the palliative care community; they thought of disability as a small, marginal issue. But if you want to know how to provide good care to all people at end-of-life, improving care for people with disabilities is a good way forward."

"We learned a lot about the potency of attitudes in the experience of patienthood," adds Dr. Chochinov. "Attitudes are shaped by existing



biases and assumptions about people with disabilities.”

Based on the experience of the NET, the team is working to advance its research agenda. It has received additional CIHR funding to look at dignity at the end of life among people with diseases other than cancer. It has also submitted a letter of intent to the Social Sciences and Humanities Research Council for a major collaborative research initiative grant on vulnerability. And it is involved in a knowledge translation project with the Winnipeg Regional Health Authority to help ensure dignity and compassion in end-of-life care.

Best of all, says Dr. Stienstra, “We still like working together!” 

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## HIGHLIGHTS

### Capacity Building:

1. A unique multidisciplinary research team was established, with representation from medicine, palliative care, disability studies, ethics and education. The team focused on the issues of disability, vulnerability and palliative, end-of-life care.
2. Trainees included a cadre of students ranging from undergraduate to doctoral, and those at the post doctoral stage of their careers. The training objective was an examination of various dimensions of disability or vulnerability as it pertained to considerations of palliative, end-of-life care.

### Research Advancement:

3. The team developed a rich and diverse program of research examining all facets of disability, vulnerability and palliative, end-of-life care. This program spanned theoretical work and model generation to both qualitative and quantitative studies examining the interface between disability and palliative, end-of-life care.

4. The team’s research and knowledge exchange activities were funded by CIHR, the Canadian Partnership Against Cancer, the Winnipeg Regional Health Authority and the Cancer Care Manitoba Foundation.

### Knowledge Transfer and Exchange:

5. A unique body of knowledge products was generated, including the Canadian Virtual Hospice ([www.virtualhospice.com](http://www.virtualhospice.com)), a resource for professionals, people at end-of-life and caregivers; and peer-reviewed publications, with a special issue in the Journal of Palliative Care dedicated to vulnerability, disability and end-of-life care.
6. Bridges between the palliative care community and national disability communities were developed, engaging the latter in all aspects of the research including study initiatives, design considerations, participant recruitment strategies, creation of knowledge products and knowledge translation activities.

### Team Members:

**Harvey M Chochinov**, MD, PhD, University of Manitoba

**Deborah Stienstra**, PhD, University of Manitoba

**Zana M Lutfiyya**, PhD, University of Manitoba

**Joe Kaufert**, PhD, University of Manitoba

**Heidi Janz**, PhD, University of Alberta

**Jim Derksen**, LLD (honoris causa), disability community consultant

### For more information:

[www.virtualhospice.ca](http://www.virtualhospice.ca)



**NET Grant: Innovative Approaches to Optimising Balance and Mobility in Older Adults**  
**Team Leader: Dr. Brian Maki**

If you're a senior who is nervous about falling, then Dr. Brian Maki's your man.

Dr. Maki, who is the Director of the Centre for Studies in Aging at Sunnybrook Health Sciences Centre, has been leading a team of researchers focused on synthesizing their individual research results and making them available to Canadians.

Among the results of the NET's work are:

- the Sole Sensor®, a simple shoe insert that uses a small raised ridge around the outside of the insert to alert people when they're going off balance;
- a handrail that lights up when people come near to it, so that they can grab at it more rapidly and effectively when they are falling;
- improvements to the design of walkers that make it easier for people to recover balance when they start to fall by allowing them room to step sideways; and
- a "perturbation" platform that lets clinicians assess their older patients and train them to better recover their balance; work is in progress to develop an inexpensive version to facilitate widespread use in clinical practice.

All of these innovations derive from the basic knowledge that a critical factor in prevention of falling is the ability to respond effectively to losses of balance, usually by rapidly stepping or reaching out to grab an object for support. As people age, it is harder for them to execute the rapid movements that will let them recover their balance.

"Prior to 1995, there were very few studies of how aging affects these stepping and grasping reactions," says Dr. Maki. "Balance assessment and training programs really need to target these



reactions and improve ability to recover balance in real-life 'balance' situations."

Many of the researchers on Dr. Maki's team have been working in this area for many years – even decades – funded through individual operating grants.

"The basic premise of the team funding was to get more value from our basic research," Dr. Maki says. "We needed to bring in all the people who could contribute, including engineers, manufacturers, clinicians, and the people who use the products we develop. That's hard to do on a project-by-project basis."

The NET funding meant that the team could provide an infrastructure of support that wouldn't disappear when an individual project ended and that it could hire a research coordinator to bring all the different people and tasks together. Team funding also meant that the group was able to support graduate students and new investigators until they found their own sources of funding.

Now the team, with funding from the Canada Foundation for Innovation (CFI), is looking forward to continuing its work in a \$36M lab that's being built at the Toronto Rehabilitation Institute, due to be ready in 2010. The centrepiece of the lab is a large motion study platform, six metres in diameter, that can move or tilt in any direction. Mock-ups of realistic



living environments can be mounted on the platform and realistic scenes can be displayed on a surrounding screen by a virtual-reality system. The lab will also feature a “cold climate room” that will allow the team to continue its recent work of assessing the effect of cold climates on seniors’ mobility. And, Dr. Maki says, team members aren’t content to simply assess the problem – they want to help solve it, with easier-to-wear garments that can prevent hypothermia or provide cushioning in the event of a fall.

The team has been awarded a six-year CIHR Team Grant to continue its work, which means that, a few years down the road, seniors will likely be able to find innovative new products on the market to help them get around safely all year round. 🍁

### HIGHLIGHTS

#### Capacity Building:

1. The NET funding aided in support of four trainees who now hold faculty positions in universities in both Canada and the United States.

#### Research Advancement:

2. The team was subsequently awarded a six-year, \$1.5M CIHR Team Grant on the ‘Development, Testing and Knowledge Translation of Innovative Approaches to Optimize Gait and Balance in Older Adults’.

#### Knowledge Transfer and Exchange:

3. The team developed a proximity-triggered handrail cueing system with automatic attention capture (U.S. patent pending; provisional patent # 60/816,347), including initial research and development studies. A full-scale investigation of its effectiveness is currently underway and there is a tentative agreement to license the product to Hart Mobility, Division of Cyprus Hills Ltd; Mississauga, Ontario.

4. The SoleSensor Balance-Enhancing Insert (U.S. patent #6.237.256), conducted a successful clinical trial, and has also been licensed to Hart Mobility, who are manufacturing and marketing the inserts.
5. The team published multiple articles in peer-reviewed journals and made several academic and lay presentations, both on specific team projects and on the project overall.

#### Team members:

**Brian E. Maki**, PhD, University of Toronto

**Geoff R. Fernie**, PhD, University of Toronto

**Rory Fisher**, MD, University of Toronto

**Barbara Liu**, MD, University of Toronto

**William E. McIlroy**, PhD, University of Toronto

**Alex Mihailidis**, PhD, University of Toronto

**Gary Naglie**, MD, University of Toronto

**Stephen D. Perry**, PhD \*, Wilfrid Laurier University, Waterloo, Ontario

**Milos R. Popovic**, PhD, University of Toronto

**Jay Pratt**, PhD \*, University of Toronto

\* recruited subsequent to original grant application

#### For more information:

[sunnybrook.ca/research/?page=sri\\_proj\\_csia\\_collab\\_bmt\\_home](http://sunnybrook.ca/research/?page=sri_proj_csia_collab_bmt_home)





## *NET Grant: Development of Biological Implants for Joint Repair*

*Team Leader: Dr. Rita Kandel*

Taking on an entire generation's degenerating knees is not a task for just one person. That's why, when Dr. Rita Kandel of the Samuel Lunenfeld Research Institute at Mount Sinai Hospital started working toward developing a biological implant to repair knee joints, the first thing she did was assemble a team. Her team, supported by a NET grant, included a mechanical engineer, a materials engineer, a cell biologist, a veterinarian, a biophysicist and many others.

The team's implant combines cartilage engineered in the lab with a degradable porous biomaterial that functions like bone. When implanted, the recipient's own bone gradually grows through the porous holes. At the same time, the biomaterial biodegrades, leaving a functioning, natural joint. Once perfected, the implant will allow treatment at earlier stages of degeneration, reducing or delaying the need for joint replacement with a metal prosthesis and easing pressure on waiting lists. Because it is natural, not artificial, it will be tolerated better by the recipient and can remodel to the individual's needs. The biomaterial can be shaped and customized to fit each recipient's own knee, rather than using an "off-the-shelf" prosthesis. Further, once perfected, the technique can be applied to all joints – hips, shoulders and elbows, as well as knees.

And, says Dr. Kandel, the NET grant made it all possible.

"We never would have brought these people together without that kind of support," she says. The NET grant took the team to the animal-study stage to test it in focal defect repair; their results from this stage have led to another CIHR five-year team grant, during which they expect to move to developing the implant's use in humans. Now in their second year, Dr. Kandel says, the team fully expects to have a biological joint replacement ready for human use.



"Without this new team grant, our research would have been dead in its tracks," she says. "I was really scared."

Dr. Kandel recognizes that there are challenges to functioning as a team. For her, the main one was not having all team members in the same place.

"E-mail makes a huge difference," she says. "But there's nothing like being face-to-face, saying 'here's the data.'"

That's the one thing she would have changed if she could have – she would have had the team get together more often.

Nonetheless, she says, the fact that all her team members shared the same goal, and that all their individual projects were focused on this goal, was a key factor in their success.

"We each have our expertise," she says. "But we're all working toward the same goal."

Communication among all team members was also critical.

"You have to keep everyone in the loop, all the time, even if it's not their topic," she says. 🍁



### HIGHLIGHTS

#### Capacity Building:

1. Training that focused on cartilage biology enhanced Canadian research capacity among graduate students (MSc and PhD), post doctoral fellows and clinical orthopedics fellows, as well as among summer and thesis undergraduate students.

#### Research Advancement:

2. The NET funding led to the establishment of a multi-disciplinary, multi-centred (University of Toronto, University of Guelph, Samuel Lunenfeld Research Institute (Toronto), Ryerson University, and University of Waterloo) research team focusing on developing novel treatments for joint disease.
3. A broad and innovative program of research was developed that included biomaterial synthesis, cartilage biology, cartilage tissue repair, and formation of biphasic constructs to repair damaged articulating joints. The team was successful in acquiring additional funding through a 6 year CIHR Emerging Team Grant, and from the Canadian Arthritis Network, and the Natural Sciences and Engineering Council of Canada (NSERC).

#### Knowledge Transfer and Exchange:

4. The team's research has led to the development of a new therapeutic agent for osteoarthritis, which has been submitted for patent protection.
5. Knowledge transfer to inform program development, therapeutic practice, and individual Canadians was undertaken through team members' engagement with the Canadian Arthritis Network and local Arthritis Societies. Research findings have also been disseminated through scientific meetings and peer-reviewed scientific journals.

#### Team members:

**Rita Kandel**, MD, University of Toronto  
**Marc Grynepas**, PhD, University of Toronto  
**Mark Hurtig**, DVM, University of Guelph  
**Robert Pilliar**, PhD, University of Toronto  
**Ehsan Toyserkani**, PhD, University of Waterloo  
**Stephen D. Waldman**, PhD\*, Queen's University  
**Marcello Papini**, PhD\*, Ryerson University  
**Paul Zalzal**, MD\*, McMaster University  
**William Stanford**, PhD\*, University of Toronto  
**Alan Edward Gross**, PhD\*, Mount Sinai Hospital, Toronto  
**Lawrence White**, MD\*, University of Toronto  
**Kaan Erkorkmaz**, PhD\*, University of Waterloo

\* recruited subsequent to original grant application

#### For more information:

[www.mshri.on.ca/bestt/kandel.html](http://www.mshri.on.ca/bestt/kandel.html)



## *NET Grant: Health Impacts of Violence across the Lifespan*

*Team Leader: Dr. Harriet MacMillan*

**S**o what's a pediatrician and child psychiatrist doing leading a NET?

As it turns out, she's doing exactly the right thing. Because no matter where people are in their lifespan – children, youth, young and middle-aged or older adults – those experiencing violence have as much in common as they have differences, says Dr. Harriet MacMillan.

So when the opportunity arose, Dr. MacMillan, a professor of Psychiatry and Behavioural Neurosciences and Pediatrics at Hamilton's McMaster University, brought together researchers and trainees from a multitude of disciplines to put their combined efforts to work on a NET grant studying the Health Impacts of Violence across the Lifespan.

Dr. MacMillan, working with colleagues from McMaster University and the University of Toronto, had already been part of an initiative led by Dr. Christine Walsh, a colleague now at the University of Calgary, to develop an instrument to measure child maltreatment. The techniques and procedures they developed, as well as the lessons they learned, helped to inform the NET team's approach to measuring elder abuse.

"Elder abuse is the least developed area in terms of abuse across the lifespan," says Dr. MacMillan. "I think that, overall, we have gone through a time where the health of older persons has not received enough attention." That's what makes the CIHR's Institute of Aging so great, she adds!

The team had three goals: to clarify what is meant by abuse or violence toward older adults; to develop a valid and reliable questionnaire that reflects the team's concepts of elder abuse; and to determine the prevalence of elder abuse.



The team held a series of focus groups with older adults and caregivers to get a better sense of what they mean when they think of elder abuse.

"We heard from older people that, in addition, to what we think of as traditional areas of abuse – physical, verbal, emotional – we were also hearing about abuse from health professionals," Dr. MacMillan says. "It was described as a kind of medical neglect."

One of the objectives of the NET grant was to build research capacity, and that has been done. For instance, Dr. Walsh, who had previously focused on childhood experiences of violence during her graduate studies, is now Associate Professor of Social Work at the University of Calgary. She and other members of the NET have received a grant from the Alberta Heritage Foundation for Medical Research to further develop – and are now about to test – a questionnaire to assess the prevalence of elder abuse. This work began as part of Dr. MacMillan's team grant.

"Without this NET grant, Christine would probably not have had the opportunity to focus her career on elder abuse," says Dr. MacMillan. "That she has received additional funding from other sources is a clear indication of the success of the NET grant."

Dr. MacMillan is unequivocal about the benefit of the NET grant.



“Without this team funding, we would not have been able to bring together people not just from different disciplines, but different areas of violence research, to interact in this way,” she says. “In fact, I would never have become involved in this area of research – I would not have had the support or the resources to do so.” 🍁

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### HIGHLIGHTS

#### Capacity Building:

1. The NET funding brought together researchers and trainees from a variety of disciplines to combine efforts and perspectives in this unique examination of the health impacts of violence across the lifespan.

#### Research Advancement:

2. The research supported by the CIHR NET led to additional Alberta Heritage Foundation for Medical Research funding aimed at understanding the distribution and determinants of elder abuse. A new investigator at the time of the NET, Dr. Christine Walsh, is the principal investigator on the new grant.

#### Knowledge Transfer and Exchange:

3. The techniques and procedures developed by the team led to the construction of clinical prototypes to identify risk and protective factors, and to help health personnel accurately detect elder abuse.
4. The team published several papers in peer-reviewed journals, including the British Journal of Social Work and the Journal of Elder Abuse and Neglect.

#### Team members:

**Harriet MacMillan**, MD, McMaster University

**Jana Fear**, MLIS, South West Local Health Integration Network, Ontario

**Lynne Lohfeld**, PhD, McMaster University

**Christopher Patterson**, MD, McMaster University

**Jenny Ploeg**, PhD, McMaster University

**Christine Walsh**, MSW, University of Calgary

**Kim Eveleigh**, MSc, McMaster University

**Emily Vella**, PhD, McMaster University

**Michelle Webb**, BSc, McMaster University

#### For more information, contact

Dr. Harriet MacMillan at:  
[macmilnh@mcmaster.ca](mailto:macmilnh@mcmaster.ca)



*NET Grant: Understanding, Treating and Preventing Tinnitus*  
*Team Leader: Dr. Larry Roberts*

When Dr. Larry Roberts and his colleagues held a public forum on tinnitus, as part of a November 2003 workshop, he thought maybe 50 people would show up. But when he arrived at Simon Fraser University at Harbour Centre, in downtown Vancouver, he found that the event had been switched to the largest available room – and it still wasn't big enough! Despite being able to seat 260 people, the forum was standing room only. And the discussion went on for two-and-a-half hours.

“Those of us on the panel were so inspired by this event,” says Dr. Roberts, a professor of Psychology at McMaster University. “This really was knowledge translation in a very unique way. One of the themes expressed by several members of the audience was how reassuring it was to find that scientists were beginning to understand how tinnitus was generated by the brain and how it might be treated.”

The workshop was put on as part of Dr. Roberts's NET grant. Tinnitus is a disorder tied to hearing impairment that causes a buzzing, hissing, chirping or other noise that never stops, in the heads of its sufferers.

Tinnitus is not well understood, except that it is related to hearing loss. But Dr. Roberts and his colleagues have contributed to advancing understanding of the disorder. Their view is that, when the neurons in the auditory cortex lose input from the ear, they form synchronous networks of their own, essentially creating their own sound and generating tinnitus.

“When tinnitus is fully understood,” says Dr. Roberts, “this viewpoint is likely to be part of the story.”

The constant noise that is tinnitus, sometimes

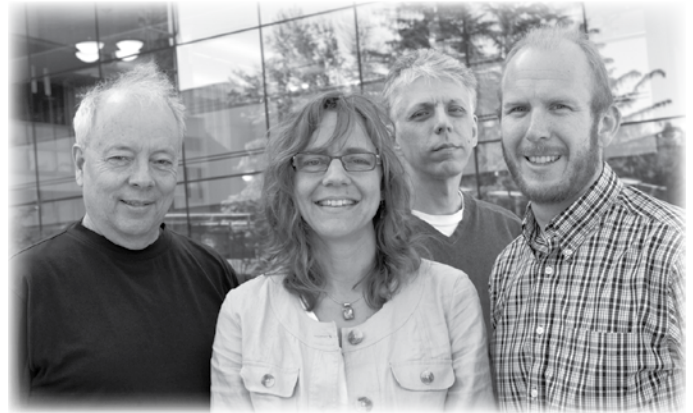


photo: JD Howell

called ringing in the ears, can lead to anxiety, depression, lack of sleep, even suicidal thoughts in those who suffer from it. But Dr. Roberts and his team have found at least temporary relief for its sufferers, by playing an audible external sound in the same pitch range as the patient's tinnitus for 30 seconds. The sound in the patient's head stops for anywhere from 20 seconds to a minute or longer – a process known as residual inhibition. Residual inhibition was first described years ago, but its dependence on matching the external sound to the pitch spectrum of the tinnitus is one of several informative new findings by the NET group. Such sounds may disrupt the synchronous neural activity that is believed to generate tinnitus.


Residual inhibition is not a cure, but, says Dr. Roberts, “For someone whose ears have been ringing for seven, ten years, even 30 seconds of relief can be a lot. Some people get very emotional in our labs.”

To extend the relief, Dr. Roberts' lab burns a CD with a sound optimized for their tinnitus for the patient to take home. That way, the patient can experience the reprieve over and over.

There is, as yet, no cure for tinnitus and limited treatment. Dr. Roberts stresses the importance of preventing tinnitus in the first place by limiting hearing loss due to exposure to loud noises. Nonetheless, the NET grant has allowed Dr. Roberts and his team to make significant progress in understanding this mysterious disorder and,



he says, it would not have happened without team funding to bring together five different labs in three locations.

“It allowed us to coordinate our projects and to do collaborative work,” he says. “It really was very important.” 

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### HIGHLIGHTS

#### Capacity Building:

1. Nine trainees including two undergraduates, one master's, two doctoral students and three post doctoral fellows developed their research skills within this NET.

#### Research Advancement:

2. The team was able to leverage the NET grant into additional support from the TransCoop Programme of the Humboldt Foundation (Germany), which supported participation in the project by team members at the University of Konstanz (Germany), as well as from the American Tinnitus Association and the Tinnitus Research Initiative (TRI). Team members have also joined international workgroups organized by the TRI to address specific aspects of tinnitus.

#### Knowledge Transfer and Exchange:

3. Novel, computerized, subject-driven tools that provide a more comprehensive assessment of tinnitus than previously available have been developed as part of the NET research. These tools, available free of charge, are being used in laboratories across Canada, and in the United States, New Zealand, the United Kingdom, Belgium, and Italy. They have recently been licensed by Walker Digital (USA) for importation to the web.
4. Team members have published articles in several peer-reviewed journals, including: Trends in Neurosciences, The Journal of Neuroscience, NeuroImage, Hearing Research, The Journal of the Association for Research in Otolaryngology (JARO), Acta Otolaryngologica, the American Journal of Audiology, NeuroReport, Neural

Computation, along with five invited book chapters.

5. The team has also held workshops for the public featuring guest researchers and students.

#### Team members:

**Larry E. Roberts**, PhD, McMaster University

**Jos J. Eggermont**, PhD, University of Calgary

**Suzanna Becker**, PhD, McMaster University

**Ian Bruce**, PhD, McMaster University

**Lawrence M. Ward**, PhD, University of British Columbia

**Arnaud Norena**, PhD\*, University of Calgary

**Daniel J. Bosnyak**, PhD\*, McMaster University

**Michael Baumann**, PhD\*, University of British Columbia

**Thomas Elbert**, PhD\*, University of Konstanz, Germany

**Christian Wienbruch**, PhD\*, University of Konstanz, Germany

**Isabella Paul**, PhD\*, University of Konstanz, Germany

**Nathan Weisz**, PhD\*, University of Konstanz, Germany

**Graeme Moffat**, MSc\*, McMaster University

**Oksana Smyczk**, BSc\*, McMaster University

**Jenn Stillman**, BSc\*, McMaster University

**Phillip Gander**, PhD\*, McMaster University

**Mike Chrostowski**, PhD\*, McMaster University

**Jennifer Ko**, PhD\*, McMaster University

**Melissa Dominguez**, Post Doctoral Fellow\*, McMaster University

**Michael Baumann**, Post Doctoral Fellow\*, McMaster University

**Pamela Valentine**, Post Doctoral Fellow\*, Alberta Heritage Foundation for Medical Research

\* recruited subsequent to original grant application

#### For more information:

[www.psychology.mcmaster.ca/hnplab/TinnitusNet/tinnitusNET\\_frame.htm](http://www.psychology.mcmaster.ca/hnplab/TinnitusNet/tinnitusNET_frame.htm)



## *NET Grant: Genomics, Genetics and Gerontology (G3): A Multidisciplinary Team for the Study of Healthy Aging*

*Team Leader: Dr. Angela Brooks-Wilson*



photo: Janis Franklin

### THE BEST-LAID SCHEMES O' MICE AN 'MEN GANG AFT AGLEY

Famed Scots poet Robbie Burns said it first, but Dr. Angela Brooks-Wilson and her colleagues at the BC Cancer Research Centre had a fresh experience of the old proverb when they set out to enrol participants for a study into the genetics of healthy aging.

The NET's goal was to learn what genetic factors are associated with the ability to live to a ripe old age, without common diseases of aging, including cancer, cardiovascular disease, diabetes, chronic obstructive pulmonary disease and Alzheimer's. But to conduct their study, they would need to assemble two groups: 500 "super seniors", over the age of 85 and healthy, and 500 middle-aged adults to act as controls.

New privacy legislation, however, prevented the British Columbia Ministry of Health from sharing updated lists of potential participants with the team. The team, which had been galvanized by the opportunities presented by the NET grant, appeared to be stopped in its tracks.

"We completely had the rug pulled out from under us," says Dr. Brooks-Wilson. "It took two and a half years to solve the problem – and it was solved just after we collected our last research subject. It would have been too late for our NET had we waited until the problem was solved."

How the team collected those subjects is a story in itself. First, they mined for all it was worth the one list they had received from the Ministry of Health before the privacy legislation came into effect, despite its being extremely out of date

and "a mess". Then, the team got lucky with a newspaper story about the project, whose writer agreed to put the research coordinator's phone number into the story. They got 100 subjects from the resulting coverage. Finally, they were able to contract with a provincial government agency, BC Stats, to contact people on the province's drivers licence insurance database on the team's behalf, and got access to another 100 "super seniors" this way.

"This was a major success," says Dr. Brooks-Wilson. "We were two years off our original time line, but against all odds we met our recruitment goals."

As a result of the unanticipated difficulties, Dr. Brooks-Wilson says, the team has had to compress its work. Late in the term of the grant, they had generated a large batch of data and by mid-2009 were writing papers they had hoped to publish much earlier in their research plan.

The crucial outcome, she says, is that due to the team's innovative work, they now have a "fantastic resource" to ask the question of why some people stay healthy as they age. And she is moving ahead with her team members to find the answers.

"If they have something in their DNA, we're going to find it." 🍁



### HIGHLIGHTS

#### Capacity Building:

1. Three trainees from the team including two post doctoral fellows and a graduate student received a total of nine awards, including fellowships, a doctoral award, and workshop attendance and travel awards.
2. The trainees have pursued further academic training in the area of aging research and have presented their novel transdisciplinary work at related academic meetings.

#### Research Advancement:

3. In 2007, Dr. Brooks-Wilson received a \$500,000 five-year Senior Scholar Award from the Michael Smith Foundation for Health Research in 'Population-based Genetic Studies of Cancer and Healthy Aging'. This innovative study aims to increase understanding of the connection between cancer and aging in order to generate new knowledge about the basis of other common aging-associated diseases. Development of clinically useful markers and information that will help individuals avoid developing diseases as they age are the impacts being targeted by this team.

#### Knowledge Transfer and Exchange:

4. Team trainees have been active in presenting their results in an accessible format to seniors' groups in the immediate community.
5. Many peer-reviewed publications related to the team's work, as well as abstracts, conference presentations and media articles were completed throughout the subject recruitment phase. New research reports based on the genetic analyses are targeted for publication in 2009 and beyond.

#### Team members:

**Angela Brooks-Wilson**, PhD, BC Cancer Agency

**Denise Daley**, PhD, University of British Columbia

**Joseph Connors**, MD, BC Cancer Agency

**Nhu Le**, PhD, BC Cancer Agency

**Kenneth Madden**, MD, University of British Columbia

**Julius Halaschek-Wiener**, PhD, BC Cancer Agency

**Maziar Rahmani**, PhD, BC Cancer Agency

**Dan Fornika**, PhD (cand), BC Cancer Agency

**Madalene Earp**, PhD (cand), BC Cancer Agency

#### For more information:

[www.bcgsc.ca/project/healthy-aging-study](http://www.bcgsc.ca/project/healthy-aging-study)



# The Benefits of Hindsight: Looking Back at the Team Experience

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As part of the development of this publication, the CIHR's Institute of Aging asked the leaders of its NETs about the benefits—and the challenges—of operating in a team environment. It also asked for their advice, based on their experiences, for the Institute as it funds teams in the future, and for researchers seeking to put together a successful team of scientists.

What follows is a (decidedly unscientific) summary of these thoughts.

## The benefits of a team

Team funding helped to achieve all of the original objectives of the NET program. Among the benefits that team leaders cited were:

- The **multi-disciplinary nature of the teams**, which provided new perspectives and enabled a coherent and holistic approach to the areas being studied. Several researchers noted the complex nature of aging research and the need to bring together multiple disciplines to make progress.
- The **lasting relationships** that were built: team funding enabled researchers to work together in a sustained way. The relationships that were forged as a result have led to ongoing collaboration and knowledge sharing.

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"I TELL MY CLASSES THAT RESEARCH IS A SOCIAL ACTIVITY. RESEARCH HAPPENS WHEN PEOPLE TALK TO EACH OTHER... YOU NEED TIME TO BUILD RELATIONSHIPS, TIME AND CONTACT. THE TEAM GRANT GAVE US THE WHEREWITHAL TO BUILD THOSE RELATIONSHIPS."

NEIL DRUMMOND

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- The **opportunity to meet face-to-face** on a regular basis, something which individual operating grants don't allow but that most team leaders considered vital.
- **Capacity building:** Due to the stable nature of their funding, teams were able to attract graduate students and new faculty, thereby building capacity in areas that were not initially well established.

- **Mentorship and career building:** Trainees benefited from the mentoring offered by more established researchers. Many researchers observed that students participating in a team were more productive than those who were not part of a team. Many of the trainees have attracted their own funding, expanding the community of investigators working in a given area.
- **Partnerships:** Teams were seen as an important vehicle for developing partnerships, with other researchers, other research institutions and research users.
- **Knowledge translation:** Because partnerships often involved knowledge users, such as practitioners and policy makers, the teams also became important means of knowledge translation, ensuring the relevance of the research undertaken and the application of its results.
- **Additional funding:** NET funding has resulted in many teams receiving additional funding, both during the life of the NET grant and as a means to carry the team's work forward. For instance, Dr. Thomas Hadjistavropoulos had wanted to establish a gerontology research centre in Saskatchewan. The University of Regina saw the NET grant as so positive, Dr. Hadjistavropoulos says, that it established the centre within the first year of the grant. Another example is the CanDRIVE team, whose success has led to another CIHR team grant for a prospective cohort study that will follow 1,000 older drivers for five years, to figure out what makes older drivers safe or unsafe. In addition, young trainees used their work on the NET as a foundation for receiving other funding as independent investigators and benefited from the mentorship and guidance they received from the more experienced researchers on their teams.

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"I FEEL NOW THAT I HAVE A NETWORK OF COLLABORATORS IN SEVERAL PARTS OF CANADA THAT MAKES MY WORK MUCH, MUCH EASIER."

THOMAS HADJISTAVROPOULOS

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### Challenges of being part of a team

Putting together a new team is not without its challenges, and researchers spoke of those as well.

- Not surprisingly in a country like Canada, the single greatest challenge noted by team leaders was logistical – **maintaining regular contact** with researchers in other parts of the country. Teams overcame that difficulty by ensuring that some of their funding was used to support regular, face-to-face team meetings, while relying the rest of the time on electronic communications. Other teams held “research days” and similar events that permitted team members, particularly students and post doctoral fellows, to present their results. Several team leaders warned, however, that while the emphasis on national participation on teams is justified, it is important to realize the challenges inherent in the model.
- Another challenge of the team environment was the **multi-disciplinary nature of the teams**. While there was an overlap of interests, each discipline had its own specific approaches. Randomized clinical trials, for instance, are the gold standard in clinical sciences, but are not always possible or appropriate in social sciences. The learning curve was “extraordinarily steep”. Team members had to reconcile their different approaches in order to move forward.

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“PEOPLE FROM DIFFERENT DISCIPLINES SPEAK DIFFERENT LANGUAGES. WE HAD TO SPEND TIME LEARNING EACH OTHER’S LANGUAGE.”

LISA DOLOVICH

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- Team leaders also pointed to the challenge of **setting priorities** in a large group with many ideas – especially as work progresses and new research possibilities arise.
- A further challenge was **keeping people engaged** when they are widely dispersed and have their own research and teaching duties.

- Finally, team leaders noted that establishing a new team with people you haven’t worked with before, can **unknowingly engage a team member who may not be a good collaborator**. They emphasized the need to exercise care in selecting members to ensure the foundation for effective teamwork.

### Advice for the Institute

Team leaders were asked to advise the Institute of Aging about future team funding initiatives. First and foremost, the researchers agreed that the Institute should continue to offer team funding opportunities. And they had several suggestions for how those opportunities should be structured:

- **New vs. existing teams:** Team leaders were divided about whether team funding should be applied to new or to existing teams. Some noted that funding new teams is important, but so is continuing to support teams whose work holds promise, especially in fledgling areas, where time is needed for people to form the relationships that underpin successful research teams. A mechanism to continue funding the higher-value teams that emerge from the NET funding is necessary, many felt, or the investment to date in the teams would be lost. Some pointed to the need for a “stepping stone” between new emerging teams and CIHR team grants. Others felt that the “new” part of the NET program is important, that existing teams will keep going but bringing new people together is also important.
- **Team composition:** Researchers felt that thought needs to be given to whether there should be a requirement for teams to include members from multiple institutions. They noted that, while the benefits are important, in terms of building relationships, the inclusion of more institutions makes the logistics more difficult and increases the resources that need to be devoted to team functioning. Similarly, requiring team members to not have worked together in the past also builds new relationships, but can lead to “poor fit” that results in less productive teams.



- **Requirements for funding:** Knowledge translation needs to be a part of the team plan and perhaps should even have separate funding. Training is another essential element of team proposals: it permits recruitment of graduate students and new faculty, giving their careers a boost as well. Students on a team are felt to be far more productive than those not on a team.
- **Evaluation of proposals:** Team leaders felt that teams must demonstrate their team approach in tangible ways and ensure that priorities are established and that teams are not trying to do too much or spreading their resources too thin. Proposals for team funding must also allow for innovative research that doesn't meet traditional models of medical research.
- **Progress:** Three-year progress reports are a good idea to provide outsider feedback and advice.

### Advice for researchers

Team leaders were also asked what advice they would give to early career researchers wanting to develop a research team. They said:

- **Team composition:**
  - Take time to put the team together and make sure team members are people who can work together.
  - Try to include people who will contribute to the overall team and with whom you have some experience working or who come highly recommended.
  - Beware of people who are already very busy.
  - Look for people with the same values and motivation.
  - The number of people on the team is important, as is their location. A core group located close together is important; too big or too dispersed a group makes decision making difficult.
- **Developing partnerships:** Involve decision makers in the research – it makes the research more relevant and gives you an audience for what you do. Ongoing communication with

these partners is vital; they are the ones who will translate your results into practice.

- **Getting started:** Be realistic about how much time it will take to start up; a five-year grant seems long, but when you factor in how long it takes to get to know each other and recruit partners, it is the minimum necessary length.
- **Effective team functioning:**
  - Don't underestimate the time and resources needed for team functioning.
  - Take time to get to know each other well at the beginning – create a space to listen to and learn from each other.
  - Ensure that all team members share the same goal and that all their projects contribute to the achievement of that goal.
  - Communication among team members is critical; maintain regular contact to deal with issues as they arise, provide moral support to each other, adjust goals as required.
  - Work out the division of labour carefully and formalize it, as people have different ideas of what being on a team means.
  - People management skills, such as consultation and mentorship, are vital. A good research coordinator helps the team function and plays a key role in cementing the team.

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**"IT'S LIKE DATING AT THE BEGINNING. YOU SPEND YOUR FIRST YEAR GETTING TO KNOW EACH OTHER."**  
KELLI STAJDUHAR

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A final word of advice: Be persistent! Building a team and getting it funded require persistence and effort – there's no magic touch that ensures you get it right the first time. 🍁

