September 16, 2016

TO: Members of the University Planning Committee

FROM: Tamara Bates
Governance Advisor and Assistant University Secretary

I am writing to inform you that the next meeting of the University Planning Committee will be held on **Wednesday, September 21, 2016 at 10:30 a.m. in the Council Chambers (Gilmour Hall, Room 111)**.

The purpose of this meeting is outlined on the attached agenda. Links to policies relevant to the agenda items are listed below:

- Guidelines for the Governance and Review of Research Institutes, Centres and Groups
- Naming Policy and Procedures
- Campus Master Plan

If you are unable to attend this meeting, please contact the University Secretariat at telephone 905-525-9140, ext. 24337 or e-mail univsec@mcmaster.ca.
UNIVERSITY PLANNING COMMITTEE

Wednesday, September 21, 2016 at 10:30 a.m.
Council Chambers, Gilmour Hall, Room 111

A G E N D A

OPEN SESSION

I MINUTES of the Open Session Meeting of June 22, 2016
(attached – for approval)

II BUSINESS ARISING

III CHAIR’S COMMENTS AND UPDATES

IV BUDGET COMMITTEE MEMBERSHIP FOR 2016-2017

V 2016-2017 MEETING DATES AND MEMBERSHIP (attached – for information)

VI RESEARCH INSTITUTES AND CENTRES (attached – for approval)
i. Transformation of McMaster Institute for Research on Aging (MIRA)
ii. Establishment of Centre for Mobility in Aging

Dr. R. Baker

VII OTHER BUSINESS

CLOSED SESSION

VIII MINUTES of the Closed Session meeting of June 22, 2016
(attached – for approval)

IX BUSINESS ARISING

X NAMING VALUES AND OPPORTUNITIES (attached/to be circulated – for approval)

Ms. M. Williams

XI BRALEY HEALTH SCIENCES CENTRE – INDOOR PARK
(attached – for approval)

Ms D. Martin

XII DEFERRED MAINTENANCE AND A.N. BOURS SCIENCE BUILDING (ABB) RENOVATIONS
i. Deferred Maintenance (attached – for information)
ii. ABB Renovations (attached – for approval)

Mr. C. MacDonald
Mr. E. Kamarah

XIII PROJECT STATUS REPORT (attached – for information)

Mr. E. Kamarah

XIV OTHER BUSINESS
McMaster University

UNIVERSITY PLANNING COMMITTEE

Wednesday, June 22, 2016 at 10:30 a.m.
Council Room (Room 111), Gilmour Hall

PRESENT: Dr. D. Wilkinson (Chair), Dr. V. Baba, Mr. R. Couldrey, Dr. K. Cruikshank, Dr. W. D’Angelo, Dr. J. Daniel, Ms T. Dobrovolska, Dr. T. Moffat, Mr. N. Nikookaran, Dr. A. Sekuler, Dr. A. Sills, Dr. D. Welch, Ms H. Ayre (University Secretary), Ms T. Bates (Assistant University Secretary)

OBSERVERS: Dr. S. Denburg, Mr. S. Van Koughnett

CONSULTANTS: Ms L. Coslovi

INVITED: Dr. C. Gabel, Dr. S. Pope, Dr. V. Watts

REGRETS RECEIVED: Dr. P. Deane, Dr. J. Lee, Ms J. Pike

I MINUTES

On a motion duly moved and seconded, the minutes of the meeting held on May 18, 2016 were Approved as circulated.

II BUSINESS ARISING

There was no business arising from the minutes of the previous meeting.

III CHAIR’S COMMENTS AND UPDATES

Dr. Wilkinson thanked those members of the Committee who are completing their terms, noting that there will be considerable turnover of members for next year. He explained that he has nominated Juliet Daniel as Chair of the Budget Committee for 2016-2017 and that a call for additional nominations will be sent out shortly to the incoming University Planning Committee membership and, following election of the Budget Committee Chair, the elected faculty members will decide amongst themselves which two of them will also serve on the Budget Committee. The results will be reported to the University Planning Committee at the first meeting of the new year. Changes to the Budget Committee process, which include an earlier start to the meeting schedule, require that the election of its faculty members are identified prior to the September meeting of the University Planning Committee.

Last month, an open letter to the Provost was published by Dr. Megumi Harada on behalf of many faculty members. The letter expressed concerns about the new budget model and its impact, particularly on the Faculty of Science. The letter was presented to Senate and
the Board of Governors at their most recent meetings, which generated significant discussion at both meetings. The conversation was positive and very collegial, and the initial letter and the response from the Provost and the President are now available on the Provost’s website.

Dr. Wilkinson informed the Committee that he is in process of establishing two ad hoc committees to address some of the recommendations of and concern raised in the Warner Report. One will be an ad hoc committee of Undergraduate Council will examine the University’s academic regulations. This committee, which Dr. Wilkinson will be chairing, will look at student flexibility and accessibility to courses and programs across the University. The University’s academic regulations have not been reviewed since 1991, so it is a good time to carry out such a project.

The second ad hoc committee will be more closely linked to the recommendations of the Warner Report. The work of this ad hoc committee will be focused on the Faculties of Humanities, Science and Social Sciences and will review the Warner Report in detail. One of the recommendations of the Warner Report was the establishment of a committee formed by the arts and sciences Deans; that committee has been established.

Andrea Thyret-Kidd has been seconded from the Academic Integrity Office to coordinate the work of the two ad hoc committees.

The IT review is well underway under Kathy Denney, who was hired earlier this year to manage the project. The review involves a number of different surveys targeted at both UTS staff and members of the McMaster community. The responses to the surveys will be reviewed very closely.

To date, no results from the Strategic Investment Fund competition have been released. The Ministry requested additional information about McMaster’s submissions and these details have been provided, but there has been no further response from the Ministry. From the information available, it would appear that no universities have had any results as of yet.

In response to questions, the Committee heard that the Warner Report included three options that could be investigated. The first option was to do nothing and continue with the status quo. The second option was to merge the Faculties of Humanities, Science and Social Sciences. The third option was to merge only two of the Faculties. Consideration is most often given to merging Humanities and Social Sciences, but there has also been a suggestion that Humanities can be merged with the Arts and Science program. This latter suggestion has been made in the past as well. There has been a lot of discussion about these mergers. There are some very strong arguments in favour of such a merger, but there are also many arguments against it. Dr. Wilkinson said he has spoken with all three Deans about merging and all have agreed to set aside the idea of merger for the time being as there is no clear path forward at present and it was felt that the possibility of merger could disable some of the other work being done within each of the three Faculties. There has, however, been a decision to see what else can be done first.

A member noted that some of the recommendations in the Warner Report are associated with the development of interdisciplinary courses. Some interdisciplinary courses are already
being developed across Faculties and there have been discussions about considerations such as how these courses are accommodated in the budget and how teaching releases are allocated. Members heard that the budget model should take care of this and that Deans should be working together to address these types of considerations. There are bound to be situations where the budget model does not work for specific issues, but these can easily be addressed. It was noted that there have been situations in which some faculty are interested in working together on interdisciplinary courses and programming, but are reluctant because of how they money flows and where teaching credit is allocated. Dr. Wilkinson said he would like to hear more about these situations, where budget model is cited as the reason not to collaborate on initiatives.

IV RESEARCH CENTRES AND INSTITUTES (Appendix A)

i. Name Change for the McMaster Institute of GeroScience

Members reviewed the proposal to change the name of the McMaster Institute of GeroScience to the McMaster Institute for Research on Aging (MIRA).

It was duly moved and seconded, that the University Planning Committee approves, for recommendation to Senate, the proposed name change of the McMaster Institute of GeroScience to the McMaster Institute for Research on Aging (MIRA), as set out in Appendix A (i).

The motion was carried.

ii. Establishment of the Centre for Ancient Numismatics

Dr. Pope joined the meeting.

Members heard that the proposed Centre for Ancient Numismatics will be primarily based in the Faculty of Humanities. In response to questions, it was confirmed that the Centre for Ancient Numismatics will report to the Faculty of Humanities and, therefore, central support unit costs will be allocated to the Faculty of Humanities.

A member expressed concern that focusing on only ancient coinage, the scope of research is limited, noting that there could be value in establishing this as an institute rather than as a research centre. Members heard that ancient numismatics is a much different field than numismatics in general, or in more modern numismatics. As the time period studied changes, so does the focus on the coins in question. The research involved is also centred within the Department of Classics, where the focus is very much on things that are ancient. The decision to establish this as a centre, rather than an institute, is simply that this was considered to be the next logical step in the development of the research opportunities, which are currently situated within the Department of Classics.
It was noted that the membership of the Centre currently includes a large number of graduate students and asked if there is an expectation that there will continue to be such a high number of doctoral students interested in numismatics. Members heard that it is very likely that this will continue to be the case. Students who are interested in numismatics know that McMaster’s program is very good and want to come here. It is also anticipated that the Centre will expand by attracting faculty at other universities to collaborate. A group of numismatists in Australia have already expressed interest in working together.

It was duly moved and seconded,

that the University Planning Committee approves, for recommendation to Senate, the establishment of the Centre for Ancient Numismatics (CAN), as set out in Appendix A (ii).

The motion was carried.

Dr. Pope left the meeting.

iii. Establishment of the Institute on Ethics and Policy for Innovation

The Committee heard that the proposed Institute on Ethics and Policy for Innovation (IEPI) will report entirely to The Faculty of Humanities, although faculty from across the University will be involved.

It was duly moved and seconded

that the University Planning Committee approves, for recommendation to Senate, the establishment of the Institute on Ethics and Policy for Innovation (IEPI), as set out in Appendix A (iii).

Members heard that this proposed institute will be housed wholly in Humanities, but that, as it is a large institute, it will require a lot of space, and that the work will be carried out by other Faculties as well. There is, however, no memorandum of understanding between Humanities and the other Faculties. The Institute will occupy space in Wilson Hall, which is already a shared space.

In response to questions, the Committee heard that the budget includes income to the Faculty related to overhead costs. The Bill and Melinda Gates Foundation Supplementary Grant is a total of $3.8 million, of which the Institute will receive $3.3 million. It was confirmed that the Institute on Ethics and Policy for Innovation will report to Faculty of Humanities and, therefore, central support unit costs will be allocated to Humanities. The Institute will be using existing assigned research space in the Faculty, of which the Bill and Melinda Gates Foundation (BMGF) project will provide rent recovery as a direct cost. The overhead revenue specified in the proposal as coming from the BMGF grant will be flowing to the Faculty of Humanities.
In response to questions about the sustainability of the Institute given that the BMGF grant is in its fourth term, the Committee heard that the expectation is that the grant will be continued, and if not, there is other funding in place to maintain the Institute. It was also noted that additional funding opportunities are always being sought out, and that this is part of the reason institutes and centres are established.

The motion was carried.

iv. Establishment of the McMaster Indigenous Research Institute

Dr. Gabel, Dr. Martin-Hill, and Dr. Watts joined the meeting.

The proposed McMaster Indigenous Research Institute has been in development for some time. Funding for the Institute and its core elements is already in place and is contingent on approval of the Institute by the University. Plans to ensure sustainability are also built into the budget.

The Committee heard that this proposal has taken a different pathway than most. The proposal was brought through a number of bodies, such as all six Faculties and the Indigenous Education Council, before it was submitted to the Committee on Research Institutes for approval.

In response to questions about the budget, it was confirmed that the McMaster Indigenous Research Institute reports to the Vice-President, Research and any support unit costs will therefore flow through the double stepdown method.

It was asked why the people involved in the Institute are not named in the proposal, when the identification of individuals might be more empowering in terms of individual recognition and would attract more researchers to the Institute. Members heard that there already a large number of indigenous researchers ready to be involved in the Institute. Communities are already lining up, following recommendations of the Truth and Reconciliation Commission, to work in all areas of research. It was pointed out that part of reason there are no names in the proposal, is related to the cultural importance of the collaborative or community effort over the achievement of individual members. Once established, a website will be developed and there will be names attached to the Institute.

It was duly moved and seconded,

that the University Planning Committee approves, for recommendation to Senate, the establishment of the McMaster Indigenous Research Institute (MIRI), as set out in Appendix A (iv).

The motion was carried.

V OTHER BUSINESS

There was no other business in the open session of the meeting.
UNIVERSITY PLANNING COMMITTEE

2017-2017 MEETING SCHEDULE

All meetings will be held in the Council Room (Gilmour Hall, Room 111) from 10:30 a.m. to 12:30 p.m. unless otherwise stated

Wednesday, September 21, 2016
Wednesday, October 19, 2016
Wednesday, November 16, 2016
Wednesday, December 21, 2016
Wednesday, January 18, 2017
Wednesday, February 15, 2017
Wednesday, March 15, 2017
Wednesday, April 19, 2017
Wednesday, May 17, 2017
Wednesday, June 21, 2017
UNIVERSITY PLANNING COMMITTEE

2016-2017 Membership List

**Elected Members:**
5 faculty members (no more than 2 from any one Faculty, for staggered 3-year terms)

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<tr>
<th>Name</th>
<th>Faculty/Department</th>
<th>Term</th>
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<tr>
<td>Wendy D'Angelo</td>
<td>Faculty of Humanities</td>
<td>June 30, 2017</td>
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<tr>
<td>Juliet Daniel</td>
<td>Faculty of Science</td>
<td>June 30, 2018</td>
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<td>Steve Hanna</td>
<td>Faculty of Health Sciences</td>
<td>June 30, 2019</td>
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<tr>
<td>Alison McQueen</td>
<td>Faculty of Humanities</td>
<td>June 30, 2019</td>
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<tr>
<td>Tina Moffat</td>
<td>Faculty of Social Sciences</td>
<td>June 30, 2017</td>
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1 Faculty Dean (elected annually by & from the 6 Deans)
1 staff member (2-year term)
1 graduate student (2-year term)
1 undergraduate student (2-year term)

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<tr>
<td>Jeremiah Hurley</td>
<td>June 30, 2017</td>
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<td>Lynne Serviss</td>
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<td>TBD</td>
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<tr>
<td>Ryan Deshpande</td>
<td>June 30, 2018</td>
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**Ex Officio:**

- Chancellor: Suzanne Labarge
- Chair of the Board of Governors: Jagoda Pike or delegate
- Vice-Chair of the Board of Governors: Paul Douglas or delegate
- President & Vice-Chancellor: Patrick Deane *
- Provost & Vice-President (Academic) - Chair: David Wilkinson *
- Vice-President (Administration): Roger Couldrey *
- Vice-President (Research): Rob Baker
- Acting Associate Vice-President and Dean of Graduate Studies: Doug Welch

* Budget Committee members – faculty representatives to be elected.

**Observers:**

- Dean & Vice-President (Health Sciences) or delegate, unless elected: Susan Denburg
- Vice-President (University Advancement) or delegate: Mary Williams
- Associate Vice-President (Students and Learning) and Dean of Students: Sean Van Koughnett
- Chair of Undergraduate Council: Susan Sears Giroux

**Consultant:**

- Associate Vice-President (Institutional Research & Analysis): Jacy Lee
- Executive Director, Office of the Provost: Linda Coslovi

**By Invitation:**

- Assistant Vice-President (Administration): Deidre Henne
- Budget Director: Lou Mitton
September 14, 2016

TO: University Planning Committee

FROM: Robert Baker

RE: Centre for Mobility in Aging Proposal, and Transformation of the McMaster Institute for Research on Aging

The Committee on Research Institutes has reviewed the attached Proposal for the Centre for Mobility in Aging, as well as the transformation of the McMaster Institute for Research in Aging, as per the policies and guidelines.

The above items have the support of the Committee on Research Institutes.

Please include these as an Agenda Item for the next University Planning Committee Meeting.

RB:pb

Attach.

cc: David Wilkinson
    Paul O’Byrne
    Doug Welch
    Helen Ayre
INTEROFFICE MEMORANDUM

TO: DR. ROB BAKER, VICE-PRESIDENT, RESEARCH
FROM: PARMINDER RAINA, DIRECTOR
SUBJECT: UPDATE ON THE STRUCTURE AND ACTIVITIES OF THE MCMASTER INSTITUTE FOR RESEARCH ON AGING
DATE: SEPT. 8, 2016
CC: SUSAN DENBURG, LAURA HARRINGTON

On April 9th, 2014 and April 17th, 2014 the Senate and Board of Governors approved the establishment of the McMaster Institute of GeroScience. I have been Director of the Institute since it was inaugurated, and since that time, I have been conducting consultations with donors and senior management about the future directions of the Institute.

As a result of these consultations, as well as an analysis of strategic knowledge mobilization opportunities, locally, provincially, and nationally, the name of the Institute was changed to the McMaster Institute for Research on Aging (MIRA), which was approved on June 29, 2016.

During this time, the structure and function of the Institute have also evolved through consultation and input from the Institute members, as well as the University’s senior management. In particular, it was agreed that the most effective way to integrate and mobilize McMaster researchers and ensure that the resulting research impact is transformative is to create centres focused on priority research areas. The first of these will be the Centre for Mobility in Aging.

In terms of the governance of the Institute, we have proposed the creation of an Executive Committee, which will provide insight and advice to the Scientific and Managing Directors regarding operation and strategic priorities of the Institute and corresponding centres, including the Centre for Mobility in Aging. Moreover, the Centre for Mobility in Aging is wholly supported by a gift of significant magnitude that includes, as a goal, maximizing educational and research opportunities in the area of aging more generally at McMaster. It has thus drawn additional infrastructure and support from the University aimed at the Institute as a whole. In order to ensure alignment with the Institute’s goals and provide coordinated oversight for this support, an additional layer of accountability has been assigned by the President, Vice-President Research, and Provost. A senior academic, to be identified as the University Lead, will join the Governing Board. As before, the Board will review the strategic direction and operations of the Centre and ensure accountability and performance.
The structural changes to the Institute, as well as a modified research approach and integration with the University’s academic mission, are outlined in the attached document, which I recommend should replace the initial proposal to create the Institute. I think you will agree that this refined Institute structure and function is more strategic, better aligned with the University’s research priorities, and will facilitate the accelerated achievement of the original goals of the Institute.

I am enthusiastic about these changes and the future of the McMaster Institute for Research on Aging, and I look forward to updating you about developments as they arise.
McMaster Institute for Research on Aging
Promoting Optimal Aging
September 12, 2016

This document has been prepared as an update to the proposal to create a research institute on aging, initially named the McMaster Institute for Geroscience. As approved by the Executive Committee of the Senate and the Board of Governors on June 29, 2016, the Institute will now be named the McMaster Institute for Research on Aging (MIRA). The structure and function of the Institute has evolved from its original conception thus this document outlines its current status.

Mission
The mission of MIRA is to optimize the health and longevity of the aging population through innovative research, education and stakeholder collaborations.

Values
Integrity • Excellence • Transformation • Interdisciplinarity • Collaboration • Transparency

About MIRA
In 2015, for the first time in Canadian history, there were more older people (age 65 and over) than younger people (under age 15) in the country. Canada’s population is aging rapidly: a trend that accelerated sharply when the baby boomers began turning 65 years old in 2011 and continues to increase. In less than fifteen years, the proportion of people aged 65 and older will grow by ten percent to reach one-quarter of the Canadian population. The rising age of our population is going to have a profound impact on individuals, families, communities, and health and social care systems. In fact, aging as a social force is not only playing a role in shaping developed societies but is also becoming an important social issue in less developed nations. In other words, aging is a global phenomenon, and by 2050, there will be close to two billion people over the age of the 65, worldwide.

In Canada, the importance of addressing the needs of an aging population has been recognised by provincial ministries of health across the country, who have named ‘aging in place’ as a key priority. In Ontario, the 2013 ‘Action Plan for Seniors’ reflected the province’s proactive approach to achieving “independence, activity, and good health – helping seniors stay safe, healthy, vibrant, and active.” There is a need for a focused effort among researchers in this field to launch a coordinated approach to support the
health and meaningful engagement of the aging population. McMaster is poised to lead such an initiative.

MIRA (formerly named The McMaster Institute of GeroScience) was established in the spring of 2014 with a mandate to:

- Create a hub for researchers and community stakeholders to link for mutual gain;
- Coordinate a shared research agenda;
- Operate outside any single faculty, yet interact with all faculties;
- Conduct research in a collegial and mutually supportive fashion with transparent project funding mechanisms;
- Employ non-traditional research approaches to create solutions;
- Establish a culture of interdisciplinary collaboration across all faculties and schools of the University in all projects;
- Engage all stakeholders in all stages of research, evaluation and implementation of interventions and technologies.

MIRA brings together over 60 researchers from across most McMaster Faculties to achieve integrated, human-centred solutions. MIRA’s researchers are organized in interdisciplinary teams to conduct studies that will address the issues faced by older adults, their families, communities and our society as a whole (Figure 1).

**Identifying Strategic Research Priorities for the Institute**

Although members of the Institute are diverse in their respective fields of research expertise focused on aging, we share the aim of advancing the science of aging at McMaster. Together, our members identified a need to focus on specific areas of strategic priority. This focus requires multiple disciplines and stakeholders to work collaboratively and efficiently to advance and promote scientific inquiry within a targeted research area. These priorities require substantial investment to generate new empirical evidence and to design and evaluate interventions that will provide the scientific basis to inform policy and practice and, most importantly, to have a significant impact in the day-to-day lives of older people. After several months of consultation with researchers across the University, the Institute has identified “Mobility in Aging” as a research area in which McMaster has substantial expertise and could become a national leader, therefore this will be a strategic research priority of the Institute over the next seven years. Further, this strategic priority builds on the initiatives funded through Labarge Optimal Aging Initiative. The work on mobility will be advanced through the creation of a focused Centre on mobility, within the Institute, as described below. Additional strategic priorities will be developed in the next few years that will form the research agenda for the Institute and that are harmonized with its overall vision, and complement the first priority area: Mobility in Aging.
Additional potential strategic priorities could include, but will not be limited to:
1) **Sensory aging:** this strategic area would explore issues related to changes in hearing and vision, and how they are linked to functional autonomy and healthy aging;
2) **Intergenerational aging:** with the goal to understand how environmental, lifestyle, psychosocial and biological factors cross generations to affect the aging process and how one could design intergenerational communities that support healthy aging;
3) **Social, community and technology innovation and aging:** the purpose of this strategic area would be to determine how social, structural, or community environments and their interaction with technology facilitate age friendly environments;
4) **Economics, public policy and aging:** there is a tremendous opportunity to understand how economic drivers and public policies at the federal, provincial and municipal levels shape aging societies; and
5) **Comparative aging:** this area would focus on basic science that is fundamental to our understanding of biological processes involved in aging, for example comparing different aging model systems (e.g., flies, worms, rodents to humans).
Strategic priority areas will form the basis of focused Centres within the Institute, which will work collaboratively across all focused Centres to advance the overall mission of the Institute. Further, the Institute from time to time will also access the expertise from other existing Centres at McMaster University such as the Geriatric Education and Research in Aging Sciences (GERAS) or the Gilbrea Centre to pursue collaborative efforts, which will mutually benefit all parties. However, the governance of these external Centres will not be part of the mandate of the MIRA unless they formally join the Institute.

**Why McMaster?**

McMaster is in a unique position to lead a new and emerging paradigm of research on aging that integrates biological and population sciences in promoting healthy and functional aging populations. Further strengthening research in aging at McMaster was supported by the generous gift of $10 million by Suzanne Labarge to establish Optimal Aging Initiative. McMaster University is also the host of one of the largest and most comprehensive population-based studies of aging anywhere in the world: the Canadian Longitudinal Study on Aging (CLSA). Data and biological samples from the CLSA provide McMaster researchers with a unique opportunity to develop high-impact research agendas. In addition, McMaster already has extensive infrastructure needed to carry out research including:

- Biobanks and high-throughput biomarker laboratories to support high-quality research;
- Knowledge translation platforms such as the McMaster Optimal Aging Portal and the McMaster Health Forum to share evidence-based research to investigators, decision-makers and citizens;
- Models for developing new technologies, such as the Smart Home;
- Existing programs focused on community-dwelling older adults, such as Health TAPESTRY (Teams Advancing Patient Experience: Strengthening Quality), which enables community-based primary care research that provides McMaster researchers with a living laboratory to carry out novel research and knowledge translation;
- Established Centres such as GERAS (Geriatric Education and Research in Aging Sciences) and the Gilbrea Centre for Studies in Aging, uniquely provide clinical and social/cultural/community links to facilitate the research agenda of the Institute for mutual benefit.

**MIRA-Training Program (MIRA-TP)**

McMaster’s infrastructure to support excellence in research is complemented by its innovative approach to education. The MIRA-Training Program (MIRA-TP), to be developed in the coming years, will provide an unprecedented learning environment in the science of aging that will facilitate communication, group process, and leadership
skills for trainees across all Faculties. We believe that learning is a process of inquiry and collaboration, not just between students and faculty mentors, but also amongst students and mentors across diverse Faculties working in interdisciplinary teams. We will draw on the expertise and experience of existing resources, such as the Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (formerly MIIETL) and the Program for Interprofessional Practice, Education and Research (PIPER) when developing this training program.

The MIRA-TP will educate the next generation of researchers and clinician scientists within the field of aging. Providing qualified, innovative personnel with interdisciplinary training in aging with the capacity to work across industry sectors enables the realization of the potential of McMaster researchers to prolong and improve the health of hundreds of thousands of Canadians.

The MIRA-TP will capitalize on the strengths of the McMaster-pioneered problem-based learning (PBL) approach. PBL involves small group, self-directed learning that emphasizes interpersonal skills, independent learning, and leadership qualities – all of which are required for successful interdisciplinary, collaborative projects. We will build on McMaster’s existing strengths in training by advancing the Labarge Curriculum on Aging, which will provide an interdisciplinary perspective on communication skills and attitudes among health professionals working with older adults, and prepare our trainees for a broad range of roles after graduation. Novel education initiatives that we are exploring are an interdisciplinary diploma program in aging, which will be available across Faculties, an undergraduate specialization program in aging, and new funding initiatives for graduate students and postdoctoral fellows including the Labarge Mobility Fellowship. Through these innovative educational opportunities, our trainees will develop projects that target research in aging within an environment that facilitates their application, evaluation, integration into practice, and uptake into policy. Training talented people to work across disciplines in a collegial and collaborative environment will allow McMaster graduates to develop the pragmatic skills to work across perspectives and foster the collaborations needed to answer the very complex questions related to aging that cannot be addressed from any single Faculty. This type of training will prepare our graduates for fulfilling careers where they can appreciate the value of tackling real-world problems through teams of diverse professionals coming together to achieve real change in society.

The Structure of the Institute
The most effective way to integrate and mobilize McMaster researchers and ensure that the resulting research impact is transformative is to create centres focused on priority research areas. The first of these will be the Centre for Mobility in Aging. The structure and mandate of MIRA will facilitate and provide incentives for collaboration between the
Centres within the Institute to foster a culture of collaboration. Further, the Institute will also facilitate collaboration between Institute focused Centres (e.g., Centre for Mobility in Aging) and access the expertise from other existing university Centres (i.e., GERAS or Gilbrea), where there is potential for mutually beneficial synergies (Figure 2).

**Figure 2: The Conceptual Structure of MIRA.** The ring in the middle highlights the focused Centres within MIRA (both existing, i.e., Centre for Mobility in Aging (highlighted in peach colour square) and proposed (not highlighted by coloured squares)) and the entities listed across external rings depict other institutional Centres, Institutes, and Initiatives external to the governance of the MIRA that are key platforms for research on aging.

Focused Centres created within MIRA will utilise a single, centralized, and shared operational, governance and administrative model to facilitate advancement of the strategic objectives of all Centres as part of the advancement of the strategic scientific objectives of the whole Institute. The centralised governance and administration model is essential to maintaining the Institute’s unique operating model while creating multiple
focused Centres that will advance diverse but integrated strategic priorities. The individual Centres, Institutes and Initiatives created prior to, or outside of the MIRA structure will retain their own governance and administrative models but will still work closely with MIRA to position McMaster University as a leader in research on aging (further details on leadership and governance are provided below).

Each of the MIRA focused Centres will advance the Institute’s overall mission, and will build upon McMaster’s existing strengths in aging, evidence-based medicine, population and clinical studies, as well as the development and evaluation of interventions. The University is also a recognized leader in knowledge exchange and policy (see Figure 1), which the Institute will use to our advantage. Developing expertise in specific areas of aging and the use of a ‘design thinking’ approach will promote the rapid integration of solutions into policy and practice.

Design thinking is a collaborative process that engages the community and other stakeholders at the outset and has been found to be effective in bringing together individuals from different areas of expertise with end-users to develop human-centred innovations. Incorporating a team-based, interdisciplinary approach and community engagement at the outset, design thinking provides a framework where ideas are created through a dynamic, iterative process within a ‘system of spaces’ (inspiration, ideation, and implementation), as opposed to an orderly (linear) set of steps, which is commonly employed in traditional approaches to innovation and design. Within these spaces, individuals trained in a variety of disparate disciplines collaborate to observe, evaluate, and work directly with users to determine innovations that come from understanding the problem. In the context of aging, innovations could include, but are not limited to, assistive devices or technologies (products), clinical or caregiver-targeted programs (services), and/or other interventions (e.g., changes in urban design). Such research can involve basic science research labs that act as centralized knowledge-generating hubs and population-based cohorts like the CLSA that improve our understanding of mechanisms at the cellular and population levels, while involving stakeholders to accelerate discovery and its adoption in practice.

MIRA and its contributing Centres, beginning with the Centre for Mobility in Aging, are structured to facilitate collaborative decision-making, community engagement, support areas of research strength, and broadly disseminate research products in order to advance the science of aging in Canada and beyond.

**Knowledge Translation Opportunities**

Emphasis will be placed on translating knowledge generated within the Institute into policy and practice or the market place to ensure that we achieve the shared goal of creating a
society that allows its people to live long and live well – ‘a life worth living.’ The Institute will be unique in combining a coordinated research agenda with the use of design thinking to generate human-centred solutions and will make ongoing interaction with diverse stakeholders a requirement.

Within each Centre, and as a priority within the Institute as a whole, our researchers will develop a comprehensive knowledge translation strategy that supports collaboration between clinicians and researchers, increases public awareness and leads to translation of evidence, exchange of ideas including best practice guidelines, to all relevant stakeholders including practitioners and policy makers. The Institute will ensure the translation of research evidence that enables people to live long and live well. We will transform the experience of aging by transforming the science of aging.

**Governance and Management of the Institute**

The Institute’s governance and management structure will facilitate the work of each Centre. An identified lead of each Centre (or a representative from each Faculty) will join the Executive Committee of the Institute in order to ensure an interdisciplinary perspective in strategic decision-making. The Institute will provide an administrative hub for internal and external communication, partnership development (e.g., not-for-profit organizations and private industry) as well as the identification of strategic grant opportunities. The Institute will serve as a core training facility for undergraduate and graduate students, clinician scientists and early career scientists for each of the Centres, and will provide physical space where trainees, researchers, and stakeholders can interact to generate collaborative ideas for cutting-edge research and further establish McMaster as a global leader in aging. Overall, the Institute will provide the necessary administrative and management structure to advance the collective research agendas of the focused Centres.

The governance and management structure of the Institute and its focused Centres is shown in Figure 3. The Institute will be led by a Scientific Director and supported by a Managing Director. The Executive Committee of the Institute will include the Scientific Director of the Institute, Managing Director, and Directors of each focused Centre (e.g., Centre for Mobility in Aging). The Institute will also be supported by several other committees including an International Advisory Board and an End-User and Stakeholder Committee. The Managing Director of the Institute will also be responsible for the management of the Centre. However, as additional focused Centres are created in the future, the role of the Managing Director will be reconsidered in light of the responsibility and the workload. The administrative structure of the Institute will also meet the
administrative needs of each Centre. The Scientific Director and Managing Director will report directly to the VPR.

Figure 3: Management Structure of MIRA and focused Centres

The Centre for Mobility in Aging is wholly supported by a gift of significant magnitude that includes, as a goal, maximizing educational and research opportunities in the area of aging more generally at McMaster. It has thus drawn additional infrastructure and support from the University aimed at the Institute as a whole. In order to ensure alignment with the Institute’s goals and provide coordinated oversight for this support, an additional layer of accountability has been assigned by the President, Vice-President Research, and Provost. A senior academic, to be identified as the University Lead, will join the Governing Board. The Board will review the strategic direction and operations of the Centre and ensure accountability and performance.
INVESTING IN NEW FRONTIERS FOR OPTIMAL AGING  
The Centre for Mobility in Aging  
Nested Within the McMaster Institute for Research on Aging

In 2015, for the first time in Canadian history, there were more older people (age 65 and over) than younger people (under age 15) in the country. By 2036, an estimated nine million Canadians will be 65 years and older—representing about one-quarter of the population. In Canada, the importance of addressing the needs of an aging population is recognized by provincial ministries of health, which have identified “aging in place” as a key priority. In Ontario, the 2013 Action Plan for Seniors reflects the province’s proactive approach to achieving “independence, activity, and good health—helping seniors stay safe, healthy, vibrant, and active.” A key component of maintaining good health is optimizing mobility, which includes both physical and social/community aspects of mobility.

In order to clearly capture and communicate the extent of our work on mobility in aging at McMaster, and funded by a generous gift from Suzanne Labarge, we are proposing to create a Centre for Mobility in Aging. This Centre will be a major component of our broader integrated research enterprise devoted to aging research and education, recently renamed as the McMaster Institute for Research on Aging (MIRA).

Developed after extensive consultations across the campus, the Centre will be organized in interdisciplinary teams that will apply a design thinking approach to their work. These teams will identify important questions with a health focus through collaborative exchange with colleagues, practitioners and citizens, investigate these questions using diverse methodologies, evaluate and analyze results and apply their findings to ultimately improve the health and well-being of older adults, their families, communities and society as a whole.

This premier research and knowledge generation hub will bring together researchers from all six McMaster Faculties to achieve integrated, human-centered solutions to mobility challenges through a unique research platform. McMaster is poised to lead on the national and international stage in this domain. Through excellence in research, education and training and the translation of scientific research findings into practical, beneficial applications, McMaster experts expect to profoundly impact the way Canadians stay mobile and engaged.

EXISTING PLATFORMS AT MCMASTER
McMaster is in a unique position to lead a new, emerging paradigm of research on aging that
integrates a wide variety of disciplines, including but not limited to social sciences, biology, psychology, engineering and health sciences, to promote healthy and functional aging populations.

There are a number of aging-related research platforms at McMaster, including the Canadian Longitudinal Study on Aging (CLSA). Data and biological samples from the CLSA provide McMaster researchers with a one-of-a-kind opportunity to develop high-impact, targeted research agendas that answer critical questions by integrating the perspectives of a variety of disciplines. In addition to the CLSA, we have the extensive infrastructure needed to carry out and disseminate this research, including:

- knowledge translation platforms such as the McMaster Optimal Aging Portal and the McMaster Health Forum, which enable evidence-based research to be easily shared with investigators, decision-makers and citizens
- models for developing new technologies, such as the Smart Home (in development)
- programs focused on community-dwelling older adults, such as Health TAPESTRY (Teams Advancing Patient Experience: Strengthening Quality), which enables community-based primary care research
- biobanks and high-throughput biomarker labs to support high-quality research
- established centres such as the Geriatric Education and Research in Aging Sciences Centre (GERAS) and the Gilbrea Centre for Studies in Aging, providing complementary clinical, social, cultural and community links that have the potential to augment the research agendas of the newly proposed Centre and the Institute (MIRA).

The Labarge Optimal Aging Initiative has raised the profile of healthy aging research across the University. Its Opportunities Fund has seeded multiple interdisciplinary research collaborations and influenced highly successful researchers to turn their minds to optimal aging, including several with the theme of mobility. The Centre will capitalize on this activity by ensuring that these researchers are collectively engaged and focused on shared problems in mobility that, with their expertise, can be solved.

MOBILITY IN AGING
Mobility is a cornerstone of healthy aging. The challenges of maintaining mobility can affect social and economic independence, along with physical and mental health. Emerging evidence suggests that individual factors, and built and social environments, play an important role in older adults’ mobility, social engagement and overall health, yet few studies address the complexity of factors across all levels.
Investments in research addressing the range of issues associated with mobility in aging have the potential to optimize the well-being of a large number of Canadians, as well as significantly reduce the nation’s health and social care costs.

Researchers define mobility in a number of ways, ranging from muscle mass and strength measures to the ability to move independently and continue living at home. Mobility encompasses not only specific maneuvers, such as walking or climbing stairs, or the execution of fundamental daily activities, but also participation in society (e.g. social participation, the ability to drive or access to public transportation).

Maintaining mobility is difficult for many older people. In addition to extrinsic barriers to mobility, such as built environments (e.g. availability of services or unsafe neighbourhoods), older adults must also cope with intrinsic barriers, such as the fear of falling and physical mobility impairments.
Within the cohort of people aged 60 years or older, 13 per cent have mobility impairments that impact physical performance, such as difficulty walking or driving, a figure that increases to 30 per cent by age 80. Over the next four decades, the number of Canadians living with such physical impairments will grow exponentially. In fact, 54 per cent of older Canadians already believe that they are less mobile than they were 10 years earlier. Evidence indicates that more than one-third of seniors have difficulty climbing several flights of stairs and at least one-quarter have difficulty bending or stooping (28 per cent) or walking a kilometre or more (24 per cent). Mobility challenges in older adulthood (e.g. difficulty walking, driving or lack of social participation) not only affect individual seniors: collectively these challenges increase the social and economic costs associated with additional health care, social supports and broad public policies.

**Objectives**

The Centre for Mobility in Aging has as its long-term goal the generation, sharing and implementation of new knowledge to improve the mobility of older Canadians and people worldwide.

The Centre’s initial objectives are to:

- establish McMaster as a national leader in this focused area of research
- increase broad awareness of the importance of mobility for the well-being of older adults
- pursue target areas for training, research and knowledge translation activities around mobility
- identify issues and questions of importance to stakeholders
- promote collaboration among researchers, the community and other stakeholders (e.g. housing industry, transportation, government/policymakers)
- engage in public outreach initiatives so stakeholders such as policymakers, business leaders, community leaders, media, educators, practitioners, etc. have a ready means to access the knowledge they need, when they need it.
- within and together with the Institute as a whole, provide a learning environment in the science of aging and undertake novel educational initiatives.

Building on McMaster’s culture of collaboration and interdisciplinarity, the Centre will be the nexus for integrated mobility research within the broader Institute.

**Leadership and Governance**

The Centre for Mobility in Aging will be the inaugural research centre encompassed within the newly renamed McMaster Institute for Research on Aging (MIRA). The Institute itself will serve
as an umbrella entity providing administrative and strategic support to the interconnected centres/programs that we see developing as the research progresses.

Together with the Managing Director, the Scientific Director will assume responsibility and accountability for all research endeavours and for the day-to-day activities of the Centre. In keeping with the University’s policy on institutes and centres (Guidelines for the Governance and Review of Research Institutes, Centres and Groups), the Centre will report through the Scientific Director of MIRA to the Governing Board of the Institute. The Centre itself is wholly supported by a gift of significant magnitude that includes, as a goal, maximizing educational and research opportunities in the area of aging more generally at McMaster. It has thus drawn additional infrastructure and support from the University aimed at the Institute as a whole. In order to ensure alignment with the Centre’s goals and provide coordinated oversight for this support, an additional layer of accountability has been assigned by the President, Vice-President Research, and Provost. A senior academic, to be identified as the University Lead, will join the Governing Board. The Board will review the strategic direction and operations of the Centre and ensure accountability and performance.

In order to provide scientific oversight and uphold the highest research standards, an International Scientific Advisory Committee (ISAC), composed of international experts, will advise and provide critical feedback to the Scientific Director on the Centre’s scientific strategy on an annual basis. This will ensure that all activity is directed to achieving the goals and milestones established for the Centre. The input of the ISAC will inform decision-making, including determining whether a research initiative will proceed as planned, be modified and resubmitted, or be rejected as it does not fit into the research framework. This interaction will occur through the Executive Committee of MIRA so that there is alignment between the activities of the Centre and the Institute more broadly.

The Labarge Gift Board will receive, for information, annual updates on project milestones and deliverables, the status of the funds, research successes, outreach activities and financial outcomes that occur each year from the Scientific and Managing Directors of the Centre.

Finally, the performance of the Centre will undergo an interim review at 3 years, as well as a
major review at 5 years from inception and at least once every five years thereafter, by an
External Review Board (ERB), as part of an analysis of the performance of the Institute. The ERB
will typically involve internal and external members, and the review will ensure that the Centre
is meeting its scientific, performance and fiscal targets.

The Research Approach
Given the range of intrinsic and extrinsic factors that can affect physical and community
mobility during the aging process, the Centre will take an interdisciplinary approach to examine
biological, behavioural, technological and environmental factors affecting mobility.

Initial consultations with McMaster researchers identified a number of priorities for study and
three areas emerged:

1. Understanding and defining mobility in aging
   • Identify trajectories of changes in physical and community mobility during aging
   • Understand and define mobility across disciplinary domains

2. Maintaining and restoring mobility: prevention, intervention and interaction with health
   systems
   • Identify and develop new interventions that affect mobility across or within diverse
     populations and conditions
   • Identify barriers for maintaining/promoting mobility in older adults within the health
     system, including access and navigation, lack of information, coordination, and
     continuity of care
   • Identify psychosocial factors affecting motivation and adaptation in mobility in aging

3. Environmental facilitators and barriers influencing mobility
   • Explore technological innovations, such as assistive devices.

These themes are elucidated more fully through the research questions outlined in the
Appendix.

In order to advance these research priorities, we propose the use of a design thinking approach,
which involves the consideration of multiple intersecting aspects of a problem and including
older adults in the concept and design stages when the research questions are being
developed. This method will generate practice- and policy-relevant high quality evidence, as
well as educational methods for creating or identifying products, services, and environments
that improve older Canadians’ health and quality of life.

**Core Activities**

To achieve the overall objectives for the Centre for Mobility in Aging, we propose several mechanisms to conduct research, support community engagement and promote knowledge translation, including:

1. **Stakeholder Consultation and Community Engagement Activities**
   - events and outreach (e.g. workshops, think-tanks) with a particular focus on communities outside of Hamilton (e.g. Oakville, Burlington, Brantford) that will facilitate and enable research collaboration and networking across disciplines and stakeholders, such as the Health TAPESTRY network
   - work with the McMaster Health Forum to conduct public and citizen dialogues
   - create a high profile national and international speaker series to inform researchers and the public about the Centre’s research outcomes

Here, we will focus on activities that will maximize both impact and leveraging opportunities.

2. **Research Reviews: Synthesis and Scoping**
   - identify research gaps in mobility
   - identify evidence that informs the evaluation of emerging interventions
   - identify interventions that have been shown to be effective
     - generate new evidence for the McMaster Optimal Aging Portal
     - implement evidenced-based interventions into practice

3. **Catalyst Grants**
   - provide an opportunity to conduct collaborative and interdisciplinary research with the goal to catalyze new research ideas in mobility
     - for example, assess the feasibility of creating residential areas that integrate university students and older people to improve social participation and mobility across generations

4. **Demonstration Projects/Case Studies**
   - demonstrate research products, such as wearable devices, in different cultural groups and diverse communities
   - examine the integration of health teams and community volunteers through initiatives such as Health TAPESTRY
5. **Major Interdisciplinary Research Initiatives** (e.g. Randomized Controlled Trials of Interventions)

- support an interdisciplinary team, for example, in the study of complex relationships between social isolation, built environment, immune system and mobility impairment, and the subsequent consequences in health and social care (cost effectiveness studies)
- perform major research studies, for example the role of affordable, usable assistive devices and consider the biomechanical and psychological needs of the aging population to promote mobility

**Membership**

Researchers with an interest in mobility in aging are eligible for membership in the Centre, which will maintain an open membership approach for all interested faculty members, clinicians and researchers at McMaster. Preliminary membership of the Centre includes:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrick Bennett</td>
<td>Professor and Chair</td>
<td>Psychology, Neurosciences and Behaviour</td>
</tr>
<tr>
<td>Jackie Bosch</td>
<td>Associate Professor</td>
<td>Rehabilitation Science</td>
</tr>
<tr>
<td>Dawn Bowdish</td>
<td>Associate Professor</td>
<td>Pathology &amp; Molecular Medicine</td>
</tr>
<tr>
<td>Andrew Costa</td>
<td>Assistant Professor</td>
<td>Clinical Epidemiology &amp; Biostatistics</td>
</tr>
<tr>
<td></td>
<td>Shlegel Chair in Clinical Epidemiology and Aging</td>
<td></td>
</tr>
<tr>
<td>M. Jamal Deen</td>
<td>Distinguished University Professor</td>
<td>Electrical and Computer Engineering / Biomedical Engineering</td>
</tr>
<tr>
<td>Lisa Dolovich</td>
<td>Professor and Research Director</td>
<td>Family Medicine</td>
</tr>
<tr>
<td>James Dunn</td>
<td>Professor and Chair</td>
<td>Health, Aging &amp; Society</td>
</tr>
<tr>
<td>Anne Gilsing</td>
<td>Postdoctoral Fellow</td>
<td>Clinical Epidemiology &amp; Biostatistics</td>
</tr>
<tr>
<td>Andrea Gonzalez</td>
<td>Assistant Professor</td>
<td>Psychiatry &amp; Behavioural Neurosciences</td>
</tr>
<tr>
<td>Amanda Grenier</td>
<td>Associate Professor</td>
<td>Health, Aging &amp; Society</td>
</tr>
<tr>
<td></td>
<td>Director</td>
<td>Gilbrea Centre for Studies in Aging</td>
</tr>
<tr>
<td>Lauren Griffith</td>
<td>Associate Professor</td>
<td>Clinical Epidemiology &amp; Biostatistics</td>
</tr>
<tr>
<td>Bhagwati Gupta</td>
<td>Professor</td>
<td>Biology</td>
</tr>
<tr>
<td>Jennifer Heisz</td>
<td>Assistant Professor</td>
<td>Kinesiology</td>
</tr>
<tr>
<td>Lori Letts</td>
<td>Professor</td>
<td>Rehabilitation Science</td>
</tr>
<tr>
<td></td>
<td>Assistant Dean</td>
<td>Occupational Therapy</td>
</tr>
<tr>
<td>Derelie Mangin</td>
<td>Professor and David Braley, Nancy Gordon Chair</td>
<td>Family Medicine</td>
</tr>
<tr>
<td>Alexandra Papaioannou</td>
<td>Professor and Geriatrician</td>
<td>Medicine</td>
</tr>
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</table>
Space
Many of the activities of the Centre will be virtual in nature, however, space has been made available at the McMaster Innovation Park within the space that has been provided as a contribution to the McMaster Institute for Research on Aging from the Faculty of Health Sciences for at least the next five years. The space will be sufficient to house administrative staff and will offer meeting and collaboration areas.

Budget
The new Centre will be funded through a generous donation of $15M from Suzanne Labarge. The gift agreement was signed in July 2016, and the formal gift announcement and launch of the Centre will occur in Fall 2016, following the formal approval of the Centre and its naming.
The gift is expendable over a minimum of seven years. During this time, the Centre staff and researchers will work to leverage and gradually supplant the donor funds through external sources, including grant funding.

A draft budget for the first two years is presented below and it is anticipated that the funds for the remainder of the gift will be allocated in a similar manner. Opportunities for new funds and for leveraging the current funds will undoubtedly emerge that will influence the allocation of funding in subsequent years. To that end, it has been decided to hold approximately 10% of the total for leveraging purposes over the course of the gift. The intention is to retain maximum agility in our response to new, exciting opportunities as they emerge.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>YEAR 1</th>
<th>YEAR 2</th>
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<tbody>
<tr>
<td>Research Funding: catalyst grants, research reviews, major research projects</td>
<td>$335,000</td>
<td>$1,335,000</td>
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<tr>
<td>Community and stakeholder engagement activities, knowledge translation</td>
<td>$275,000</td>
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<td>Fellowships, PDF support</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$810,000</strong></td>
<td><strong>$1,960,000</strong></td>
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</table>

**Summary**

McMaster has the opportunity to take a leadership position in the area of mobility in aging, which will be amplified by the excellence and external profile of the broader McMaster Institute for Research on Aging. Supported by a generous donation, we propose the creation of a **Centre for Mobility in Aging** to enable enhanced collaboration, strengthen research excellence in this area, and increase the critical mass of researchers and trainees at McMaster that are exposed to opportunities in aging research and knowledge translation.
APPENDIX

Thematic Areas of Research in Mobility

1. Understanding and defining mobility in aging
   i. Identify trajectories of changes in physical and community mobility during aging and
      the aged:
      a. What are normal age-related changes associated with mobility?
      b. Identify and define criteria that are indicative of pathology or impairment and
         require treatment.
   ii. Define mobility across disciplinary domains
      a. How do external (physical and social) and internal (cognitive and biological)
         environments function, individually and collectively, to influence mobility as
         people age?
      b. Is there a link between social isolation and biology?
      c. How do social isolation and biology influence mobility-related impairment and
         well-being?

2. Maintaining and restoring mobility: prevention, intervention and health systems
   i. Identify and develop new interventions that affect mobility across or within diverse
      populations and conditions: “who-how-where-when”
      a. Evaluate models for existing and novel interventions.
      b. How do we prevent, maintain and limit (or delay) decline in mobility in an aging
         population? This may include interventions targeting healthy lifestyles (e.g.
         exercise programs or dietary changes), or community engagement (e.g. peer
         mentorship and volunteering).
   ii. Identify barriers for maintaining/promoting mobility in older adults within the health
       system, including access and navigation, lack of information, coordination and
       continuity of care.
      a. What are challenges faced by seniors and their families with respect to mobility
         and health?
      b. How does poly-pharmacology affect mobility? How can medication be used more
         effectively for people as they age?
      c. How can health and social systems be integrated to help people function
         optimally?
   iii. Identify psychosocial factors affecting motivation and adaptation in mobility in aging.
      a. What makes people engage with their communities?
      b. What are some of the obstacles people experience when engaging in their
community?

c. How do sensory impairments impede social participation, and how do these psychosocial factors influence mobility?

3. Environmental facilitators and barriers that influence mobility

i. Technological innovations, (e.g. assistive devices)

a. What outcome measures and assessment tools, devices, and equipment are most effective for determining interventions that will have a real impact on the mobility of older adults?

b. What measurement outcomes and indicators/predictors of mobility status are most important when considering the design of generalizable vs. tailored tools?

c. What is the best way to develop affordable, usable assistive devices and technologies that consider the biomechanical and psychological needs of the aging population that promote mobility?