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Executive Summary

The University of Manitoba (UoM) has the privilege of being a member of the research-intensive U15 group in Canada. However, that position is rapidly being eroded with the decline in UoM Tricouncil and total grant funding, as well as the low graduate to faculty ratios that exist at the UoM. Critical to the success of the UoM in maintaining/increasing its standing within the U15 is the Faculty of Health Sciences (FHS), which accounts for ~50% of the total and 41.6% of Tricouncil funding as well as 23% of the graduate student population at the UoM. As such a robust FHS research and graduate student environment must be a top priority for the FHS, the UoM and the Province. If this is achieved then it will ensure not only the academic mission of the University but access to cutting edge health care for Manitobans.

Tasked with developing recommendations to address these issues as the FHS comes into being the FHS-Research/Grad Studies Subcommittee held a series of meetings over the last year. It included a review of the individual College activities and resources, a review of the UoM Strategic Research Plan, and a meeting with the Dean, Faculty of Graduate Studies. The result is a series of recommendations specific to the following:

- FHS advisory structure consisting of three committees:
  - FHS Research Advisory Committee (RAC)
  - Academic Health Sciences Network – Research Working Group/Task Force
  - FHS Graduate Studies Advisory Committee
- FHS Strategic Framework for Research based on the overarching theme of “Integrative Research in Health and Well-Being”
- FHS CORE Platforms in support of faculty research
- Strategies to facilitate research in the FHS
- Advice to address FHS overarching goals to build collaboration, increase knowledge translation, improve process and enhance resource management.
- Strategies to enhance graduate studies in the FHS

The key issue identified is the need to appropriately fund the research environment and provide appropriate support for graduate student stipends in line with other provinces. Fundamentally, there is inadequate provincial government support for the indirect cost of research and the funding of graduate education. Indeed, Manitoba in both these dimensions ranks at or near the bottom of all provinces making it inevitable that our position within the U15 will decline and importantly more difficult to recruit or retain the best and the brightest to Manitoba.

This issue can not be addressed by the current UoM strategy of successive budget cuts to faculties rather it requires an investment of new resources to allow Manitoba’s pre-eminent university to succeed in an ever increasingly competitive environment. As such the report call for a significant investment in the FHS research enterprise. This in turn will ensure that Manitoban’s are served in all dimensions to the best of our ability.
About

**Audience**
Council of Deans, Faculty of Health Sciences

**Authors**
Raj Bhullar, Research and Graduate Studies Lead, College of Dentistry
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**Acronyms and Definitions**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tr>
<td>CHI</td>
<td>Centre for Health Innovation</td>
</tr>
<tr>
<td>CIHR</td>
<td>Canadian Institute for Health Research</td>
</tr>
<tr>
<td>MCNHR</td>
<td>Manitoba Centre for Nursing and Health Research</td>
</tr>
<tr>
<td>NCE</td>
<td>Network of Centres of Excellence of Canada</td>
</tr>
<tr>
<td>NSERC</td>
<td>Natural Sciences and Engineering Research Council of Canada</td>
</tr>
<tr>
<td>PI</td>
<td>Principle Investigator</td>
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<tr>
<td>VPRIO</td>
<td>Vice Presidents (Research and International) Office</td>
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<tr>
<td>WRHA</td>
<td>Winnipeg Regional Health Authority</td>
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**Reasons and Strategic Alignment**
Services provided should align to the strategic priorities of the University as proposed in “*Taking our Place: University of Manitoba Strategic Plan 2015-2020*”:

I. **Inspiring Minds through innovative and quality teaching**

“The University of Manitoba is this province’s research university; therefore, research informs our teaching and teaching informs our research. We are committed to ensure that our graduate students … have access to experiential learning opportunities”

An integrated research strategy will provide greater inter-professional training opportunities for learners.

II. **Driving Discovery through research excellence**

The recommendations contained in this proposal will enhance the research activities within the FHS and will foster meaningful and sustained collaborative research within the institution and with provincial, Canadian and global partners. It will facilitate
collaborative research and will allow for the exploration of offering jointly-authored, multi-disciplinary, graduate theses.

III. Creating Pathways to Indigenous achievement

“As Manitoba’s research university, we are dedicated to advancing Indigenous research and scholarship, becoming a centre of excellence for this work”. The new Research Unit will enhance the University’s research capacity on issues of importance to the health of Indigenous peoples and populations.

IV. Building Community that creates an outstanding learning and working environment

Strong research programs will be one of the elements that will make the University of Manitoba the institution of choice for potential students and faculty.

V. Forging Connections to foster high impact community engagement

“We are committed to aligning our research and teaching activities to meet local and global needs in a collaborative way, and to developing and fostering relationships that enable the University and our alumni, donors, and partners to have a direct and positive impact on people’s lives”.

Research programs within the FHS already foster great relationships with local and global partners. This is evident in the research funding generated by the Faculty. This proposal identifies that an investment in base funding for graduate student research and FHS CORES will ensure the University maintains its status in the U15.
Background and Current Situation

The Sub-Committee’s goals and objectives were to consider and advise the COUNCIL OF DEANS on issues relating to Research / Graduate Studies for the FHS and to develop and facilitate the implementation of strategies relating to:

FHS Overarching Goals:

- Consideration of opportunities to identify administrative efficiency.
- Enhanced collaboration, resource management and process improvement.

Research Goals:

- An integrated research strategy.
- A single research advisory committee.
- Enhanced research competitiveness.
- Increased opportunities to collaborate.
- More robust mentorship and peer support programs for all faculty including grant pre-review and grant facilitation.
- Development of common research platforms (e.g. shared research facilities and equipment) of infrastructure/data accessible to the whole faculty.
- Greater support for knowledge translation to move research into clinical dimension.

Graduate Studies Goals:

- Review of processes relating to graduate students within the FHS, recognizing the role of the over-arching Faculty of Graduate Studies
- Determine which graduate study processes/programs are grandfathered and which processes/programs follow the rules of the new FHS, i.e. operationalizing the changes.
- Greater inter-professional training opportunities for learners
University of Manitoba Strategic Research Plan (draft – before Senate)

The University of Manitoba’s Strategic Research Plan recognizes and supports the importance of a full spectrum of impactful research. It identified, through extensive consultations, a number of core thematic and signature areas for enhancement, which have been chosen based on their uniqueness, their potential to draw on strengths from across the University that combine teaching, research, and public service activities, and have relevance to Provincial priorities in today’s rapidly changing society. ¹

Strategic Themes
- Integrative Research in Health and Well-Being
- Safe, Healthy, Just and Sustainable Food Systems
- Human Rights and Social Justice
- Culture and Creative Works
- Sustainable Water Management Systems
- Arctic System Science and Technology
- High Performance Materials, Structures and Processes
- Fundamental Research

Cross-Cutting Themes
- Understanding and Communicating Information
- Indigenous People and Knowledges
- Sustainable and Resilient Systems for Prairie and Northern Communities

Signature Areas
- Arctic System Science and Climate Change
- Population and Global Health
- Immunity, Inflammation and Infectious Disease

Stakeholders
University of Manitoba
FHS – Faculty
FHS – Graduate Students
FHS – Support Staff
Other Faculties
VPRIO

External Stakeholders
Government of Manitoba
Research Manitoba
Regional Health Authorities and CancerCare Manitoba
Diagnostic Services Manitoba
Affiliated Hospitals, Institutes and Foundations
Federal Agencies
Private Sector

¹ The University of Manitoba – Strategic Research Plan 2014-2018
Process

Summary of FHS Research and Graduate Subcommittee Activities

The Subcommittee defined its overarching, research and graduate studies goals. Following this the Subcommittee embarked on a data gathering and reporting phase. Each ADR presented the following information to the Committee:

- Operating Budget - Baseline
  - Baseline
  - Overhead from Contracts
  - Indirect Cost or Research Program
  - IOF Program from CFI Funding
- List of programs in support of research in the College
- Inventory of Researchers in Faculty with 20%+ Research Time
- Org Structure of College Research and Graduate Studies Office
- List of Graduate Programs offered by College
- College research strategic plan

Each of the college’s graduate study leaders provided a report regarding their programs and future plans. The graduate study leaders formed a committee and provided the Subcommittee with a set of recommendations for research related to graduate studies.

The Subcommittee met with the Dean of the Faculty of Graduate Studies to understand his goals for FGS over the next 5 years to inform our analysis and is the basis of our recommendations to the Deans.

The Subcommittee embarked on a series of meetings to develop the work plan based on the Terms of Reference:

I. September 24, 2014
   a. VPRIO Strategic Research Plan
   b. Research Advisory Committee(s)

II. October 15, 2014
    a. Enhancing research competitiveness (e.g. Grant Pre-Review and Facilitation, Mentorship)
    b. Identifying common research platforms (e.g. shared research facilities and equipment), infrastructure and data accessible to the whole faculty.

III. November 12, 2014
    a. Identify increased opportunities to collaborate
    b. Strategies to increase knowledge translation to move research into clinical dimension

IV. November 19, 2014
    a. Process improvement opportunities
    b. Enhancing resource management
Recommended Advisory Structure

The Subcommittee recommends the formation of a Faculty of Health Sciences Research Advisory Committee as well as formalizing the mandate/scope of work for an Academic Health Science Network – Research Working Group/Task Force.

FHS Research Advisory Committee (RAC)

Membership:
College Research Leads
College Graduate Studies Leads
Faculty Research Lead

Committee members shall serve as liaison persons with others in the areas, which they represent.

Committee members, individually and collectively, shall deal with matters before the Committee in such a way that the interests of the Faculty of Health Sciences take precedence over the interests of any of its constituent parts, should those interests conflict or appear to conflict.

Function:

To advise the Council of Deans on issues relating to research within the Faculty, which includes:

• Developing, implementing and reviewing research policies within the Faculty, and advising on external research policy.
• Proposing mechanisms to enhance research funding.
• Designing strategies to enhance overall research education and capacity.
• Designing strategies to facilitate and augment research collaborations within the Faculty, as well as other Faculties or other external institutions.
• Assign individuals to subcommittees or working groups to evaluate and prioritize research proposals as required.
• Regular reporting on its activities and providing recommendations for approval to appropriate bodies as required.
• To communicate research activities:strategies/areas of focus/opportunities amongst the Colleges of the Faculty of Health Sciences.
• To review on an on-going basis resource allocation and requirements.
• Considering opportunities for process improvement and provide oversight during implementation.
Academic Health Science Network – Research Working Group/Task Force

The terms of reference for the Academic Health Sciences Network - Research Working Group/Task Force will be developed as part of the implementation process. However, in its current iteration this group acts as an implementation oversight committee to align research strategies across the Academic Health Sciences Network in Manitoba as well as to provide advice as to how the University of Manitoba can most effectively work with its partners in the network.

Membership:

**FHS Colleges**
- Faculty of Health Sciences research lead
- College of Dentistry research lead
- College of Medicine research lead
- College of Nursing research lead
- College of Pharmacy research lead
- College of Rehabilitation Sciences research lead
- NSERC/CIHR Pillar 1 representative
- SSHRC/CIHR Pillar 2 representative
- CIHR Pillar 3 representative
- CIHR Pillar 4 representative

**Academic Health Science Network Partners**
- Director Research, HSC
- Director Research, St. Boniface
- Director Research, Cancer Care MB
- Director Research, MICH
- CEO, Diagnostic Services MB
- WRHA Lead for Research
- Executive Director, CHI (SUPPORT UNIT)

**UoM Research Administration/Provincial Government**
- VPRIO, U of M representative
- Executive Director, Research Manitoba
- Manitoba Government - Jobs and the Economy / Health
Recommended Strategic Framework for Research

The committee adopted the framework for the Theme “Integrative Research in Health and Well-Being” that is proposed by the VP Research International Office, with some modifications. In particular, the committee viewed “Health and Well-being as a knowledge network marked by patient engagement that integrates outputs from Fundamental and Biomedical Research, Clinical Research, Health Services and Systems Research, as well as Social, Cultural, Environmental and Population Health Research together to form new knowledge that is applied through knowledge translation. This is seen as an evolving iterative process advancing individual and population level health and well-being.

Integrative Research in Health and Well-Being

To foster research, it was proposed that the strategy be focused on developing CORE platforms – in support of faculty researchers – and foster CLUSTERS as our engine for integration of SSHRC/NSERC/CIHR Pillar I, II, III, and IV research within a given field of expertise.
Recommended CORE Platforms

To support Health and Well-Being Research, key environment, infrastructure, services (CORE Platforms) are available for research within the FHS.

CORES that serve the research needs of faculty across the FHS include:

- **Provincial Biobank** (being developed by Diagnostic Services Manitoba). Facilitates CIHR Pillar II and IV research.
- **Manitoba Centre for Health Policy** (managed by Department of Community Health Sciences). Facilitates SSHRC, and CIHR Pillar III and IV research.
- **G&F Yee Centre for Healthcare Innovation** (CIHR SUPPORT UNIT - co-managed by College of Medicine and Winnipeg Regional Health Authority). Facilitates CIHR Pillar II and III research.
- **Central Animal Care and Small Animal Imaging and Genetic Modeling Centre** (responsibility of the College of Medicine). Facilitates NSERC and CIHR Pillar I research.

CORES that largely serve the research needs of a particular College faculty are:

- **Molecular Modeling Suite** (College of Dentistry)
- **Biomedical Service Platforms** (College of Medicine)
- **Manitoba Centre for Nursing and Health Research** (College of Nursing)
- **Pharmaceutical Analysis Centre** (College of Pharmacy)

*Note: new sources of funding are required (e.g. indirect cost of research funding from the province) to properly support these CORES – top priority are those CORES serving all Colleges of the FHS.*
Recommended Strategies to Facilitate Research in the FHS

The Subcommittee identified key strategies that will enhance the research competitiveness of the new FHS. Providing some opportunities at a Faculty level will strengthen the integration of research activities.

Strategies at the Faculty level include:

- Faculty start-up funds for new investigators to leverage funds from VPRIO (goal – to establish research environments and generate preliminary data to seek external awards)
- Access to the services of Grant Facilitators (goal – enhance research competitiveness). The Faculty currently has 2 positions (one at each campus), but it is anticipated that a third facilitator at the Bannatynne campus will be needed in the near future.
- The establishment of Faculty Internal Peer-Review Committees (goal – enhance research competitiveness)
- Research Development Workshops (goal – career development and advancement, capacity building)
- Research Symposia Sponsorship (goal – collaboration; integration; development of teams)
- Academic Health Sciences Network Research Working Group (goal – align research strategy within the Network; foster collaboration)
- Targeted Research Recruitment \rightarrow Research Team/Cluster (goal – to integrate and focus to enhance competitiveness)
- Matching funds for National grants (NSERC or CIHR Team, Network or NCE) (goal – to enhance competitiveness and inclusion of Manitoba researchers in national networks)
- Bridge Funding (formal open competition – peer reviewed needs assessment) (goal – maintain individual PIs competitive for awards)

Strategies that are in place and should remain at the College level:

- Bridge Funding (informal (ad hoc) - at discretion of the College Dean) (goal – maintain individual PIs competitive for awards)
- Visiting Professor Program/Seminar Series (goal – building external collaborations)
- Performance Review (goal – career development and advancement)
- Provision of a Mentorship Program (goal – career development and advancement)
Recommendations Addressing FHS Overarching Goals

Recommendation 1: Identify increased opportunities to collaborate:

- Facilitate workshops and symposia that are more collaborative and integrative amongst all the colleges.
- Support a semi-annual visiting professor program for individuals of joint interest to multiple colleges, which may also be part of jointly held symposia or workshops.
- Utilize the Research Manitoba new program in Clusters and Teams to facilitate NSERC/multi-CIHR pillar collaborations between Colleges – needs to be investigator driven.

Recommendation 2: Strategies to increase knowledge translation (KT) to move research into clinical dimension:

- Maintain and enhance the KT expertise that has been developed at the Manitoba Centre for Nursing and Health Research (MCNHR) and the George & Fay Yee Centre for Healthcare Innovation (CHI).
- That MCNHR and CHI look for opportunities to increase their dialogue and collaborations to further foster the area of Knowledge Translation in Manitoba.

Recommendation 3: Process Improvement Opportunities:

- That the FHS Research Advisory Committee conducts ongoing evaluation of research process improvement opportunities and makes recommendations to the Council of Deans. For example, the committee recommends that electronic signatures should be acceptable in general to avoid excessive paper utilization, speed processes, and enhance time management of investigators and office staff (i.e. FAAF forms and grant sign-off).
- That the current commissioned administrative, financial, and legal review of processes in support of research be tabled with the Dean’s of FHS once submitted to the Academic Health Sciences Network Research Taskforce.

Recommendation 4: Enhancing Resource Management:

- That the FHS Research Advisory Committee conduct ongoing evaluation of resource utilization and makes recommendations to the Council of Deans.
- The committee identified that there are little discretionary funds in support of research within colleges at present for gaining further efficiencies.
- The committee strongly urges the FHS Deans to advocate for appropriate provincial level of funding to the University to appropriately cover such things as indirect costs of research, graduate student support. If the University received such funding then sustainable solutions would be enabled to ensure a robust competitive research environment is present at the University of Manitoba. (It should be noted that at present Research Manitoba is working in collaboration with the VPRIO to assess the current gap of indirect cost support in Manitoba).
Recommended Strategies to Enhance Graduate Studies in the FHS

Recommendation 1:
Establish a FHS Graduate Studies Committee to promote the student experience throughout the Faculty of Health Sciences that will:

- Establish a linkage with the Bachelor of Health Sciences and Bachelor of Health Studies degree programs with the objective of increasing the exposure of undergraduate students to health sciences research.
- Establish a Faculty-wide Graduate Student Awards Committee to oversee and vet financial support:
  a. to enhance the grad student experience;
  b. to attract national/international students; and, in part, by promoting financial support to graduate students by offering 10 entrance awards ($25K each – allocated across the Colleges)
  c. to retain top graduate students by providing top-ups;
  d. and make available financial resources to provide graduate students additional support, e.g. for travel to present at national/international conferences.
- Develop programs/strategies that will support career development of graduate students for non-academic settings.
- Establish FHS based, coordinated support for outstanding speakers/scientists, to include all five Colleges, with enhanced opportunities for grad student interactions with speakers/scientists.
- Establish a communication structure for disseminating graduate studies information at the faculty level. A dedicated graduate studies FHS website should be created, to reflect current practice and opportunities in an engaging manner.
- In coordination with the Research Subcommittee, promote basic, clinical and population research at the Faculty level to expand multi-disciplinary and patient-oriented research.
- Oversee the implementation of the recommendations.

Recommendation 2:
The Heads and graduate chairs from those Units who offer research-based degrees undertake a systematic evaluation of their courses and determine course overlap between Units with the objective of enhancing the integration of programs within the faculty.

Recommendation 3:
Course Coordinators be encouraged to develop module-based courses, which meet the needs of graduate students and enrich their learning experience.

Recommendation 4:
Maintain the current administrative structure, with management of individual graduate programs remaining at the unit/college level.

Recommendation 5:
The provision of enhanced IST support for all campuses to ensure remote access to the full range of programs/courses/seminars/grand rounds.
Deliverables/Products

- FHS Head appointed and Administrative Structure Established by Council of Deans (Note: ToR declare out of scope for the Research and Graduate Studies Subcommittee).
- FHS Research Office
- FHS Research Advisory Committee
- FHS Graduate Studies Committee
- Academic Health Sciences Network - Research Working Group/Task Force
- FHS Strategic Plan for Research

Timescale

Initial Phase:
- Approval of FHS Research Platform Proposal: December 2014
- Council of Deans to Create a Research Structure: February 2015
- Develop Project Plan for a FHS Research Advisory Committee: April 2015
- Develop Project Plan for a FHS Graduate Studies Committee: April 2015

Implementation Phase:
- Establish FHS RAC Committee: February 2015
- Establish FHS Graduate Studies Committee: February 2015
- ToR for Academic Health Sciences Network Research Group: March 2015
- Implement FHS Research Structure: April 2015
- Execute FHS Graduate Studies Project Plan: April 2015 – March 2016

Expected New Costs Related to Research

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<tr>
<td>FHS Central CORES baseline</td>
<td>$2,000,000/yr (new)</td>
</tr>
<tr>
<td>funding</td>
<td></td>
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<tr>
<td>FHS Start-up and Bridge</td>
<td></td>
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<tr>
<td>Funding Pool</td>
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Major Risks

Should this proposal not be approved, the following risks need to be considered:
- The erosion of the existing research infrastructure and research excellence
- Loss of competitiveness in the National environment for Tricouncil operating and salary awards, which in turn limit access to linked federal research programs (i.e. CRC, ICP, CFI)
- Preclude participation in National research endeavors (i.e. SPOR Networks, NCE Networks)
- Negative impact to the career advancement of faculty
- Eroded ability to recruit and retain top faculty
- Inability to attract and retain top graduate students
**Major Constraints**

Provincial level of funding to the University to appropriately cover indirect costs of research is not available. If the University does not receive such funding then a competitive research environment at the University of Manitoba will not be sustainable. This in particular relates to the CORES to meet the needs of faculty researchers in the FHS.

Provincial level of funding to the University in support of graduate students is below the national average. If this is not addressed then the University’s ability to remain a part of the U15 will be unsustainable. While this is a major concern for the FHS it is germane to all Faculties.

**Major Assumptions**

Province/Research Manitoba will be made aware of the situation, listen and provide the necessary funding to support this proposal.