

Building Healthy Lives, Healthy Communities

**Faculty of Health
Strategic Research Plan**

2015-2020

DRAFT

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EXECUTIVE SUMMARY

Research has been central to the Faculty of Health since the Faculty was formed in 2006. Our research impact has grown, as have the number of researchers and trainees in the Faculty, and our research funding. Through a consultative process our researchers have identified a number of areas of research strength, and six main research themes: fundamental discovery in the social and natural sciences; the brain, the mind and mental health, the body, movement and physical health; health and development across the lifespan; health and social justice in diverse communities; and, systems and policy for healthy societies.

We see specific threats to our research enterprise in the forms of changing funding priorities within governments and within the Tri-Council, and in funding for graduate students and post-doctoral fellows. But we also see several opportunities, developing on the foundation of research excellence that we have already achieved, to mitigate these risks and threats. We see opportunity in the natural alignment between our identified research strengths and priority areas related to health that have been identified in our University's Strategic Research Plan, and in the governments' research and innovation strategies. We see opportunities to enhance the visibility of our research in the public domain. We recognize opportunities to further leverage our Organized Research Units, and to enhance our partnerships through collaboration, both locally and globally.

We have established four strategic approaches toward building our research over the next five years: promoting our research; enhancing supports for research and our researchers; investing in our people; and enabling collaboration. The investments we make over the next five years will help attract new funding, augment our research programs, enhance our productivity, and deepen the impact we make as researchers.

INTRODUCTION

Research has always been a defining feature of the Faculty of Health, ever since the Faculty was formed in 2006. The breadth of research in our Faculty is remarkable, spanning the natural sciences, life sciences, social sciences, humanities and arts. We have made steady gains in many aspects of our research: the number of researchers has grown with new faculty hires, our research income has increased, and we have diversified the sources of our research funding. Our highly productive researchers are recognized nationally and internationally for their contributions, from fundamental curiosity-driven research that advances the state of the art, to applied research that contributes directly to our society's quality of life.

All of our progress has been accomplished in an environment of increasing competition for research funding on a global scale, and a steady decline in resources made available to researchers across the country, in every discipline. Indeed, funding to support research – broadly speaking – has been identified as the greatest threat to the future success of research in the Faculty. Funding for trainees, shifting priorities of the Tri-Council and other federal agencies, and the availability of peer-reviewed funding generally are all of concern. A focus of this plan is to highlight opportunities to address these threats.

This new document, the strategic research plan for the Faculty of Health, aligned with the University's Strategic Research Plan, as well as the University Academic Plan, is the first formal research plan that has been assembled for the Faculty. The plan identifies thematic areas of strength, and lays out not only our aspirations, but also the steps we will take in the short- and long-term to realize our goals.

This plan is intended to serve as a guide to provide a five-year trajectory for the growth and development of research in the Faculty of Health. It sets priorities that will help inform the allocation of our resources, our advancement efforts for research, and our pursuit of strategic research funding. But it is recognized that this plan is only one of several strategic documents that define the Faculty's coordinated and integrated approach to meeting the critical demands that lay before all of us.

It is with great pride and satisfaction that we present our Faculty of Health Strategic Research Plan.

METHODS

The process for developing Health's Strategic Research Plan was designed to be consultative, seeking and incorporating as much input from our individual researchers as possible. Recognizing that faculty members are already very busy with many meetings of all sorts related to research, teaching and service commitments, we approached this process by electing to implement online surveys to gather information, holding a minimum of meetings with individuals or groups of faculty members.

Two surveys were disseminated to the Faculty of Health research community. In broad terms, the first survey asked "Who are we?" and "Who would we like to become?" and the second survey asked "How will we get there?" Survey one addressed our research strengths and research culture, as well as strategic research opportunities and general threats to the future success of our research. Survey two addressed mechanisms to enhance research across the Faculty, explored new collaborative opportunities within the Faculty, and asked how we might aggregate new and greater resources to underpin growth in our research. Both surveys addressed the roles of and opportunities for Organized Research Units within the Faculty.

The surveys received a good response rate. Any quantitative outcomes were graphed for visual inspection, while longer, text-based responses were read and examined to extract common themes. Summaries of the responses to both surveys were prepared and circulated to all faculty members on July 9, 2014 and March 5, 2015. Following each survey, each of the Schools and Departments within the Faculty (i.e., School of Kinesiology and Health Science, School of Nursing, Department of Psychology, and School of Health Policy and Management) were directly consulted at a regularly scheduled meeting to discuss the results. A webpage was also established where comments could be submitted anonymously. The feedback offered online and at the meetings has been integrated into the development of this document.

Any interpretation of the results of the surveys must recognize that not all researchers from within the Faculty of Health responded to the surveys. Surveys were sent to 177 researchers, and the average response rate was slightly more than 40%. Furthermore, size discrepancies in terms of the number of current researchers across different disciplines inherently biases any results in favour of those larger representations. Without a justifiable statistical method of addressing either of these concerns, a good-faith best effort was made to represent all interests across the Faculty. Nevertheless, through two visits to each of the four Schools and Departments in Health, the vast majority of our faculty members did have the survey results presented back to them, and there was, with few exceptions, strong consensus at those meetings that the results generally were accurate in reflecting the range of perspectives of our researchers. Exceptions were explored through consultation with faculty members, and the outcomes of these discussions are integrated in the document.

The Advisory Council to the Associate Dean, Research and Innovation, as well as the Chairs and Directors of the Faculty's four Schools and Departments provided guidance and assisted in the development of this plan. We would like to acknowledge their important contributions to this process. Most significantly, the detailed survey responses, thoughtful comments at meetings, and constructive feedback from individual faculty members were instrumental in constructing this strategic research plan. Thank you to all those who participated in setting the Faculty of Health's future course for research.

RESEARCH IN THE FACULTY OF HEALTH

The Faculty of Health enjoys a rich research culture, in which research is valued, encouraged and supported. The foundation of the Faculty's research environment is investigator-driven research, with robust programs of research built on the pursuit of individual interests.

Research in the Faculty of Health spans multiple disciplines, ranging from the humanities and arts, to the social sciences, to the life sciences and natural sciences. From physiological mechanisms at the molecular and cellular levels; to physical, cognitive and mental health, and behaviour; to government policies; to history and theory; local to global – our research includes all of this, and more. And it is important to note that, regardless of the Faculty's name, some of our faculty members do not research "health" at all. Their areas of inquiry – such as basic social science research, quantitative methods, or fine arts – are important to the Faculty, and the boundaries of the Faculty expand to include such disciplines. This should be borne in mind in all considerations of "health research" throughout this plan.

Across our four Schools and Departments there is a diverse range of high-quality research, and our faculty members recognize (as articulated in the survey responses) a number of specific areas as particular **areas of strength** within the Faculty. In alphabetical order these are:

- Aging
- Child and youth development
- Mental health
- Muscle and exercise physiology
- Neuroscience
- Social determinants of health
- Vision

Research in the Faculty of Health is generally aligned with, while not being directed by, the priorities of our multiple levels of government with respect to human health, broadly defined, and with the important transitions that we see evolving around us in our society, throughout our daily lives. In that sense, our research is **responsive to the needs of our society** but at the same time maintains the crucial nature of curiosity-driven, passionate exploration that characterizes, and should continue to characterize, research within the academy.

Organized Research Units (ORUs) represent a key feature of our research enterprise in the Faculty of Health. While it is recognized that not all researchers either see themselves as a good fit to be a member of an ORU or desire to be a member of an ORU, many faculty members do, and are. There are five ORUs that have direct relationships with Faculty of Health, either as Faculty-based ORUs, or as Institutional ORUs that have significant numbers of members from the Faculty of Health. The Faculty-based ORUs include: Muscle Health Research Centre, LaMarsh Centre for Child and Youth Research, and York University Centre for Aging Research and Education. The related institutional ORUs include: York Institute for Health Research, and Centre for Vision Research. Several other ORUs at York University also have members from the Faculty of Health. The ORUs provide a sense of community and collegiality amongst like-minded researchers and trainees. They also provide some advantages to their members, including access to certain resources, a platform from which to apply for research funding, and a framework through which enhanced publicity and profile may be realized.

Beyond the formal structure of an ORU, many Health investigators work as research teams, and increasingly work across disciplinary boundaries. The reach of the Faculty can be seen locally, nationally, and internationally, with active collaborations in more than 30 countries around the world. Our partnerships extend beyond academia to government, industry, community agencies, and healthcare organizations. The majority of such partnerships have emerged through the efforts of individual faculty to build their networks. And the Faculty of Health has created formal frameworks for collaboration with key organizations, for example, having established continuing Research Scientist appointments at two community hospitals to foster joint efforts between researchers and clinicians. **Collaboration** is a hallmark quality of research in our Faculty.

The Faculty of Health has a large footprint on campus, with our researchers located in offices and labs across many buildings. The **infrastructure** that enables our research includes key common facilities such as the MRI, vivaria, and shared equipment in the Life Sciences Building, as well as the libraries, machine shops, and computing services. These resources are essential to the success of our research and contribute to the experiences of our trainees. Access to increased research space and infrastructure will continue to be important as our research enterprise continues to grow. The University's location in the Jane-Finch neighbourhood and on the doorstep of York Region has also provided strategic opportunities for many of our researchers to carry out their work in nearby communities.

Individually and collectively, our **research performance** in the Faculty of Health is impressive. Our investigators:

- Publish over 650 peer-reviewed articles per year, on average
- Make over 1000 peer-reviewed conference presentations per year, on average
- Receive \$4.3 million per year in new Tri-council funding, on average
- Held more than \$13.4 million in external research funding in 2013-2014
- Include 5 Canada Research Chairs, 3 current CIHR Chairs and 2 current CIHR New Investigators
- Include 1 York Research Chair and 5 Distinguished Research Professors

The Faculty of Health is recognized within the university as a research leader, and our vibrant research enterprise is a key characteristic of who we are as a Faculty.

OPPORTUNITIES

As we plan the future of research in the Faculty of Health, it is clear that we are starting from a position of strength. But there are, without question, ways in which we could bolster and grow our research. In the survey results, our faculty observed distinct opportunities in the following ways: natural alignment with externally-defined priority areas; increasing the visibility of our research; leveraging our ORUs; new collaborations; and new partnerships.

We are fortunate that Health's research aligns with many priorities internally (e.g., opportunity areas set out in the institutional Strategic Research Plan) and externally (e.g., Ontario's Innovation Agenda; the Federal Science, Technology and Innovation Strategy). Our research enterprise is naturally positioned to be advantaged by societal trends that influence government and funding agency priorities, including shifting demographics, an increasingly diverse society, advances in technology, and ballooning

healthcare costs. Examples of areas where **our strengths align with external priority areas** or areas where we have seen recent targeted funding calls could include:

- Health and mental health in children and youth
- Aging and health in older adults
- Understanding the brain and related disorders
- eHealth and integration of technology in health, health behaviours, and health interventions
- Health in vulnerable populations
- Population health and health systems
- Patient-oriented or person-centred care

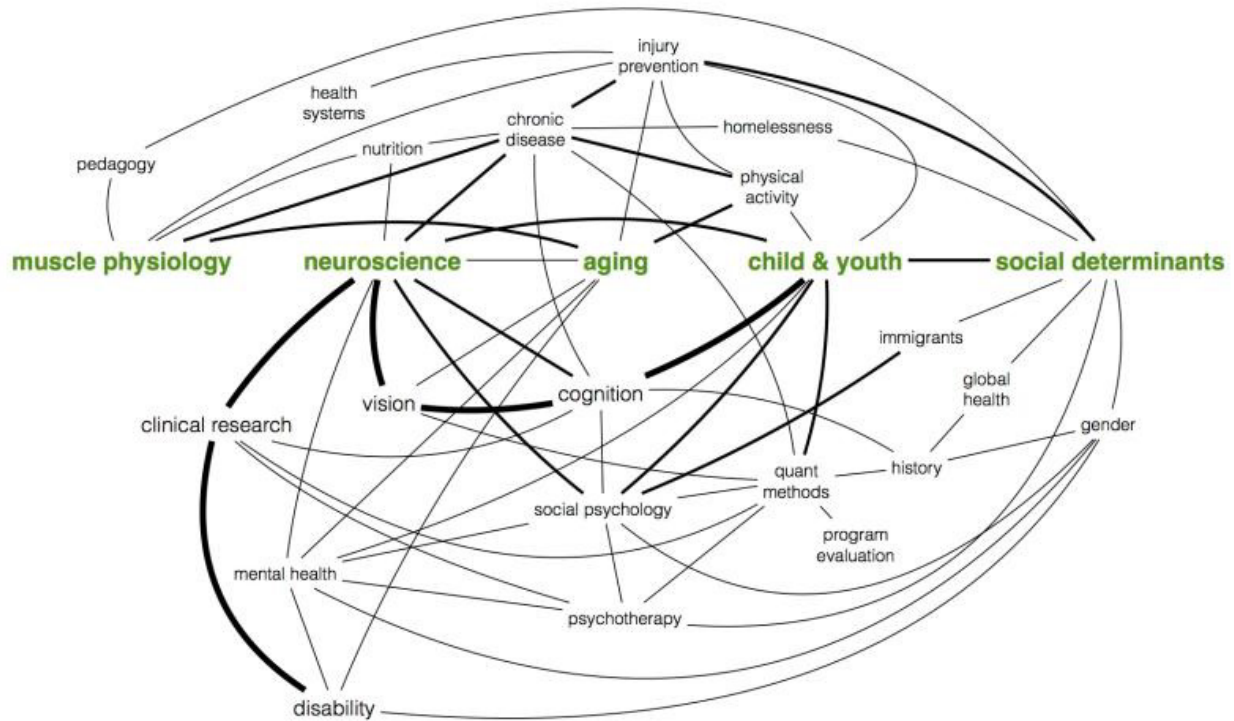
We are well poised to respond to requests for proposals on such topics. The growing need for research evidence in these areas, and in health more broadly, is a distinct opportunity for our Faculty.

Throughout the consultation process, we heard often that we have a significant opportunity to increase **the visibility of our research**. Although we are known for our research excellence within York University, and are known outside the institution for a few specific research areas, especially those associated with our ORUs, our research achievements are often hidden. We can do more to promote our Faculty, faculty members and trainees, and enhance the Faculty of Health's reputation as a leading research entity and destination for high-quality graduate students. Given the relevance of our research for so many areas of human health and quality of life, there are also abundant occasions for projects and findings by Faculty of Health investigators to be featured in the popular media.

There is potential for our ORUs to play a bigger role in our research culture. Many faculty described ORUs as an under-utilized or untapped resource, and see potential in **leveraging ORUs** to advance Health's research enterprise. The findings of the survey process tell us there is work to be done in making the mandates and roles of our ORUs better known within the Faculty. For example, the ORU framework can be beneficial in obtaining external funding by demonstrating a critical mass of research capacity in an area, in attracting highly-qualified trainees and enhancing their training, and in mentoring and supporting junior faculty as they establish their programs of research. ORUs also provide a natural structure to facilitate communications and collaboration amongst researchers in different fields and between institutions, and can offer infrastructure and administrative support through the pooling of resources. There is an opportunity to contemplate increasing the number of ORUs associated with the Faculty of Health, to create these associated benefits in research areas not currently represented by existing ORUs, though any new ORUs established in the coming years would need to demonstrate that the area of research focus is complementary but in no way competitive to existing ORUs. ORUs could also potentially serve as the "face" of the Faculty of Health in specific research areas, as part of branding, media and advancement strategies. There is great potential for ORUs to help enhance our reputation.

A key opportunity for the Faculty of Health is **collaboration**. While many of our faculty already work collaboratively, it is also true that many investigators within the Faculty have never met one another. We can take action to help faculty better know who their colleagues are, what they research, and what methodologies they use. As one survey response noted, *"We are a big Faculty – this should be our strength, not a weakness."* The potential exists for an intensely collaborative environment that draws on the strengths of researchers across the Faculty in the formation of multidisciplinary and interdisciplinary

teams, bridging basic and applied approaches, to tackle the toughest and most interesting problems we now face as a civil society. Through the consultation process, a “map” emerged of a possible future collaborative state for the Faculty of Health, directly reflecting the responses made by faculty members, capturing the potential links between thematic areas. The diagram below graphically demonstrates the connections between our researchers’ current areas and areas with which they would like to work.



Similarly, collaboration with external organizations also offers a chance to expand research in the Faculty. More and more, we feel the pull of public- and private-sector organizations that approach the Faculty of Health with specific needs for research expertise. In addition to connecting with those who can benefit from our work, such **partnerships** can offer a chance to access specific populations, provide trainees with new skills and experiences, or engage in contract research. Research funders increasingly place value on collaboration, and many new opportunities for funding are in the collaborative space, including pools of funds reserved for industry-partnered work. Significant numbers of our faculty are already engaged in such collaborations. It is also important to recognize that this will not be an appropriate avenue for everyone. But for those who wish to, there are clear opportunities to sustain, increase, or embark upon new partnered research initiatives.

RESEARCH THEMES IN THE FACULTY OF HEALTH

Six dominant themes emerged from discussions and questions of what we do well in the Faculty of Health, our opportunities, and how we would like to collaborate. These themes are represented visually in the diagram below. These six themes exemplify the breadth and depth of our research in the Faculty of Health; they showcase areas where we have strength, and where we are making an impact. Each theme encompasses many different disciplinary areas and research approaches in which we collectively



have a strong record of past accomplishments. While these themes cannot reflect – and are not designed to reflect – the individual research interests and strengths of each of our faculty members, many will see themselves within one or more of these themes. It should also be stressed that these themes are connected, and that our researchers and research teams often work at the intersection of these areas.

Over the next five years, we will seek to build on and advance these thematic areas. In setting priorities, we should continue to focus on these existing areas of strength, areas where we have infrastructure and capacity in place. In describing the areas with which they would like to collaborate, very few faculty members identified areas that are not already represented within the Faculty of Health. Their ideal collaborators, in the vast majority of cases, are areas in which we already have strength. So while we must be open to expanding our focus, and be responsive to new and emerging areas, we see that **our largest opportunity as a research community is to focus our resources - financial and otherwise - on advancing and enhancing these research themes.**

STRATEGIC DIRECTIONS FOR RESEARCH IN THE FACULTY OF HEALTH

Over the next five years, we will build on the Faculty of Health’s achievements to date and the strong platform that has been created already. We will consolidate the gains that we have made, and invest in our future productivity and accomplishments. Therefore, we will focus our efforts on **promoting our research, enhancing supports for research and our researchers, investing in our people, and enabling**

collaboration. Through these strategies, we will also seek to mitigate the greatest risks that have been identified by our faculty members: changes in funding agency priorities, the availability of peer-reviewed funding, and funding for trainees. The investments we will make over the next five years are intended in part to help attract new funding, serving to augment our research programs, productivity, and impact.

The remainder of this document highlights specific goals and objectives for Health’s research enterprise, and the actions and investments that will be made to accomplish them. It is important to note that all of the particular strategies noted here were drawn directly from faculty members through the consultation. Each of these goals is intended to measurably increase the impact of our research in one or more ways, and to continue to improve the quality of our professional lives as researchers and faculty members in the Faculty of Health at York University. We must make careful use of our limited resources to grow and support our research; each strategy has been paired with one or more appropriate metrics to monitor and assess our progress. While we will be disciplined in following through with our plans, we will remain flexible to be responsive to an evolving landscape, to take advantage of the opportunities that will surely arise during the next five years.

1. Promoting our Research

Objective: To make Health’s research better known, internally (intra- and inter-Faculty) and externally (academic and lay communities), through increased communication activities.

Immediate/Short-term plans	Long-term plans	Metrics
<ul style="list-style-type: none"> • develop research brochure • launch feature research website • help ORUs become better known and understood within the Faculty • explore new ways to recognize and celebrate research successes 	<ul style="list-style-type: none"> • develop an internal research newsletter • create extra staff capacity to focus on research communications, media and social media • host research events for internal and external audiences 	<ul style="list-style-type: none"> • # internal events • # external events • website traffic • media coverage

2. Enhancing Supports for Research and Researchers

Objective: To help Health researchers maintain and grow their research programs and research impact by providing additional internal research funds, enhancing current supports, and implementing new, additional supports toward securing external funding.

Immediate/Short-term plans	Long-term plans	Metrics
<ul style="list-style-type: none"> • explore and pilot mechanisms for faculty to access professional grant writing support • expand internal peer review opportunities to all Tri-Council applications • provide access to machine shops subsidies and a repair contingency fund • make travel funds available to graduate students • continue to advocate for Health's research space needs and promote opportunities to acquire infrastructure (e.g. CFI, Advancement) 	<ul style="list-style-type: none"> • make additional internal funds available for research • expand the Catalyst Award program to reduce teaching for high-load faculty • explore models to provide bridge funding (as resources permit) for Tri-Council renewals • pursue offering funding for postdocs (linked to graduate program time-to-completion) through a competitive process 	<ul style="list-style-type: none"> • # of applications submitted for external funding • application success rates • % of faculty holding external funding • \$ of infrastructure funding • # internal peer-reviews completed

3. Investing in Our People

Objective: To attract and retain top faculty and graduate students, to position our researchers and trainees for success, and to see our people recognized for their achievements.

Immediate/Short-term plans	Long-term plans	Metrics
<ul style="list-style-type: none"> • identify a research mentor for all new faculty (and ensure recognition of mentors) • encourage faculty to nominate their colleagues and increase number of Health faculty nominated for prestigious awards • explore incentives to encourage top 3rd and 4th year students to engage in research activities, e.g. RAY program 	<ul style="list-style-type: none"> • appoint additional YRCs • initiate a formal mentoring program for junior researchers • ensuring competitive funding packages for top graduate students • promote extra-curricular learning opportunities associated with career skills for graduate students 	<ul style="list-style-type: none"> • # research mentors engaged • # award nominations • # RAY positions • average \$ funding package • # research chairs

4. Enabling Collaboration

Objective: To promote interdisciplinary work and improve our competitiveness for collaborative funding opportunities by increasing the number of collaborations amongst Health researchers and partnerships with external organizations, both locally and globally.

Immediate/Short-term plans	Long-term plans	Metrics
<ul style="list-style-type: none"> • host internal events where researchers can meet one another • promote collaborative funding opportunities • develop a listserv and/or webpage for collaboration requests • provide opportunities for ORUs to become better known to faculty • coordinate with AD Community and Global on planned efforts to sustain and grow our networks of partners 	<ul style="list-style-type: none"> • work with ORUs to support them in attaining independent financial sustainability • expand Research Scientist program • increase applications to partnered funding programs • create extra staff capacity to support partnership activities and large funding initiatives • host networking events to bring new teams and partners together • coordinate with AD Community and Global on planned efforts to support international research collaborations 	<ul style="list-style-type: none"> • # events • # research scientist appointments • # applications to partnered programs • # of partnerships