

**UNIVERSITY COUNCIL
RESEARCH, SCHOLARLY AND ARTISTIC WORK COMMITTEE
FOR INFORMATION ONLY**

PRESENTED BY: Stephen Urquhart, Research, Scholarly and Artistic Work Committee Chair

DATE OF MEETING: April 18, 2013

SUBJECT: *Report on Principles and Strategies for Research Success*

COUNCIL ACTION: For information only

CONTEXT AND BACKGROUND:

The Research, Scholarly and Artistic Work Committee (RSAW) has been engaged in discussion of the actualization of the goal set in the University's *Strategic Directions* (2010) [www.usask.ca/ipa/planning/strategic_directions.php], specifically that "*Tri-agency funding performance be above the national average for medical-doctoral universities in all competitions and in all academic units of the University.*" The attached report represents the distillation of the Committee's thinking in this regard over a two-year period, utilizing both a principle-based approach and articulating a more practical-based set of strategies to realistically advance the University toward this goal.

The Committee consulted with the University's NSERC, CIHR, and SSHRC special advisors and received valuable comments and feedback from these individuals on drafts of the report. Consultation also occurred with the Vice-President Research, who is also a member of the Committee. As a first step, the Committee invited a number of leading "front-line" researchers to provide their own personal reflections and insight on the Tri-agencies and changes in research funding models.

DISCUSSION SUMMARY:

The attached report distills the discussion on research and the Tri-agency funding goal into a set of principles and recommended strategies that are submitted to Council for consideration. The goal is to engage Council in discussion of how the University's research mission might be advanced and to provide guidance to those offices directly responsible for research and to the University at large on Council's thinking in this regard. In the report, there are several placeholders of key importance to the Committee

that are worthy of separate and more in-depth consideration and consultation than could be realized within the report. These are undergraduate research and Aboriginal research.

As a general background, the importance of research is captured in the [Foundational Document on Research, Scholarly and Artistic Work \(2004\)](#) [www.usask.ca/ipa/planning/foundational_docs/index.php]; [Toward an Engaged University, the Second Integrated Plan \(IP2, 2008\)](#) [www.usask.ca/ipa/integrated_planning/second_intplan/index.php]; and [Promise and Potential, the Third Integrated Plan \(IP3, 2012\)](#) [www.usask.ca/plan/index.php].

ATTACHMENTS:

Report on *Principles and Strategies for Research Success*

Research, Scholarly, and Artistic Work Committee Report to Council: Principles and Strategies for Research Success

April 4, 2013

The goal: The update of the University of Saskatchewan Strategic Directions (2010) sets the goal that “Tri-agency funding performance be above the national average for medical-doctoral universities in all competitions and in all academic units of the University.” In response, the question is, “What will it take to bring the University up to the top-flight medical-doctoral research institution which it aspires to be?”

This report summarizes a series of discussions held by the Research, Scholarly, and Artistic Work Committee (RSAW) from 2011 to 2013, where the Committee asked the following questions:

- What strategies can the University pursue to reach its goals of research success?
- What principles should the University follow to reach its goals of research success?

This contribution from the Research, Scholarly, and Artistic Work Committee of Council is meant to inform, reinforce, and complement existing activities and action plans to build research success. These include high-level documents such as the *Foundational Document on Research, Scholarly and Artistic Work* (2004), *Toward an Engaged University, the Second Integrated Plan* (IP2, 2008) and *Promise and Potential, the Third Integrated Plan* (IP3, 2012), new initiatives such as the *Research Success and Collaboration* commitment area in IP2, ongoing activities that include the development of the shared research facilitation model, research mentorship programs, and awards facilitation; and new initiatives such as the development of college/school research plans and the Graduate Student Lifecycle in the Strategic Enrolment Management Project. These efforts are yielding fruit at many levels in the University. For example, early assessment of the new internal review process for Tri-agency grants indicates a strong correlation between the review and success rates in the CIHR (2011) and SSHRC (2010, 2011) competitions (the NSERC program was launched in 2012).

This report will outline a series of specific and practical suggestions raised by the Committee and pose questions where further discussion is needed. For simplicity, this document will use the word “research” as a proxy for “research, scholarly, and artistic work.”

Funding and Research Success: The goal of enhanced Tri-agency funding is part of the broader objective that the University of Saskatchewan be a leader in the national and international research landscape, as one of the top medical doctoral research universities in Canada. Tri-agency funding is considered the “gold standard” of peer-reviewed research funding and status in Canada. It serves as the basis for other federally allocated funding, such as the Indirect Costs of Research and the University’s Canada Research Chairs allocation. Tri-agency funding is also an important measure for the allocation of funds under the Saskatchewan Universities Funding Mechanism (SUFM) and is weighted more heavily than other sources of research funding under the University’s internal resource allocation through TABBS.

However, the Committee cautions that Tri-agency funding by itself will not be sufficient to realize our research goals. NSERC intends its research funding as a grant in aid of research,

and requires leverage in Collaborative Research and Development (CRD) grants. Tri-agency funding is essential, but must also be accompanied by other sources of research funding. Additional sources of research and graduate student funding can come from regional, provincial and national governments, private companies, and foundations. The value of complementary funding sources should be weighted by considerations of quality, where the primary consideration is competitive peer review, evaluated against national and international standards. Competition drives quality, which in turn can drive reputation and generate additional opportunities. Nevertheless, support borne from all funding sources can still be valuable to the institution's research success, particularly if it can support target areas, such as graduate student enrolment growth.

The Committee discussed the imperative for research funding and recognized that high levels of research funding are not essential for all research areas. In the Natural and Health Sciences and Engineering, research funding is essential. Even in disciplines with a low cost of research, there is clear value in supporting graduate students with Tri-agency grants.

To address some of the strategies and principles for addressing the challenge of building our research success, the following areas are identified for this document:

1. Faculty as Research Leaders
2. Training and Research Success
3. Supportive Research Environment
4. A Road Map to Research Success

1. Development of Faculty as Research Leaders: Faculty members, as individuals and increasingly as members of research teams in some disciplines, are the *de facto* leaders of the research enterprise at the University of Saskatchewan. From the conceptualization of research projects, writing research-funding applications, recruiting students, training and mentorship, oversight and execution of research projects, and in the dissemination and translation of results, faculty members are leaders. Our strategies must recognize this fact, empower faculty leadership, and align administrative support to this objective.

The development of faculty research leadership will require work at all levels, including faculty recruitment, support and mentorship for new hires, recognition and support of the role faculty play as research leaders, and respect for the research time of faculty.

a.) Faculty Recruitment: The recruitment of new faculty members is a critical factor in research success of our institution. Other institutions have identified hiring the best individuals as the single largest component for research success. The Committee cautioned that the scope of new faculty searches should not be unnecessarily narrow, as this can exclude strong candidates from consideration. **Similarly, teaching and clinical drives must be kept in perspective: it is better to declare a failed search and re-advertise than to hire a mediocre candidate on the basis of a teaching or clinical need.**

The hiring process must identify and select those researchers who have demonstrated their ability to formulate an independent research program, and to understand and clearly identify their start-up and research funding needs. One suggestion made to the Committee was that newly hired faculty members should be required to submit a detailed research plan within the first six months of their appointment. **This is simply too late.** Units with a strong hiring history correlated with research success advocate that these discussions must be part of the interview process.

Some units are more successful than others in recruiting new faculty. There are many reasons for this, and these may relate to the strength of the unit, competitiveness within the field, the pool of potential candidates, and other factors such as the capacity to identify truly research-minded junior scholars. Institutionally, while leadership at the college and department levels is important for an effective recruitment process, the entire collegium must also be committed to this process. The interview is a two-way process: a negative experience can lose the best candidate. Professionally moderated, peer-led workshops about successful faculty hiring practices should be organized across campus to help units improve their performance in terms of recruitment. The experience of successful units should form the basis for a list of evidence-based factors for faculty recruitment, including:

- Prior research output;
- The articulation of an independent research program with short- and long-term goals;
- A robust interview process, where independent research skill and potential are evaluated;
- A critical evaluation of start-up requirements and research funding opportunities;
- An assessment of all potential challenges regarding the candidate's research program.

In the discussion of new faculty mentorship, it was noted that some new faculty might be advised to "work on their CVs" in their first year of appointment, that is, increasing their research output before applying for their first grant. An even stronger statement would be to hire new faculty who already have the CV that will allow them to be competitive for research funding at the start.

b.) Competitive Start-up Support for New Faculty: The hire of a new faculty member typically represents a >30 year commitment to the career of a new colleague and researcher. To skimp on appropriate and competitive research start-up funding is short-sighted and unworthy of our stated ambitions.

A differentiated level of support for new faculty, based on need and competitive pressures, will be needed. In a time of fiscal restraint, a "one size fits all" approach to start-up funding will mean that some new faculty will have inadequate support, and will therefore be hampered in establishing their research programs. A model based not on equality but on equity so that differential start-up needs can be accommodated could be facilitated by consideration of the following:

- An estimate of potential start-up requirements and the identification of their source should precede the interview process. The decision to allocate a salary line for a new faculty search should be coupled at the outset with consideration of appropriate, discipline specific start-up funding for that position.
- Deans, department heads, and senior administrators need to exercise judgment in determining the start-up requirements of each new hire, provide a strategy to provide this support in a timely manner, and follow-up to ensure that this support is provided.
- The responsibility for competitive, discipline specific start-up funding is a shared responsibility of departments, colleges, and the senior administration.

The Committee also reflected on the need for flexibility to allow new faculty to direct their start-up funding to the specific needs of their programs (operating versus capital, for example), as needs will vary.

c.) Support for New Faculty, Including Mentorship: The University of Saskatchewan is developing a mentorship program for new faculty. The Committee recognizes the great value in pairing our new faculty colleagues with experienced mid-career and senior faculty members. **However, mentorship programs cannot compensate for poor background preparation or weak research potential; nor can mentorship programs compensate for inadequate facilities and infrastructure.** The University must “hire the best” and provide adequately for new faculty as the essential first steps. Mentorship programs can then build on well-prepared ground.

Formalized mentorship programs are part of a broader process to develop a supportive research culture in a unit. The Committee supports faculty being paired with a detached mentor, particularly with faculty mentors outside of the individuals’ home units who are not directly involved in collegial decisions. This distance is important for honest exchange and support. Greater recognition should be given for the time committed by senior researchers on mentorship. Selectively determining the most relevant point in time to disseminate orientation information on new hires is suggested, rather than providing a deluge of information at the outset.

The Committee discussed the following principles:

- The research time of new faculty must be protected. Colleagues should recognize this principle, and department heads and deans must ensure that this is recognized in the formal assignment of duties, and the informal manner in which workload is managed within units and by new faculty.
- As new faculty will require considerably more time (per student contact hour) to prepare teaching materials, graduated teaching relief must be used to introduce new faculty into the university. Mechanisms for providing teaching include a rebalancing the assignment of duties (supporting new members by redistributing the teaching load in a department) and sessional support.
- The responsibility for supporting new faculty must be shared by all levels of the University (colleagues, department, college/school, and administration).

d.) Facility Requirements for New Faculty: The Committee is concerned with reports of the slow renovations of research space for new faculty. Preparations should begin immediately upon hire. Delaying renovations until the new faculty member arrives means that valuable research time is lost. New faculty are in a precarious position and must establish laboratory capacity and research groups quickly. National research grant funding is awarded competitively, where our new colleagues are compared to faculty at other universities. Delays can place our new colleagues at a competitive disadvantage. The consequences of this harm to their careers cannot be simply apologized away. The development of shared research laboratories may provide flexibility in providing these facilities to new researchers; clarity and commitment to new researchers is also needed within this model. The University needs mechanisms to ensure appropriate planning and budgeting for research facilities, coupled with meaningful accountability to ensure that our academic mission is properly satisfied.

e.) Early Career and Other Challenges: As new faculty settle in, and then move into the mid and senior stages of their career, the challenges of maintaining and growing their research program change. A “rapid start” to a research career is extremely important as new faculty reach their first Tri-agency renewal. Faculty are evaluated on their research

records, including publications and the number and quality of their trainees, so faculty with low numbers of graduate students and poor publication metrics fare poorly in renewals. Researchers with strong publication and HQP (highly qualified personnel) metrics are also losing funding in fiercely competitive NSERC Discovery grants competition. These challenges at first renewal are shared by NSERC, SSHRC and CIHR funded scholars. Recovery is difficult and perhaps impossible as researchers take a large cut in research resources with the loss of their grant.

The Committee did not explicitly discuss the challenges for mid- and late-career faculty members, but anticipates that their evolving professional roles will create both opportunities and pressures on their research activities. The Committee recommends that greater recognition be given for the time committed by senior researchers on mentorship, and service on internal and external review panels.

2.) Training and Research Success

a.) Undergraduate Research: Engaging undergraduate students in research, from their first learning experiences to work in senior projects, is suggested as a priority for the University as a whole. Research experience can change how students approach their scholarship, shifting their perspective from learning the accreted body of disciplinary knowledge to contributing to its creation. Research, as a process of posing new questions where the answers are not already known, can help our graduates tackle new challenges in their lives and careers after graduation. The Committee is considering undergraduate research as a separate item and intends to report separately to Council on this issue as a priority item.

b.) Graduate Student Training: Graduate student training is both a critical component of our research capacity and a key part of our educational mission. The multiplicative effect of graduate student participation on research programs is extraordinary. Tri-agency funding is increasingly tied to the outcome of the graduate student training, and seeks evidence that HQP gain employment in fields that use their skills. Quality of training and research capacity are therefore two themes that underlie the role of graduate students in research.

As a medical doctoral research-intensive university, a careful balance between research (thesis-based) programs and coursework-based professional graduate programs is needed. Ph.D. student enrolment is necessary to build our institutional research capacity. However, much of the University's recent progress toward its graduate student enrolment targets has come from professional Masters graduate programs. Professional and research programs are important to the institution for different reasons. Consideration of differential graduate program growth targets is needed, coupled with clarity when reporting enrolment metrics. Growth in thesis-based programs must be coupled with the recognition that most graduates will not work in academia, and that we have the obligation and opportunity to help our graduates succeed in other lines of work.

The University needs to evaluate its capacity for increased graduate student enrolment, and to identify barriers to enrolment growth. Factors are likely to include the availability of competitive student funding, supervisor capacity, graduate course instruction, administrative support, and access to appropriate student space and research facilities. A challenge for individual faculty in many departments is defining effective institutional strategies for recruiting graduate students that can be enacted at the individual level.

The Committee proposes the following aspects for consideration:

- Student Recruitment: Graduate program reviewers have noted the lack of a sufficient number of high-quality graduate students at the University given the calibre of research facilities and the size of the faculty complement. This may illustrate the need for promotion, but at its core, this is an issue of competitiveness with other graduate schools. High quality graduate students will flock to high quality faculty. We need clarity on what factors attract the best students, help them decide to come to the University of Saskatchewan, drive their research achievement and productivity once they are here, and how these factors differ between disciplines. These factors might include institutional reputation and research strength, the reputation and strength of the supervisor's research program, stipend support and duration, and the cost of living, etc.
- Funding Strategies: The importance of competitive stipend support for attracting the best graduate students must be determined. Intuition would suggest that adequate funding support will be correlated with appropriate completion rates: time spent in a part-time job is not time spent in a library or the lab. Data are needed to confirm this intuition as well as the question of why students choose one institution over another.
- Structural issues: The purpose, processes, and procedures of the College of Graduate Studies and Research, and their relationship to student training and research success, need to be clarified.
- Research Output: Graduate student publication demonstrates that the student's work is leading edge and underscores the value of graduate education. However, the perception is that graduate student publication rates are comparatively low at the University. A comparison with our peers, and the development of a strategy to encourage publication and dissemination are encouraged.

The Committee had several other observations:

- Collaborative relationships between programs could make better use of resources. Research and statistical research methods classes at the undergraduate and graduate level are an example of where efficiencies could be obtained through collaborative delivery.
- The development of compelling and engaging graduate programs could harness the research energies of under-utilized faculty members, and thus increase graduate student enrolment and research activity. The Interdisciplinary Centre for Culture and Creativity (ICCC) is an example of an innovative structure that offers Ph.D. programming not directly associated with any one unit, thereby allowing faculty members from departments that do not offer a Ph.D. program, the opportunity to contribute to graduate student training and supervision. There are also administrative efficiencies available using this model.

c.) Postdoctoral Fellows: The role of postdoctoral fellows in the University's research agenda has not been fully considered. Postdoctoral fellows can make large contributions to research programs, and provide role models in the mentorship of graduate and undergraduate students. Increasingly, postdoctoral fellowship experience is sought in new faculty searches. The opportunities to develop the roles of postdoctoral fellows in our research community deserve further discussion.

d.) Mentoring Scholarship Applications: The Committee recommends that graduate and undergraduate students and postdoctoral fellows be provided with scholarship application

support and mentorship. We fail our trainees when we do not provide them with this support, and we hurt our research programs and our standing when these support opportunities are lost. Support includes structured advice and support in the process for applying for scholarships, as well as formal review of scholarship applications with the requirement for detailed feedback from internal evaluation processes.

The University's research facilitators help with faculty applications and are often asked to assist undergraduate students on an *ad hoc* basis. Broader mentorship by faculty and an established review process would ensure all students had access to assistance in the application process. Grant writing is a professional and career skill, with value beyond the research enterprise, and an important part of student and postdoctoral fellow education.

Other suggestions for enhancing undergraduate and graduate student scholarship success include encouraging students to apply for Tri-agency funding in the last year of their undergraduate program, rather than in the first year of their graduate studies, and using the honours thesis as a platform to publish research and prepare undergraduate students for graduate studies.

3. The Development of a Supportive Research Environment

a.) Administrative Support Issues: In addition to collegial processes, faculty research performance is also evaluated in grant renewal competitions, waged against peers from across Canada, and evaluated by peers from around the globe. Therefore, our research environment must support our faculty on the global stage. An uncompetitive research environment, in terms of available facilities, graduate student support, and research leveraging opportunities will create barriers for continued research funding and activity.

A critical aspect of a competitive environment is protected research time. From a simple numerical perspective, the value of protected research time is difficult to measure. Quiet contemplation and reflection are at the core of scholarly activity for many faculty members but might be indistinguishable from "inactivity" to an outsider. Research output metrics will ultimately demonstrate the value of this important form of work. Nevertheless, this time needs to be protected, and we need mechanisms to ensure that this time remains sacrosanct.

With this in mind, a few suggestions are offered:

- The Service and Process Enhancement Project (SPEP) continue as a high priority at the University of Saskatchewan, with a particular emphasis on measures that improve the research support and efficiency of researchers. The Committee supports the development of the UnivRS research administration system for simplifying processes and improving efficiency for researchers.
- Increasingly, administrative responsibilities are being devolved to departments at the same time that resources are diminishing. It is recommended that all new administrative tasks that are "downloaded" to researchers by any part of the University be evaluated for their incremental impact on faculty productivity.
- Providing financial management tools in an easily accessible format was encouraged. A careful approach to regulatory controls is encouraged. The need and requirement for institutional responsibility for the use of public funds is clear; however, the University's core mission must be balanced against this requirement and the academic loss resulting from the continued attrition of researchers' time.

b.) Research Support:

- (i) Environmental Scan: A comprehensive environmental scan of the research support strategies employed by other comparable universities was proposed. A particular example is UBC's midlevel research strategy document,¹ which outlines a series of specific strategies; some of these strategies may be familiar, while others will be unique to UBC. Such an environmental scan should initially be blind to issues of implementation at the University of Saskatchewan, and include perspectives from senior administration, deans, department heads, graduate chairs, and faculty, as strategies and coping mechanisms may differ with level.
- (ii) Research Facilities: **The need for operating support for campus research facilities must be considered at a time when operating budgets are constricted.** These considerations should weight the competitive environment in which researchers find themselves. The full consequences of any reduction in operating support for research facilities should be considered before any budgetary decisions are taken.
- (iii) Grant Preparation Support: Research grant writing support has been discussed at several levels, including support from research facilitators and proposal development assistance programs. Introductory grantsmanship support is needed for new faculty, and large grant and project management supports are needed for mid-career and senior faculty as they take on larger leadership roles.
- (iv) Post-Grant Administration: Structures need to be put in place to facilitate rather than hinder a faculty member's administration of grant monies. Integrated policies and procedures across units, such as Research Services, Financial Services, and Facilities Management (for research space and renovations) need to be fostered and maintained.
- (v) Team Building: The development and coordination of research teams are key strategies for CIHR and SSHRC success. Faculty, particularly junior faculty, need support and assistance in building these teams, ensuring complementarity of efforts and expertise.
- (vi) Teaching Research Balance: The Committee considered the balance between teaching and research. As faculty member responsibility for wider graduate student mentorship and professional training roles increase, this work must be balanced with undergraduate instruction in the overall teaching equation. Similarly, course release time to complete or apply for funding for a major research project, which can then be applied for in a relatively straightforward manner, is a strategy used by other universities (e.g. University of Calgary).

4. Roadmap to Research Success²

a.) Research Metrics: Research metrics are an important part of identifying and celebrating success. The Achievement Record currently lists three indicators of research, scholarly, and artistic work:

- Research Funding, specifically Tri-agency and total funding;
- Faculty Awards and Honours;
- Output and Impact, as identified by the Academic Ranking of World Universities.

¹ <http://research.ubc.ca/sites/research.ubc.ca/files/uploads/documents/VPRI/UBC-research-strategy-May-2012.pdf>

² Title inspired by K. Chad, "Moving from Research Vision to Reality: transformational change through inspiration, clear goals, strategies and practical tools," presentation to RSAW, March 9, 2012.

These metrics provide an indicator of our “research inputs” (Tri-agency funding levels) and two long-term measures of research standing. Additional metrics will be needed to more clearly define the strengths and weaknesses of the institution, and to inform the development of specific strategies.

The discussion of research metrics has just begun in earnest, through the identification of unit level metrics in IP3. Targets must be identified and tracked with care. A cautionary example is institutional targets for graduate student enrolment, based on the expected contributions of thesis-based graduate students to research activity. As an institution, we have celebrated our progress towards our graduate student enrolment targets, despite the fact that most of this growth has come from course-based graduate student programs. These programs are important in their own right, but they do not contribute to the objective for the target.

Research inputs, such as funding, matter as much if not more than research outputs, which are simply a means towards an end. Carefully defined institutional data, including the University’s quarterly data on unit-based research grant funding success, can help guide our strategy development. Input measures (funding) and long-range output measures (awards and international standing) must be coupled with data to identify specific barriers to research activity, such as the nature of graduate student support, research facility support, administrative support for faculty, etc. Our membership in the U15 group provides the University with detailed comparative institutional data from which evidence-based strategies could emerge. To realize institutional goals, we must be prepared to ask specific questions, and let data guide the identification of challenges and opportunities. These will be difficult questions. We may not be prepared for the answers, but to develop meaningful strategies to build research strength, we must start with telling ourselves the truth.

When considering research metrics, the familiar aphorism holds: "not everything that counts can be counted, and not everything that can be counted counts." Subjective evaluation, transparently articulated and weighed against clearly defined principles, should also have a role in developing and evaluating institutional strategies for research success. The University is also challenged to find better ways to measure and acknowledge the contributions of the Performing and Fine Arts toward the creation of new knowledge outside of the Tri-agency paradigm.

b.) Tri-agency Specific Strategies: Evolving pressures from Tri-agency programs must be tracked and used to guide our strategies. Research support, mentorship, and University structures must provide for a competitive research environment, including the efficient use of grant funds for junior and senior faculty. The standard for competitiveness is not an internal measure, but is relative to the institutions with which we compete for grant funding from the Tri-agencies. Our proposals compete directly with proposals submitted by colleagues at the University of Alberta or the University of Toronto. Institutional support for graduate students and research facilities is a key part of this competitive environment.

Some specific challenges and opportunities are discussed below.

NSERC: Changes to the NSERC Discovery evaluation have caused disruption within the Canadian research community in the recent past. Some responses and opportunities to these changes have already been articulated in this report. The importance of the training

and subsequent roles for HQP is now emphasized, and can be viewed as an opportunity for the University and individual researchers to improve their research standing.

The NSERC Discovery grant program remains the foundation of the Natural Science and Engineering research programs at the University. Even though the funding level is modest, this program recognizes the national standing of our researchers. Critical examination of successful and failed Discovery grant applications must be used to determine the objective and subjective factors that drive grant success. These insights must then inform institutional support for research. Mentorship is essential at many levels: for new faculty to establish Discovery grant funding, for active faculty to retain funding, and for unsuccessful faculty to return to Discovery grant funding.

Once established (and perhaps with the security of tenure), researchers have opportunities to develop their research programs through partnership funding (Strategic Program Grant and Collaborative Research and Development grant programs). Collegial mentorship is essential, as the skills required to succeed in these opportunities are very different from Discovery programs. Encouragement of risk-taking and the development of scientific entrepreneurship is needed.

SSHRC: SSHRC's decision not to fund health-related research has seriously undermined the productivity of and funding potential for sociocultural health researchers whose work falls outside of CIHR's mandate. We must take the lead in addressing decisions of the Tri-agencies that will adversely affect researchers at the University of Saskatchewan and diminish our research strength. There is tremendous opportunity for SSHRC researchers in the socio-health area to work with CIHR researchers on collaborative projects.

There are also opportunities to contribute to SSHRC funded research in the Fine Arts, especially where it involves interdisciplinary research. The Insight Development grants for research in the Fine Arts may be a better fit than Canada Council grants for a post-secondary environment.

CIHR: Within the Health Sciences, the University is greatly challenged by evolving pressures at CIHR to support translational research that reduce health care costs or lead to commercialization. Our history with clinical health research compounds the challenges in responding to these funding changes. Restructuring and the One Health research focus might provide an opportunity to identify and build research areas of strength relevant to the Province, in which a critical mass can be attained. This will not happen without sustained attention – there is no panacea.

Themes that bridge the Tri-agencies: Aboriginal research is an area of critical importance and opportunity for the University, and must be highlighted in research development strategies. CIHR and SSHRC have prioritized Indigenous research, and one of the CIHR institutes is the Institute for Aboriginal Peoples Health. The Indigenous People's Health Research Centre is a partnership between the University of Saskatchewan, the University of Regina, and the First Nations University of Canada, and is one of the ten Indigenous Health Research centres across the country. This centre has funded a large number of undergraduate and graduate students, postdoctoral fellows, and community initiatives.

There is great potential for the University to become a major cultural centre for the reflection and integration of Indigenous values and experiences within the Humanities and

Fine Arts. This potential is beginning to be realized through partnership and dialogue with Aboriginal artists under the leadership of the Division of Fine Arts and Humanities.

Tri-agency graduate student training programs, such as the CIHR Strategic Training Initiative in Health Research (STIHR) and the NSERC Collaborative Research and Training Experience Program, create tremendous opportunities for funding and enabling graduate training. A key requirement is a paradigm shift, as these programs must be viewed as training programs rather than research support. At the same time, these training programs can support research programs, expand our graduate programs, and improve the quality of our graduate programs.

Summary: The University of Saskatchewan has high ambitions for its research and scholarly standing. Over the past decade, we have started on the path to growing our research intensiveness and impact. We have results to celebrate, but our work is far from done, and this work will not sustain itself without constant attention. Frank evaluation of our strengths and weaknesses, and our barriers to research success, is needed.

- **New faculty hiring is key to our research success:** the hiring process must identify and select researchers who can demonstrate competitive research standing based on prior research output and can articulate an independent research program, with short and long term goals. Teaching and clinical concerns must be kept in perspective: a failed search is preferable to the hire a mediocre candidate on the basis of a teaching or clinical need.
- **Start-up Support:** New researchers must compete on the national and international stage; our support must provide sufficient support for this competitive environment. The decision to allocate a salary line for a new faculty search should be coupled with an appropriate, discipline specific start-up funding for that position. Our start-up funding model should be based on equity, not equality, so that differential start-up needs can be accommodated. Particularly in times of fiscal restraint, a "one-size-fits-all" approach to start-up means that some positions will not be competitive.
- **Mentorship programs for new faculty:** Mentorship programs have great value for new faculty. However, mentorship programs cannot compensate for poor background preparation or weak research potential; nor can mentorship programs compensate for inadequate facilities and infrastructure. The University must "hire the best" and provide adequately for new faculty as the essential first steps.
- **Facility Requirements:** New faculty are in a precarious position and must establish their research programs and groups rapidly, so as to be competitive with their peers across Canada. These research programs must not be delayed by slow access to research space and delayed renovations
- **Graduate Student Research Training:** We need clarity on the factors that attract the best graduate students and help them be successful once they are here. The importance of competitive stipend support in attracting graduate students must be determined. Comparative data are needed to confirm intuition and to inform the development of strategies
- **Development of a Supportive Research Environment:** Protected, contemplative research time must remain sacrosanct. The downloading of administrative responsibilities must be weighted against their impact on research productivity. The development of administrative programs and supports must be guided by the goal of simplifying processes and adding efficiency for researchers.

Operating support for campus research facilities must be considered as operating budgets are constricted.

- **Roadmap for Research Success:** Research outputs and other institutional data should be used to guide strategy development, with a focus on identifying barriers to research success. To meet our goals, we must be prepared to ask tough questions, and act upon the answers. Specific changes with the tri-agencies must be tracked, and this information must guide the development of supports and strategies at the university.