DISCUSSION PAPER ON THE ORGANIZATION OF RESEARCH AT THE SCHULICH SCHOOL OF MEDICINE & DENTISTRY

Presented by the Research Review Task Force

February 2011

Revised May 2011

Final June 2011

Schulich

MEDICINE & DENTISTRY

Research White Paper:

Table of Contents:

Appendices:

1. Executive Summary

The Schulich School of Medicine & Dentistry aims to become a national and global leader in health research within the next 10 years. To achieve this goal, Schulich needs to develop a robust and vibrant academic culture based on strong research and scholarship. The *objective* of this white paper is to evaluate the existing research organization and infrastructure at Schulich and to propose strategic changes to enhance future research successes. The Research Review Task Force recommends that both *organizational* and *cultural* changes are needed to create and instill a "culture of research" within Schulich. These institutional and cultural changes are complementary, and both are needed to foster research excellence throughout the school. The Task Force also recommends specific *programmatic* changes to support research and research infrastructure within Schulich.

The following actions are recommended by the Task Force:

- Create the new position of Vice Dean, Research and Innovation
- Reorganize the Research Office with additional positions phased in over the next three years, initially focused on grant facilitation and assistance in the preparation of major grant applications
- Work with the departments, undergraduate and postgraduate programs, partner organizations faculty members and trainees to implement a "culture of research" including uniform mentorship
- Ensure that all trainees have a substantive exposure to research as part of their educational programs
- Establish a core of highly performing multidisciplinary research centres or groups that will achieve international recognition
- Target additional resources for research infrastructure and alleviation of animal care costs
- Expand the existing Gap competition
- Increase the focus on research in CIHR pillars 2, 3 and 4 by building on existing strengths to promote multi-disciplinary, cross-pillar research
- Target investment in developing a cadre of young, up and coming clinical research faculty starting from undergraduate trainees
- Develop an inventory of Schulich's research interests and skills to provide necessary input for team building, new research collaborations and new research opportunities

The investments in research will be evaluated regularly using objective metrics. With these strategic investments, and with a critical focus on supporting excellence, Schulich will become a leading Canadian research-intensive medical and dental school within five years, and globally within 10 years.

2. Glossary of Terms and Acronyms

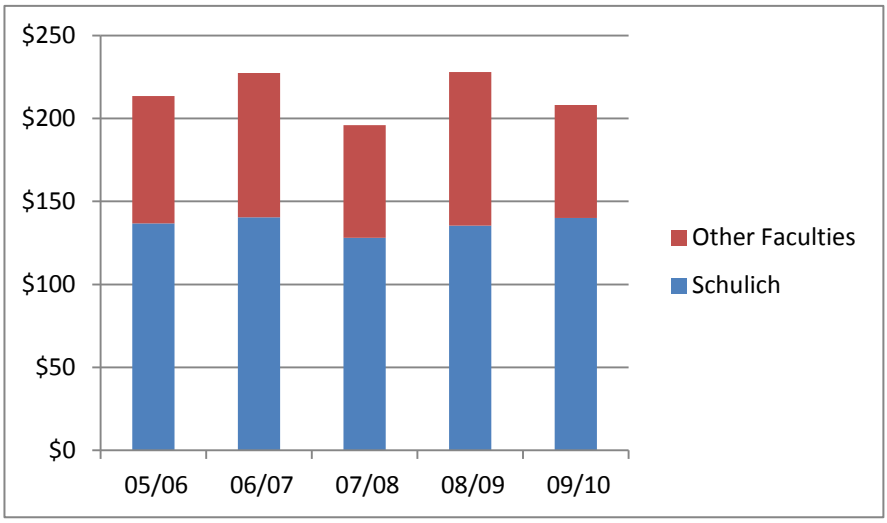
CERC	Canada Excellence Research Chairs
CFI	Canada Foundation for Innovation
CIHR	Canadian Institutes of Health Research
CIHR Pillars	CIHR categorizes health research into four broad pillars: • Pillar 1: Basic Biomedical • Pillar 2: Applied Clinical Science • Pillar 3: Health Services and Health Systems Research • Pillar 4: Research on Populations including the Social, Societal and Environmental aspects of Health and Disease
CIP	Clinician Investigator Program
CRC	Canada Research Chairs
HSF	Heart and Stroke Foundation
HQP	Highly Qualified Personnel
IOF	Infrastructure Operating Fund - funds to help pay for incremental operating costs of CFI-funded infrastructure projects
KT	Knowledge Translation; also Knowledge Transfer
LHSC	London Health Sciences Centre
LRGC	London Regional Genomics Centre
LRPC	London Regional Proteomics Centre
MPH	Masters in Public Health
NCE	Networks of Centres of Excellence of Canada
NSERC	Natural Sciences and Engineering Research Council of Canada
PMA	Professional and Managerial Association of The University of Western Ontario
REB	Research Ethics Board
RFA	Request for Applications
ROLA	Research On-Line Administration
SJHC	St. Joseph's Health Care, London
SPOR	Strategy on Patient-Oriented Research
SROP	Schulich Research Opportunities Program
SRTP	Summer Research Training Program
SSMD	Schulich School of Medicine & Dentistry
SWOMEN	Southwestern Ontario Medical Education Network
UWOSA	University of Western Ontario Staff Association

3. Background

The Schulich School of Medicine & Dentistry (Schulich) has a reputation as a school that provides an outstanding education for its students and trainees. Although Schulich has a strong history of medical and dental achievements based on research in specific areas, a common perception of Schulich externally as well as internally is that it provides high quality education for students to become excellent medical and dental professionals, but not to become excellent researchers. Importantly, this impression is found not only among our students and trainees but also among some faculty.

Western's President, Dr. Amit Chakma, has a stated goal of making Western one of the top 5 research intensive universities in Canada. If Western is to meet this goal, much of the momentum must come from Schulich, as its researchers (including researchers at our affiliates) account for approximately 60% of research funding at Western. Further, the new Dean of Schulich, Dr. Michael Strong, has clearly stated his intent for Schulich to be "the *lead Canadian centre* for the study of the spectrum of diseases of aging." To meet these goals, Western needs a robust and vibrant research culture at Schulich.

Research Revenue for The University of Western Ontario
2005/06 – 2009/10



Source: Office of Institutional Planning & Budgeting, The University of Western Ontario

Various indicators suggest that Schulich is not keeping up with its competition in research. One such indicator is total research revenue. In recent years, the school has been ranked either 7th or 8th amongst the 16 Canadian medical schools in terms of research revenue. While comparably sized medical schools such as McMaster University and the University of Alberta have risen in the rankings in recent years, Schulich's position in the middle of the pack is unchanged.

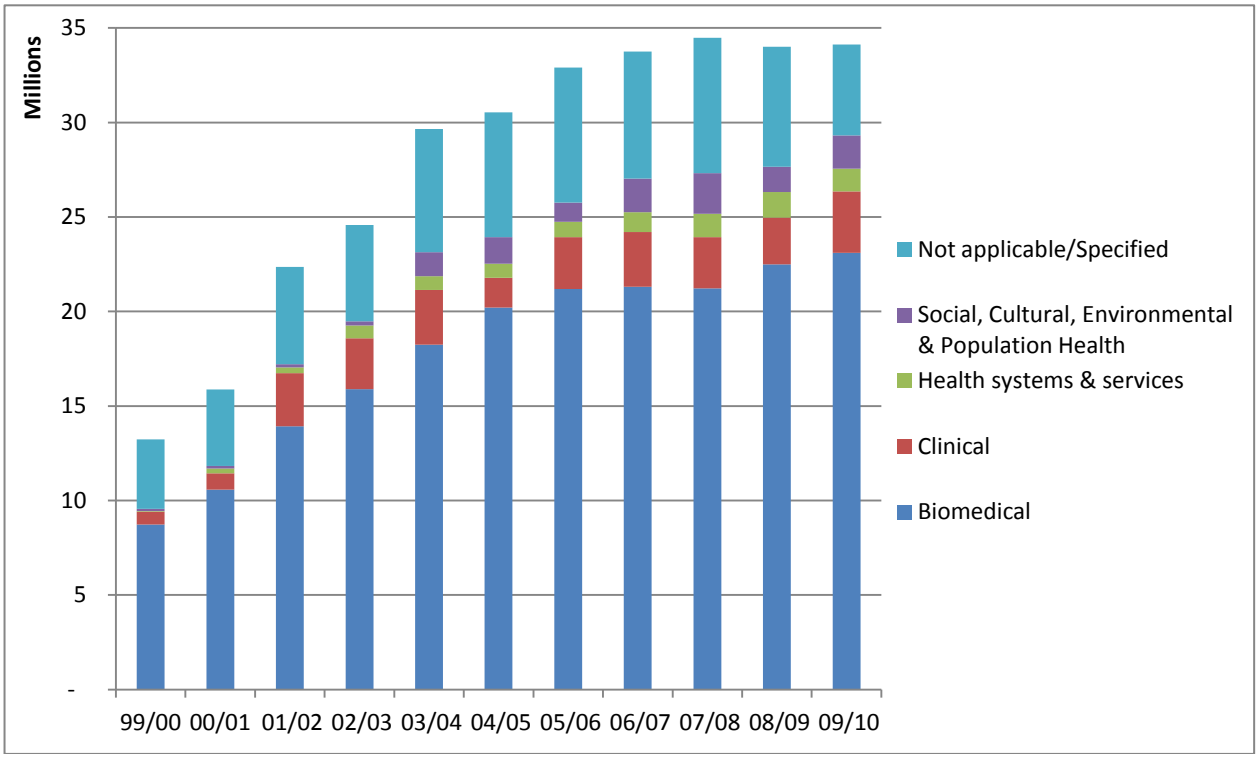
Ranking of Canadian Faculties of Medicine
by Biomedical and Health Care Research Revenues
2004/05 - 2008/09

Faculty of Medicine	2004/05	2005/06	2006/07	2007/08	2008/09
Toronto	1	1	1	1	1
UBC	4	3	3	2	2
McMaster	2	2	2	3	3
Alberta	6	6	6	6	4
McGill	3	4	4	4	5
Montréal	5	5	5	5	6
Western Ontario	***7***	***7***	***7***	***8***	***7***
Calgary	9	8	8	7	8
Ottawa	10	9	9	9	9
Laval	8	10	10	10	10
Manitoba	11	11	11	11	11
Queen's	12	12	12	12	12
Dalhousie	14	14	13	13	13
Sherbrooke	13	13	14	14	14
Saskatchewan	15	15	15	15	15
Memorial	16	16	16	16	16

Source: Association of Faculties of Medicine of Canada (AFMC)

Schulich has a strong record of research in fields including neurological sciences, diabetes, imaging and medical biophysics, and the school continues to excel in many areas. Individual research programs across Schulich also continue to do well, garnering both national and international recognition and funding. Schulich also has an outstanding faculty with a diverse range of involvement in research - ranging from those who hold multiple external research grants, to those who lead and contribute to multicenter clinical trials, to those who supervise student/trainee research projects, to those who are involved with knowledge translation activities and scholarship in education. Overall however, Schulich's success rates at national competitions, previously above the median for the country, have now fallen to match those of the rest of the country. Biomedical research competitions, previously above the median for the country, have now fallen to match those of the rest of the country. Biomedical research (CIHR pillar 1) continues to be strong at Schulich. However, the failure to progress in funding successes can be, in part, attributed to a failure to fully embrace emerging areas of research or funding opportunities such as large scale clinical research, translational research, and large scale population and health services research – areas now identified as CIHR's pillars 2, 3 and 4. These areas have been targeted by CIHR as part of its roadmap (Strategy on Patient-Oriented Research – SPOR) to enhance knowledge translation to improved health outcomes for Canadians.

CIHR Funding to Western and Affiliates by CIHR Pillar
1999/2000 – 2009/2010



* Source: CIHR Funded Research Database

There is concern that Schulich is not adapting quickly enough to changes in the research world – in terms of agility and responsiveness to new funding and research opportunities, and in terms of capitalizing on our existing base of research excellence to build to a new level.

We are at a critical juncture to focus our attention to research. The new leadership at Western, Schulich and the affiliated teaching hospitals and research institutes, and forthcoming new funding opportunities provincially, nationally and internationally provide the milieu to attain the desired goals. The *objective* of this white paper is to evaluate the existing research organization and infrastructure at Schulich and propose strategic changes to enhance future research successes.

4. Context

The timing for a new focus on research is excellent. Dr. Michael Strong was appointed the new Dean to Schulich in 2010. The alignment of a new leadership at Schulich, new President and Provost at Western, and new CEOs at the affiliated teaching hospitals, LHSC and SJHC, represents a rare opportunity for changing the environment for research at Schulich and its affiliated organizations, and bringing a renewed emphasis on research. There is broad consensus among these leaders on the desire to enhance and improve our research performance and profile.

Our goal is to fundamentally redevelop Schulich's research infrastructure to enhance our competitiveness and to position Schulich among the top research intensive medical and dental schools in Canada within the next 5 years – and as a global leader in health research within 10 years. This will include strategic investments in personnel, infrastructure support, alleviation of animal care inequities, and investments in core research facilities through a mixture of endowment fund utilization, economies gained from an in-depth operational review, and strategic investments with Western and affiliated organizations. This will also require defining key areas of research strengths that will be intensively supported, while being sufficiently flexible to allow for new strategic investments.

Although achieving this ranking will not be easy – and we do not underestimate the challenges – there will be clear and obvious benefits for the School by achieving these goals. As examples, faculty members will be in a better position to attract and support high quality graduate students, fellows and post-docs; the school will be able to attract the best and brightest researchers and teachers to our faculty; core facilities will continue to be operated and maintained with increased users; and Schulich will receive increased overhead funds.

Schulich has a number of existing strengths on which to build, including:

- a strong base of successful researchers and research teams, particularly in biomedical research - many with strong national and international reputations;
- recent recruitment of key researchers (CERC and CRCs) collaboratively with partner faculties and research institutes;
- prior successes in large grant competitions (CFI, NCE, Team Grants);
- investments in core facilities and infrastructure needed to support research (e.g. LRGC, LRPC, animal facilities);
- upgrades to research space and animal housing over the course of recent years; and
- the alignment of Schulich with the strategic plans of Western, Robarts and Lawson Health Research Institute (Lawson).

Schulich also has a strong institutional and regional base upon which to build this effort. Southwestern Ontario is an excellent locale for biomedical research. It consists of both rural and urban populations, and all major ethnic populations. This population is at the leading edge of demographic trends for all of Canada. Through past initiatives (e.g. Lifecycle Research Network), Schulich has already built research collaborations with universities in Southwestern Ontario, namely the University of Windsor, University of Guelph and University of Waterloo.

At the same time, Schulich has some identified weaknesses including:

- a culture, both institutionally and across much of the faculty, that fails to promote research strongly as a core value at all levels of the organization;
- a lack of incentives and capacity for researchers to engage in large grant competitions, even when the willingness to undertake and the benefits of such grant submissions are evident;
- a failure to fully capitalize on previous successes (e.g. Innovarium) or to take advantage of new large grant opportunities;
- a failure to pro-actively reinvest in core facilities in order to anticipate evolving research trends;

- a failure to develop competencies required to meet the demands of rapid technological advances;
- a failure to meaningfully invest in clinical, translational, and population health research through targeted infrastructure redevelopment; and
- a failure to pro-actively support faculty renewal through targeted recruitment in support of the educational and research mission.

One of the concerns is a perceived lack of interest in research by the majority of MD and DDS students and postgraduate clinical trainees (residents). While a small number of research-intensive residents are undertaking training to be future clinician scientists or clinician researchers, usually with faculty and mentors who are themselves clinician scientists or clinician researchers, many MD and DDS students and clinical trainees leave Western without exposure to research. As a result, they do not develop an interest in undertaking research training and research-intensive careers. These students and trainees are the future of health care; a lack of appreciation for and interest in research by this group is of concern.

The external environment for health research has also changed. CIHR's budget is expected to remain at current levels for the near future without substantial increases in the operating grants program but with targeted increases in some programs such as SPOR. While CIHR remains an important funding source for biomedical and medical research, Schulich cannot depend on CIHR as the sole funding source for future research. Thus, Schulich will need to explore new opportunities for funding and to cultivate stronger relationships with local, provincial, and national governments and agencies, as well as with industry.

5. Research Review Task Force

To address these many issues, the Dean of Schulich Medicine & Dentistry convened a Research Review Task Force in the fall of 2010. The Task Force was charged with undertaking an intensive data-driven process to review the administrative infrastructure and strategies necessary to ensure that within the next 10 years, Schulich will be identified as among the leading research intensive medical schools in the country and to increase our ranking internationally. The Task Force was *not* charged with addressing Schulich's research themes of excellence or identifying priority research areas for investment, as Schulich's Health Research Plan continues to provide this guidance. The terms of reference of the Task Force are in Appendix 2.

The Task Force consisted of researchers from across Schulich and its partner institutions. It was divided into a Steering Committee plus four working groups to focus on the needs of specific themes of research: basic science; clinical science; education and training; and health services, policy, and population health. Each of the working groups met several times and prepared a working paper based on its discussions.

To inform the Task Force's discussions, site visits were made to both the University of Alberta and McGill University, while the infrastructure at McMaster was reviewed by phone interviews (see Summary of Findings in Appendix 3). These site visits highlighted the wide variation in administrative practices and procedures in use across our peer institutions to support research. While some practices such as the provision of assistance to put together major research proposals are common, others pertain to needs

and resource availability at an individual institution. Finally, a retreat was held in November 2010 which was attended by approximately 40 researchers. Questions posed at the retreat are in Appendix 4.

This discussion paper incorporates the input generated from this process. The School will utilize this document as the template upon which the organization will move ahead over the next 3-5 years to implement the infrastructure adjustments required to enhance our research successes.

6. Findings of the Task Force

The Task Force confirmed that both ***organizational*** and ***cultural*** changes are needed in order to create and instill a "culture of research" within Schulich. These institutional and cultural changes are complementary, and both are needed to foster research excellence throughout the school. In addition, the Task Force recommended specific ***programmatic*** changes for the support of research and research infrastructure within Schulich.

Cultural changes

Schulich requires a strategy and vision to instill a "*culture of research*" throughout the organization – that is, the conviction that research is an intrinsic expectation of all faculty and trainees within the academic health centre. Instilling such a culture within Schulich will require changes in faculty roles and expectations, changes in students' expectations, and changes in current programs and practices at Schulich.

Research needs to permeate all aspects of our training enterprise. For students and trainees, this means that everyone will have a substantive exposure to research as part of their educational programs. To implement this will require the participation of all departments and undergraduate and postgraduate programs, together with supervisors and researchers, to develop strategies and implement changes to the existing training programs. This will require organizational as well as cultural changes, including markedly increasing the opportunities for early-year professional students to conduct meaningful and productive research and to have exposure to high caliber researchers as positive role models.

For faculty, this means that everyone will have to accept that research is essential to their role, and a necessary component of their workload. This research component will differ substantially – from a base level of 5%-10% up to 75%, depending on the role category of each faculty and on other factors such as external salary awards. The nature of individual faculty members' involvement in research will also vary; some research-intensive faculty will be active PIs or co-PIs on research grants, while other faculty will be involved in research through activities such as active participation as collaborators in multidisciplinary teams, facilitating translation, contributing to clinical trials, assisting with outreach, or mentoring. All of these varied roles must be recognized as meaningful contributions to research.

This focus on research should not be interpreted that Schulich will value clinicians or educators less than researchers, as all are essential for Schulich to be successful as an academic institution. The Task Force recognized that this increased emphasis on research may have a negative impact for some whose career has been focused on excellence in clinical care or teaching. In the current competitive funding climate and with the focus on translation, research success is often achieved by teams. Each member of the

team plays an important role and should be appropriately recognized in annual performance reviews and promotion and tenure considerations. In order to provide time for faculty to become engaged in research, Schulich, together with its affiliated institutions, will need to address issues related to workload and the balance between patient care, service, education, and research.

Critical to the "cultural change" is the recognition that a vibrant academic centre must allow room for all aspects of its academic mission (clinical, research and education) to develop in parallel and be recognized equally. To this end, Schulich must be more active in recognizing and acknowledging both research and education scholarship achievements through appropriate workload agreements with the faculty and recognition of academic successes with Schulich awards and nominations for major national and international awards. Schulich may also wish to create a mechanism to acknowledge the contributions of faculty as co-PIs, participants, and collaborators to the overall research endeavor. Such recognition may encourage clinicians to become more involved in research activities and interact and collaborate with their basic science counterparts.

In addition, there is little reward or recognition presently to faculty taking on leadership roles in major endeavors such as core facilities or major research grant proposals. We will "incentivize" and support faculty to take on leadership roles in larger projects such as group, team or infrastructure grants, or to participate in major group/team grants.

This new "culture of research" will place added responsibility on the faculty. This is a two-way relationship - the School will expect more involvement and performance in research from the faculty, while the faculty will expect additional support and recognition from the School.

A recurrent theme amongst several of the working groups was that not all faculty members serve as good role models for students. Although a significant investment is made in developing the next generation of academics from our student population, many faculty do not present research as an attractive career (either in academic or non-academic positions).

In addition to efforts to recruit excellent students, we need to provide students and trainees with positive role models for research. This applies to both clinical and basic realms. At present, medical and dental trainees often receive minimal exposure to research activities and often are not exposed to interdisciplinary research. We need to institute changes in the undergraduate and postgraduate medical/dental education programs to embed research from the earliest stages of their training in conjunction with clinical training, and to institute a mandatory research rotation as part of the residency programs.

Departments will play an important role in the development and implementation of a new culture of research in Schulich. Each department will need to define its own "best practices" based on its own specialty and impact on health. It is acknowledged that different strategies will have to be developed for each department based on multiple factors including the type of department (e.g. basic science or clinical), existing culture and infrastructure, existing faculty and personnel, resources available, etc. However, each department should adapt its own research strategic vision based on the general and overall concepts developed within this white paper and the research strategic vision of Schulich and Western. Departments will also need to take a role in defining mentorship practices and in providing financial support for research and researchers. Schulich and the departments may need to look at the option of providing stipends for faculty who assume responsibilities for mentoring and internal grant reviews.

Organizational changes

The Task Force agreed that organizational changes are needed for the Schulich Research Office to support the School's new emphasis on research. The Task Force reached consensus on several points.

Vice Dean: There was general agreement on enhancing the current position of Associate Dean Research to *Vice Dean, Research and Innovation*. The Vice Dean will provide strategic vision, oversight, liaison and communication (internal and external), and advocacy for research for Schulich. The incumbent will have a major role in enhancing Schulich's profile provincially, nationally and internationally, as well as serving as the key senior leadership member identifying novel funding opportunities. The individual will be the voice of Schulich Research both nationally and internationally. The position will require a major commitment of time (0.8-1.0 FTE) and will be the primary academic and administrative role for the incumbent. The position will have a clear mandate, goals and accountability. Given the consensus on this aspect, development of this position description and recruitment for this position has already been initiated (Appendix 6).

Additional Staff: The Task Force agreed that the there is a need for additional personnel in the Schulich Research Office to meet new requirements and responsibilities. Various models for reorganizing the Research Office were discussed. Task Force members differed as to whether various roles require the creation of new decanal appointments (Assistant/Associate Deans) or new staff (PMA/UWOSA). Decanal positions in specific areas (e.g. knowledge translation, mentorship) could provide leadership and higher visibility, and could facilitate interactions with counterparts from other faculties and universities. However, decanal appointments generally require a limited commitment of faculty time (0.2-0.5 FTE) whereas a staff person devotes 100% of time to a position. Cost considerations must also be taken into account. The Task Force concluded that for each position or function, the role description should be carefully crafted with defined metrics and deliverables, following which a determination of the nature of the appointment could be undertaken in an informed manner.

There was consensus on a need for increased resources for research facilitation. New positions for "Research Officers" (also known as "grant facilitators" or "research consultants") should be added to assist with coordination of major grants and enhance the quality of grants. These staff will be knowledgeable about research resources available locally (within Schulich, Western, and London), provincially, nationally and internationally; assist with developing components of proposals such as budgets and administrative needs (REB, ROLA, biohazards, etc.); provide assistance with developing narrative for ancillary components of research applications such as HQP and "Benefits to Canada". In addition, these staff will provide assistance with editing and with the use of good grantsmanship practices. Although Research Officers cannot replace faculty members in leading initiatives and serving as research "champions", they will, in essence, help faculty members translate their ideas into well-prepared grant applications. This is critical in the current peer-review funding climate as a few decimal points in scores can make a difference between being funded or not.

Research Officers will also assist with team building by actively developing research teams to respond to funding and research opportunities – industry and non-profit opportunities as well as Federal and Provincial funding opportunities. This will include identifying team leaders and key individuals, actively promoting team development, fostering potential links with external investigators/teams, and encouraging networking. They will be skilled at identifying the research community needs and aligning

these needs with opportunities. They will help serve as matchmakers, linking researchers to new opportunities, and linking researchers with each other.

There was a difference of opinion on the various other types/scope of staff positions required for the office. Some Task Force members suggested new staff positions be created to address specific areas of expertise including industry liaison, government liaison, knowledge translation, international research, specialists in pillars 3 and 4,and health policy roles. While these positions may not be immediate priorities, some personnel may be added to meet these roles in the longer-term. In the short term, the Vice Dean will fill some of these roles, together with the new staff. A position focused on research infrastructure was also suggested. However, as SSMD provides financial support for facilities but is not at present involved in the direct management of research facilities, this was not considered justified. Also suggested were additional staff to address graduate student, postdoctoral, and clinical trainee needs. (Note: A discussion of graduate staffing needs is taking place separately; thus, these concerns are not addressed in this Research Review).

Research Advisory Council: The Task Force suggested the formation of a new Research Advisory Council (RAC). The RAC would be chaired by the Vice Dean and membership would include representatives from Schulich, Lawson, LHSC and SJHC, Research Western, Windsor, Robarts, and from other Western faculties with substantial activities in the area of health research (Health Sciences, Social Science). The purpose of the Council would be to help mould London as an Academic Health Sciences Centre and serve as a conduit to/from the research community. This new RAC would replace the existing Schulich Research Committee.

Programmatic changes

The Task Force identified a number of specific areas for the targeted investment of funds.

Gap/Bridging Funds: Schulich currently supports a "Gap" competition for researchers whose highly-rated CIHR Operating Grant applications are not funded. The Task Force members agreed that an expanded gap support is needed, particularly in light of declining funding rates at CIHR. In addition, there is a need for bridge funding for faculty members at all career levels. This expansion of Gap/bridge funding will be linked to mentoring – actively assisting researchers to improve their grantsmanship and evidence of full preparation including a well-conducted internal peer-review.

Support for Proposal Preparation: Provision of resources targeted for the preparation of large proposals (RFAs, team grants, CFI applications, etc.) would be helpful. Preparation of these applications is often complex and time-consuming, and faculty may be reluctant to take on the additional workload and responsibility for these. Assistance for proposal preparation may be provided by newly hired Research Officers, with additional resources as required.

Support for Core Research Facilities: Task Force members agreed on the need for enhanced support for core research facilities and infrastructure. Schulich currently provides a limited amount of operating/maintenance funding for selected core research facilities, with funding allocated through a competitive process. However, the available resources are insufficient to meet all the needs. Further, as CFI/IOF funding runs out, many researchers and departments are struggling to meet the costs of ongoing operations and necessary upgrades. Schulich has taken steps to address these concerns in its recently submitted Budget.

The provision of additional resources for facility support will mandate a critical evaluation of core facilities support. It is reasonable to expect that as new areas of research develop, new core facilities may be required, while others may need long term funding stabilization, and still others may no longer be required. There should be a culture developed around core facilities which does not speak to entitlement, but rather to renewal and critical evaluation.

Animal Facilities: The Task Force expressed specific concerns about the costs of cage charges for animal care facilities. Schulich has taken steps to address these concerns in its 2011-12 Budget. Schulich will partner with the University to reduce the costs to researchers. Based on current cost estimates in order to bring our per diem rates to the mean rates at Ontario universities, an infusion of approximately $210K per annum will be required to subsidize this. In addition, there is a need to implement an in-depth comprehensive review of animal services, in partnership with Research Western, to address increasing costs and to search for novel solutions to keep these costs as low as possible.

Mentorship: Mentorship of new/young researchers should be approached more consistently and seriously throughout the whole school. This is essential for helping new faculty establish themselves as independent researchers. Mentorship activities may include not only topics such as grantsmanship and internal peer review, but also assistance in such areas as leadership, activities to promote knowledge translation, and advice on supervising trainees. The Departments will need to take an active role in this effort. Schulich's recent mentorship document at http://www.schulich.uwo.ca/executivecommittees/documents/committee/Joint/2009_2010/SCHULICH%20MENTORSHIP%20PROGRAM_June2010.pdf addresses these issues. Given the increasingly competitive climate for research, mentorship and assistance with grantsmanship should also be extended to more established investigators in mid career rank if they so desire and as resources permit.

Fostering Student Research: In order to foster student interest in research, additional resources may be needed to expand support for student research activities. Current programs such as Summer Research Training Program (SRTP) and Schulich Research Opportunities Program (SROP) for undergraduates which enable students to gain research experience are limited by the available resources. In addition, the portfolio of programs to foster student and trainee research should be evaluated. Some new programs may be developed, or additional funding for programs such as the Clinician Investigator Program (CIP) may be useful for assisting with research costs for students (e.g. awards for attending research conferences, seed funding for postdocs or resident research).

Training Future Clinicians in Basic Clinical Research Methodologies: The majority of clinical trainees at the postgraduate (residency level) are interested in clinical research as their career goals are in keeping with being clinician researchers or clinician teachers. However, many if not most are not equipped to conduct clinical research using fundamentally sound research methodologies. As Schulich plans to launch the MPH Program, one option will be for medical/dental trainees to enroll in this program to learn sound research methodologies. The MPH program will be just one option for providing research training to future clinicians, and will not address the complete need. Nevertheless, once the program matures, the school should investigate the possibility of expanding into an MD/MPH Program for undergraduate medical/dental students.

Knowledge Translation: Knowledge Translation (KT), is of growing concern to funding agencies and to governments. Schulich currently lacks in-depth capacity in KT and appears to lag in this area. Schulich, and indeed the University, is significantly disadvantaged by the lack of a strategic plan on developing knowledge translation and health policy research – although inter-faculty efforts of the latter are in

process. Further, KT is often not well incorporated into funding applications. It often appears to be an afterthought, rather than an integrated component of a project. We need to take steps to develop a comprehensive approach to foster KT and to solve translational problems. Part of the solution to this need may be to foster more interactions between basic scientists and clinicians, and between clinicians and population health and health policy researchers. One strategy may be to establish a small program for KT grants, similar to the "Translational Grants Program" recently implemented locally by the Children's Health Research Institute. Education in KT should also be a component of the MPH Program.

Other Issues Raised by the Task Force

City-wide Integration: Schulich is in the early phases of discussions with relevant stakeholders within the city of London and the region to develop a **Southwestern Ontario Academic Health Science Network** (SWO AHSN). The current health sector research environment in London and Southwestern Ontario is not organized to provide real vision for the future. This research network would provide an umbrella organization to develop a cohesive approach to research, education, and fundraising, thereby allowing Schulich, related faculties, teaching hospitals, research institutes and centres, and individual researchers to gain a competitive advantage across all aspects of our efforts. This network would be structured to provide both financial and academic benefits to the participating institutions. This approach will help develop a sense of cohesiveness in London research community and will ultimately provide an advantage when applying for large national and international grants. Initially viewed as a city-wide effort, this has the potential to grow into a regional network, incorporating SWOMEN and other regional academic institutions.

There was general agreement by the Task Force that this move to a single administrative organization is the correct direction for Schulich. The Task Force identified that a number of existing barriers will need to be addressed. Issues include organizational concerns (loss of identity), legal issues, fundraising/financial issues related to the foundations, etc. Resolving these issues will be a lengthy process.

As a first step, Schulich will continue to work with the Lawson Health Research Institute to harmonize administrative processes and remove duplication in administrative activities between Schulich/Western and the Lawson Health Research Institute. This will simplify procedures for researchers and reduce barriers (for example, related to involving students in research at the hospitals). A few initial steps have already been taken – for example, deadlines for ResearchNet submissions for CIHR Operating Grants have been harmonized. These are small items, but can be major annoyances for researchers. As part of this effort to harmonize research processes, we will also review the processes and procedures involving students and trainees – e.g. access to facilities, training requirements, security checks, N96 fits, WHMIS, etc. – in order to facilitate rather than impede the inclusion of students in research.

Other topics: The Task Force raised a number of other issues and interesting ideas, many of which extended beyond the limited mandate of the group. While these issues are of importance to Schulich, they are either not immediate priorities, or are being addressed elsewhere through other processes. Although not addressed in detail in this paper, we would like to note them for future discussion:

- Internationalization with specific reference to research;
- Creation of a new M.Ed. program;

- The need for additional health policy expertise within Schulich. Note that the creation of the new Masters in Public Health program should help address this need;
- Needs for additional high-quality research space;
- Funding and funding models for graduate studies, and the administrative infrastructure required to support Schulich graduate programs;
- Issues related to postdoctoral trainees;
- Support for young investigators (distinct from Gap or bridge funding);
- Support for mid-career level investigators;
- Involvement of University of Windsor faculty in research;
- Identifying complementarities with excellent research labs/programs in SW Ontario non-medical universities – e.g. Waterloo, Guelph, Laurier, Windsor (non-SWOMEN), and develop linkages to universities in Michigan or elsewhere in the region;
- How to ensure that every new recruitment is viewed as "strategic"; and
- Needs for expanded interactions and partnerships across the University.
- Streamlining processes for ethics, biosafety, and other administrative requirements; and
- Intensified fostering/nurturing of home-grown personnel, especially with regard to early action to retain trainees who have potential to become new faculty; and balancing this effort against the need for external hires to bring fresh ideas, approaches, and techniques.

7. Actions

The following actions will provide a strategic blueprint to guide Schulich over the next 3-5 years to develop the infrastructure adjustments that will be required to enhance our research funding and productivity to achieve the desired goal. This plan will balance the allocation of new resources between personnel, infrastructure and other research needs. A summary table for this plan is below.

I. The role of Associate Dean, Research will be redefined to the position of Vice Dean, Research and Innovation. This position will be filled by a competitive process and will be expected to be a research-intensive individual either currently, or with a track record of such. The development of the position description is currently underway as a component of this review.

   At this time, no new Associate Deans or Assistant Deans for Research will be created; however, this decision may be reexamined once a Vice Dean is in place.

II. The Schulich Research Office will be reorganized, with additional positions phased in over the next three years. An emphasis for new positions will be on grant facilitation and on assistance with the preparation of major/large research grant applications. The purpose for these new positions is to improve Schulich's competitiveness and increase the level of external research funding. In addition, staff will be added as necessary to manage research programs (e.g. SRTP, SROP, etc), facilitate grants and awards, and provide administrative/support staff. A draft

Organizational Chart is in Appendix 5. In conjunction with the new capacity for grant facilitation, Schulich will provide seed funding for grant preparation on a limited basis.

III. Schulich will work with the departments, postgraduate and graduate programs, our partner organizations, faculty members and trainees to implement a "culture of research" at Schulich. Actions will include:

   a. Develop educational objectives and content within the undergraduate and postgraduate curriculum that supports building a culture and capacity for research among our trainees while building on our strengths and reputation for excellence in medical teaching

   b. Work with departments to develop best practices for mentoring students, trainees, and junior faculty; it is acknowledged that each department may vary in its practice, however, they will be based on faculty guidelines

   c. Work with postgraduate training programs to increase trainees' involvement with research during residency and fellowships

   d. Ensure that research is an integral part of expectation within the role or workload of all faculty starting at the stage of recruitment, offer and annual performance reviews or career development planning

   e. Expand recognition for research in annual performance reviews and promotion and tenure reviews to include recognition not only for PIs/co-PIs, but also for members of research teams, research supervisors, working with trainees on clinical research projects, etc.

   f. Increase the recognition of faculty members for their research achievements through internal and external awards (e.g. Hellmuth, Distinguished University Professor, Faculty Scholar, NSERC awards, fellowship in the Canadian Academy of Health Sciences, Royal Society, etc.)

   g. Work with partners (affiliated hospitals, research institutes, faculties) to incorporate some aspect of research or research-related activity into all faculty role descriptions

IV. Schulich will target additional resources for research infrastructure – core research facilities and to ensure that necessary core research facilities are maintained and are accessible for Schulich researchers.

V. Schulich will also undertake a critical review of its core research facilities, to determine where there may be gaps or unmet needs, updating of infrastructure, and to determine how its resources for the operations and maintenance of facilities can be best used.

VI. Schulich will target resources to alleviate excessive cage charges for Schulich researchers. The intent is to bring per diem rates into alignment with facilities within Ontario.

VII. Schulich will expand the existing Gap competition and will create a bridge funding program that recognizes the challenges of current CIHR funding. Faculty with highly-rated operating grants applications that have just missed the funding cut-off and for which rigorous internal peer review was utilized prior to submission will be eligible to receive one-time, non-renewable

support at a higher level than currently provided to bridge to the next competition, based on demonstrated need.

VIII. Recognizing that Schulich has traditionally been strong in CIHR pillar 1 (biomedical research), we will take actions to increase our focus on CIHR pillars 2, 3, and 4 (clinical; health systems and services; and the social, cultural and environmental factors that affect the health of populations). Our goal is to build on existing strengths to promote multi-disciplinary, cross-pillar research.

IX. Schulich will target investment in developing a cadre of young, up and coming clinical research faculty.

X. Develop an Inventory of Schulich research interests and skills, to provide necessary input for teambuilding, establishing new research collaborations, and fostering new research opportunities. This will also benefit Schulich's communication needs and help increase the public face of SSMD research.

Summary of Proposed Actions

Action	Status (as of April 2011)	Timeframe
Recruit Vice Dean, Research and Innovation	Search committee formed; search initiated	Spring-Summer 2011
Restructure Schulich Research Office	New org chart proposed	Spring 2011
Hire additional staff for Research Office, including new Research Officers to focus on proposal development	Position descriptions written; recruitment initiated	Spring/Summer 2011
Alleviate inequities in animal cage charges	Additional funds provided in 2011-12 budget	2011
Target additional resources for research infrastructure	Some additional RISF funds provided in 2011-12 budget	2011
Develop program(s) to expand student research and to develop a cadre of future researchers	Proposals for growing the summer research programs (SRTP/SROP) are in development) Examination/development of other programs to follow, pending new Vice Dean	Summer/Fall 2011
Expand support for Gap/bridge funding	Expanded Gap to begin based on results of March 2011 CIHR competition	Fall 2011
In partnership with Western, undertake critical study of core facilities (including animal facilities)	pending new Vice Dean	Fall/Winter 2011/2012
Expand focus on CIHR pillars 2, 3, 4		Ongoing
Develop an inventory of Schulich research interests and skills		Spring 2012
Form a task force to address specifics on how to implement a “culture of research” at Schulich	pending new Vice Dean	Winter 2012
Develop best practices for mentoring students, trainees, and junior faculty		Begin Winter/ Spring 2012
Initiate discussions on Lawson on further integration of research administration	pending new Vice Dean	Begin Winter 2012
Together with postgrad training programs, increase trainees’ involvement with research during residency		2012-2013
Develop mechanisms for recognition of faculty achievement in research		2012-2013
Work with partners to incorporate some aspect of research or research-related activity into all faculty role descriptions		2012-2014

8. Desired Outcomes and Metrics

Our vision is that in 10 years, Schulich will be is ranked as a global leader in health research. London and Southwestern Ontario will have developed a cohesive "academic health network" and will be viewed, both internally and externally, as a "destination" for excellent researchers.

In the short-term, within the next three years the Schulich Research Office will be fully staffed. Schulich will increase the number of group/team/large funding applications.

Medium-term, within the next five years, we will see increased successes in Tri-Council operating grants (significantly above national average in every competition), infrastructure grants and other larger awards from national and international funding agencies and industry.

We will develop and track metrics to determine whether we have been successful with these strategic investments. Metrics may include:

- Research revenues / research revenue per FTE
- Numbers and types (pillars or themes) of applications
- Success rates
- New collaborations/groups/teams developed
- New basic/clinical collaborations developed
- Publications (total number; change in number of principal authored publications in peer-reviewed journals) and impact
- Metrics related to students/trainees (# grad students, # med/dents undergraduate or postgraduate students engaged in research projects)

Appendix 1 - Summary of Comments Received on Drafts

Comments on version 1 (February 2011)

Overall, comments focused on the lack of specificity regarding strategies and programs to achieve the stated goals. The document identified issues crucial for research success and set goals for the School, but did not include enough detailed plans or recommendations on how to achieve these goals.

General approach

Implementing a "Culture of Research": A substantial number of comments focused on the lack of specificity regarding actions to change the "culture of research" and noted that insufficient attention is given in the paper as to how to make this effort a reality. A secondary concern is how Schulich can address cultural issues in a positive and relevant way, rather than being prescriptive or perpetually playing "catch up" with other schools which have already implemented this within their institutions. In general, Schulich needs to demonstrate a willingness to take some risks, not just make cosmetic changes.

> **Response**: We agree that the paper does not sufficiently address specifics. However, the Research Review Task Force was asked to focus on administrative requirements rather than on developing new programs. A separate task force will be organized by the new Vice Dean Research to develop solid proposals on how to develop this new culture of research. As noted in the paper, this will be neither easy nor quick. Some of these questions will likely also be addressed through the upcoming strategic planning process.

Capturing the Excitement of Research: Some comments noted that the draft does not adequately reflect excitement or passion for research - for example, the excitement of new imaging modalities, next-generation sequencing and personalized genomics, molecular-targeted therapies and personalized medicine, or the dramatically changing research environment.

> **Response**: Agreed. The draft does not focus on the excitement of research – that is a topic that will be addressed through the upcoming strategic planning process. .

Using Rankings as a Goal: Concerns were expressed about using specific rankings as a goal (e.g., top 3 in research, top 5 in Canada) – is this useful or is this an artificial goal? If we aim for being in the top 3 but end up ranked as number 4, would that be interpreted as a great success or as missing our goal? An alternate goal could be expressed as "increasing our share of research revenue" or "doubling our research revenue."

> **Response**: While a general goal such as "doubling our revenue" might be more acceptable, it would not serve as a metric to demonstrate how Schulich is doing compared against other schools. Also, goals such as "increasing share" are ambiguous and do not generate enthusiasm or motivation for research.

Metrics and Data: A number of additional possibilities for metrics were suggested including:

- NIH and international grant success

- presence on national and international advisory and scientific review panels
- journal editorship or editorial board membership
- patents and patent applications
- number of joint R&D ventures with industry
- research-focused community outreach events
- clinical impact of research / impacts on patient care (e.g. evidence-based guidelines)
- ethical/educational/economic/legal and social aspects of Schulich-based research
- need to emphasize excellence and innovation as well as impact rather than just numbers
- important to monitor trajectories to identify strengths and gaps
- new jobs, products and services created
- documented occurrences of knowledge translation

Some commented that the proposed metrics, as well as the data referenced in the paper, focus too much on CIHR funding. Success with CIHR funding may be viewed as a proxy for overall success, and may have many positive benefits. However, given CIHR's budget situation and the government reluctance to increase overall support for biomedical research, the question was raised as to the validity of the measure.

There were also comments suggesting that alternate data could provide useful for analyzing success at other institutions. For instance, data on infrastructure funding (CFI, Genome Canada, etc.) could be used to develop institutional rankings, and could be used for identifying factors in success.

> **Response**: Many of these are excellent suggestions. We will probably need to assess costs/benefits for using data which is readily available vs. measures which may be desirable but which may be burdensome or difficult to measure. In terms of CIHR, this is the data that is readily available, not self-reported, and is consistent across institutions. Use of the CIHR data should not be interpreted that CIHR funding is the sole measure of success. To compare with other schools in the country or internationally, we need to use metrics such as total research funding which is used by most schools and organizations. One of the critical first steps is to ensure that we are capturing all the funding that is received by our faculty from multiple sources. Consolidation of databases of Schulich, Western and partner research institutes into a single database that is complete and current is the essential first goal.
>
> We agree that it would be useful to analyze other data; however, alternate data is not readily available at present. Alternate research metrics (e.g. "research funding per FTE") might be more meaningful, but again, comparable data across institutions is not currently available and would need to be developed.

Linkages between Research and Education Mandates: It was suggested that there needs to be a clear articulation of how research integrates with the education mandate. A strong research culture will enrich the already strong culture of education that exists within Schulich. We need to avoid people perceiving that our focus on education is done and now we're moving on to research. These efforts are mutually reinforcing, not mutually exclusive.

> **Response**: Agreed.

Students/Trainees

Student Engagement in Research: A number of comments focused on the expectation that all trainees/students will be exposed to research as part of their educational programs, and on how to incorporate or embed research expectations within all training programs. These comments generally were positive regarding the goal, but agreed that it will be difficult to achieve. They focused on the lack of detail in the report on how to achieve these goals and noted that this will require not just a cultural change, but tangible resources. As an example, one person noted that specifics on how to engage, encourage and support undergraduate students, medical students and residents in research need to be more clearly defined.

At the program level, there needs to be not just a strategy to engage trainees in research, but also documentation of best practices and lessons learned from the past so that medical and dental trainees are not just given an opportunity to undertake research, but just as importantly they are exposed to the appropriate mentorship and good research practices. Thus, not only will they see the benefits in terms of their own learning, but that learning comes to the department and ultimately to the school.

There were suggestions that Schulich should build on and enhance its existing programs which aim at developing student research capacity, including the Clinician Investigator Program (CIP), the MD/PhD program, and programs for undergraduate research (SRTP/SROP/dental research programs). There also were some comments that Lawson's facilities and hospital-based investigators are underutilized with respect to providing a research training experience to medical undergraduates and postgraduates, and we need an active strategy to redress this.

> **Response**: Revitalization and expansion of the SRTP/SROP programs for undergraduate research has already been initiated. A broader look at how to incorporate research into all training programs will await the new Vice Dean. Regarding the underutilization of Lawson, we will engage Lawson in these discussions – for example, would Lawson contribute to programs such as CIP or resident training awards in order to provide broader opportunities for trainee involvement in research?

Graduate Students: There was a suggestion that graduate student stipends need to be addressed as the level/source of grad student stipends directly impacts the funds available for research.

> **Response**: Graduate student issues are being addressed through a separate white paper being prepared by the Associate Dean (Graduate and Postdoctoral Studies).

Postdoctoral Fellows: Comments noted that the needs of postdoctoral fellows (PDFs) were not addressed in this paper. Excellent PDFs are critical to Schulich's research mission, and Schulich should take action to increase awareness, funding, recruitment and importance for PDFs.

> **Response**: Training of PDFs and graduate students is also being addressed in a separate white paper being prepared by the Associate Dean (Graduate & Postdoctoral Studies).

International Students: Recruitment and needs of international students/trainees were not addressed in the draft. These will help our international reputation.

> **Response**: That is outside the scope of this paper, but is an important issue that will be addressed in the forthcoming faculty strategic planning.

Organizational/Administrative

Role of Research Officers: There were general comments that Research Officers (*aka* grant facilitators) should not just be proof readers, but be able to engage with faculty and foster the entire grant preparation process. In addition, grant writing support should be coordinated with efforts already available within certain departments and research groups. There were also a number of suggestions on how to allocate the Research Officers – e.g. embed with specific research groups, embed in departments, focus by CIHR pillar or by research theme. The suggestions far exceeded the number of Research Officers to be hired. There also was a suggestion that all Research Officer/Grant Facilitator/Grants Development- type positions be unified into a "virtual office" regardless of location or source of salary support.

> **Response**: We agree that the Research Officers will need to provide a higher level of service, not merely serve as proof readers or clerical assistants. The position description reflects this. The idea of a "virtual office" is an interesting strategy and we will explore this. In a limited fashion, some coordination of this type already occurs through Research Western.

Research Advisory Council: Several comments were received about the proposed Research Advisory Council which would replace the current Research Committee. There were some concerns about the composition of the council – focusing too much on organizational representatives, as opposed to involving active researchers. In addition, there are some administrative considerations to take into account – for example, the current Research Committee provides substantial assistance in reviewing applications. The new Research Advisory Council may not provide such assistance, and alternate mechanisms would be required to address these needs.

> **Response**: The Research Advisory Council is seen as a policy group, helping to set direction for the School. However, the composition and mandate of the group needs to be carefully considered.

Vice Dean – Several comments focused on the Vice Dean role. Some suggested that Vice Dean play an active role in lobbying at the provincial / federal levels and play a prominent role externally. Others noted that the skill set for lobbying is not necessarily the same required for other aspects of the role. Alternate models were also proposed – e.g., a senior position to advocate for health research across London.

Other Comments

Faculty workload: There was general support for the goal of every faculty member having a mandated component of research within the workload or role description. Comments focused on the lack of specificity on how to achieve this – how specifically will Schulich and departments incentivize faculty to

engage in research. How will APT processes be aligned with these expectations - for instance, will recognition be given to alternative research contributions such as participation in clinical trials; collaboration on team grants or participation in larger collaborative research initiatives; and engagement in activities to foster knowledge translation and synthesis, such as development of evidence based guidelines, in addition to more traditional measures of success (grants, pubs) expected of research intense individuals

There was concern that leaving this to each department to address faculty considerations is not viable and will not achieve the intent –some external impetus/assistance will be required.

Faculty incentives: The use of incentives to drive behavioral changes is viewed as essential, while at the same time allowing for the other critical dimensions of the academic mission. Basic science faculty are bound by the collective agreement and the incentives will need to abide by the agreement. However, there are novel incentives that are being undertaken within several basic and clinical departments (e.g. summer studentships, trainee travel grants, translational grants, etc) which will be explored. Some may be suggested for broader implementation as departmental initiatives, recognizing that they will be department-specific.

Promoting specific fields within Schulich: There were several concerns that highlighting some programs (e.g. p. 5 - neurological sciences, diabetes, imaging and medical biophysics) is too partisan.

> **Response**: These were used for illustrative purposes, and in no way were meant to imply that these are the *only* areas of excellence. The areas of research strength are those recognized within the current Schulich Health Research Plan.

Branding: There were comments that Branding and Communication are critical. We need to develop a consensus on a single message that is put out to the public, and to streamline internal and external messaging.

> **Response**: Agreed. This is part of the new strategic planning.

Facilities/space: There were multiple comments that more attention should be paid to facilities/space issues. These are critical for researchers and for recruiting the best students/trainees.

> **Response**: One of the tasks for the new Vice Dean will be to lead a review of core facilities, and to work with Western to undertake a review of animal care facilities. One specific issue pertaining to animal care user fees is being addressed in this white paper.

Developing Groups/Teams/Large Projects: There were suggestions that Schulich identify specific areas where the School is strong and empower the leaders in those areas. There is recognition that the school cannot be strong in all arenas but can have a presence across all arenas. However, there were no specifics on how to identify specific areas or how to approach the development of multi-investigator, team/group proposals. Further, there was not sufficient recognition or discussion of the complexities of increasing the level of industry engagement within Schulich.

> **Response**: The Health Research Plan identified areas of research strength at Schulich. It is unclear whether the groups/teams would necessarily be in these areas, or what process would be used to select these groups/teams.

Knowledge Translation (KT): A number of people commented on aspects related to KT, noting that the paper is thin on specifics. What processes are needed to ensure that KT actually happens? Among the comments were suggestions that a baseline level of education about KT should be nurtured at all levels within Schulich; and that Schulich engage Lawson and the hospitals in this effort. Faculty need information about what best practices are already in place for KT – why are some practices more successful than others, and how can faculty/departments emulate best practices. What incentives are there for faculty to engage in KT activities?

> **Response:** Agreed. Another question to consider is whether KT training should be part of the med/dents and graduate program curricula. The general topic of KT may be raised as part of Schulich's strategic planning process.

Engaging with Industry: There was concern that more focus be put on developing interactions with industry, and less focus on CIHR. We need to develop broad partnerships with industry and entrepreneurs. In addition, these partnerships can provide spin-off jobs for the city and region and. enhance the economic and social well being of our community and region.

> **Response**: Agreed that we cannot be focused solely on CIHR. Industry linkages and funding will be crucial for moving forward. As an aside, Schulich faculty currently underutilize opportunities provided by WorlDiscoveries. We also need to take advantage of WorlDiscoveries.

Academic Health Centre/City-Wide approach: There were concerns that this not just be talk, but become a reality. How can we make this work? There is a perception that the lack of integration between Schulich and its partners is slowing down the emergence of Schulich as a national and international leader in health research. There should be greater emphasis on partnerships and integration of services, not only between Schulich and Lawson, but also between Schulich and other Western faculties.

Comments related to Departments' roles: Some comments focused on the role of the departments in this transformation of culture. Western faculty tend to have a very strong departmental affiliation, which is an important part of our culture. Departments will have a critical role to ensure that research is on the agenda of each faculty member. However, it is unclear whether all departments have the resources or enthusiasm to support this transformation, or whether departments will need assistance/incentives to engage in this process. Departments will need to set up mechanisms to foster, recognize, and reward research, and these will probably differ between basic and clinical departments.

Other issues commented on:

- Assistance in developing award nominations to recognize faculty achievement
- Additional focus on the needs of mid-career investigators
- Recognition for faculty who serve on granting agency review panels (CIHR, NIH, HSF, etc.)
- Additional focus on the importance of mentorship

- A need to reduce barriers, and make it easier for people to try new things
- What is the impact of changing priorities at CIHR?
- Need to empower champions to engage in changing the culture

Additional comments received on version 2 (May 2011)

Students/Trainees

Graduate education: There was concern that the discussion of research is incomplete without addressing issues related to graduate students and post-doctoral trainees. These trainees are the future of Schulich's research reputation and ranking.

Expansion of graduate enrollment in the past few years through the Provincial Reaching Higher initiative resulted in increased base funding to Schulich. As the Reaching Higher program is ending there is concern that Schulich's financial support of graduate students will need to be reduced, thus putting further strain on existing research funding. The impact that this will have on research growth and future graduate student expansion is not addressed in this document.

MD/PhD Program: It was suggested that the MD/PhD program should be identified as a strength of the School and should be expanded.

BMSc: There was concern that the undergraduate BMSc students were not sufficiently discussed in the paper. Many BMSc students go on to graduate programs in Schulich or to medical or dental school. The research experience they gain as part of their undergraduate program or summer research training influences how they view research and the choices they make in the future. Expanding summer research training programs and reviewing/updating their undergraduate research experience would benefit both graduate programs and medical or dental programs.

Additional research experience for medical and dental trainees: There were several comments in support of providing more research experience for medical and dental trainees. However, if research faculty will be expected to help train more medical and dental students and residents, will this come at the expense of time and resources for graduate students? Where will the funding come from to support these additional research projects?

Linking students and trainees: Finding ways to bring graduate students and post-doctoral students together with medical and dental trainees in a mutually supportive and meaningful environment could be one way to achieve advances in translational research while promoting a "culture of research". Treating these groups as separate entities further promotes the separation between cultures in Schulich and does little to advance the goal of giving more MD and DDS students an appreciation of research. Giving graduate students and postdocs the opportunity to work with clinicians, residents and medical/dental students will expose these dedicated research trainees to an environment that will foster translational research while providing MD & DDS students with the role models and contacts for future research networking as they pursue their own careers.

Identifying future "stars": In order to facilitate careers in research, Schulich will need a strategy for early identification of potential research 'stars' in the undergraduate and residency training programs.

Funding of clinical research fellows: There is a "Catch-22" in obtaining external funds for clinical research fellows: funding is awarded to the fellow, not the supervisor, and the timeline for applications is such that promising residents are reluctant to apply, because if the application is not successful, they will not have a job, and it will be too late for them to find an alternative. In order to persuade them to apply, the job (and funding) need to be guaranteed in advance. A Schulich guarantor fund would minimize the risk of these applications; the risk could be minimized by having a panel review applications to be put forward with guaranteed funding. Such a fund might appeal to donors.

Organizational Changes

Additional staff: Several comments focused on the proposed addition of staff to the Research Office. One comment was that the proposed structure for the Schulich Research Office is not proportional to the needs. One research officer is allocated just for Robarts with two for the rest of Schulich.

As an alternative to hiring additional personnel for the Research Office, it was suggested that hiring additional research faculty and technical staff should be given a priority: these are the people that make direct contributions to the research enterprise.

In addition, there should be an additional staff position to coordinate research opportunities for medical post-graduate trainees and fellows. The needs of this group are different from those of graduate students or postdoctoral scholars.

Value of Research Officers: There was some disagreement on the value of Research Officers. Some say it would be beneficial, while believe that they would be of minimal value. These positions will consume resources and there needs to be some confidence of resultant benefits. The recruits must have demonstrated evidence of their success in obtaining research grants; otherwise people in this position will end up just providing editorial assistance to the help-seekers. Research consultants who can teach by example are needed. Assistance with grants provides junior or less experienced researchers with the tools to improve and succeed, and importantly, to teach their trainees.

One suggestion was to leverage existing staff already within Schulich, rather than hire new staff. Some groups/teams in Schulich already have individuals who have experience in organizing grant applications, grant writing, grant preparation, etc. Perhaps tasks could be "contracted out" to these individuals, when appropriate, rather than hiring staff centrally. This would form a virtual grant facilitation service, rather than a central one, and have the benefit of minimizing costs by contracting for grant facilitation services only when needed.

Need for technical staff: There was a suggestion that rather hiring additional administrative staff for the Research Office, to hire additional technical staff to enhance the research enterprise. These people operate and maintain research infrastructure, and train students on the proper use of equipment and experimental techniques. Core facilities run by knowledgeable technical staff represent a highly efficient means of enhancing the research enterprise: they facilitate access to cutting-edge technology, and in

addition to maintaining the equipment, technical staff can guide users and train students, freeing the researcher to focus on research planning, evaluation, and scientific communication.

"Time Crunch" for faculty: There was a comment about faculty finding it increasingly difficult to make time for reading, pursuing new ideas and planning experiments, discussing research and experimental strategies with colleagues, and writing manuscripts and grant proposals. The "time crunch" is exacerbated by an ever increasing administrative burden and tasks that do not directly contribute to either the research or the educational missions of the faculty. Accordingly, there is concern about hiring additional administrative and support staff.

Time commitment of decanal personnel: Having decanal personnel with 100% of time devoted to a research office is essential. Additional part-time decanal positions may not enhance the functioning of the research office. Part-time positions will only allow for maintenance at best. Innovation and implementation of new programs or services are born from more focused roles.

General approach

Instilling a Research Culture: Commenters concurred on the importance of instilling a "culture of research" throughout Schulich. However, some felt that this section does not go far enough in addressing how more of the clinical faculty and mentors will gain the training and research experience to act as appropriate role models for medical and dental students and trainees. If they are to become involved in research teams, how will these connections be made and fostered to grow? The document seems to imply that embedding research in the undergraduate education program and a research rotation as part of the residency program is all that is required to produce a researcher.

Differences in "culture" between the professional and graduate programs: There was concern that the paper does not distinguish between the different cultures in the basic and clinical programs. The paper appears to focus on the perspective of the clinical education programs. A statement such as "a culture, both institutionally and across much of the faculty, that fails to promote research strongly as a core value at all levels of the organization" is not representative of the basic programs. Basic science departments can provide numerous examples of excellence in graduate student education resulting in their graduates progressing to post-doctoral and faculty positions in research intensive universities with much higher profiles than Western, or to graduates who progressed to non-academic careers and are now leaders in business. Creating a document on the organization of research without including graduate students and post-doctoral fellows while focusing on the research needs of medical and dental trainees is a critical flaw in this document.

Department cultures: Cultural changes for Schulich are addressed. However, as Western is very heavily driven by departments; there are some major challenges facing the basic departments and major cultural problems for the clinical departments. Within the clinical departments, in particular, it should be made clear that research is expected as part of the academic mission for all faculty at Schulich.

Existing strength in Basic Biomedical Research: While expanding research in pillars 2, 3 and 4 is a good strategy, Schulich should be cautious not to sacrifice its existing strength in pillar 1 research in its efforts to expand activities in the other 3 pillars.

Role of Institutes: The paper focuses on medical research at Western and does not sufficiently address the situation at Lawson. Schulich/Western should look at much closer harmonization and integration of Lawson researchers and research groups, particularly in light of the provincial policy that hospitals cannot directly support research. This would substantially improve London's KT potential. Further, scientists from the institutes have historically not tended to collaborate and work in teams. If this is to change, the institutional barriers need to be eliminated. More detail on this would have been appreciated.

In addition, the role of Robarts, and its challenges, is not sufficiently addressed.

Lack of broader themes: Broader themes such as social accountability, internationalization, transdisciplinarity, non-basic biomedical sciences research, and global health were not addressed in a substantive manner.

Other issues

Research Technicians/Research Associates: Two groups that were identified as missing from the discussion are full-time research technicians and research associates. In many cases these are critical members of research teams that provide continuity and unique expertise that complements that of PIs on the grants. The salaries of these key personnel are wholly dependent on continuity of research funding to their PIs. How will Schulich support their continued employment or their severance packages if funding fails? Laying these individuals off in advance of the end date of a grant means a loss of productivity and a disincentive for excellent personnel to become involved in research.

Institute Scientists: There were several comments regarding the role of institute scientists. While Lawson PhD researchers contribute significantly to Schulich's research mission, many of them do not have long-term salary stability, and few have any opportunity for tenure. This issue leads to low morale and some bitterness. This will need to be addressed if these scientists are going to buy into the enhanced research focus of Schulich. Otherwise, talented research scientists may leave for other institutions that provide more job security.

Clinician Scientists: Although there was mention of further support and promotion of the clinician scientists, details were lacking. In a number of departments there is a lack of recognition for the value of clinician scientists. Additional details will be needed.

Internal Peer Review: Mandatory internal peer review, as exemplified by the Sick Kids Research Institute model, should be instituted. One suggestion is that a staff person should organize and document this formalized process, with the actual reviews performed by faculty researchers. This review process should be mandatory for the allocation of bridge funding.

This type of review process will increase scientific communication between researchers, particularly if the peer evaluation incorporates extra-departmental reviewers as well as both clinical and basic researchers. The process may also help to foster greater collaboration and translational research. All of these things should contribute to the goal of enhancing the research enterprise at Schulich.

Core facilities: The increase in financial support for core facilities is certainly justified by the resource they provide to faculty. The competitive aspect of the funding has been beneficial, though sometimes painful. It has forced core facilities to become more efficient, and certainly should be retained. The new Vice-Dean Research should host a feedback session to identify issues related to this application process for core facility support.

Clinical databases: Schulich should support the development of clinical databases as a core resource, in order to facilitate clinicians' research. Many such databases exist already, but with varying usefulness and limited or no connectivity. There currently exists within Schulich substantial expertise that can be called on to help with this. In a related matter, Schulich should capitalize on the new ICES @ Western to enhance research skills, training and strength for CIHR pillar iv in the document.

Industry research: Schulich should be more entrepreneurial with regard to industry and pursue this area much more aggressively. A major challenge is to identify Industry partners in the applications where one needs such partnership. One of the mandates of Research Office (possibly in collaboration with WorlDiscoveries) should include development such relationships with industry. There also needs to be appropriate encouragement to support researchers involved with industry-supported RCT's.

REB Issues: The increasing time required for ethics approval at Western presents an impediment to clinical research. As an example, the REB's guidelines and procedures for approvals of case studies or case series could be harmonized with other Canadian institutions. This would relieve the burden on the HSREB as well as on clinician researchers. In addition, the HSREB needs increased staff and support to accelerate ethics review. Departments should increase their recognition for service on the HSREB in promotion and tenure, to encourage faculty members to serve on the HSREB.

Animal Ethics: The process of obtaining animal ethics approval is long and confusing (even with eSirius). There is a need to revise the forms to make the whole process simple, rational and user friendly. Such changes will facilitate research.

Cage charges: While the issue of cage charges is important, given the number of times mentioned in the paper, it appears to be a main focus of faculty research concerns. There are other issues which are of more conceptual and logistical importance.

Knowledge Translation (KT): Western's record in the area of KT is lacking. A dynamic and effective industry liaison office is necessary. Clinical trials need to be addressed to be successful, and that is largely through hospital-based programs.

Adjunct Faculty: The paper lacked comment or recognition about the participation of Adjunct Professors. Adjuncts contribute to research and education at Schulich (e.g. graduate student supervision, SRTP supervision, thesis reviews). Adjuncts present an opportunity to expand Schulich's research capacity.

Need for accurate and informative metrics: The importance of an accurate and verified picture of Schulich's current research output (e.g. publications with impact factors, funded peer-review and Industry grants) as the first step in advancing the research mission was noted.

Appendix 2 – Terms of Reference for the Research Review Task Force

Committee Description: SSMD RESEARCH REVIEW TASK FORCE

Draft Version: 24 September 2010

Preamble: The research mission of the Schulich School of Medicine & Dentistry has been clearly delineated in the document entitled "*Shaping the Future of Health Care through excellence in Research. Our Research Mission 2008 – 2012*". In this, Schulich identified 7 areas of research excellence, including biomedical imaging research; cancer; cardiovascular, respiratory health and metabolic diseases; maternal, fetal, child and family health; infection and immunity; musculoskeletal health; and neuroscience and mental health. In addition, seven areas of emerging strength were identified, including aging and geriatric medicine; clinical pharmacology and personalized medicine; environment and health; genomics, proteomics and bioinformatics; health services, delivery and policy; innovative surgical therapies; and population health. The document also speaks to the need to coordinate research space planning across Schulich and the University and its affiliated research institutes, as well as the need to organize new space for Schulich researchers in a thematic manner. Prior to this, the 2006 academic plan described Schulich strategic directions as including "enhancing our research capacity, productivity and impact".

Embedded within these documents were key action items:

- Increase the number of faculty with external peer review research funding and aim to become one of the top medical and dental schools in the country with most grant funds per capita faculty
- Increase the ratio of PhD to MSc students
- Increase the numbers of graduate students and postdoctoral fellows with external scholarships
- Increase the number of medicine and dental undergraduate students involved in research
- Increase the number of clinician scientists and clinician researchers obtaining external salary and research support
- Ensure that core facilities become financially stable
- Increase interactions and collaborations with partner universities in southwestern Ontario

In the interval since the crafting of this document, the CIHR has published a new strategic plan that focuses on 4 directions: investing in world-class research excellence, addressing health and health system research priorities, accelerating the capture of health and economic benefits of health research;

and achieving organizational excellence, foster ethics and demonstrate impact. Research funding to Schulich has declined in spite of notable exceptions. While this can be argued to reflect the increasingly stringent funding opportunities, it can also be argued that Schulich is ill-positioned to capitalize on its strategic objectives for research or to adapt to the new CIHR mandate.

Mandate: In this light, the SSMD Research Task Force will be struck to critically evaluate the infrastructure of SSMD as it relates to the support of research. The Task Force will address the following:

- To critically review the role of the associate Dean Research and determine whether this position would be better served as a Vice-Dean. If so, to define the terms of reference for this position.
- To critically review and make recommendations regarding the organizational scope and priorities of the Research Office
- To review the funding and mentorship of research-intensive faculty within Schulich with emphasis on both new and mid-career level
- To critically review the nature of the current status of health research across London, and specifically to evaluate the effectiveness of multiple independent research facilities
- The Task Force will be expected to provide a blueprint for reorganization of the Research Office and its interactions with Research Western, other faculties at Western, and Lawson with the ultimate aim of improving successes in heath research at Schulich and Western

Membership: The Task Force will consist of representative membership from across the community of London health researchers and will include representation from Education (CERI), Robarts, Lawson, clinical and basic researchers from both Medicine and Dentistry, as well as from key campus partners. As individuals are confirmed for their participation, this list will be forwarded.

The panels will meet biweekly with the intent of producing a “white paper” on the reorganization of the Schulich Research Office by late 2010.

Team Structure: Because of the number of individuals to be involved in this process, with relatively short time lines, the membership will be divided into specific working groups.

a) Leadership team: This team will meet biweekly as a coordinating group with representation from each of the working subgroups.
    a. Meetings will take place in Room 3702, Dean’s Conference Room
    b. Meetings will be of one hour duration, commencing Thursday September 16, 0700 hrs

c. It is anticipated that two smaller groups from the steering committee will make site visits (single day) to comparable Canadian Medical Schools (specifically University of Alberta (Edmonton); McGill) where existing successful Faculty of Medicine Research Offices have been established. Dr Han's office will work towards establishing the liaison with his counterpart offices with the anticipation that each site will be visited by a team of 3 individuals, including the SSMD COO (Dwayne Martins).

d. The leadership team will be responsible for drafting the white paper for presentation at SSMD ECSC.

b) Working groups: The working groups (leadership identified) will include Education Research and Training, Basic Science Research, Clinical Science Research, and Health Services & Policy, and Population Health.

c) Each of the working groups will be expected to meet biweekly in order to address the 4 key items delineated in the mandate section, and to do so using a SWOT analysis format. In addition, several issues of importance cut across all the working groups, including Knowledge Translation, Interdisciplinarity and Partnerships, and matters related to Research Ethics Review, and all the groups should address these issues.

Time Line:

a. **3 Sept 2010**: Presentation of terms of reference to ECSC for feedback and further recommendations regarding the scope of the review and committee membership

b. **16 Sept 2010**: Initial meeting of steering committee

c. **Sept – Oct 2010**: Working group deliberations

d. **November 20, 2010**: Single day Retreat (venue to be announced) for all task force members to collate individual working group products into a single document

e. **January 2010**: Presentation of draft white paper to SSMD senior leadership council for review

f. **January 2011**: Presentation of draft paper to ECSC for review

g. **February 2011**: Distribution of draft paper to Task Force members, Schulich Research Committee, and other interested groups for comment

Appendix 3 – Comparison of Schulich Research with Peer Institutions: Summary of Findings from Site Visits

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
Organization **How is the Research Office of the medical school organized? Organizational chart? Staff and job descriptions?**	Assoc Dean Research 1 Associate Dean Graduate and Postdoctoral Studies 1 Senior Consultant 3 staff	Vice Dean, Research (VDR) 3 ADRs 3 Directors 1 Senior Administrator 4 staff 1 Grant Facilitator (University - located in RSO) 9 staff working in RSO for grant administration	Vice Dean Sciences & Strategic Initiatives 1 Assoc Dean Research 1 Assoc Dean Grad Studies 1 Assoc Dean Faculty Affairs (appts) 4 Managers (Sr. Admin) 6 Staff (4 Research, 2 Grad Studies)	Assoc Dean Research 4 Sr Grants Advisors 1 Grants Specialist 1 Mgr 7 other staff (13 total) AD Grad Studies – separate office
What is the reporting relationship of the organization?	AD Grad & Postdoc works independently and consults with ADR Senior Consultant works mainly with ADR 1 staff works for both ADs 1 staff works mainly with AD GPS	Directors report to VDR and meet once/wk Research Committee meets twice/month and discuss issues at high level for decisions; adjudicates grants and appointments including CRCs Staff serve ADRs and Directors, report through Senior Administrator	ADRs report to VD and Dean 2 ADs work independently 1 Strategic Grants Officer dedicated to CFI, CRC, FRSQ 1 Sr. Admin Coordinator for Internal Peer Review	ADR reports to Dean; dotted line to VP Research
How has the faculty Research office staff/responsibilities evolved (e.g. bottom-up demand from faculty vs. top-down implementation from university/faculty)?	Has been top-down implementation from faculty	Restructured when the new Dean and the VDR were appointed 1 yr ago. Recommendation from the Task Force and top-down decision.	Restructured after Task Force led by Sandra Crocker 1 yr ago R Quirion appointed to new position created	Mixture

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
Budget and Funding **Do you have a separate budget for the Research Office? What is the budget of the Research Office? What is the source of funds for the budget?**	Research Office budget covers only staff salary/benefits and operating costs (phone, copier, etc.) All program funds come from the Dean	550K from VPR for administration 700K from Provost for start-ups 1.2M indirect cost transfer from central – used exclusively to support animal facilities (operated by the faculty and not by central) 600K from central as indirect cost from all other grants used for activities including summer studentships, bridge or gap funding, travel and other awards, etc.	No separate budget except for salaries for personnel, stipends for decanal positions Funding for special programs - bridge funding (eJournal Press to track internal peer review) - Personnel awards (bridge for FRSQ)	Research Office budget approx 75% from indirect costs (contracts, etc) and 25% from Faculty funding
How is the indirect cost of research transferred from central university to your medical school? What is the main use of these funds?	270k in RISF transferred from UWO; used by SSMD for core research facilities	1.2 M transferred from central (total tri-council grants about 200 M); used exclusively for animal facilities	Variable depending on faculty or research institute (23-50%) Research office activities	Funds cover Research Office budget, including REB administrative costs
If the faculty had the resources to further expand their Research office, what would be their top priorities? How do you set priorities?	Discussions in progress - Research Review Task Force	Priorities – Core facilities (none funded from faculty at present) Grant writing and facilitation Priorities set by the Research Committee	N/A	N/A

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
Operations **What is the role of the Research Office in operating grants and major grants (Team grants, NCEs, CFIs, etc)**	Little direct role in the development of grants Approval of operating grants Workshops on grantsmanship Research Western supports major grants	New Director in CIHR Special Projects – responsible for internal peer review RSO assist in major grants Some grant writing support available via freelancers ($200/h); plan to have some support through faculty – first 10 hours to be free, subsequently will be charged $45/hour for grant preparations from the Office.	Strategic Grants Officer for CFI, CRC and FRSQ	4 Grants Advisors for CIHR, Major Projects Faculty of Health Sciences coordinates CIHR Operating grants for all university, not just Faculty
How is mentorship organized in your faculty? Is it mandatory?	Mentorship via departments; new SSMD mentorship policy	Mentorship variable among departments, no responsibility from Office of Research. Mentorship not mandatory.	Mentorship not mandatory at present, being discussed as strategic planning	Mentorship not mandatory but encouraged
How is internal peer review organized in your faculty? Is it mandatory? Are there incentives for faculty members contributing to internal peer review or mentorship	Varies by department. No mandatory faculty peer review. Incentive: Gap funding contingent on peer review of CIHR application.	In development. New Director position will be responsible. Incentives for internal reviewers with credit towards faculty support towards grant preparation being considered.	Senior Admin Coordinator for IPR, not mandatory but eligible for bridge funding only if demonstrate IPR (tracked with eJournal Press software) Incentives for IPR, mentoring – recognition as service in APR and promotions/tenure	Peer review at department level. Required for new faculty; others are encouraged.
How is research space allocated in your faculty? Are there guidelines based on performance or funding that are used for space allocation?	Departmental decision; variable guidelines	Being developed based on funding, number of personnel, pillar of research Lots of space available with recent build up of both wet and dry laboratories	Space owned by faculty; allocation using Famis software Space requests in special forms and considered by the Dean	Ad hoc; based on performance/funding or on potential of individual; some flexibility

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
How is the graduate training and postdoctoral fellowships organized and administered in your faculty? How are teaching assistant funds distributed – department or faculty?	AD for Graduate and Postdoctoral Studies responsible for recruitment and organization Council of Graduate Study Program Chairs Teaching assistant funds distributed by departments (2010); may change	ADR for graduate studies; mostly responsible for recruitment and awards Most organization of enrolment and graduation through the Faculty of Graduate Studies Has a Council of Graduate Chairs PDFs not organized by faculty; appointments by departments; able to participate in faculty workshops; no recognition in place	AD for Graduate Studies with 1 Senior Administrator and 2 staff Faculty of Graduate Studies (Marty Kreisworth with 3 Associate Deans – 1 for FOM, Dentistry, Kinesiology and Business) 19 Graduate Programs Responsible for CIP, Summer Research Program (MD/PhD under 2 separate Ass Deans) Funds distributed to Programs	AD Graduate TA/fellowships not addressed
How is the mid-career level faculty supported?	No program at present except for those hired in tenure-tracked stream	Not addressed at present	FRSQ	N/A
How is the recruitment of CRCs organized in your faculty? What is the requirement for long term commitment by a department in the consideration of the allocation of a CRC?	CRCs which become available are allocated based on proposals to university SSMD requests CRC proposals from departments and ranks internally	CRCs in Health allocated to faculty CRCs allocated based on 3 yr rolling average of tricouncil funding; stays with the faculty Research Committee calls for nominations from departments and adjudicate the nominations	Central allocates CRCs based on tricouncil funding Recruitment through Associate Dean Faculty Affairs CRCs only for recruitment until now; retention being considered James McGill Professorship from endowment for retention	Primarily used for recruitment; some use for retention
How do you encourage and facilitate translational research? Health Services and Policy research?	No specific program Health Services and Policy research in development	ADR Clinical Research responsible for clinical and translational research Centre for Health Outcomes Research; new Director recently appointed No funding from Capital Health or AHFMR (in flux) 2 M from ICARE still available for Clinical Research but the strategy still	No specific program	Clinical depts. encouraged to partner with basic depts. and research institutes

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
		being discussed		
How do you support your core facilities? Animal facilities?	RISF funds used for core facilities ($270k) (prior support via TPC-allocated funding) Animal facilities managed centrally	No support for core facilities from faculty at present. New ADR starting to organize with 2 core facilities (imaging and cell sorting) Animal facilities operated by the faculty; 4 M operating cost; 1.2 M from indirect cost directed towards the animal facilities; animal care cost in the lower end of the scale for all universities; planning to increase per diem rates.	No support for core facilities from faculty, mostly by user fees	REB and animal facilities coordinated by Faculty, not by central university
Are there supporting mechanisms for faculty members who need bridge or gap funding?	Gap competition – awards range 10-15k. Gap limited to CIHR Operating Grant applications	Bridge or gap funding available; awards currently ~ 20-30K; VDR wishes to increase to 50K; criteria being developed, currently as first come first serve basis; Research Committee adjudicates funding	Bridge funding for 30% or better $35K Require documentation of internal peer review tracked by eJournal Press software	N/A
Relationships **What is the reporting relationship with the Dean?**	Good; ADR meets regularly with Dean once/2 wks ADR sits on the Faculty Leadership Committee which meets once/2 wks	VDR meets with the Dean 1-3 times/month; VDR is part of the Executive of the Faculty which meets with the Dean once/week; Dean available ad hoc if necessary	ADR a member of senior leadership team which meets twice/wk ADR meets with the Dean once every 2 wks to 1 month	Dean = VP Health Sciences
What is the relationship with the central university? Is there a Vice Provost position in your university that serves for all health faculties (Medicine,	Good working relationship with central university; no regular meetings, held ad hoc No Vice Provost Health	The Dean and VDR meet with VPR once/month No Vice Provost position; Associate VPR is from the Faculty of Medicine and therefore access to VPR is good.	Very good relationship with Associate Vice Principal of Sponsored Research (Sandra Cocker) Internationalization under AVP	ADR has dotted line to VP Research

Questions	Schulich (Current)	University of Alberta	McGill University	McMaster University
Dentistry, Health Sciences, Nursing, etc)?			of Sponsored Research 1 Director for NIH and international agencies	
How do you distribute the research support provided by the central university and your office?	Research Western provides grant facilitators who are shared by all faculties	1 Grant Facilitator from RSO to the faculty with 9 staff for the faculty 1 Director for CIHR grants and 1 Director to review the grants (not all reviewed; focus on those faculty with not good track record in the past)	60 staff in central research office Maintains database Separate arm of sponsored research for CRCs and CFIs	Fac of Health Sci handles CIHR for all university; in exchange, univ handles NSERC/SSHRC
What is the relationship with other faculties within the university?	Good –interdisciplinary activities encouraged (e.g. CRC recruits, IDIs)	Good; opportunity for interfaculty joint proposals Interdisciplinary research opportunities within the faculty (basic and clinical)	Good; no official collaborative programs	N/A
What is the relationship with the hospitals and research institutes? How do you distribute the research support provided by the hospitals and your office?	In progress: new ADR/Vice Dean proposed Lawson submits own proposals and accounting of research funds	In progress; new ADR in Clinical Research who is a methodologist; Capital Health has no funding for research.	Complicated relationship with hospitals; each hospital based research institute has separate administrative structure	All peer review goes through university; all industry goes through hospitals; much coordination
Who is responsible for the external relationships (not fund raising) in your research office? How is this function distributed within your Research Office with the Dean?	Shared between the Dean and ADR	Not addressed	VD Strategic & Research Initiatives (R Quirion) involved; the Dean is mostly responsible	AD Research; also Dean and dept chairs; Contacts needs to be coordinated with University

Appendix 4 - Questions posed at Research Retreat, November 20, 2010

Questions on Organizational and Operational Changes

What organizational changes are required to enhance Schulich's research position?

Consider:

1. What changes in organization are required – Decanal team and Research Office Personnel?

2. Budget – How would you allocate to infrastructure and initiatives (guidelines)?

3. How can we use additional resources to best position ourselves to be successful in grant competitions both nationally and internationally? What should be the role of departments vs. the role of Schulich in terms of research facilitation (mentorship, internal peer review, space, core facilities, etc.)?

4. Should Schulich be more aggressive in identifying and supporting the most promising research "stars" and/or areas? What are the resource and focus implications of these changes?

Questions on Attitudinal and/or Cultural Changes

What attitudinal or cultural changes are required to enhance Schulich's research position?

Consider:

1. What changes in incentives or culture are required?

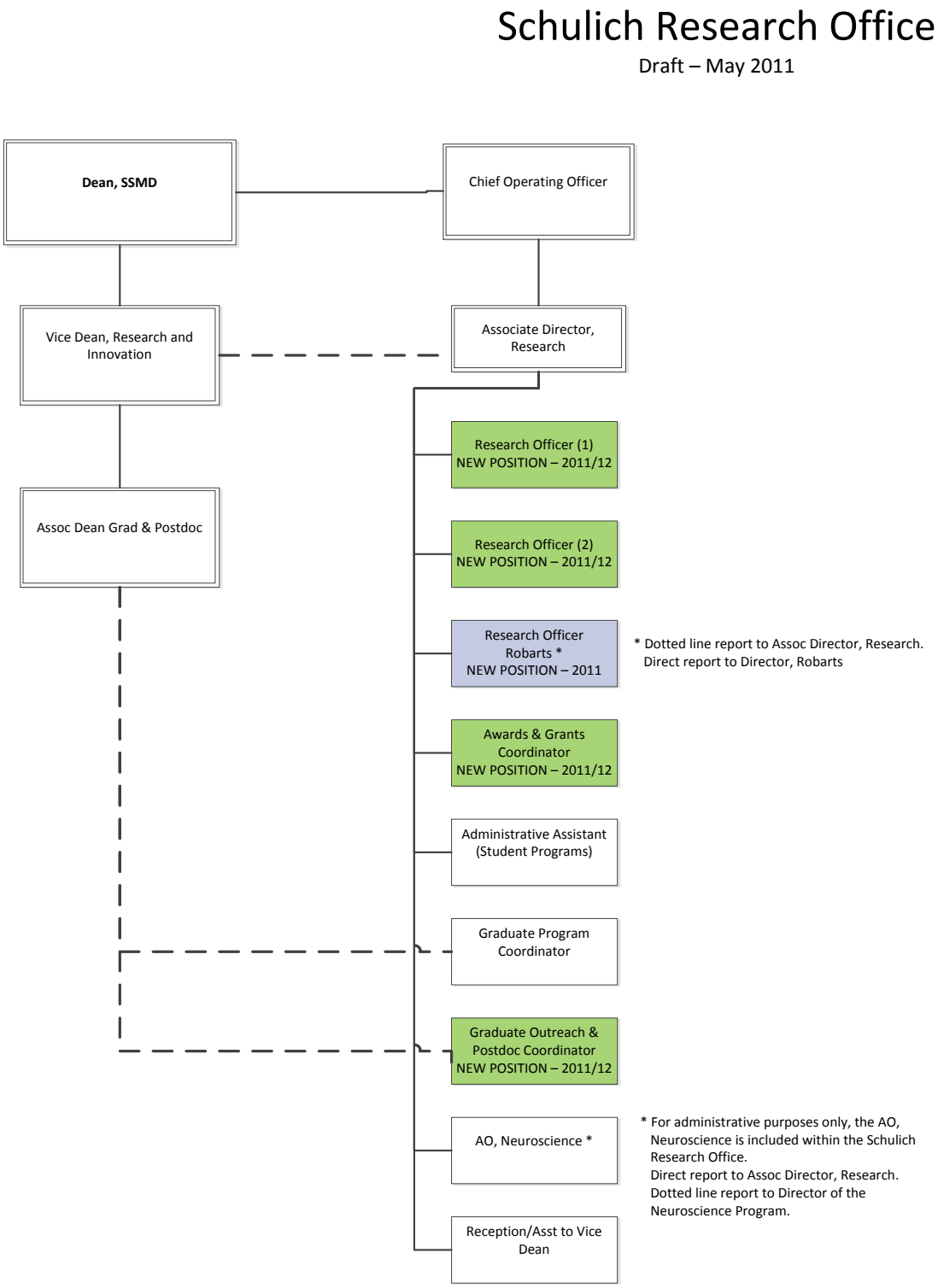
2. What are the cultural implications for Schulich if the faculty becomes more aggressive in identifying and supporting the most promising research "stars" and/or areas?

3. How can Schulich address the translational issues of basic and clinical research, often termed the Valleys of Death by CIHR? (Implicit in this question is what are the processes and requirements to undertake in a meaningful manner the translation from biomedical to clinical and from clinical to population based health and health policy? Can Schulich establish a pre-eminent position in this sphere (pillars 2, 3 and 4?)

4. How can Schulich produce and sustain the next wave of Canadian researchers?

5. What institutional changes can Schulich adopt to become more collaborative? If health research is to be organized in a citywide basis (including Lawson/UWO integration), how can Schulich help to achieve this?

Appendix 5 –Organizational chart for new proposed structure



Appendix 6 – Job Descriptions for Vice Dean, Research and Innovation and Research Officer

Job Description: VICE-DEAN RESEARCH

Preamble: The research mission of the Schulich School of Medicine & Dentistry (Schulich; SSMD) is clearly delineated in the Health Research Plan entitled "Shaping the Future of Health Care through excellence in Research. Our Research Mission 2008 – 2012" (http://www.schulich.uwo.ca/Research/Documents/ Health_Research_Plan_2008-2012_Final.pdf). Since crafting of this document, the Canadian Institutes for Health Research (CIHR) has published a new strategic plan that focuses on four directions: investing in world-class research excellence, addressing health and health system research priorities, accelerating the capture of health and economic benefits of health research; and achieving organizational excellence, fostering ethics and demonstrating impact. Recognizing that CIHR is the major but not the sole funding source for Schulich researchers, it is noteworthy that CIHR research funding to Schulich Medicine & Dentistry has declined. There are few notable exceptions to this trend. While this can be related to the increasingly stringent funding opportunities, it can also be a reflection that Schulich is ill-positioned to capitalize on its strategic research plan or to adapt to the new CIHR mandate.

Schulich Medicine & Dentistry has begun to develop a revitalized strategic plan to ensure that the School is well-positioned for the future. The plan will align with the four basic principles identified as strategic priorities for Western and will be built upon the fundamental position that a lead international institution must be built upon the basis of its education and research scholarship. To facilitate this, there is a need to fundamentally redevelop the Schulich research infrastructure to enhance our competitiveness, and position ourselves initially within the top five research intensive medical schools in Canada, and ultimately amongst the top three. This will include strategic investments in personnel, infrastructure support, alleviation of animal care inequities, and investments in core facilities through a mixture of endowment fund utilization, economies gained from an in depth operational review, and strategic investments. In addition, the culture of research at Schulich Medicine & Dentistry will need to be altered to become a priority amongst all levels of the organization. To achieve these goals, the position of Vice Dean Research has been created at Schulich.

The Vice-Dean Research will provide strategic vision, oversight, liaison and communication (internal and external), and advocacy for research at Schulich Medicine & Dentistry. He/she will foster strong inter-faculty relationships to take advantage of potential synergies such as integrated Canada Research Chairs (CRC) recruitments, targeted Chairs and faculty support, and development of new graduate opportunities. The incumbent will be the lead national and international spokesperson for Schulich Research. With the increasingly integrated missions and strategic directions of Schulich Medicine & Dentistry with those of its primary clinical and research partners (London Health Sciences Centre, St. Joseph's Health Care London, Lawson Health Research Institute, Hôtel-Dieu Grace Hospital and Windsor Regional Hospital), the incumbent will play a critical role in coordinating efforts to achieve common research goals amongst these partners, including a pivotal role in the development of a Southwestern Ontario Academic Health Sciences Network.

Mandate: The Vice-Dean Research will serve, but not be limited to, the following functions:

- Facilitate development of new and continuing research initiatives through support of identified or recruited champions and the transparent, criteria-based allocation of discretionary resources to individual researchers and integrated research programs
- Coordinate the recruitment to and renewal of Canada Research Chairs and endowed chairs of Schulich School of Medicine & Dentistry
- Facilitate and increase recruitment of high quality graduate (e.g., MSc, PhD, DDS/PhD, MD/PhD), postgraduate medical and dental (e.g., residents) and postdoctoral fellows whenever possible and work to enhance the quality of their research training environment
- Work to maintain and improve quality of research at Schulich Medicine & Dentistry through support of individual researchers and members of integrated research groups in concert with the School's Health Research Plan and through consultation with the Research Committee (or Research Advisory Committee)
- Increase collaboration and communication amongst Schulich researchers, which includes our affiliated partner institutions in London and Southwestern Ontario, and with other faculties at The University of Western Ontario
- Facilitate the development of research at the Schulich School of Medicine & Dentistry – Windsor Program and across SWOMEN, working closely with the Vice-Dean Hospital and Interfaculty Relations and the Assistant Dean, Rural & Regional Medicine.
- Develop strategies, initiatives and programs to increase funding for research and research training in the School by encouraging and facilitating applications to established and evolving national and international sources
- Report annually to the ECSC on the research funding and metrics of the Schulich School of Medicine & Dentistry
- Report regularly at the ECSC with Research Updates
- Participate and contribute to the appropriate Schulich committees (e.g., Senior Leadership Council, Information Services Policy and Planning Group)
- Represent Schulich Medicine & Dentistry on appropriate Western (e.g. University Research Committee, Associate Deans of Research Committee, Core Planning Group, Animal Care Governance Committee, Health Research Council. Western Innovation Fund) and external organizations (e.g. Research and Graduate Studies Committee of the Association of Faculties of Medicine of Canada [AFMC], Research COFM)
- Chair the Dean's Award of Excellence Committee, Committee on Faculty Support for Research in Education, Faculty Committee on Small and Large Academic Development Fund grants
- Advise the Dean on research matters, including the allocation of research space assigned by Western to Schulich Medicine & Dentistry, and funding and development of core facilities
- Be responsible for the nominations of, and assist in the preparation of dossiers for, Distinguished University Professors, Faculty Scholars, Hellmuth Award, Fellow of the Royal Society, Canadian Academy of Health Sciences, etc.
- Lead the investigation of internal and external complaints on inappropriate and unethical research behaviours of Schulich faculty and conflicts of interest on behalf of the Dean and Vice President Research, and submit timely reports.
- Work closely and integrate with the Vice-Dean, Education, Vice-Dean, Dentistry, and Vice-Dean, Hospital and Interfaculty Relations in advancing the research objectives of Schulich Medicine & Dentistry
- In concert with the Dean, participate in the chairing of selection committees as well as provide support and advice to the Dean with respect to leadership recruitment

- Cultivate and maintain relationships with local, provincial and national governments and funding agencies and industry
- In concert with the Dean and the Office of Global Health, enhance research collaborations and training with international medical and dental schools (e.g. dual PhD program) in accordance with the strategic vision on global health of the School
- Conduct annual performance reviews of the Associate Deans, Assistant Deans and Directors of the Research Office
- In concert with the Dean and the Chief Operating Officer, be responsible for the construction of the research budget
- In concert with the Director of Research (Senior Consultant of Research to be promoted to Director), develop a Human Resources plan for the Office of Research, and participate in the hiring and termination of personnel within Research Office.
- Other duties as assigned by the Dean, Schulich School of Medicine & Dentistry

Terms: The Vice-Dean Research:

- Will be a physician or dentist or a basic scientist with a strong track record of research (as evidenced by extensive research funding, awards and publications in high-impact and widely read journals), research recognition (keynote speaking invitations, national and international grants panels) and national and international research leadership (editorial boards, professional societies)
- Will have a track record in leadership in innovation, vision and team building
- Will have demonstrated administrative and organizational skills
- Will be an individual that has demonstrated capacity to work with the community to see a vision come to fruition
- Will be a five-year term, renewable once. In extraordinary circumstances, as determined by the Schulich Senior Leadership Council and following a favorable external review, extensions beyond a two terms will be allowed.
- Will be jointly accountable to the Dean and the Senior Leadership Council with annual performance reviews
- Will commit to a 0.8-1.0 FTE time allocation
- May be either an internal or external appointment

Research Officer (DRAFT position description)
(aka ""Grants Specialist" or "Strategic Grants Officer" or "Research Consultant". Several positions anticipated)

Qualifications

- Masters degree in relevant field; PhD degree an asset
- Proven experience in grantsmanship
- Working knowledge of government and non-profit research funding programs
- Excellent communication and writing skills

Responsibilities

- Primary role is to increase Schulich's research competitiveness, research productivity, and external research funding
- Will help faculty members translate research ideas into highly competitive grant applications.
- Will work directly with Schulich researchers to plan, coordinate and prepare funding proposals for strategic programs; team/group grants; and major provincial, national and international funding opportunities
- Will assist researchers in formulating funding strategies and developing new research collaborations