GFC Academic Planning Committee (APC)

Approved Motion

The following Motion and attendant Final Document were approved by the GFC Academic Planning Committee (APC) at the meeting of Wednesday, September 28, 2011:

Agenda Title: **Faculty of Medicine and Dentistry's Proposed Alberta Institute for Transplant Sciences (AITS)**

Motion: THAT the GFC Academic Planning Committee approve, under delegated authority from General Faculties Council, the proposal submitted by the Interim Dean of the Faculty of Medicine and Dentistry for the formal establishment of the Alberta Institute for Transplant Sciences (AITS), to be housed in the Faculty of Medicine and Dentistry at the University of Alberta, as set forth in Attachment 1, to be effective upon final approval.

Final Document: Item 4

OUTLINE OF ISSUE

Agenda Title: **Proposal for the Establishment of the Alberta Institute for Transplant Sciences (AITS)**

Motion: THAT the GFC Academic Planning Committee approve, under delegated authority from General Faculties Council, the proposal submitted by the Interim Dean of the Faculty of Medicine and Dentistry for the formal establishment of the Alberta Institute for Transplant Sciences (AITS), to be housed in the Faculty of Medicine and Dentistry at the University of Alberta, as set forth in Attachment 1, to be effective upon final approval.

Item

Action Requested	☒Approval ☐Recommendation ☐Discussion/Advice ☐Information
Proposed by	Verna Yiu, Interim Dean, Faculty of Medicine and Dentistry
Presenter	Verna Yiu, Interim Dean, Faculty of Medicine and Dentistry; and Atul Humar, Associate Professor, Department of Medicine, and Director, Transplant Infectious Diseases
Subject	Proposed establishment of the Alberta Institute for Transplant Sciences (AITS) as an academic institute in the Faculty of Medicine and Dentistry at the University of Alberta.

Details

Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is (please be specific)	See the attached proposal.
The Impact of the Proposal is	See the attached proposal.
Replaces/Revises (eg, policies, resolutions)	N/A
Timeline/Implementation Date	Effective upon final approval.
Estimated Cost	See the attached proposal.
Sources of Funding	See the attached proposal.
Notes	N/A

Alignment/Compliance

Alignment with Guiding Documents	*Dare to Discover* and *Dare to Deliver*
Compliance with Legislation, Policy and/or Procedure Relevant to the Proposal (please quote legislation and include identifying section numbers)	1. ***Post-Secondary Learning Act* (*PSLA*)**: The *Post-Secondary Learning Act* (*PSLA*) gives General Faculties Council (GFC) responsibility, subject to the authority of the Board of Governors, over "academic affairs" (section 26(1)). Section 26(1)(o) provides that GFC may make recommendations to the Board of Governors on a number of matters, including "the budget" and "academic planning." GFC has thus established an Academic Planning Committee (GFC APC), as set out below. GFC delegates certain of its powers to the GFC Academic Planning Committee. The complete wording of the section(s) of the *PSLA,* as referred to above, and any other related sections, should be checked in any instance where formal jurisdiction or delegation needs to be determined. 2. **University of Alberta Policies and Procedures On-Line (UAPPOL)**: According to the University of Alberta's *Academic Centres and Institutes*

	Establishment Procedure (Section 2 – Establishment) (available at: www.uappol.ualberta.ca): "All proposals for establishment of academic centres and institutes shall be submitted initially to the Provost and Vice-President (Academic). The Strategic Initiatives Group (SIG) shall review operational details (e.g. budget, space) for the proposed centre or institute and suggest revisions or recommend clarification as needed. Proposals deemed to be in good order will be forwarded by the proposer(s) to the GFC Academic Planning Committee (APC) for final approval. When the University of Alberta forms a partnership with another entity in creating an academic centre or institute, full approval processes must be followed with all partner entities prior to operation. Proposed academic centres and institutes shall not operate prior to receipt of notice of approval. All academic centres and institutes existing but not approved by APC shall come into compliance immediately or be considered for closure."

Routing (Include meeting dates)

Consultative Route (parties who have seen the proposal and in what capacity)	See the attached proposal for information on the consultative routing of this initiative.
Approval Route (Governance) (including meeting dates)	Centres and Institutes Committee (May 24, 2011) (for discussion); Strategic Initiatives Group (September 20, 2011) (for discussion); GFC Academic Planning Committee (September 28, 2011) (for final approval)
Final Approver	GFC Academic Planning Committee

Attachments (each to be numbered 1 - <>)

1. Attachment 1 (pages 1 – 24): Proposal for the Establishment of the Alberta Institute for Transplant Sciences (AITS)

Prepared by: C Watt, Office of the Provost and Vice-President (Academic), for A Humar.

Attachment 1

ALBERTA INSTITUTE for TRANSPLANT SCIENCES (AITS)

A Vision for Transplantation at the University of Alberta

Table of Contents:

Attached:
Letters of Support

1. Dr. Verna Yiu, Dean, Faculty of Medicine and Dentistry
2. Dr. Lorne Tyrrell, Director, Li Ka Shing Institute of Virology
3. Dr. Arvind Koshal, Senior Medical Director, Mazankowski Alberta Heart Institute
4. Dr. Douglas Hedden, Chairman, Department of Surgery
5. Dr. David Lynch, Dean of Engineering
6. Dr. Philip Baker, Former Dean, Faculty of Medicine and Dentistry

Section 1: STRATEGIC VISION

1.1: Vision Statement

Our vision is to build a world-class academic transplant program in Edmonton that is second to none.

1.2: Mission

The mission of the Alberta Institute for Transplant Sciences (AITS) is to achieve global impact with respect to the tri-partite goals of cutting-edge research, exemplary patient care and highly sought-out educational opportunities.

Section 2: BACKGROUND AND EXECUTIVE SUMMARY

The University of Alberta is home to many transplant physicians and scientists with international recognition. However, lack of a cohesive transplant organizational structure has been the single most important barrier to enhanced international recognition, improved research output, and leadership in a number of critical areas related to education, research and clinical care delivery. In the 2009-10 Research Assessment Exercise (RAE) at the Faculty of Medicine & Dentistry, Transplantation Sciences were recognized as being in the top four ranked areas of excellence within the Faculty. The primary recommendation of the RAE as it pertains to Transplantation was the development of a cohesive transplantation grouping; specifically the RAE suggested the development of a Transplant Institute. The recommendation from the RAE is as follows:

"The Committee recommends an organizational entity to consolidate the Faculty's research efforts in transplantation…the Committee suggests that an 'Institute of Transplantation Sciences'…" (From the RAE report)

Immediate Goals:

For academic success we need to:

1. Unify academic transplantation initiatives under a recognized structure.
2. Facilitate further development and growth of all aspects of transplantation sciences, leading to international impact and recognition of our program as a true leader on the world stage.

We believe these changes will provide significant benefit. Official thematic-based models of transplantation have been adopted with great success by many transplant programs in Canada and the United States. These include University of Toronto, Pittsburgh, Minnesota, Harvard and numerous others.

Section 3: STRENGTHS AND CHALLENGES

3.1: Academic Contributions of Transplantation to the University

Organ transplantation is a major theme at the U of A that ties together many Schools and Institutes and contributes to many priority research areas. Transplantation research is embedded within many areas of research strength including viral infections, cardiovascular

diseases, diabetes, laboratory medicine, immunology, and neonatology / human development. As such, it is a flagship area of activity supported by many of the FoMD schools and departments, helping in recruitment and retention of many of our clinical researchers and program leaders. U of A transplantation research is internationally recognized in basic, translational and clinical research arenas. Key areas of excellence include 1) ABO blood group tolerance research; 2) Standardization of diagnostic systems; 3) Cellular transplantation/Regenerative medicine; 4) Transplant infectious diseases/Virology; 5) Neonatal cardiac transplantation. The indices of international recognition are available in detail as part of the RAE submission. In addition we are unique in Alberta as the only multi-organ transplant program.

3.2: Challenges

Despite these successes, the lack of a cohesive program has lead to many ongoing challenges. Individual research members have not been able to maximize research synergies amongst themselves. This means we are less competitive for major thematic or group grants related to research within transplantation. For example, with the CIHR now developing a major RFA for transplantation, a unified structure will be of critical importance to improve our competitiveness with other major transplant programs in Canada (particularly with the Toronto Transplant Institute). In addition, without a recognized home, recruitment and retention of the best and brightest in the field of transplantation is very challenging and has led to loss of some very promising recruits. Lack of a cohesive educational program for research and clinical fellows has also led to lost opportunities. For example, other Canadian programs have successfully obtained substantial CIHR training program funding for transplantation-related education. Finally, on the clinical side, we have faced significant challenges in implementation of novel techniques to improve outcomes and organ donor utilization. For example, amongst other areas, we are lagging behind most provinces in the use of organs from DCD donors (donation after cardiac death – see section 4.3), an accepted and important method for improving patient access to life-saving organ transplants.

Section 4: BENEFITS OF THE INSTITUTE

The advantages of an Institute for Transplant Sciences can be divided into four broad themes: research, education, clinical and global. Many of these themes are overlapping, and benefits in one area will extend to others. These are outlined in more detail below.

4.1: Research

- The AITS will provide a virtual academic ‘home’ for physicians and scientists who share common interests and goals. This creates a working environment that encourages the highest quality research and promotes productivity. It develops a home where transplantation-related research is recognized as important and allows for clear evaluation of the merits of such research in the context of the global transplant community.
- An institute structure will promote research collaboration among basic and clinical scientists and will facilitate collaborations with researchers in other UofA faculties, institutes, and centers.
- A unified and truly academic transplantation program will make us much more competitive for the recruitment and retention of top researchers.

- A strong and cohesive academic grouping makes us more competitive for research funding. Specifically it facilitates the development of large group grants for both infrastructure and operating dollars. For example, CIHR is in the process of developing a targeted RFA for transplantation, as well as broader central strategic initiatives in which transplantation is poised to play a key role. It would be important for us to situate ourselves strategically in a position to enhance competitiveness.

4.2: Education

- A cohesive structure provides opportunities for thematic educational programming. It will provide a platform to improve education and training for Transplant Fellows, as well as residents and members of multi-disciplinary clinical teams, and basic science trainees. Since transplantation as a discipline crosses multiple departments, this type of educational training is not available in the traditional departmental structure.
- This will facilitate recruitment of the strongest calibre of national and international trainees and will contribute to research enhancement as well.
- Importantly, a comprehensive and unified training program will allow for opportunities to apply for broad-based Education Funding.

4.3: Clinical Care

- An institute provides a more cohesive view of transplant-related care for patients, allowing more efficient translation of cutting-edge research findings into new clinical therapies. Collaboration with AHS will be important in this regard (see section 5.4).
- Importantly, an institute structure will facilitate activities important to organ transplantation. This includes advocacy around organ donor awareness campaigns and initiatives to improve organ availability and utilization and to decrease mortality on the waiting lists. We will be able to facilitate development of effective cadaveric organ donation programs across the Prairies and develop effective programs such as use of organs from DCD donors (Donation after Cardiac Death). Once established as an institute we will have the leverage to work and collaborate with AHS around the issue of organ donation.
- Enhanced communication among organ groups will facilitate development of the highest quality evidence-based clinical practice protocols.

4.4: Global

- A seamless integration of research, education and clinical care activities is required to advance the field of transplantation. A unified structure will facilitate organizational and budgetary planning and provide increased opportunities to obtain external resources. Fundraising for transplant institutes has been extremely successful in other centers where multi-million dollar endowments have provided significant resources.
- In addition, progress in each of the above themes will greatly enhance national and international recognition.

Section 5: DETAILED DEVELOPMENT PLAN

5.1: Short-term goals for transplantation: Years 1-2

Initially the AITS will focus on defining its members, developing relations and setting long-term goals. We will foster collaboration among basic and clinical scientists and among departments of Surgery, Medicine, Pediatrics, Laboratory Medicine/Pathology and Medical Microbiology/Immunology, and Biochemistry. Specifically the framework for the following will be developed in Year-1 and Year-2.

- Development of a *Basic Science and Translational Research Committee*: the BSTRC will develop an inventory of current research strengths and define long-term research goals and priorities for the Transplant Institute. This will include identifying key funding opportunities for transplant-related research from CIHR, NIH and others.
- Development of a Clinical Research Committee: the CRC will work in close collaboration with the BSTRC to develop priorities for future clinical research and form a Transplant Clinical Trials Unit.
- Development of an education group and education program: this group will define the educational needs of trainees and develop and optimize the training program. While each of the clinical programs currently trains fellows, there is significant opportunity to bring together these disparate programs into a comprehensive transplantation training program. The education group will also develop specific plans for integration of other members of the clinical transplant teams and of basic science trainees into the overall education mandate of the AITS.
- Development of a patient care group: In collaboration with AHS and the Division of Transplantation, this group will focus on optimization of transplant outcomes, quality assurance, and donor awareness. Work with such external groups who are an integral part of the clinical transplant programs will include nurturing province-wide approaches to organ donation and transplantation
- Development of a model and implementation plan for fundraising: The use of a naming opportunity for the institute may have significant potential.

5.2: Long-term goals for transplantation: Years 2-5

- ***Basic science and translational research:*** Implementation and further development of strategic goals for basic science and translational research. This will include recruitment of scientists in key emerging strategic areas [see appendix 3]. Stronger programmatic application for funds including CFI and CIHR Teams and Networks, and NIH funding will be a key component.
- ***Clinical Research:*** Formation and establishment of a self-sustaining clinical trials unit. This will have long-term sustainability and be funded through a combination of industry research and peer-reviewed funding. The clinical trials unit will function as a resource to members for investigator-initiated research. Although not all Clinical Trials Units in the FoMD function within NACTRC, a close collaboration and mutually beneficial arrangement will be sought with NACTRC to take benefit of existing clinical trials infrastructure. The Clinical Research Committee will establish and implement priorities for translational research, working in close collaboration with the Basic Science and Translational Research Committee.

- ***Patient Care:*** Key goals will include the development and implementation of: targets for improvement of transplant outcomes, quality assurance measures, strategies for improving donor awareness and identification. In parallel we will increase the donor pool through alternative methods such as DCD donors, paired-exchange donors, etc.
- ***Education:*** Ongoing development of transplant educational program including appropriate curriculum design and improvement; development of sustainable training program including both clinical and research training and application for external funding such as CIHR training program grants, etc.; full integration of transplant fellowships across programs for thematic core elements.
- ***Fundraising:*** Enhanced opportunities for fundraising will be explored. Funds raised through private donors (including naming opportunities) will be used to further support the missions of the Transplant Institute.

5.3: Members and Linkages

It is anticipated that a core group of members whose primary focus is transplantation will have a major affiliation within the Transplant Institute. However, numerous other members, especially those with fewer transplant-related activities may have only minor affiliations with the Transplant Institute. However, key linkages both within and outside of the Faculty will be critical:

1. Key linkages will include the Departments of Medicine, Surgery, Pediatrics, Laboratory Medicine (including histopathology, HLA, and microbiology) as well as the Virology Institute, Alberta Diabetes Institute, and the Mazankowski Alberta Heart Institute. Fostering and expanding these links so as to provide improved benefit with respect to all aspects of our mandate will be important
2. Collaboration with other Faculties, Schools, and Institutes in the University of Alberta will be developed. These include collaboration with the Faculty of Engineering (Dept. of Biomedical Engineering – see attached letter), Faculty of Nursing, School of Public Health, and the National Institute for Nanotechnology (NINT).
3. Province-wide collaboration will be important to facilitate research as well as clinical care. Considerable integration already exists among some of the clinical transplant programs and support services, including liver transplant and microbiology, but these have generally not included major research collaborations. A long-term goal will be to build and strengthen province-wide research collaboration.
4. National and International linkages – Includes transplant societies (Canadian Society of Transplantation, Canadian Blood Services, American Society of Transplantation, International Society of Heart and Lung Transplantation, The Transplantation Society – several members currently hold key leadership roles in these societies) and research funding agencies such as U.S. NIH (several members serve on grant review panels), as well as established international research collaborations.

5.4: Linkage with Alberta Health Services

A key link and collaborative engagement will be developed with AHS. The clinical transplant programs are an integral part of transplant-related research and education and therefore development of transplantation-related activities may ultimately have resource implications for AHS; therefore a robust and mutually beneficial partnership with AHS is

essential to success. This will build on current strong relations between the clinical transplant programs and AHS. Dr. Norman Kneteman, the proposed interim Clinical Director of AITS, is also the current AHS Director of Transplantation, and reports to AHS in this regard. Further collaborative engagement will be sought in the early phases of the AITS development plan, with exploration of potential resources from government streams. Ultimately if resources from government or AHS are provided to the Institute, a memorandum of agreement will be developed and provided to the University. However, this is seen as a longer term goal that can only be facilitated once the Institute is established within the University structure. In the past, attempts by individual transplant physicians to lobby AHS for further support have had limited success. However, we believe that approval of the Institute by the University will provide us with the leverage and visibility needed to discuss future potential resource needs with AHS.

5.5: Structure

The governance structure of AITS is described in Appendix 2a and b. The leadership plan is described in section 7.

Section 6: RESOURCE PLANNING

Resource commitment would eventually be important for a number of areas including recruitment, administration, and education. A number of potential revenue streams exist for this [see below]. Recruitment is considered a key aspect of growth and development. The leadership group within transplantation will identify key strategic recruitment directions and specific potential recruits [see AITS recruitment strategy Appendix 3]. Resources for fellowships (clinical and post-doctoral basic science) and studentships, clinical research co-ordinators and the ability to develop an integrated IT support structure for both clinical and research purposes will be important. Again such resource allocation may be shared across multiple lines. Possibilities may exist for external funding (CIHR training programs, etc).

6.1: Detailed AITS budget and business plan

The long-term budget planning goals of the Institute are to procure substantial resources that would contribute to the effective realization of the vision and mission statement of the AITS. In the short term, establishing the concept and the structure of the Institute are seen as critical, with longer term revenue streams and expenditures flowing from the development plan outlined in the main document and summarized below.

6.1.1 Short-Term Budget: Year 1 and 2

The initial development plan envisions a virtual institute that focuses on establishing the concept, structure, membership, and key linkages to allow sustainable and goal-oriented development over subsequent years. As such the start-up budgetary requirements of the institute will be modest and are derived from both existing revenue sources and potential new sources.

Budget item	Funding source	Expenditures
Administrative support	Use of existing administrative support will be sufficient	N/A
Trainee stipends 1. Clinical Fellows 2. Research Trainees	 1. Province-wide services 2. TBD	 1. $525,000/year 2. Contingent on funding
Recruitment	Multiple potential sources including academic ARP, AHS Endowed Chair (see below)	Detailed strategic recruitment plan to be developed [appendix 3]
Research Facilitation and Strategic Initiatives [see below]	Current – Transplant Innovation Fund (~$200,000/year). Multiple potential revenue sources including CIHR, others	Priority research initiatives to be developed by Executive Committee

1. Administrative support: The institute requires administrative support for the Institute Director and to the Research, Education and Clinical Directors. For research aspects, administrative support will be for assisting in the development and bringing together of core research groups (basic/translational and clinical – see development plan). For education, this includes assisting in the administrative aspects of establishing a common educational curriculum as well as developing a seminar series, journal club, and other activities. Between the current proposed institute Directors, sufficient administrative support already exists for all of these functions. In specific, the Director's administrative assistant will coordinate overall administrative aspects of the institute. The education Director's administrative assistant will coordinate administrative activities related to education. Signage for the Institute will be placed in the Director's office area.

2. Fellowship/trainees – Current support for clinical transplant fellowships exists from Province-wide Services through the Department of Surgery. The current financial support is sufficient to fund 7 MD post-doctoral fellows per year to pursue training in transplantation [value $525,000/year]. Through the AITS, expansion of funding for research training positions [graduate, post-doctoral] would be important to help the Institute achieve its vision. For long-term expansion and sustainability, additional revenue streams would be explored as below.

3. Recruitment: [see appendix 3]. The AHS-endowed Chair in Transplantation would be used for recruitment of an individual that would enhance current strengths. The current value of the endowed chair is $1.5 million.

4. Research Facilitation: A key long-term development goal will surround facilitation of research for members of the AITS and development of novel high impact areas of research. In the short-term, we will continue to focus on enhancement and facilitation of research efforts by junior faculty. The Transplant Innovation Fund will be used for this purpose. This is provided as unrestricted dollars by industry [~value $200,000/year]. Long-term, higher and more sustainable revenue streams will be sought to enhance this

important activity [see below]. Once such stream is through clinical trials overhead which should be provided to the Institute.

6.1.2 Long-Term Budget

As noted in the long-term development plan, it is expected that significant resources will be needed for full development of the long-term vision of AITS. The potential revenue streams for these resources include but are not limited to:

1. Faculty of Medicine & Dentistry
2. Government of Alberta/Alberta Health Services/Province-wide Services
3. Private donors: Includes naming opportunity for the AITS
4. Industry partnerships
5. National and provincial governmental peer-reviewed research funding agencies: CFI, CIHR, Alberta Innovates – Health Solutions, others.
6. Organ-specific and disease-related non-governmental funding agencies: Kidney Foundation, Heart and Stroke, others

The mechanisms for developing these revenue streams will include the formation of a Fundraising Committee (chair appointed by the Director). The Fundraising Committee will work with the Development office in the FoMD and will focus on obtaining philanthropic support from private donors, industry and charitable organizations. The Research Committees of the Institute, working with the Research Director will develop strategies to obtain peer-reviewed group funding from National and Provincial funding agencies.

6.2: Areas of targeted growth

The areas of growth for the Institute that these revenue streams would be used for include but are not restricted to the following:

1. Recruitment: targeted recruitment to enhance strategic areas of growth and for succession planning [see Appendix 3].
2. Training of highly qualified personnel: Graduate student / fellowship training programs and funding. This includes training of transplant surgeons and physicians and research training.
3. Strategic research initiatives: This would include novel initiatives [Appendix 3] and supporting initiatives such as improved IT infrastructure and transplant database development, enhanced specimen bio-banking, development of key core research facilities, and enhancement of opportunities for junior research faculty. Development of effective strategies for knowledge translation and commercialization of research findings will be of fundamental importance.
4. Strategic clinical initiatives: This would include newly developing areas of transplantation such as composite tissue transplantation (hand, limb and face transplants), and improved/novel organ donor utilization strategies. Also the transition from ‘virtual’ to ‘actual’ transplant space is a long-term goal that would depend on procuring an adequate revenue stream. A development plan for the ‘3G’ area in the WMC previously exists and could form the basis of a future plan.

Section 7: INTERIM LEADERSHIP FOR THE AITS

Strong leadership is essential for developing the AITS. We believe that such leadership is present in abundance here at the University of Alberta. During the initial development phase of the AITS we feel it would be prudent to select leadership locally rather than to bring an external person whose vision and goals may differ from those developed by the members of the transplant program locally. Listed below are the key leadership positions and the persons we propose to fulfill interim roles in these positions. Once the concept and structure of the Institute are established, and the early-phase development goals are fulfilled as outlined above [after the initial ~ 2-3 years of the Institute], we would then recommend a formal search and selection committee to select a Director for a specified term. The Director would then finalize the selection of the remaining leadership roles within the Institute. The composition of the search and selection committee would include key leadership representatives from the FoMD and schools that are closely involved in transplantation [e.g. surgery, medicine, pediatrics, lab medicine].
Qualifications for the Leadership Group are as follows:

1. Director – Clinician-Scientist in transplantation with international reputation, strong leadership skills, and leadership experience.
2. Research Director – Scientist or Clinician-Scientist with strong clinical or basic research background, international research recognition, and leadership experience
3. Clinical Director – Transplant Physician or Surgeon with strong clinical leadership experience
4. Education Director – Clinician and/or scientist with broad educational experience and background.

7.1: Proposed names for the Leadership Group positions for the initial development phase of the AITS (~2year interim positions) and qualifications *[Reviewed and endorsed by the Faculty Research Committee]*.

Note: All leadership roles including Executive Council are undertaken as U of A employees [all are Associate Professor or full Professor appointments FoMD, U of A].

1. Director of the AITS: Atul Humar, MD
   Qualifications: CIHR-funded clinician-researcher; basic and clinical science experience; administrative and leadership experience in transplantation including at national and international levels.
2. Scientific (Research) Director: Lori J. West, MD, DPhil
   Qualifications: CIHR- and NIH-funded clinician-researcher; AHFMR senior scholar; Canada Research Chair (Tier 1). Key national and international leadership positions in transplant and research organizations.
3. Education Director: Patricia Campbell, MBChB
   Qualifications: Director HLA laboratory, leadership roles nationally and internationally, broad multi-year education experience, former training program director (nephrology).
4. Clinical Director: Norman Kneteman MD

Qualifications: Clinical Director of Transplantation Services and AHS lead for transplantation for over 10 years; internationally renowned researcher; CIHR- and NIH-funded.

Proposed AITS Executive Council and roles:
The Executive Council* will serve an advisory role to the Leadership Group [Appendix 2b]. The purpose of the Executive Council will include: 1) development of strategic goals for the Institute, including recruitment priorities, strategic research and clinical initiatives, and measures to develop resources 2) representation of each of the transplant program groupings, and 3) advise the leadership on resource allocation.
*All Executive Council roles are undertaken as U of A employees.
*Chair of the Executive Council appointed by the Director

Heart/Lung Transplant (surgical) Lead: John Mullen, MD
Lung Transplant (medical) Lead: Dale Lien, MD
Heart Transplant (medical) Lead: Daniel Kim MD
Basic Science Lead: Colin Anderson PhD
Liver/intestinal Transplant (medical) Lead: Vince Bain MD
Liver/intestinal Transplant (surgical) Lead: Norman Kneteman MD
Kidney Transplant Lead: Sandra Cockfield MD
Organ Donation Lead: Jim Kutsogiannis MD
Pathology and Lab Medicine Lead: Michael Mengel MD
Islet Transplant Lead: James Shapiro MD
Transplant Infectious Diseases Lead: Atul Humar MD
Pediatrics Lead: Lori West, MD

External Advisory Committee
An External Advisory Committee will be established to provide guidance to the leadership group specifically in strategic planning, resource allocation and strategies for development. The chair of this committee will be an international leader in the field of transplantation.

Section 8: OTHER ITEMS AS PER 'U of A INSTITUTE FORMATION GUIDELINES'

8.1: Termination plan: The AITS is intended to be long-standing, sustainable, and evolve with technological changes and shifts that may occur in the field of transplantation. However, if unforeseen circumstances lead to dissolution of the Institute, the termination plan will be as follows:

a. Physical space – since the Institute is virtual (at least initially), physical space distribution will not likely arise as an issue.
b. Resources – distribution of any remaining resources will be undertaken by the Institute Executive Council. Where possible, resources will be allocated for their original intended purpose. Unused resources will be returned to source where appropriate.

8.2: Annual Reporting: The AITS leadership will provide an annual report to the Dean of the Faculty of Medicine & Dentistry and to the Provost & Vice President (Academic) of the University of Alberta. The report will outline progress and accomplishments made towards the goals and mandates of the Institute and a financial year-end summary.

8.3: Strategic and Operational Review: After 5 years the Institute will undergo a full strategic and operational review by an external committee with membership consisting of national and international transplant leaders. The external review will provide a 'S.W.O.T.' type analysis of the AITS which will be the basis for long-term strategic planning.

8.4: Potential Risks: No significant risks are foreseen for establishing the Institute. Administration of any potential resources will need to be undertaken in a transparent and fair manner that helps realize the goals of the AITS.

8.5: Intellectual Property: Ownership of intellectual property and copyright generated by Institute members will be determined in accordance with university of Alberta Policies, or as dictated by individual contracts. The Institute will facilitate research but will not retain intellectual property. The University will remain the sponsor of PI-initiated clinical trials.

8.6: Equipment: Equipment and research infrastructure available to Institute members is outlined in the RAE [available upon request]. No new space is being requested from the University. Future planning regarding potential space will be embedded in the Faculty's general space program. Ownership of existing equipment is mostly with individual researchers or with the University. For future planning, use of AITS funds for equipment purchase will be decided by the Executive.

8.7 Change Management Strategy: Since the Institute reflects a substantial shift for transplantation, we developed a change management strategy based on the assumption we would receive eventual approval of the Institute from the University. The first part included understanding and conveying the change that was being proposed [scope/who is affected]. Specifically we confirmed there was shared vision for transplantation. This was done through several forums including two round table / open house discussions, numerous one-on-one consultations, and individual program group discussions. Through this process we developed a cohesive, inclusive, and well-supported vision. We then ensured that the appropriate leaders and managers were on-board for the proposed change to be successful. This was done by consultation and meetings with key leaders including the Dean, Department chairs, and the FRC. In creating the change management strategy, we then identified where potential resistance can be expected and have been working pro-actively to ensure that concerns are met prior to the proposed change implementation. Throughout the change implementation, such special tactics may need to be revisited and updated.

Appendix 1

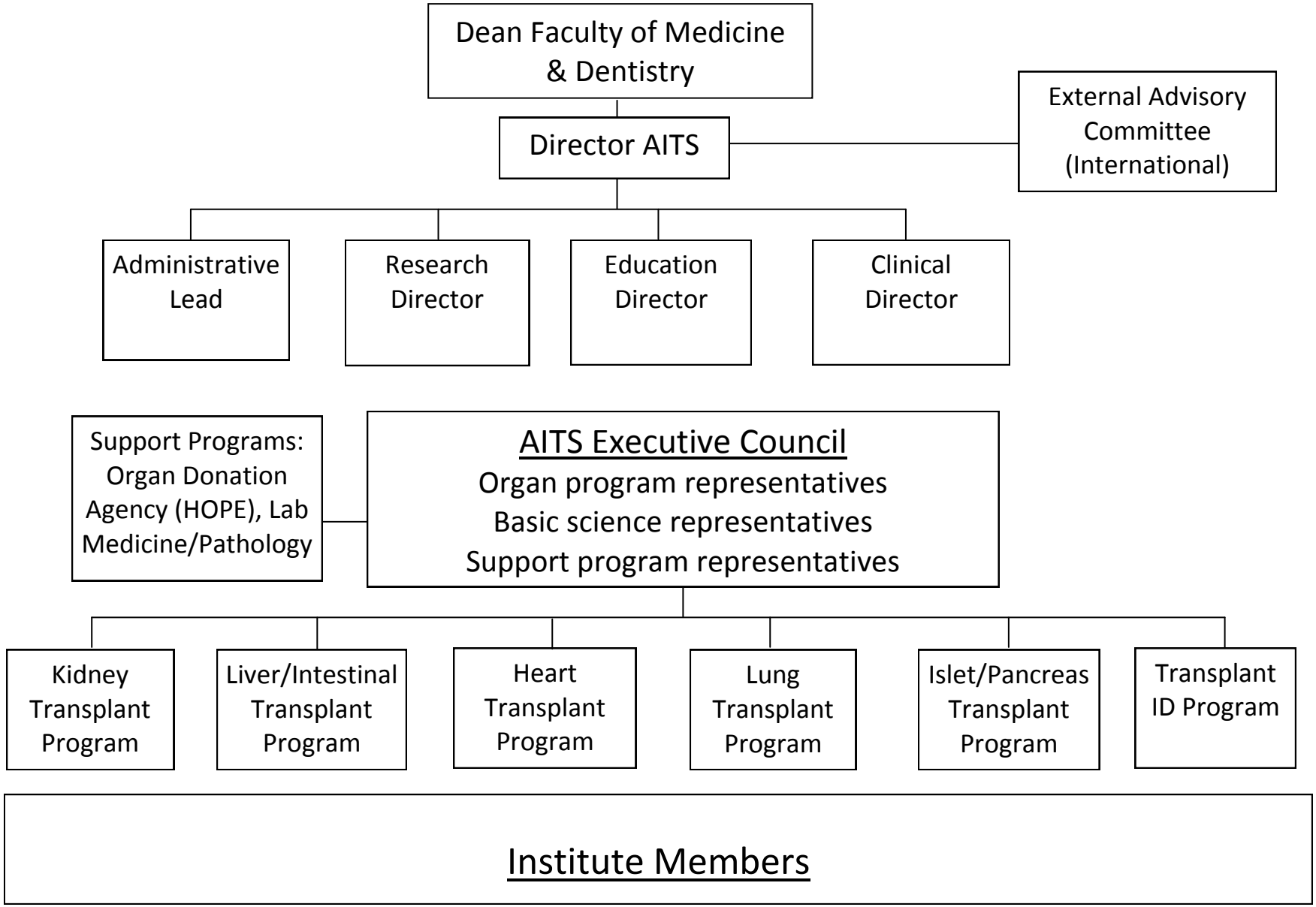
Institute membership

Transplantation by its nature is a wide-ranging discipline which includes many different fields. Below is a listing of members of the FoMD that have complete or partial affiliation with transplantation as part of research, education, or clinical care commitments. Those members with substantial transplant commitment will form the core of the Institute while others may have looser ties with the institute. Defining precise membership and their roles is one of the key goals listed in the early stage developmental plan of the Institute [see document].

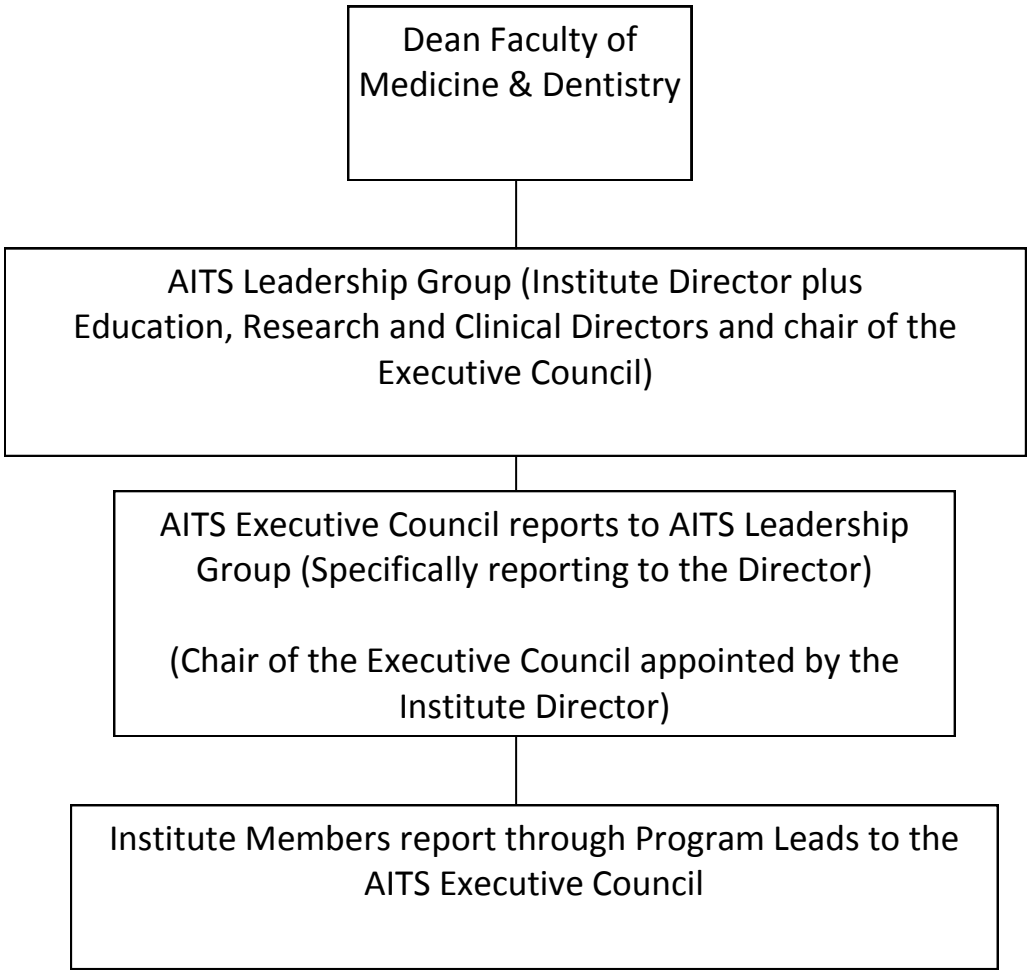
Members of the FoMD with complete or partial affiliations with transplant [listed in alphabetical order]:

Colin Anderson
Todd Alexander
Vince Bain
David Bigam
Holger Buchholz
Jeff Burton
Patricia Campbell
Michael Chan
Sandra Cockfield
Thomas Churchill
Karen Doucette
John Dyck
Nitin Ghorpade
Susan Gilmour
Sita Gourishankar
Manjula Gowrishankar
Richard Grynoch
Klaus Gutfreund
Atul Humar
Kailash Jindal
Ali Kapasi
Dean Karvellas
Daniel Kim
Norm Kneteman
Greg Korbutt
Deepali Kumar
Jim Kutsogiannis
Lucille Lalonde
Dale Lien
Mang Ma
Andy Mason
Michael Mengel
Steve Meyer
Dennis Modry
Aldo Montano-Loza
Ron Moore
Catherine Morgan
Thomas Mueller
John Mullen
Allan Murray
Roland Nador
Susan Nahirniak
Jayan Najendron
Maury Pinsk
Jutta Preiksaitis
Ray Rajotte
Gina Rayat
Ivan Rebeyka
David Ross
Lisa Ross-Rodriguez
Trevor Schuler
Peter Senior
James Shapiro
Gurmeet Singh
Banu Sis
Ken Stewart
Puneeta Tandon
Gerald Todd
Justine Turner
Wayne Tymchak
Simon Urschel
Wendy Vaudry
Justin Weinkauf
Lori West
Eytan Wine
Jackson Wong
Winnie Wong
Jason Yap
Verna Yiu

Appendix 2a: Detailed structure of AITS



Appendix 2b: Reporting structure of AITS



Appendix 3: Summary of AITS recruitment and new development strategy

Preamble:
Recruitment is considered a key aspect of growth and development for AITS. The Leadership Group and the Executive Council will identify key strategic recruitment directions and specific potential recruits. Long-term planning for further recruitment (especially in the basic and translational sciences areas) will be crucial. Co-recruitment opportunities may exist amongst the Departments of Surgery, Medicine, Pediatrics, Lab Sciences, Alberta Diabetes Institute, Li Ka Shing Institute of Virology, Mazankowski Alberta Heart Institute and others. Recruitment would likely be broadly targeted to two groups 1) known leaders in the field and 2) junior faculty with promising academic careers who represent the leaders of tomorrow. Succession planning will also be very important to lead important areas that are already fully developed by senior faculty.

Targeted recruitment strategies:
Initial recruitment should be targeted to allow us to develop one to two key areas that are at the forefront of transplant research and care but in which we do not have significant development locally. This is seen as the best use of resources for initial recruitment. Areas where we already have international strength (islet transplant, ABO incompatible infant heart transplantation, transplant virology, and genomics) are important areas of investment but will represent a lower recruitment priority during the initial development of the institute.
Key areas that could be targeted for development are as follows. Depending on recruitment opportunities, availability of recruits and resources, we would focus on one or two of these areas.

New areas to consider for development in AITS:
1. **Regenerative medicine / tissue engineering:** Regenerative medicine can be defined as the practice of repair, regeneration, or replacement of organs that have failed. It has enormous potential to revolutionize therapeutic approaches to organ failure. In particular, the most exciting recent developments in transplantation have been around bioengineering of whole organs. One example is the use of perfusion – decellularized matrices as scaffolding upon which whole organs can be built. Development of a tissue/organ bioengineering research group could be an important and high-profile success for AITS. This is also an area where significant research investment is occurring world-wide and where opportunities exist to leverage research dollars through industry. A close collaboration with the Department of Biomedical Engineering will be sought [see letter of support attached].

2. **Tolerance induction:** Long-term acceptance of transplanted organs without requirement for indefinite immunosuppression remains the ultimate goal of transplant clinicians and scientists. However, although demonstrated in some animal models, this clinical state of allograft acceptance termed "operational tolerance" has been elusive in routine practice. The assessment of novel methods to induce operational tolerance [from bench to bedside] is an exciting area of research in the field of transplantation. Several future approaches to tolerance induction are possible including inhibition of T-cell signalling, manipulation of

costimulatory pathways, and expansion of regulatory T (and B) cells. The principles of these experimental approaches may ultimately be extended to provide safe and effective control of transplant rejection and induction of clinical operational tolerance. Any advancement in this area would result in high international impact.

3. **Vascularized composite allograft transplantation:** Vascularized composite allograft (VCA) refers to the transplantation of tissues such as hand, leg or face from deceased donors. Like all other areas of transplantation, VCAs have the capacity to transform the lives of patients. This novel area is considered at the forefront of transplantation care and requires a multi-disciplinary team approach along with the integration between clinical care and research. Again development of this type of program places us at the forefront of transplantation medicine.

Immediate plans:

The AHS Endowed Chair in Transplantation can be used to recruit a junior to mid-level scientist. The AITS Leadership Group feels that such recruitment should be targeted so as to fit into the recruitment strategy outlined above. The endowed chair would then serve as a nidus for further development over the next 5-years of a strategic goal-oriented plan for AITS.

UNIVERSITY OF ALBERTA

DEAN'S OFFICE

3rd Floor Clinical Sciences Building
Edmonton, Alberta, Canada T6G 2G3
Tel: 780.492.6236
Fax: 780.492.2551
www.nursing.ualberta.ca

September 20, 2011

Dr. Carl Amrhein
Provost & Vice President (Academic)
2-10 University Hall
University of Alberta
Edmonton, AB T6G 2J9

Dear Dr. Amrhein

Re: Alberta Institute for Transplant Sciences

As the Dean of the Faculty of Nursing, I would like to provide my strong support for the formation of the Alberta Institute for Transplant Sciences. Transplantation is a highly visible and important therapy for people with end stage organ failure. Extensive research has demonstrated that it dramatically improves quality of life and extends life for people with end stage organ failure.

The University of Alberta is renowned for its work in transplantation, both in terms of research and clinical practice. Development of an Institute would enhance our international reputation in this area and make us more competitive for funding opportunities.

Successful transplantation involves careful nursing care and monitoring. A number of my colleagues have a keen interest in this area. As an example, my own research encompasses both organ donation as well as quality of life after transplantation. There will be many opportunities to foster and develop further partnerships between researchers in the Faculty of Medicine and Faculty of Nursing regarding common methodological and clinical areas of focus in relation to transplantation.

I enthusiastically support the formation of the Transplant Institute, and look forward to further discussions regarding opportunities for collaboration between the FoMD and the Faculty of Nursing in relation to the work of the Alberta Institute for Transplant Sciences.

Sincerely

Anita E. Molzahn, PhD, RN, FCAHS
Professor and Dean

cc. Dr. Verna Yiu, Professor and Dean, FOMD

UNIVERSITY OF ALBERTA

September 21, 2011

Dr. Atul Humar
Director, Transplant ID
Infectious Diseases
6-030 Katz Group Centre
University of Alberta

Dear Atul,

As the current interim dean for the Faculty of Medicine/Dentistry, I am in full support of the development of a Transplantation Institute. Solid organ transplantation is a key strength for our faculty and clinically, we are currently ranked only second to Toronto for total number of transplant completed. We need to leverage off on our clinical expertise and indeed, we have key strengths in different areas for transplantation research where we need to synergize our current activities. The development of a Transplantation Institute will allow for venue that will improve our current collaborations for research, education and clinical innovations. It will also align with the current movement where transplantation is recognized as a specific specialty in addition to it being recognized as upcoming CIHR platform.

With best regards,

Verna Yiu, MD, FRCPC
Interim Dean
Professor of Pediatrics
Pediatric Nephrology
Faculty of Medicine & Dentistry
University of Alberta

Office of the Dean
Faculty of Medicine & Dentistry
2J2.00 WC Mackenzie Health Sciences Centre University of Alberta · Edmonton · Alberta · Canada · T6G 2R7
Telephone: (780) 492-6621 Fax: (780) 492-7303
www.med.ualberta.ca

UNIVERSITY OF ALBERTA

Department of Medical Microbiology and Immunology

1-41 Medical Sciences Building
Edmonton, Alberta, Canada T6G 2H7

www.ualberta.ca/~mmi/

Tel: 780.492.2309
Fax: 780.492.7521

May 2, 2011

Provost & Vice President (Academic)
2-10 University Hall
University of Alberta
Edmonton, AB T6G 2J9

Dear Dr. Amrhein:

Re: Formation of the Alberta Institute for Transplant Sciences

It is my pleasure to fully support the application from the Transplant group at the University of Alberta to form an Institute of Transplant Sciences. Transplantation has had a long and rich history at the University of Alberta. We have the largest multi-organ transplant program in western Canada, and one of the largest across the country. The Program includes several research strengths and investigators who have had international impact in the field of transplantation. However, to achieve a greater level of success and global impact, I agree that an Institute of Transplantation Sciences is a vital next step. This will facilitate the proposed mission of the institute to achieve global impact with respect to research, patient care, and educational opportunities. I also believe that there will be several opportunities for synergy between the Li Ka Shing Institute of Virology and the newly-formed Transplant Institute.

In summary, I strongly endorse the formation of the Alberta Institute for Transplantation Sciences.

Kindest regards.

Yours sincerely,

D Lorne Tyrrell

D. Lorne Tyrrell, MD, PhD, FRCP
Professor and CIHR/GSK Chair in Virology
Director, Li Ka Shing Institute of Virology

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MAZANKOWSKI
ALBERTA HEART INSTITUTE

Arvind Koshal, OC, FRCSC

Senior Medical Director
Clinical Professor, Cardiac Surgery

May 5, 2011

Provost & Vice President (Academic)
2-10 University Hall
University of Alberta
Edmonton, AB T6G 2J9

Dear Dr. Amrhein

Re: Application for the Alberta Institute for Transplant Sciences

I would like to express my enthusiastic support for the application to form an institute of transplantation. This is a critical development to move the research, educational and clinical aspects of transplantation forward and to make us competitive on both the national and international stage. Transplantation at University of Alberta has been at the forefront of innovation and provides us with an international reputation. However a major limitation has been the lack of a focused transplant grouping. This has meant that transplant programs where institute models have been adopted [such as the Toronto Transplant Institute] have gained a competitive advantage in terms of research development, recruitment, attainment of resources and other areas. I have worked closely with the leadership of the proposed transplant institute on their development plan and mission and believe they have carefully thought through the planning, formation and implementation strategies for the institute. The transplant institute will also result in important opportunities for close collaboration with the Mazankowski Alberta Heart Institute.

I anticipate the institute will be extremely successful in allowing transplantation at the University of Alberta to achieve greater international recognition and I am in fully supportive.

Yours sincerely,

Arvind Koshal, OC, FRCSC

/eh

3H2.14 Walter Mackenzie Health Sciences Centre, 8440 – 112 Street
Edmonton, AB, Canada T6G 2B7
Phone. 780.407-8058 Fax. 780.407-7657
Email. **akoshal@ualberta.ca** Website. www.albertaheartinstitute.ca

UNIVERSITY OF ALBERTA

May 4, 2011

Provost & Vice President (Academic)
2-10 University Hall
University of Alberta
Edmonton, AB T6G 2J9

Dear Dr. Amrhein

Re: Alberta Institute for Transplant Sciences

As chair of the Department of Surgery, I strongly support the formation of the Alberta Institute for Transplant Sciences. Transplantation is a major strength in the Department of Surgery and within the Faculty of Medicine and Dentistry. Several investigators have had and continue to have major international impact in the field. However, as evidence by the recent research assessment exercise, there is significant potential for enhancement through the development of a cohesive transplant grouping, and specifically an Institute of Transplant Sciences. The institute will facilitate the transplant mission in several ways, including improvement of educational and research initiatives. It is anticipated the institute will have opportunities to obtain significant external revenue streams that can then be utilized to facilitate the vision and mission outlined in the application package. Also, the institute is critical to make us competitive for external funding such as recently proposed CIHR initiatives in transplantation. Based on my close working relationship with the leadership of the institute, I strongly believe that we will quickly develop into one of the top international transplant institutes.

Overall, I very enthusiastically support the formation of the Alberta Institute for Transplantation Sciences. I would be happy to discuss this further if you have any questions,

Yours sincerely,

Douglas M Hedden, MD, FRCSC
Walter Stirling Anderson Professor and Chair;
Clinical Department Head of Surgery

Douglas M Hedden, MD, FRCSC
Walter Stirling Anderson Professor and Chair
Department of Surgery • Faculty of Medicine and Dentistry • University of Alberta
Clinical Department Head • Surgery • Alberta Health Services – Edmonton Zone
2D2.24 WC Mackenzie Health Sciences Centre • University of Alberta • Edmonton • Alberta • Canada • T6G 2B7
Telephone: (780) 407-6605 • Fax: (780) 407-6606
dhedden@ualberta.ca

UNIVERSITY OF ALBERTA

Office of the Dean
Faculty of Engineering

E6 050 Engineering Teaching and Learning Complex
Edmonton, Alberta, Canada T6G 2V4

www.engineering.ualberta.ca

Tel: 1.780.492.3320
Fax: 780.492.0500
Toll Free: 1.800.407.8354

September 20, 2011

Provost & Vice President (Academic)
2-10 University Hall
University of Alberta
Edmonton, AB T6G 2J9

Re: Alberta Institute for Transplant Sciences

Dear Dr. Amrhein:

As the Dean of the Faculty of Engineering, I would like to give my strong support for the formation of the Alberta Institute for Transplant Sciences. The formation of the institute is important to foster and develop collaboration between researchers in the Faculty of Medicine and other Faculties at the University of Alberta.

Specifically, the Department of Biomedical Engineering, which is administered jointly by the Faculty of Engineering and the FoMD, would be able to develop important synergies with the Transplant Institute in a number of areas. These include the development and enhancement of tissue engineering / regenerative medicine-related research at the University of Alberta. Such research would be at the forefront of advanced biomedical engineering technologies and at the same time represents a strategically important area in transplantation sciences. It would enhance our international standing and make us more competitive for funding opportunities.

In summary, I enthusiastically support the formation of the Transplant institute, and look forward to exploring further opportunities for collaboration between the FoMD and the Faculty of Engineering.

Sincerely yours,

David Lynch

David T. Lynch, PhD, P.Eng.
Dean of Engineering

Copy: Dr. Verna Yiu
Interim Dean, FOMD

UNIVERSITY OF ALBERTA

May 2, 2011

Dr. Atul Humar
Associate Professor, Division of Infectious Diseases
Director, Transplant Infectious Diseases
4106 RTF
8308-114 Street
Edmonton, AB T6G – 2E1

Dear Atul,

Re: Alberta Institute for Transplant Sciences

I am writing to confirm my support for your proposal to establish an Institute of Transplant Sciences.

One of the clear conclusions arising from the 2010 research assessment exercise of the Faculty of Medicine & Dentistry – was that we should consolidate our strengths in this area by establishing a Research Institute. Your proposal takes this one step further by aligning Research with Education and Clinical Service – in the field of transplantation.

Our Faculty Research Committee has reviewed your proposal in detail, and has recommended that the proposal be supported.

The proposal is both comprehensive and clear, and I am delighted to support the initiative shown by you and the other transplantation leaders.

Very best wishes,

Yours,

Dr. Philip N. Baker, FRCOG FMedSci, (FRCSC)
Dean,
Faculty of Medicine & Dentistry
Professor of Obstetrics & Gynecology