Formal Proposal for Approval of the Translational Institute of Medicine (TIME) as a Faculty of Health Sciences Institute

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LIST OF ABBREVIATIONS

DOM: Department of Medicine

EC: Executive Committee

EAB: External Advisory Board

FHS: Faculty of Health Sciences

HQP: Highly Qualified Personnel

PDF: Postdoctoral Fellow

RIC: Resources Committee

TIME: Translational Institute of Medicine

1. Introduction

a. This should briefly summarize the context and proposal.

The Translational Institute of Medicine (TIME) is a virtual Faculty-based Institute in Faculty of Health Sciences (FHS) that has been created to capture the breadth of translational health research. The mission of TIME is to formalize a network of translational health researchers and clinicians – namely, Department of Medicine faculty and their collaborators – with the necessary tools to enhance collaboration and optimize access to state-of-the-art research platforms, expertise and training.

Rubio et al. (2010) described that, "*Translational research fosters the multidirectional integration of basic research, patient-oriented research, and population-based research, with the long-term aim of improving the health of the public.*" Translational medicine is driven by our patients and their diseases. Guided by this primary focus, translational research spans across the spectrum from molecular and cell biology to preclinical models to patient studies and back again.

TIME's vision embraces a culture of interdisciplinary and collaborative translational health research that will accelerate discovery of novel and effective clinical therapies, and their integration into clinical practice to improve patient care. To achieve this vision, TIME will improve the organization and networking of our researchers to aid navigation through the stages of research and innovation, and ensure that their findings are translated into clinical practice. Our vision is that TIME will transform the expertise and productivity of Department of Medicine members and their collaborators/partners by creating an integrated enterprise that is recognized nationally and internationally for its innovations, the impact of its biomedical discoveries on patient care, and the success of its graduates from the Translational Medicine Graduate Program in obtaining careers in medicine, biomedical research, academia, industry and health policy.

As part of this vision and as outlined in the Constitution (*Section 4*), TIME aims to meet the following objectives:

- Enhance our research portfolio by building on and formalizing existing strengths into a number of research themes.
- Elevate the impact of our discoveries by translating more effectively to improve the lives of diverse patients.
- Accelerate our discovery pathways to create novel and effective therapies that benefit patients in a timely fashion.
- Enhance collaboration between our researchers and optimize access to state-of-the-art research platforms and expertise
- Increase our research productivity and competitiveness as judged by increasing numbers of high impact publications and success in obtaining Tri-council funding.

- Attract new partners that will strengthen our research programs through collaborative expertise, sharing of novel discoveries and molecules, and enhanced support of our research programs.
- Attract philanthropy for the ongoing support of our infrastructure and training program.
- Change the paradigm for training of basic and clinical scientists with a focus on the emerging discipline of translational health research.

TIME's mission is to provide its formalized network of translational researchers with the necessary tools to enhance collaboration and optimize access to state-of-the-art research platforms, expertise and training. As outlined in the TIME Constitution, TIME aims to achieve its mission by:

- Establishing research themes of excellence that bring together the collective expertise of existing and emerging research groups in a manner that transforms the creativity and productivity of our research programs, which include: 1) Heart, Lung, Blood and Vascular; 2) Cancer; 3) Digestive Disease, Kidney & Endocrinology; 4) Immunology, Inflammation & Infectious Disease; 5) Health Systems, Public Health & Quality Improvement; 6) Education; 7) Neuroscience, and; 8) Molecular & Cellular Biology.
- Establishing research platforms that enable the research themes, in the areas of: 1) Small Animal Imaging and Physiology, including preclinical models of human disease; 2) Molecular Biology, Transcriptomics and Genomics; 3) Cellular Biology; 4) Human Physiology and Biobanking; 5) Population Health and Institute for Clinical Evaluative Sciences (ICES); 6) Clinical Trials, and; 7) Advanced Research Computing and Bioinformatics.
- Developing funding models with existing and new partners to optimize research support and stability for highly qualified personnel (HQP) with the necessary expertise to optimize the research platforms. By assembling a critical mass of investigators, TIME's core facilities will be more financially stable. TIME will hire 3-5 core scientists to operationalize the core platforms listed in the bullet point above. In so doing TIME promotes a novel service model which offers researchers state-of-the-art technology, and equally important, the operational skills of HQPs who run these core facilities. Likewise, by their breadth and depth and support from staff scientists, TIME's infrastructure resources will enhance the competitiveness of its faculty for national and internal funding.
- Creating a "next generation" Translational Medicine Graduate Program that attracts the best basic science and clinical students and maximizes their potential for success by preparing them to work together in a translational team environment. TIME has conference facilities and space for postdoctoral and doctoral trainees within Gastrointestinal Disease Research Unit (GIDRU) and Queen's Cardiopulmonary Unit (QCPU).
- Creating TIME UNIWeb – a web-based 'TIME atlas' – that captures TIME members and their research platforms and expertise, thereby enabling members, collaborators and partners to readily seek out opportunities within the Institute. This electronic resource map identifies

"Who is Where" and "What is Where" ensuring optimal accessibility of our human and infrastructure resources and avoiding redundant purchases of technology.

TIME's mission and goals aligns with the FHS Strategic Plan 2017-2021: "Ask questions, seek answers, advance care and inspire change". By formalizing our translational health research community TIME members will have a much greater ability to connect with potential collaborators, and improved access to research tools and expertise that will enhance researchers' capacity to ask meaningful research questions. TIME will promote collaboration and catalyze the assembly of cognate teams, and a better-networked and better-resourced faculty will have a competitive advantage in an evolving funding landscape (e.g. CIHR Strategy for Patient Oriented Research (SPOR), research chairs and other highly competitive group grants), with the ultimate goal being to better understand and improve human health.

2. Purposes and Functions

a. What is the main purpose of the proposed Centre or Institute?

Faculty members in DOM and FHS traditionally have not had easy access to information on other faculty members' research interests, or on local equipment, expertise and infrastructure that could be used to enhance their research programs. This includes new faculty members who are looking to get their research programs started as well as established researchers looking to push their research program to the next level by using the latest research tools and techniques.

TIME will formalize a community and culture of translational medicine through a united vision to accelerate the discovery and clinical implementation of effective therapies for improved patient care. Key activities of TIME are aimed to improve the success of its members in navigating complex translational research pathways. TIME will provide its members with the tools to enhance connections to potential research collaborators and to optimize access to state-of-the-art research platforms, expertise and training. This new research model will elevate the visibility of our biomedical research enterprise and enhance our funding competitiveness nationally and internationally. The key activities are listed and discussed individually and in further detail below:

1) Creation of a new Translational Medicine Graduate Program, with a unique program curriculum that includes patient contact.
2) Implementation of a web-based research networking software, TIME UNIWeb, to facilitate connections to potential collaborators and enhance access to research infrastructure.
3) Operationalizing research platforms by funding 3-5 operator/scientist positions for highly qualified personnel (HQP) with technical skills to run advanced equipment.
4) Facilitating interdisciplinary research meetings, seminars, and training opportunities with a focus on the emerging discipline of translational health research that can be accessed by its members.

5) Facilitating annual internal grant competitions, including creation of grants specific to translational health research projects and facilitating internal grant review for its members.

Creation of a new Translational Medicine Graduate Program:

The proposed Translational Medicine Graduate Program aims to train the next generation of researchers to be effective translators of biomedical discovery. Graduates of the program will operate at the intersection of clinical and related sciences and will have the expertise to generate and lead discovery through an integrated process, increasing the efficiency of translating science knowledge into health improvement. The proposed Translational Medicine Graduate Program will be the first to address and integrate clinical and related science content. TIME's cadre of engaged physicians, patients and basic scientists provide an ideal environment for creation of this unique program. The program offers Master of Science (MSc) and Doctor of Philosophy (PhD) options, and includes a flagship course in *Translational Medicine*, a *Profession of Medicine* course which integrates attendance at Medical Grand Rounds, and a course focused on *Research Success Skills*. This new and innovative program aligns with many aspects of the FHS Strategic Framework (2017-2021) including the needs to "develop, implement and evaluate innovative methods of teaching, learning and assessment" and to provide a "transformative student learning experience". Furthermore it strengthens our national and international recruiting plan. It is expected that the program will attract high calibre students who will contribute to the research programs of TIME members throughout the term of their studies.

The Translational Medicine Graduate Program has been formally approved and opened for its first year in September 2018 with 6 MSc students.

Implementation of TIME UNIWeb Resource Mapping Tool

Developed by the Ottawa-based company Proximify, UNIWeb is a web-based research networking software that is optimized to facilitate connections in research communities. UNIWeb has previously been successfully implemented in other Canadian institutions including University of Ottawa and McGill University.

TIME UNIWeb allows TIME members to quickly and easily find 'who's where, and what's where'. Researcher profiles allow users to explore their own research connections, or to find potential collaborators with specific research interests to facilitate assembly of multidisciplinary research teams. TIME UNIWeb also features two new modules developed specifically for TIME in conjunction with Proximify: 1) a research groups module that allows users to connect to relevant groups, and 2) a research platforms module where users can quickly find research equipment, services and expertise relevant to their research programs, determine whether that equipment might be available on a collaboration or fee-for-service basis, and find contact information to inquire about accessing resources of interest. Enhanced knowledge of, and access to, state-of-the-art research tools will allow TIME members to build their research methodologies using the latest technologies and techniques.

TIME UNIWeb went live in June 2018 with approximately 200 faculty users in DOM, DBMS and collaborators from other Departments and Faculties and continues to develop (see the new story

here). The public instance of TIME UNIWeb can be viewed here at the web address https://uniweb.time.queensu.ca/.

Operationalizing research platforms with HQP

TIME will be organized to enhance access to and utilization/financial stability of complex technology platforms and infrastructure resources, such as Queen's CardioPulmonary Unit (QCPU) and Gastrointestinal Diseases Research Unit (GIDRU). TIME promotes a novel service model which offers researchers state-of-the-art technology and – equally important – the operational skills of HQPs who run these core facilities. This access to core scientists who possess the necessary skills to apply and optimize new technologies to answer a range of multidisciplinary research questions will enhance the competitiveness of its faculty for national and international funding.

Already during the provisional period, three HQP positions have been created:

1) Core 1: Dr. Charles Hindmarch, Genomics Specialist, hired in January 2017. Dr. Hindmarch manages the Genomics, Transcriptomics and Molecular Medicine Laboratory and the Mass Cytometry and Proteomics Laboratory within the core facilities at Queen's Cardiopulmonary Unit (QCPU).
2) Core 2: Dr. Patricia Lima, Cytometry & Imaging Specialist, hired in August 2017. Dr. Lima manages the Cell Culture Laboratory and the Microscopy Laboratory including a Leica two-photon confocal microscope within core facilities at QCPU.
3) Core 3: Dr. Elahe Alizadeh, Physiology & Imaging Specialist, hired in July 2018. Dr. Alizadeh is responsible for operationalizing and managing the QCPU Physiology Laboratory and its micro PET/SPECT/CT system.

Facilitating Training and Meetings with a Focus on Translational Research

Educational seminars, academic meetings and training opportunities will be organized to highlight successes in translational medicine and to enhance members' access to knowledge of best practices and pathways toward better translational research. These activities will invite participation from patients and others in the community. Examples of potential meetings include translational medicine rounds, an annual academic meeting with international participation, and training opportunities for members to enhance skills in areas related to translational medicine research. These may include training for HQP on advanced equipment, or coordinating training for members by TIME partners who could enhance relevant skillsets for our researchers (e.g. Centre for Advanced Computing).

Grant Competitions and Internal Grant Review

Full TIME members will have access to apply for grant funding competitions, including travel grants and collaborative translational health research grants. In line with competition guidelines associate members will have access to apply for these grants in collaboration with full members, and trainee members will also be eligible for these grant competitions with support from their

primary supervisor. The TIME grant competition and internal grant review processes will be carried over from existing DOM programs and built upon to be inclusive for TIME members, and to better facilitate improved opportunity for funding translational research projects.

b. How will the Centre or Institute perform its functions (research, publication, etc.)?

TIME will provide access to a virtual forum that will benefit how its members approach translational research. Improved networks will give TIME members the ability to more readily identify expertise and potential collaborators to assemble cognate teams that will have an advantage in competitions for large, multidisciplinary team grants. TIME facilitates access to core scientists who possess the necessary skills to apply and optimize these new technologies, to address a range of multidisciplinary research questions. TIME will invest in pilot research endeavors to further promote the collaborative potential within TIME.

Metrics wil be established to track the productivity of TIME members' research endeavors, including metrics on frequency and impact of publications, participation in collaborative and interdisciplinary research and funding competitiveness. TIME members will hold their primary affiliation outside of the Institute but will recognize their participation in TIME in presented and published research. As part of membership responsibilities and in addition to contributing to shaping the vision of TIME and working towards its objectives, members will be required to: maintain a TIME UNIWeb user profile; participate in TIME events including rounds, seminars, academic meetings and business meetings; cite TIME as an affiliation on publications, and; include the TIME logo and acknowledge the Institute in research presentations, posters, etc.

c. Will the Centre or Institute cover a field of research not now adequately or readily covered within an existing department, Centre or Institute?

While TIME intersects many fields of research there is currently no other department, Centre or Institute with its vision focused in growing the field of translational medicine. TIME will promote a culture of translational medicine where members are driven to move research between themes with the goal of better understanding and improving human health.

d. What department within Queen's and department at other universities will be significantly active and involved in the activities of the Centre/Institute?

TIME is founded by and will be governed by the Department of Medicine, Faculty of Health Sciences. While DOM faculty will hold majority membership, TIME also welcomes involvement from collaborators within the Faculty, the University and beyond in its translational health research initiatives. This includes collaborators internal to Queen's (e.g. Department of Biomedical and Molecular Sciences, Department of Pathology and Molecular Medicine), as well as external national and international institutional and industrial partners. This inclusive environment where

DOM's collaborators are free to participate will allow its membership to benefit from a better networked Institute.

DOM research groups will retain their identities and names but serve as part of TIME's structure. Core collaborating research programs and groups include those listed below. While membership in TIME is voluntary and not all members from these programs/groups are required to participate, the research programs and groups listed below are represented by TIME members.

- Queen's CardioPulmonary Unit (QCPU)
- Gastrointestinal Diseases Research Unit (GIDRU)
- Environmental Exposure Unit (EEU)
- Cardiac, Circulatory and Respiratory (CCR) Research Program
- Cardiac Arrhythmia Signal Analysis (CASA) Lab
- Cardiovascular Imaging Network at Queen's: CINQ
- Centre for Neuroscience Studies
- Clinical and Molecular Hemostasis Research Group
- Department of Medicine/Queen's ICES Program
- Respiratory Research Unit (RIU)
- Arthritis Research Group

In addition to the core groups, the following departments and groups have expressed interest in being TIME collaborators:

- Human Mobility Research Centre (HMRC)
- Cancer Research Institute (CRI)
- Department of Biomedical and Molecular Sciences
- Department of Pathology and Molecular Medicine
- Centre for Advanced Computing (CAC)

e. How will the Centre/Institute facilitate or influence the work of Undergraduate students?

Undergraduate students could potentially be influenced by TIME through enhanced opportunities for training and enhanced opportunities for research involvement in this formalized translational environment. For example, fourth year students wishing to complete a project course will have access to this integrated Institute, its resources and educational seminars. Undergraduates can also access the public version of the TIME UNIWeb research network to gain knowledge of research opportunities in TIME, and of state-of-the-art equipment and expertise that could be available to them by pursuing further education or employment at Queen's University.

ii. Graduate students?

Graduate students will benefit from creation of a Translational Medicine Graduate Program, directed by Dr. Paula James. This is a unique research-based graduate program focused on translational medicine at both master's and doctoral levels in Canada. The program is innovative, offering a curriculum interweaving graduate level research with authentic clinical experiences in a multidisciplinary environment across departments.

As one of the first of its kind, the program links graduate level research skills with a variety of clinical experiences including patient interactions, clinical observerships and medical rounds to enhance professional thinking and action. This unique curriculum will offer important foundation work for future careers in the biomedical field and will provide critical skills for pursuing careers that include clinician scientists, biomedical researchers, leaders in industry and public health and/or health policy. This program will be a unique in Canada and will attract new students to Queen's from national and international Universities and Colleges. Students of the Translational Medicine Graduate Program are eligible to be TIME Trainee members (non-voting).

iii. Post-doctoral trainees?

Post-doctoral trainees under supervision of TIME members will share the benefits of improved access to research equipment and expertise through TIME's improved research networks as well as enhanced training opportunities on advanced equipment offered by TIME HQPs. Post-doctoral trainees will also have access to apply for travel and training grants through TIME's grant competitions as part of TIME's commitment to training the next generation of scientists. PDFs of TIME members are eligible to apply with the support of their supervisor to be TIME Trainee members (non-voting).

iv. Faculty members?

Faculty members will benefit from TIME UNIWeb, a research networking tool that enhances the ability for its users to identify and access expertise, potential collaborators and state-of-the-art research tools that can be utilized to enhance their research programs. Faculty will also have improved capacity to assemble cognate teams that will have an advantage in competitions for large, multidisciplinary team grants. The unique Translational Medicine Graduate Program will attract high caliber trainees who will contribute to faculty research programs through their MSc or PhD studies. Faculty will also have access to core scientists with the skills to optimize new technologies to answer their research questions across various research fields. Educational seminars and academic meetings will be organized to reinforce and build upon research networks and to improve its members' knowledge of translational medicine research practices and strategies. Full TIME members will be eligible to apply for grant competitions through TIME, including travel grants and collaborative translational health research grants.

f. In what respects might it enhance the reputation of the University?

Our vision is that TIME will transform the expertise and productivity of Department of Medicine members and their collaborators/partners by creating an enterprise that is recognized nationally and internationally for its innovations, the impact of its biomedical discoveries on patient care and the success of its graduates from the translational medicine graduate program in obtaining careers in medicine, biomedical research, academia, industry and health policy. This will be reflected in increased recognition for its discoveries and competitiveness for Tri-council, CFI, and other national and international funding opportunities.

3. Membership

TIME is founded by DOM and consists of its faculty members and their collaborators within the FHS and across the University. Full membership details are covered in the TIME Constitution (Section 4) which includes a list of founding members.

a. Have the proponents of the Centre or Institute been working together informally, and if so, for how long, and what numbers of students have been involved?

Many of TIME's members have already been informally collaborating on a smaller scale and have been successful in funding applications for Tri-council and CFI grants, research publications and in co-supervision of students. TIME will formalize these relationships and build upon them to create new opportunities for interdisciplinary collaboration and novel research ideas.

TIME members have a track record of co-supervision of students that crosses disciplines and departments. The newly approved TIME graduate program will create a new platform for training students in translational sciences. Faculty of the Translational Medicine Graduate Program hold primary appointments in various Departments and Faculties at Queen's University and will bring multidisciplinary perspectives to train students in their application of translational medicine principles to their research.

b. If outside groups will be represented, to what extent, and how are they chosen?

Groups outside Queen's who are DOM collaborators may be represented through Associate Membership. See TIME Constitution.

c. Which are the critical departments with respect to drawing membership?

Although TIME is based in and base-funded by the Department of Medicine (DOM), with our vision for interdisciplinary and collaborative research, TIME welcomes participation from DOM collaborators across Queen's Departments and Faculties who have demonstrated contributions to translational health research. DOM represents the majority of membership, with affiliations of

other members including Department of Biomedical and Molecular Sciences, Department of Pathology and Molecular Medicine and Centre for Advanced Computing.

d. Will all members of the Centre or Institute also hold positions in an established department? Will members seek exemption from any normal departmental responsibilities?

All Full Members of TIME will hold positions in established Queen's Departments. Associate Members may be from outside of the University. Members who are Queen's faculty would not be exempted from normal departmental responsibilities solely due to their TIME affiliation. Membership classes and responsibilities are described more fully in the TIME Constitution.

e. Will membership be continuing or short term?

Membership will be continuing, reviewed annually by the TIME Management Committee to ensure that the membership lists remain up to date. Trainee memberships will be for the duration of a student's enrollment in the Translational Medicine Graduate Program, or for PDFs, for the term of their PDF appointment. Membership terms are described more fully in the TIME Constitution.

f. Will members be brought to Queen's to work on their own projects? If so, what are the sources of such members and the probable means of financing them?

Not applicable.

4. Constitution

The TIME Constitution (Appendix I) was developed in consultation with, and approved by, the TIME Advisory Committee.

5. Organization and Liaison

a. In what ways, if any, does the constitution of the proposed organization differ from that envisaged in Appendix V?

The Constitution aligns closely with the suggested items listed in Appendix V.

b. Does the formation of the Centre or Institute have the support of the heads of all the departments involved?

TIME originated with a proposal from the Head, DOM, Dr. Stephen Archer and Deputy Head, Dr. Stephen Vanner. This proposal was discussed and approved at a DOM Retreat in the Fall of 2015. TIME has the support of the DOM faculty and has the full support of the Head, DOM. The creation

of TIME has been informed by meetings over the provisional period with FHS and Queen's leadership including the TIME Advisory Committee and has the support of the DOM faculty and FHS Department Heads including Dr. Alexander Boag (Pathology and Molecular Medicine), Dr. John Rudan (Surgery) and Dr. Michael Adams (DBMS).

c. Does the formation of the Centre/Institute have the support of the Deans of all departments involved?

Under the direction of the Interim Director, the creation of TIME has been planned in consultation with membership from the TIME Advisory Committee, which includes membership from a number of Departments in FHS. TIME's structure and scope has been informed throughout the provisional period by meetings with the TIME Advisory Committee, DOM Research Committee, Translational Medicine Graduate Program Committee, and other Departmental and leadership meetings. TIME has the support of Dr. Richard Reznick [Dean, FHS], Dr. Roger Deeley [Vice-Dean, (Research), FHS], and Dr. John Fisher [former Vice-Principal (Research), Queen's University].

6. Staffing and Physical Requirements

a. Will a space allocation be required? If so, how extensive might this be?

TIME is a virtual institute. In the short term and in the first five years all research space, teaching and administrative space is already in place.

Within ten years, space requirements for TIME exceeding what is listed in the five-year requirements above will be dependent on the success of TIME. It is anticipated that successful multi-user applications (e.g. CFI awards) would facilitate growth and additional infrastructure.

b. Is it necessary that any space required be i) directly associated with certain departments? ii) on the main campus?

TIME is a virtual institute. No new space is needed by virtue of the formation of the Institute.

c. Is it proposed that there be a professional staff of the Centre or Institute who are not staff of a department?

The current proposal does not request professional staff who are not staff of a Department. TIME staff positions will be housed under DOM.

d. What office and administrative staffing is proposed?

Office and administrative staffing include:

- TIME Research Associate (1.0 FTE)
- Graduate Program Assistant (1.0 FTE)
- Educational Consultant for Translational Medicine Graduate Program (0.5 FTE)

Three office and administrative staff have been hired during the provisional period:

1. Wei Yan – Translational Medicine Graduate Program Coordinator hired December 2016. As of September 2018 at program opening, Wei has been promoted to the position of Educational Consultant.
2. Whitney Montgomery – TIME Research Associate hired June 2017.
3. Julie Heagle – Graduate Translational Medicine Graduate Program Assistant hired September 2018.

e. What technical staffing is proposed?

TIME will contribute resources to support 3-6 HQP in the areas of:

1. Core optical imaging (e.g. confocal microscopy)
2. Cell culture, stem cell creation and flow cytometry (e.g. advanced culture facilities for creating inducible progenitor cells for blood outgrowth endothelial cells)
3. Creation and rigorous preclinical trials in small animal models of human disease (e.g. cardiac catheterization, ultrafast micro-CT/SPECT imaging)
4. Genomics/proteomics (e.g. Cytof/Fluidigm, NextGen sequencing)
5. Population health sciences (e.g. ICES node)
6. Human phenotyping and clinical trials

Three HQP have been hired during the provisional period:

1. Dr. Charles Hindmarch – Genomics Specialist hired January 2017
2. Dr. Patricia Lima – Cytometry & Imaging Specialist hired August 2017
3. Dr. Elahe Alizadeh – Physiology & Imaging Specialist hired July 2018

7. What special demands might be made on library, computing or other University services?

No special demands are expected for library, computing or other University services outside of what is typically required by Queen's Departments. Hosting and technical support for TIME UNIWeb is provided by Proximify.

8. Five Year Budget

	Year 1	Year 2	Year 3	Year 4	Year 5
	2018/19	2019/20	2020/21	2021/2022	2022/23
Opening Balance	**$ 268,567.76**	**$ 534,014.08**	**$ 354,456.97**	**$ 290,259.24**	**$ 216,064.20**
Confirmed Revenue					
DOM Contribution	$ 150,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00
DOM Faculty Donation	$ 100,000.00	$ -	$ -	$ -	$ -
UNIWeb Cost Recovery	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00
Graduate Program – Year 0 and 1 Funded by FHS	$ 69,011.52	$ -	$ -	$ -	$ -
Cost Recovery: Highly Qualified Personnel	$ 100,000.00	$ 100,000.00	$ 125,000.00	$ 125,000.00	$ 125,000.00
Research Award Funds					
DOM Research Awards Fund	$ 80,000.00	$ 80,000.00	$ 80,000.00	$ 80,000.00	$ 80,000.00
John Alexander Steward Fellowship Award	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00
Departmental Development and Innovation Fund (Remaining 2016-17)	$ 35,154.01	$ -	$ -	$ -	$ -
2018-2019 Departmental Development and Innovation Fund	$ 100,000.00	$ -	$ -	$ -	$ -
Total Revenue	**$ 709,165.53**	**$ 355,000.00**	**$ 380,000.00**	**$ 380,000.00**	**$ 380,000.00**
Expenses					
Personnel Costs	$ 230,565.20	$ 260,557.11	$ 270,197.73	$ 280,195.04	$ 290,562.26
TIME UNIWeb	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ 20,000.00
Office Supplies	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 3,000.00
Meetings (Conferences, Seminars, Business Meetings)	$ 5,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
Research Award Distribution					
DOM Research Awards Fund	$ 80,000.00	$ 80,000.00	$ 80,000.00	$ 80,000.00	$ 80,000.00
John Alexander Steward Fellowship Award	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00	$ 70,000.00
Departmental Development and Innovation Fund (Remaining 2016-17)	$ 35,154.01	$ -	$ -	$ -	$ -
2018-2019 Departmental Development and Innovation Fund	$ -	$ 100,000.00	$ -	$ -	$ -
Total Expenses	**$ 443,719.21**	**$ 534,557.11**	**$ 444,197.73**	**$ 454,195.04**	**$ 464,562.26**
Closing Balance (Revenue - Expenses)	**$ 534,014.08**	**$ 354,456.97**	**$ 290,259.24**	**$ 216,064.20**	**$ 131,501.94**

9. Financing and Support

a. As direct University financial support usually cannot be provided, the budgetary expenses under 8 must be met by grant and contract funds or by contributions from departments, Faculties or the School of Graduate Studies. What method is proposed in this case?

The budget is self-sustaining, as shown in the five year budget (Section 8). We anticipate growth beyond the current budget through development of strategic revenue streams including multi-investigator research awards, fundraising and philanthropic endeavors.

b. Is there a need for any deviation from normal University financial and administrative policies? Will members of the Centre or Institute who are full-time members of a department receive any personal remuneration from the Centre or Institute at any time?

There will not be a need for deviation from normal University financial and administrative policies.

TIME members who are full time members of a Department will not receive personal remuneration from the Institute for their membership.

10. Additional Documentation that may strengthen the request (e.g. letters of support)

Letters of support are included in Appendix II.

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Appendix I: TIME Constitution

CONSTITUTION

Translational Institute of Medicine (TIME)

July 17 2018

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LIST OF ABBREVIATIONS

DOM: Department of Medicine

EC: Executive Committee

EAB: External Advisory Board

FHS: Faculty of Health Sciences

HQP: Highly Qualified Personnel

PDF: Postdoctoral Fellow

RIC: Resources Committee

TIME: Translational Institute of Medicine

Translational Institute of Medicine at Queen's University: Constitution

1. NAME

Translational Institute of Medicine (TIME)

2. OBJECTIVES OF THE INSTITUTE

TIME is a collective of clinical and basic scientists who approach research and discovery from the perspective of improving human health through bidirectional movement of research, from fundamental science to clinical trials and population health. TIME encompasses individual researchers, a graduate training program, core research facilities and is linked into a community through a web-based research networking tool. Based in the Department of Medicine (DOM), with partners in other Departments and Faculties, TIME aims to meet the following objectives:

- Elevate the impact of our discoveries by translating them to improve the lives of diverse patients.
- Accelerate our discovery pathways to create novel and effective therapies that benefit patients in a timely fashion.
- Enhance our research portfolio by building on and formalizing existing strengths into a number of research themes.
- Increase our research productivity and competitiveness as judged by increasing numbers of high impact publications and success in obtaining Tri-council funding.
- Change the paradigm for training of basic and clinical scientists with a focus on the emerging discipline of translational research. This approach to discovery emphasizes the bidirectional flow of investigation from bench to bedside and vice versa as means of catalyzing the discovery and application of knowledge relevant to human health and disease. Trainees in the new Translational Medicine Graduate Program will acquire the necessary skills to work together in translating their research into enhanced patient care, health policy and accelerated biomedical discovery. TIME trainees will become faculty members, career scientists, policy experts or work in the biomedical pharmacy/medical device/regulatory industries.
- Ensure we prepare trainees to meet the needs of a diverse world of patients and communities.
- Attract new partners that will strengthen our research programs through collaborative expertise, sharing of novel discoveries and molecules, and enhanced support of our research programs.
- Attract philanthropy for the ongoing support of our infrastructure and training program.

TIME will accomplish the above by:

- Establishing research themes of excellence that bring together the collective expertise of existing and emerging research groups in a manner that transforms the creativity and productivity of our research programs, which include: 1) Heart, Lung, Blood and Vascular; 2) Cancer; 3) Digestive Disease, Kidney & Endocrinology; 4) Immunology, Inflammation & Infectious Disease; 5) Health Systems & Public/Population Health; 6) Education & Quality Improvement; 7) Neuroscience, and; 8) Molecular & Cellular Biology.
- Establishing research platforms that enable the research themes, in the areas of: 1) Small Animal Imaging and Physiology, including preclinical models of human disease; 2) Molecular Biology, Transcriptomics and Genomics 3) Cellular Biology; 4) Human Physiology and Biobanking; 5) Population Health and Institute for Clinical Evaluative Sciences (ICES); 6) Clinical Trials, and; 7) Advanced Research Computing and Bioinformatics.

- Developing funding models with existing and new partners to optimize research support and stability for highly qualified personnel (HQP) with the necessary expertise to optimize the research platforms. By assembling a critical mass of investigators, TIME's core facilities will be more financially stable. TIME will hire 3-5 core scientists to operationalize the core platforms listed in the bullet point above. In so doing TIME promotes a novel service model which offers researchers state of the art technology and equally important the operational skills of HQPs who run these core facilities. Likewise, by their breadth and depth and support from staff scientists, TIME's infrastructure resources will enhance the competitiveness of its faculty for national and internal funding.
- Creating a "next generation" Translational Medicine Graduate Program that attracts the best basic science and clinical students and maximizes their potential for success by preparing them to work together in a translational team environment. TIME has conference facilities and space for postdoctoral and doctoral trainees within Gastrointestinal Disease Research Unit (GIDRU) and Queen's Cardiopulmonary Unit (QCPU).
- Creating TIME UNIWeb – a web-based 'TIME atlas' – that captures TIME members and their research platforms and expertise, thereby enabling members, collaborators and partners to readily seek out opportunities within the Institute. This electronic resource map identifies "Who is Where" and "What is Where" ensuring optimal accessibility of our human and infrastructure resources and avoiding redundant purchases of technology.

3. ADMINISTRATIVE STRUCTURE

3.1 Governance

TIME is founded by Queen's DOM, Faculty of Health Sciences (FHS). DOM will maintain ownership and governance privileges of TIME. See organizational chart on page seven.

3.2 TIME Director

3.2.1 Appointment

TIME will be led by its appointed TIME Director. The Director will be a clinician scientist and GFT faculty member in the Department of Medicine, Faculty of Health Sciences, Queen's University. The Director will be actively engaged in translational research, and is expected to be a recognized leader in their field and to possess considerable administrative strengths.

The Director will be appointed by the Head, Department of Medicine in consultation with the Vice-Dean Research, Faculty of Health Sciences. The TIME Director is a member of the DOM Executive and reports to the Head, Department of Medicine, Vice-Dean Research, FHS and the External Advisory Board (EAB) (*see org chart*). The Director is Chair of the TIME Management Team and the TIME Executive Committee.

The TIME Director is appointed for a five-year term. At the end of the five year term the TIME Director is eligible for renewal, upon successful review of the Institute (*see Section 5.0*). In the event that the TIME Director steps down before the end of their five-year term, an Interim TIME Director will be appointed by the Head, Department of Medicine, until such time that a new TIME Director is appointed.

3.2.2 Scope of Responsibility

Responsibilities of the TIME Director include:

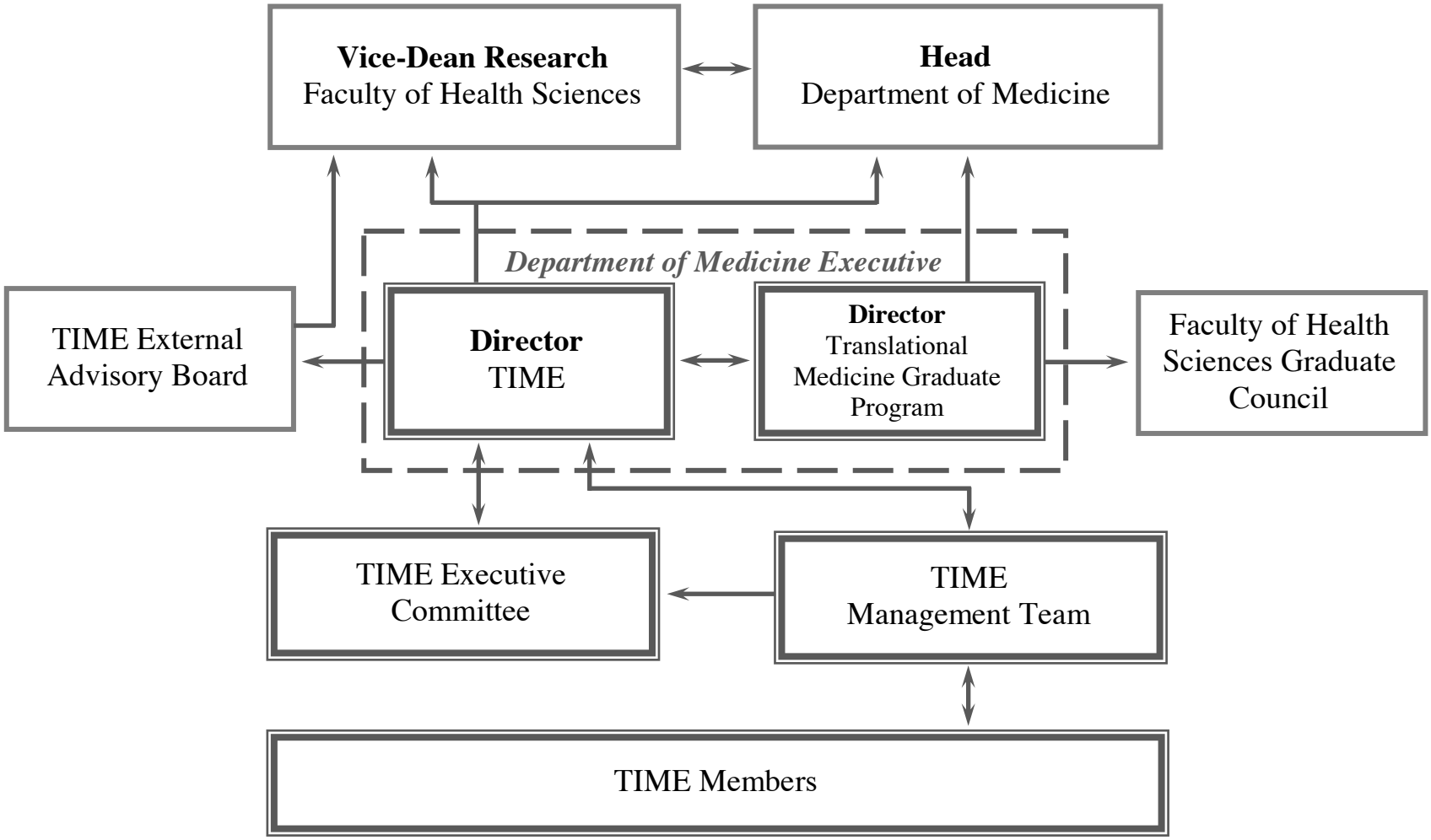
1. In conjunction with the TIME administrative support team, oversee day-to-day operation of the Institute.
2. Assume overall administrative responsibility for TIME to ensure goals of the Institute are met.

Continued on page 8

QUEEN'S UNIVERSITY

TRANSLATIONAL INSTITUTE OF MEDICINE (TIME)

ORGANIZATIONAL CHART



3. Develop TIME's strategic plan including long-range strategic directions and research priorities for approval by the Executive Committee (EC).
4. Carry out strategic priorities per TIME's strategic plans.
5. Develop evaluation criteria for which overall performance of the Institute can be measured with respect to achievement of its objectives.
6. Report quarterly to the Head, Department of Medicine on activities and progress of the Institute.
7. Coordinate activities of the TIME Management Team and TIME EC, and chair their meetings.
8. Take a lead in preparing the TIME annual report in conjunction with the TIME Management Team to be submitted to the Head Department of Medicine, TIME EC, DOM Resources Committee (RIC), Vice-Dean Research FHS, EAB (*see section 3.5*) and Queen's Senate.
9. Develop annual operating budget and coordinates approval by the EC.
10. Oversee actual and forecasted expenditures against the budget on an ongoing basis.
11. Support the *Translational Medicine Graduate Program Director* with development and advancement of the graduate program.
12. Represent the Institute within Queen's University and externally.
13. Take a leadership role in a communications and marketing strategy aimed at advancing the profile of the Institute within Queen's University, as well as nationally and internationally.
14. Actively pursue new funding opportunities for the Institute and its programs.
15. Take a leadership role in recruitment of basic and clinician scientists in Department of Medicine.

3.3 Translational Medicine Graduate Program Director

3.3.1 Appointment

The Translational Medicine Graduate Program will be led by the Translational Medicine Graduate Program Director, in consultation with the TIME Director. The Translational Medicine Graduate Program Director will be a GFT faculty member in the Department of Medicine, Faculty of Health Sciences, Queen's University. The incumbent will be actively engaged in translational research, medical education activities, and will have considerable administrative strengths.

The Translational Medicine Graduate Program Director will be appointed by the TIME Director and Head, Department of Medicine. The Translational Medicine Graduate Program Director is a member of the DOM Executive and reports to the TIME Director, the Head Department of Medicine and to the Faculty of Health Sciences Graduate Council (*see org chart*).

The Translational Medicine Graduate Program Director is appointed for a three-year term and is eligible for renewal. In the event that the Translational Medicine Graduate Program Director steps down before the end of their three-year term, an Interim Translational Medicine Graduate Program Director will be appointed by the TIME Director and Head, Department of Medicine until such time that a new Translational Medicine Graduate Program Director is appointed.

3.3.2 Scope of Responsibility

Responsibilities of the Translational Medicine Graduate Program Director include:

1. Oversee day-to-day operation of the Translational Medicine Graduate Program including course development, and selection and evaluation of trainees.
2. Evaluate faculty teaching within the program.
3. Organize activities of, and Chair, the Translational Medicine Graduate Program Committee.
4. Support the TIME Director and initiatives of TIME as required.
5. Take a leadership role in a communications and marketing strategy aimed at advancing the profile of the Translational Medicine Graduate Program nationally and internationally.
6. Represent the Translational Medicine Graduate Program within Queen's University and externally.
7. Pursue new funding opportunities for the Institute and its programs.

8. Have overall administrative responsibility for implementing decisions of the EC relevant to the Graduate Program, and for ensuring that the goals of the Program are met.
9. Support the TIME Director with coordination of EC activities as required.

3.4 TIME Management Team

Day to day oversight of TIME will be provided by the Management Team. Membership of the TIME Management Team will be approved by the TIME Director in consultation with the Head, Department of Medicine. Membership term for the TIME Management Team will be five years and is renewable.

3.4.1 Membership

The TIME Management Team will normally reach decisions related to day to day operations by consensus.

The Management Team will consist of the following members:

- TIME Director (Chair)
- Head, Department of Medicine
- Translational Medicine Graduate Program Director
- One Department of Medicine Divisional Research Representative
- One TIME member from outside DOM (primary appointment outside DOM)
- TIME Employees (two, to be appointed by the TIME Director)

3.4.2 Scope of Responsibility

Responsibilities of the TIME Management Team include:

1. Support the TIME Director with development of annual and long-range strategic directions and research priorities, as well as broad policies relevant to the Institute.
2. Ensure implementation of strategic priorities, institute objectives and policies in practice.
3. Develop metrics of success and evaluate overall performance of the Institute against these measures, with respect to achievement of its objectives on an annual basis.
4. Develop membership eligibility criteria, approve membership applications based on those criteria, and review membership. Report membership information annually to the TIME EC.
5. Review the Institute's annual operating budget.
6. Govern and coordinate TIME grant competitions, including determining funding guidelines, coordinating the adjudication process and approving funding decisions.
7. Ensure implementation of changes related to constitutional amendments, following ratification of such changes by TIME membership. Ensures changes to the Constitution are highlighted in the proceeding annual report and five-year review.
8. Support the TIME Director with preparation of the Institute's annual report for submission to the Head Department of Medicine, TIME EC, DOM RIC, Vice-Dean Research FHS, TIME EAB, Queen's Senate and TIME Membership.
9. Reviews and acts on recommendations put forward by the EAB.

3.4.3 Meetings

Members of the TIME Management Team will normally meet monthly, with additional meetings and email correspondence between meetings at the discretion of the TIME Director.

3.4.4 Evaluation

On an annual basis, a review of the terms of reference and re-affirmation of membership of the TIME Management Team.

3.5 Executive Committee (EC)

The TIME Executive Committee oversees and serves an advisory role for the TIME Director and the TIME Management Team. Membership of the EC will be approved by the TIME Director in consultation with the Head, Department of Medicine. Membership term for the EC will be five years and is renewable. At inception approximately 1/3 of members will serve for a three-year term to ensure continuity of the committee.

3.5.1 Membership

The EC will consist the following VOTING members:

- TIME Director (Chair)
- Head, Department of Medicine
- Translational Medicine Graduate Program Director
- Department of Medicine Education Lead
- Department of Medicine Equity and Diversity Lead
- One Department of Medicine Divisional Research Representative
- One TIME member from outside DOM (primary appointment outside DOM)

The EC will consist the following NON-VOTING members:

- One student (Translational Medicine Graduate Program)
- DOM Communications Officer
- One patient/lay member
- DOM Finance Officer

3.5.2 Scope of Responsibility

Responsibilities of the Executive Committee include:

1. Propose changes in the Institute's organizational format to the TIME Director and Head Department of Medicine.
2. Appoint committees to advise the TIME Director and EC on strategic planning, budgeting considerations and research priorities, as needed.
3. Approve reports and documentation for the EAB's annual meeting.
4. Review yearly progress of strategic plans.
5. Review strategies to explore and develop partnerships that facilitate the achievement of TIME objectives.
6. Review budget forecasts against actual budget expenditures, and ensure annual financial reporting to the DOM RIC in the form of the Institute's annual report.
7. Recommend grant funding opportunities for the Institute and its programs.
8. Prepare a brief report card annually on the progress of the Institute and distribute to the Dean, FHS and Vice-Dean Research, FHS.
9. Review the Institute's annual report for submission the Head Department of Medicine, DOM RIC, Vice-Dean Research FHS, TIME EAB, Queen's Senate and TIME Membership.
10. Takes a lead in preparations for the five year review process, in accordance with the Senate of Queen's University's *Procedures Governing the Establishment, Reporting and Review of Research Centres, Institutes, and other entities at Queens' University* (*see Section 5 – Review of Institute*).

3.5.3 Voting

All voting EC members, including the Chair, are entitled to one vote only on motions brought forward to EC meetings. Meetings where motions are brought forward for vote require a quorum of 50% plus one of EC voting members. A simple majority vote from voting EC members in attendance is required to carry the motion. In the case of a tie, the motion shall be deemed not to carry. Final ratification of changes to the

administrative structure or amendments to the constitution requires vote by TIME membership (*see section 4.5.1 Voting Rights*).

3.5.4 Meetings

Members of the TIME EC will normally meet twice per year, with additional meetings and email correspondence between meetings as required at the discretion of the TIME Director.

3.5.5 Evaluation

On an annual basis, a review of the terms of reference and re-affirmation of membership of the TIME Executive Committee.

3.6 External Advisory Board (EAB)

The TIME EAB will serve in a consultative role to advise on the activities of TIME and assess progress toward TIME's strategic goals.

3.6.1 Membership

Membership of the TIME EAB will be selected and approved by the TIME EC. Membership term for the EAB will be five years and is renewable. At inception approximately 1/3 of members will serve for a two-year term to ensure continuity of the board.

1. Dean FHS (Chair); the role of Chair can be delegated to Vice-Dean (Research) FHS
2. Vice Dean (Research) FHS, or their delegate
3. Three members external to Department of Medicine; effort will be made to ensure that at least one member is external to Queen's University
4. One trainee (graduate, postdoctoral MD or PhD fellows)
5. A patient representative

3.6.2 Scope of Responsibility

Responsibilities of the EAB include:

1. Review and advise on annual and long-range strategic directions, research priorities and broad policies relevant to the Institute at the recommendation of the TIME Director and TIME EC.
2. Review TIME annual reports and materials for five year Institute review.
3. Identify the EAB's needs and requirements for information and requests it of the TIME Director.
4. Evaluate overall performance of the Institute with respect to achievement of its objectives and strategic vision.
5. Review strategies to explore and develop partnerships that facilitate the achievement of TIME's strategic goals.
6. In cases of major deficiencies in operation, performance, or leadership, advise on appropriate corrective action to the TIME EC.

3.6.3 Meetings

The EAB will meet a minimum of once per year, coordinated by the TIME Director. Meetings can be attended virtually or in person.

3.6.4 Evaluation

On an annual basis, a review of the terms of reference and re-affirmation of membership of the TIME EAB.

4. MEMBERSHIP

4.1 Membership Classes

Full Member, Associate Member, Trainee Member (*refer to Table 1*)

4.2 Eligibility for Membership

All GFT DOM faculty members are eligible to apply for membership in TIME. Applications for membership from Queen's full-time faculty members outside of Department of Medicine are welcomed and will be considered on a case to case basis.

Full members will normally hold a primary faculty appointment in FHS at Queen's University. Applicants outside FHS are also eligible to apply for full membership. Full members in DOM must be actively engaged in and have designated protected time for research and scholarship activities in their role description. All requests for full membership are adjudicated by the TIME Management Team. Full members hold voting rights in TIME business.

Associate Members may be faculty of Queen's University or another Academic Institution. Associate members are not required to be scholarly researchers. Clinicians and collaborators supportive of the research enterprise and partnered with a full TIME member would exemplify this group. All requests for associate membership are adjudicated by the TIME Management Team. Associate members do not hold voting rights in TIME business.

Trainee members are those enrolled in the new Translational Medicine Graduate Program (MSc or PhD) or Postdoctoral Fellow's (PDF) of TIME faculty. All requests for trainee membership are adjudicated by the TIME Management Team. Trainee members do not hold voting rights in TIME business.

4.3 Election and/or Appointment of Members

Full and Associate membership in TIME is regulated by a simple application process. Applicants state their desire to become a member to the TIME Director, along with a simple application form providing a biosketch and summary of their research program and training opportunities in their program and their up to date CV. Full members will should have demonstrated involvement in scholarly activities.

Trainee membership can be requested by students of the Translational Medicine Graduate Program (MSc or PhD) and PDF's of TIME Faculty.

4.4 Responsibilities of Membership

Full members hold the following responsibilities:

- Contribute to shaping the vision of the Institute
- Contribute to the achievement of TIME's aims and objectives
- Create and maintain TIME UNIWeb faculty user profile
- Contribute resources/expertise to TIME UNIWeb Research Platforms Inventory, as appropriate
- Contribute to the Translational Medicine Graduate Program, as appropriate
- Participate in TIME events, including rounds, seminars and academic meetings
- Participate in the annual TIME Business Meeting
- Cite TIME as an affiliation, as applicable
- Include TIME logo in research presentations, posters, etc., as applicable
- For DOM members, agree to have their research overhead funds directed to TIME to contribute to the financial stability of the Institute

Table 1: Membership Overview

	Full Member	Associate Member	Trainee Member
Eligibility	• Normally holds a primary faculty appointment in FHS at Queen's • Actively engaged in research and scholarship activities • Applicants outside FHS also eligible to apply	• Faculty at Queen's or other Academic Institution • Not required to be scholarly researchers	• Enrolled in the new Translational Medicine Graduate Program (MSc or PhD) or PDF's of TIME members
Appointment	• All requests for membership adjudicated by TIME EC	• All requests for membership adjudicated by TIME EC	• All requests for membership adjudicated by TIME EC
Voting	• Hold voting rights in TIME business	• Do not hold voting rights	• Do not hold voting rights
Responsibilities	• Contribute to shaping vision of TIME • Contribute toward achievement of TIME's aims and objectives • Create and maintain UNIWeb user profile • Contribute to TIME UNIWeb research platforms inventory, as appropriate • Contribute to Translational Medicine Graduate Program, as appropriate • Participate in TIME events including rounds, seminars and academic meetings • Attend TIME Business Meeting • Cite TIME as affiliation, as applicable • Include TIME logo represented in research presentations, posters, etc. • For DOM members, agree to have research overhead funds directed to TIME to contribute to its financial stability	• Share the vision of the Institute • Contribute toward the achievement of TIME's aims and objectives • Create and maintain UNIWeb user profile, as applicable • Contribute to TIME UNIWeb research platforms inventory, as appropriate • Contribute to Translational Medicine Graduate Program, as appropriate • Participate in TIME events including rounds, seminars and academic meetings, as applicable • Cite TIME as affiliation, as applicable	• Participate in TIME events, including rounds, seminars and academic meetings, as applicable • Cite TIME as an affiliation, as applicable
Rights of Membership	• Access to internal grant review • Eligible for grant competitions facilitated through TIME, per guidelines • Faculty user profile in TIME UNIWeb • Access to conferences, seminars and rounds facilitated by TIME • Membership discounts to services and equipment offered in core research groups (e.g. QCPU, GIDRU), as applicable	• Faculty user profile in TIME UNIWeb, as applicable • Access to conferences, seminars and rounds facilitated by TIME	• Access to internal grant review • Eligible for grant competitions facilitated through TIME, per guidelines and with support of primary supervisor • Access to conferences, seminars and rounds facilitated by TIME

Associate members hold the following responsibilities:

- Share the vision of the Institute and contribute to the achievement of TIME's aims and objectives
- Create and maintain TIME UNIWeb faculty member profile, as applicable
- Contribute resources/expertise to TIME UNIWeb Research Platforms Inventory, as appropriate
- Contribute to the Translational Medicine Graduate Program, as appropriate
- Participate in TIME events, including rounds, seminars and academic meetings, as applicable
- Cite TIME as an affiliation, as applicable

Trainee members hold the following responsibilities:

- Participate in TIME events, including rounds, seminars and academic meetings, as applicable
- Cite TIME as an affiliation, as applicable

4.5 Rights of Membership

Full members hold the following membership rights:

- Vote on TIME business
- Access to internal grant review
- Eligible to apply to grant competitions facilitated through TIME, as applicable in accordance with competition guidelines
- Faculty user profile in TIME UNIWeb
- Access to conferences, seminars and rounds facilitated by TIME
- Membership discounts to services and equipment offered in core research groups (e.g. QCPU, GIDRU), as applicable

Associate members hold the following membership rights:

- Faculty profile in TIME UNIWeb, as applicable
- Access to conferences, seminars and rounds facilitated by TIME

Trainee members hold the following membership rights**:**

- Access to internal grant review
- Eligible to apply to grant competitions facilitated through TIME, as applicable in accordance with competition guidelines and with support from primary supervisor
- Access to conferences, seminars and rounds facilitated by TIME

4.5.1 Voting Rights

Full members are eligible to vote on TIME business. Associate and trainee members do not hold a vote. TIME business meetings will be held at least once per year. All TIME members are invited to participate in annual business meetings. TIME business meetings will include informing TIME members of previous and future activities and may include items requiring vote by TIME membership. Items requiring vote include but are not limited to approval of annual reports, budgets and strategic plans, and changes to the administrative structure or constitution.

Quorum for the annual business meeting will be 50% plus one of ***full members***. Full members must be present in order to vote on matters arising at the business meeting**.** A simple majority vote of full members in attendance is required to carry the motion.

4.6 Founding Members

TIME is founded by Department of Medicine, Faculty of Health Sciences, Queen's University and as such DOM will maintain ownership and governance privileges of TIME. A list of founding members is included in *Appendix 1*.

DOM has contributed resources to fund TIME activities leading up to and during the provisional period. As outlined below, DOM has also contributed funding toward salaries for TIME Employees and has contributed in-kind resources to TIME Leadership positions.

In-kind resources contributed to TIME leadership roles during the provisional period include:

- Dr. Stephen Vanner, TIME Interim Director
- Dr. Paula James, Translational Medicine Graduate Program Director
- Dr. Stephen Archer, TIME Advisory Committee Chair

Salary contributions for three TIME Employees during the provisional period include:

- Wei Yan (0.5 FTE): Start date December 12 2016, in the position of Project Coordinator for the Translational Medicine Graduate Program
- Dr. Charles Hindmarch (1.0 FTE): Start date January 30 2017, hired as TIME HQP (Genomics Specialist) to run the Genomics, Transcriptomics and Molecular Medicine Laboratory at QCPU
- Whitney Montgomery (0.5 FTE): Start date June 12 2017, hired in the position of Research Associate, TIME

5. REVIEW OF INSTITUTE

The Institute will be reviewed once every five (5) years, by an Advisory Review Committee appointed by the Office of the Dean, FHS, in accordance with the Senate of Queen's University's *Procedures Governing the Establishment, Reporting and Review of Research Centres, Institutes, and other entities at Queens' University*. Per the aforementioned procedures the Office of the Dean will conduct/oversee the five year review. The Advisory Review Committee will conduct the review under the Terms of Reference outlined in the *Procedures Governing Institutes at Queen's* document. The Institute will report annually in accordance with the regulations of the Senate of Queen's University outlined in the *Procedures Governing Institutes at Queen's* document. The Institute will provide a copy of the annual report the Office of the Dean, Faculty of Health Sciences.

6. AMENDMENT OF THE CONSTITUTION

Constitutional amendments will be proposed by the TIME EC and are subject to vote by full members. Final ratification of matters concerning changes to TIME's administrative structure or amendments to the constitution requires vote of full TIME members as described above in section *4.5.1 Voting Rights*. Following endorsement by TIME membership the TIME Director and TIME Management Team will be responsible for implementing changes associated with constitutional amendments. Constitutional amendments will be highlighted in the proceeding annual report and five-year Institute review.

7. RELATIONSHIP TO THE UNIVERSITY

TIME is an Institute based in the Faculty of Health Sciences. The Institute will be governed by the pertinent regulations of Queen's University Senate. The Institute will maintain liaison with the University and will submit reports at prescribed intervals.

8. CONFLICT OF INTEREST

Institute officers shall disclose to the TIME Director and Head, Department of Medicine of any activities or associations that could create a conflict of interest. The TIME EC will be notified by the TIME Director of conflicts of interest. University faculty members will follow procedures in alignment with Queen's University Collective Agreement, as applicable, and with Senate Policy.

9. LIABILITY AND INDEMNITIES

9.1 Limitation of Liability

No Director or Officer of the Institute shall be liable for the acts, receipts, neglects or defaults of any other Director or officer or employee, or for joining in any receipt of other act for conformity, or for any loss, damage or expense happening to the Institute through the insufficiency or deficiency of title to any property acquired by order of the Board for or on behalf of the Institute, or for the insufficiency for deficiency of any security in or upon which any of the monies of the Institute shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortuous act of any person with whom any of the monies, securities or effects of the Institute shall be deposited, or for any loss occasioned by any error of judgment or oversight on their part, or for any other loss, damage or misfortune whatever which shall happen in the execution of the duties of their office or in relation thereto unless the same shall happen through their own wilful neglect or default.

9.2 Indemnity

Every Director and Officer of the Institute and their heirs, executors and administrators and estate and effects, respectively, shall from time to time and at all times be indemnified by Queen's University from or against:

- All costs, charges and expenses whatsoever that such a Director or officer sustains or incurs in or about any action, suit or proceedings that is brought, commenced or prosecuted against them for or in respect of any act, deed, matter or thing whatsoever made, done or permitted by them in or about the execution of the duties of their office; except such costs, charges or expenses as are occasioned by their own wilful neglect or default, a fault which is unrelated to the duties of office, or fraud. Provided however, that such indemnified Director or Officer shall cooperate fully with Queen's University in the defines of such proceedings and shall be subject to such direction, as the University shall deem appropriate.

10. INSTITUTION LIABILITY AND WORKER COMPENSATION

The Institute is not an employer. All individuals working under the umbrella of TIME are employees of Queen's and as such are covered under those institutions' respective employment rules, including insurance policies and workers compensation. All employment matters will be addressed in consultation with Human Resources, Queen's University.

11. CLOSURE

If circumstances are such that the Institute cannot continue to fulfil its mandate, Queen's University is not under any obligation to continue to operate the Institute. In the event that the decision is taken to close down the operation of the Institute, any costs associated with dissolving the Institute shall be included in the final year's operations budget. Proceeds from the sale of assets will be paid toward costs of dissolving the Institute. In the event that costs of closure are greater than funds available, including proceeds of any sales or sales of assets, such costs shall be paid by Queen's University.

12. INTELLECTUAL PROPERTY

TIME does not have a claim on the intellectual property developed by TIME investigators but may have claims related to development of tools or media developed by the TIME administrative team, such as the electronic tools for its graduate program and faculty connectivity. Considerations for intellectual property

should be made in consultation with the *Report of the Senate Ad Hoc Committee on Intellectual Property (1991).*

13. EQUITY AND DIVERSITY AND INCLUSION

13.1 Statement of Equity, Diversity and Inclusion

At the Translational Institute of Medicine (TIME), we commit to providing a welcoming and accommodating environment for all. We recognize that equity and diversity is a source of strength which promotes a culture of excellence, innovation and inclusion that thrives based on the contributions of all our members. We work in the context of a university fully committed to the principles and programs for equity and diversity. At the core of our mandate is to maintain and improve an environment in all programs, research and patient care of mutual respect and understanding. In alignment with Queen's University we strive to:

- Maintain an environment of fairness, mutual respect and inclusiveness where all may work, learn and share their perspectives free of discrimination
- Recruit and retain learners, faculty and staff who reflect the diversity of Canadian communities
- Ensure our programs prepare our trainees to meet the needs of, and improve the lives of, diverse patients

13.2 Equity, Diversity and Inclusion Definitions

13.2.1 Equity

- Equity is the guarantee of fair treatment, access, opportunity, and advancement for all
- It requires identification and elimination of barriers that prevent full participation of some groups
- The principle of equity acknowledges that there are historically underserved and underrepresented populations in the social areas of employment, the provision of goods and services, as well as living accommodations
- Redressing unbalanced conditions is needed to achieve equality of opportunity for all groups

13.2.2 Diversity

- In broad terms, diversity is any dimension that can be used to differentiate groups and people from one another
- It means respect for and appreciation of differences in ethnicity, gender, age, national origin, ability, sexual orientation, faith, socio-economic status and class
- It includes differences in life experiences, learning and working styles and personality types that can be engaged to achieve excellence in teaching, learning, research, scholarship and administrative and support services

13.2.3 Inclusion

- Inclusion is the active, intentional, and ongoing engagement with diversity, where each person is valued and provided with the opportunity to participate fully in creating a successful and thriving community
- It means creating value from the distinctive skills, experiences and perspectives of all members of our community, allowing us to leverage talent and foster individual and organizational excellence

Appendix 1 of TIME Constitution: Founding Members

Name	Title & Department	Research Interests
Dr. Michael A Adams	Professor & Head, Department of Biomedical and Molecular Sciences	Causes and Consequences of Cardiovascular and Kidney Disease and New Therapeutic Strategies for Prevention and Treatment
Dr. Stephen Archer	Professor & Head, Department of Medicine	Pulmonary Arterial Hypertension, Mitochondrial Dynamics
Dr. Alexander Boag	Associate Professor & Head, Department of Pathology and Molecular Medicine	Translation Aspects of Lung, Prostate and Bladder Cancer
Dr. J. Gordon Boyd	Associate Professor, Department of Medicine	Neural Monitoring, Cognitive Outcomes, Neuroprognostic biomarkers
Dr. Anne Ellis	Professor, Department of Medicine	Clinical Trials, Allergic Rhinitis, Epigenetics, Developmental origins of allergic disease
Dr. Alastair Ferguson	Professor, Department of Biomedical and Molecular Sciences	Role of the CNS in Autonomic Processing, Changes in Brain Function Associated with Hypertension and Obesity
Dr. Jennifer Flemming	Assistant Professor, Department of Medicine	Epidemiology/Health Services Research, Hepatology
Dr. Nader Ghasemlou	Assistant Professor, Departments of Anesthesiology & Perioperative Medicine and Biomedical & Molecular Sciences	Neuroimmune interactions in the central and peripheral nervous system, and the transition from acute to chronic pain
Dr. Sudeep Gill	Associate Professor, Department of Medicine	Clinical Epidemiology, Health Policy
Dr. Annette Hay	Assistant Professor, Department of Medicine	Hematologic Malignancies, Clinical Trial Methodology
Dr. Paula James	Professor, Department of Medicine	Inherited Bleeding Disorders, Clinical Assessment Tools, Molecular Genetics
Dr. David Lebrun	Professor, Department of Pathology and Molecular Medicine	Lymphoma and Acute Lymphoblastic Leukemia
Dr. David Lillicrap	Professor, Department of Pathology and Molecular Medicine	Inherited Bleeding Disorders, Animal Models, Molecular Genetics
Dr. Diane Lougheed	Professor, Department of Medicine	Asthma, Clinical Epidemiology, Health Services Research, Airway Physiology

Name	Title & Department	Research Interests
Dr. Donald Maurice	Professor, Department of Biomedical and Molecular Sciences	Cyclic Nucleotide (cAMP and cGMP) Compartmentation and Cyclic Nucleotide Signalling in Human Vascular Cells
Dr. David Maslove	Assistant Professor, Department of Medicine and Critical Care Program	Informatics, Genomics, and the use of biomedical Big Data to address current challenges in Critical Care Medicine
Dr. Alberto Neder	Professor, Department of Medicine	Function of Multiple Organ Systems During Exercise, Factors that Limit Exercise Capacity in Health and Disease
Dr. Mark Ormiston	Assistant Professor, Departments of Biomedical and Molecular Sciences, Medicine and Surgery	Pulmonary Arterial Hypertension, Cardiovascular Immunology, Regenerative Medicine
Dr. Denis O'Donnell	Professor, Department of Medicine	Clinical Integrative Physiology, Exercise Pathophysiology and Mechanisms and Management of Dyspnea in Respiratory Disorders
Dr. Elaine Petrof	Associate Professor, Department of Medicine	Microbiome, Microbial-host interactions, *C. difficile* infection
Dr. Damian Redfearn	Professor, Department of Medicine	Electrophysiology and treatment of arrhythmia
Dr. David Reed	Assistant Professor, Department of Medicine	Neurogastroenterology
Dr. Steven Smith	Professor, Department of Biomedical and Molecular Sciences	Molecular determinants regulating macromolecular complex assembly and function
Dr. Stephen Vanner	Professor & Deputy Head, Department of Medicine	Gastrointestinal Motility, Peripheral Pain Sensing in Irritable Bowel Syndrome and Inflammatory Bowel Disease

Appendix II: Letters of Support

Queen's UNIVERSITY

ROGER G. DEELEY, PHD, FCAHS, FRSC
VICE-DEAN, RESEARCH
FACULTY OF HEALTH SCIENCES

Queen's University
Suite 300, 10 Stuart Street
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Tel 613 533-6627

October 1, 2018

Dr. Stephen Vanner
Interim Director, Translational Institute of Medicine (TIME)
Department of Medicine
Queen's University
Etherington Hall
Kingston, ON K7L 3N6

Dear Stephen:

Re: Application for Approval of a Senate-recognized Faculty of Health Sciences Translational Institute of Medicine (TIME)

I am delighted to endorse the TIME proposal. It supports FHS, and more broadly, Queen's, priorities in a number of areas and at several different levels.

Unlike most health related institutes and centres which are multidisciplinary, TIME not only crosses a wide range of disciplines but also covers a wide variety of disease based themes. This characteristic alone might be viewed as being a major challenge from a management and coordination perspective. However, anchoring TIME to the creation and support of new technology platforms and a new interdisciplinary graduate program, all focused on translational medicine, is a very appealing and exciting concept.

The new graduate program is a crucially important component. Two of our most successful graduate programs in FHS over the last 10-15 years have been the stand-alone program in the Centre for Neuroscience Studies (CNS) and the collaborative program run by the Queen's Cancer Research Institute (QCRI). The Translational Medicine (TMED) Graduate Program is expected to attract high caliber students, and already in its first year six MSc. students are enrolled in the program. Leadership from the TMED graduate program and other FHS graduate programs has agreed to a course sharing relationship where students in the TMED graduate program are eligible to enroll in select courses from other FHS graduate programs, and vice versa, students in other FHS graduate programs are eligible to take courses in the TMED graduate program. These enhanced learning opportunities will train the next generation of researchers to be effective translators of biomedical discovery. The TMED program also offers overdue opportunities for clinical and basic science faculty to collaborate in student supervision; to date the program has 31 faculty members from multiple departments in FHS.

Another important component is the creation of a web-based research networking and resource inventory tool, TIME UNIWeb. This tool enhances our research community's knowledge of, and access to, existing research tools in FHS and at Queen's that are relevant to the field of translational medicine, and are available for use by TIME researchers on a collaborative or cost-recovery basis. The improved connections through TIME UNIWeb will help to reduce incidence of redundant purchasing and increase competitiveness for funding through enhanced access to research expertise and state-of-the-art infrastructure. TIME UNIWeb is in its first stage of implementation and usership in this early stage has exceeded expectations, with over 200 faculty user accounts created including all faculty in the Department of Medicine and Department of Biomedical and Molecular Sciences, plus other key collaborators.

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The theme of translational medicine fits perfectly with our ongoing efforts to integrate the hospital based research programs and the Queen's health research programs in a more formal way, structured along the lines of some of the major health research institutes in Canada and elsewhere. TIME's plans to bring together multidisciplinary groups for joint seminars and academic meetings on topics of translational medicine will support these efforts and are likely to enhance opportunities for collaboration. It is easy to imagine how, together with the translational programs of the QCRI and CNS, TIME could become a major pillar of the proposed new entity.

Lastly, I think the creation of a technology core housed in the QCPU will be an important contribution to the cross fertilization of collaborations across disciplines and across disease themes. As proposed, it would be very opportune to expand the management structure of the new facility, to existing facilities in the FHS and to develop plans to address the funding challenges that plague maintenance of this essential infrastructure. The need for increased attention to this issue was highlighted in the School of Medicine Strategic plan.

I look forward to watching TIME develop and if I can do anything to assist, please do not hesitate to let me know.

Yours sincerely,

Roger G. Deeley, PhD, FCAHS, FRSC
Vice-Dean (Research), Faculty of Health Sciences, Queen's University
Vice President, Health Sciences Research, Kingston Health Sciences Centre

MICHAEL A. ADAMS, PHD
PROFESSOR AND HEAD

DEPARTMENT OF BIOMEDICAL
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October 9, 2018

Dr. Stephen Vanner
Interim Director, Translational Institute of Medicine (TIME)
Department of Medicine
Etherington Hall
Queen's University

RE: Approval for Translational Institute of Medicine

Dear Dr. Vanner,

On behalf of the Department of Biomedical and Molecular Sciences it is my pleasure to write in enthusiastic support of moving forward with the Faculty-based Institute application for the Translational Institute of Medicine (TIME).

As a member of the Advisory Committee I have participated in a number of discussions leading up to this application. It is clear that TIME is increasingly being recognized across FHS as an important opportunity for enhancing visibility and competitiveness in an evolving, and highly competitive funding landscape. TIME's vision for improved collaboration and sharing of resources and expertise between clinician scientists and biomedical scientists will benefit our collective research capacity in a funding era that favours established research teams. DBMS researchers are already well represented on the list of members committed to participating and contributing resources to TIME, and I expect that interest will continue to grow.

The Translational Medicine Graduate Program being developed in conjunction with TIME is highly unique and it is widely agreed across departments that this new program will attract a great deal of interest. I have no doubt that the course sharing between our existing DBMS graduate programs and the new graduate program will be of mutual benefit.

As Head of DBMS and as a faculty member that has long recognized the value of collaborating with clinician scientist, this application for approval of TIME has my strong support. TIME represents an exciting step for strengthening the research prominence of FHS and Queen's on a national scale. I look forward to continued involvement and collaboration.

Yours sincerely,

Michael Adams

Michael A. Adams, PhD
Professor and Head

PATHOLOGY AND
MOLECULAR MEDICINE

Alexander H. Boag, MD, FRCPC
Associate Professor and Department Head
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September 25, 2018

Dr. Stephen Vanner
Interim Director, Translational Institute of Medicine (TIME)
Department of Medicine
Etherington Hall
Queen's University

Dear Dr. Vanner,

I am happy to provide this letter of support for the further development of the Translational Institute of Medicine (TIME). As you know I have been participating in the TIME Advisory Committee since taking over as Head in the Department of Pathology and Molecular Medicine. I strongly believe that given the current research climate in Canada that collaborative initiatives such as TIME are not only laudable but in fact necessary if Queen's is to continue its leadership role as a research intensive university. There are clearly multiple synergies between our Department and the Department of Medicine and other departments which will participate in this Institute. Furthermore, the Department of Pathology and Molecular Medicine is ideally positioned to provide core infrastructure support for translational medical research given our exciting departmental research laboratory facility (Queen's Laboratory for Molecular Pathology).

Clearly, the proposal to include a graduate program in translational medicine as part of this initiative may be seen as a threat to existing graduate programs. However, I think we need to move forward at an institutional level rather than within our own Departmental silos. I have met with Paula James who is a long time cross-appointee within our own department and who is leading the new graduate program. I am confident that if developed in the spirit of collegiality and synergism that our two graduate programs will be mutually supportive.

I look forward to continuing collaborations with your team as this exciting new Institute continues to develop.

Sincerely,

Alexander H. Boag, MD, FRCPC

John F. Rudan, BSc(Hon), MD, FRCS(C), FCAHS
Britton Smith Chair in Surgery
Professor and Head, Department of Surgery
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25 September 2018

Dr. Stephen Vanner
Interim Director, Translational Institute of Medicine (TIME)
Department of Medicine
Etherington Hall
Queen's University

Dear Steve,

On behalf of myself, and as Head of the Department of Surgery, I strongly endorse and support your application for the creation of the Translational Institute of Medicine (TIME). This venture is important for Queen's to continue our quest to improve our research standing in the U-15.

We look forward to increasing our interactions with our colleagues in TIME to further our mutual interests in advancing science and it's translation into solutions that matter for society.

Sincerely,

John

John Rudan, MD, FRCS(C), FCAHS
Britton Smith Chair in Surgery
Professor and Head, Department of Surgery, Queen's University
Chief of Perioperative Services, Kingston Health Sciences Centre

JFR/ai