PRESENTED BY: Dirk de Boer, chair, planning and priorities committee

DATE OF MEETING: January 19, 2017

SUBJECT: Respiratory Research Centre in the College of Medicine

DECISION REQUESTED:

It is recommended:

That Council approve the establishment of the Respiratory Research Centre as a type A Centre in the College of Medicine.

PURPOSE:

The planning and priorities committee is requesting that Council approve the Respiratory Research Centre as a type A centre in the College of Medicine.

DISCUSSION SUMMARY:

The centres subcommittee met with proponents on October 12, 2016, to consider an early draft of the proposal and provided substantial feedback. On November 15, 2016, the research, scholarly and artistic work committee considered a revised draft and provided additional feedback. The discussion at these meetings is summarized in the written feedback provided to proponents (see attachments).

On November 30, 2016, the planning and priorities committee met with Darcy Marciniuk, associate vice-president research health (interim), research and international, and lead proponent for the centre, to review a revised proposal. Members of the planning and priorities committee commented on the well-established need and benefit the centre will bring to the university, the province and beyond; the support the centre provides to the One Health signature area of research and research in the clinical sciences; and the breadth
of individuals involved with the centre across campus. In general, members were struck by the prevalence of chronic obstructive pulmonary disease and its lasting reach and effects.

Overall, members of the planning and priorities committee were highly satisfied with the proposal. Members of the committee noted that revisions had been made throughout the review process in response to the feedback provided earlier by the centres subcommittee and the research, scholarly and artistic work committee.

SUMMARY

In summary, the planning and priorities committee strongly supports the request to establish the Respiratory Research Centre as a type A centre within the College of Medicine. The centre will recognize the strength and leadership at the university in respiratory health and disease, increase research activity in the clinical sciences and across the university, and most significantly, as stated in the proposal, has the potential to “reduce risk, discover cures, save lives, and improve the quality of life for all Canadians.”

ATTACHMENTS

1. Memo from the research, scholarly and artistic work committee dated November 21, 2016
2. Memo from the centres subcommittee dated October 19, 2016
3. Proposal – Respiratory Research Centre with attachments
November 21, 2016

Dr. Paul Jones
Chair, Research, Scholarly, & Artistic Works Committee of Council
Office of the University Secretary
University of Saskatchewan
Saskatoon, Saskatchewan S7N 5A2

Dear Dr. Jones:

Thank you very much for the opportunity to have met with the Research, Scholarly, and Artistic Works Committee of Council regarding the proposed University of Saskatchewan Respiratory Research Centre (RRC). We are grateful for the helpful feedback at the committee meeting, and the written suggestions you forwarded with your follow-up letter. We also very much appreciate your timely response – thank you for that.

As discussed, we will work hard to strengthen our relationships and research interactions with the Western College of Veterinary Medicine and the College of Nursing, in order to better realize the potential of the RRC. We agree there are both significant existing synergies and potential new ones that would be created if these relationships are strengthened, either wholly by College, or with individual faculty and/or research groups.

The funding allotted to statistical and data analysis support is linked with potential funding from the CIHR SCPOR Support Unit for healthcare administrative database and system research ($100k/yr in years 2-5). If received this funding is eligible to be directed to either research grants or graduate student support as long as it aligns with the goals/intent of the SCPOR Support Unit. Having been involved in the writing/submission of the initial application to the CIHR, and as the current University of Saskatchewan representative for the SCPOR Oversight Committee, I do not foresee difficulty in meeting these objectives, and those of the RRC.

We’ve also made the following revisions to the application:
1. Removed the word adjunct describing membership to ensure there is no misunderstanding about intention.
2. Added a notation on the revised budget that the statistical and data support spending is linked with funding from the CIHR SCPOR Support Unit for healthcare administrative database and system research.
3. Clarified the funding allotted for research grants by naming as ‘Research Grants ($25k/yr x three annually)’ to assure that the funding will be used for that specific purpose.

Thank you for sharing that the committee is supportive of this proposal going forward to the Planning and Priorities Committee of Council with consideration given to the concerns raised by RSAW. We hope these explanations and changes to the application appropriately address your concerns.

Sincerely,

DARCY D. MARCINIUK, MD, FRCP(C)
Professor of Medicine
Associate Vice-President Research (Acting)
To: Dr. Darcy Marciniuk

From: Paul Jones; Chair, Research, Scholarly, and Artistic Works Committee of Council

Date: November 21, 2016

Re: Respiratory Research Centre

Thank you for attending RSAW on November 15, 2016 to present the Respiratory Research Centre and to answer questions of the committee. The committee felt, generally, that the proposal was well developed and thorough and are very supportive of having this centre developed at the University of Saskatchewan. It was clear from the proposal that this centre will be unique from other centres and activities at the U of S.

You will recall from the meeting that some concerns were raised about the terminology used around members who will working part-time with the Centre, specifically the term “adjunct,” which may raise some confusion due to the use of that term by the College of Graduate Studies and Research. Additionally, the committee hopes that there will be continued effort from the Respiratory Research Centre to liaise with the Western College of Veterinary Medicine and the College of Nursing to ensure that similar work is focused. It was suggested that if the College as a whole is not able to engage in the Centre, engaging with interested and competent individual faculty would be beneficial.

Concerns were raised about the allocation of $50,000 for Statistical Support and $50,000 for Data Support each were seemed rather high, specifically when compared to the funding provided for PhD and MSc students. From the budget, it is not clear what “Development Grants” means and a clearer explanation of all these categories would be beneficial.

The committee is supportive of this proposal going forward to the Planning and Priorities committee of Council with consideration given to the concerns raised by RSAW.

Regards,

Paul Jones; Chair, Research Scholarly and Artistic Works Committee
MEMORANDUM

TO: Darcy Marciniuk, acting associate vice-dean research, College of Medicine
    Marek Radomski, vice-dean research, College of Medicine

FROM: Dirk de Boer, chair, centres subcommittee and chair, planning and priorities
       committee of Council

DATE: October 19, 2016

RE: Proposed Respiratory Research Centre

Members of the centres subcommittee welcomed the opportunity to meet with you to
discuss the proposed Respiratory Research Centre. Thank you once again for attending the
centres subcommittee meeting on October 12th to present the proposal.

Members of the subcommittee broadly considered the institute to be more in keeping with
the definition of a Type B centre but, as the definition of centres is under review, were not
overly concerned with whether the centre was cast as a Type A or a Type B centre,
acknowledging that placement of the centre within the College of Medicine was a definite
benefit in solidifying its establishment.

The following comments summarize the discussion of the committee:

- That the proposal include specific milestones over the course of the first five years
  of the centre as stepping stones to ensure the sustainability of the centre beyond the
  initial five years of funding (e.g. increase number of collaborators by 30% by ...);

- That the proposal reference those aspects that will make the centre unique, which
  are presently found in appendix C (i.e. access to the province's indigenous, immigrant,
  rural, remote, and socially disadvantaged populations);

- That the proposal refer to the centre as a Type A centre throughout to avoid any
  confusion;

- That the advisory committee membership be reconsidered to include members at
  the associate dean research or vice-dean research level from participating colleges
  to draw in the leadership of these colleges;

- That collaborating members be listed in addition to members in the proposal;

- That the relationship of the centre with the Lung Health Institute of Canada and the
  Lung Association of Saskatchewan be clarified within the proposal;
That the proposal define whether the centre will exist primarily in a virtual space or whether collaborators will come together physically to create synergies, and how this might be accomplished (e.g. seminars, working groups, etc.);

That the proposal include a statement that the centre’s space needs would be absorbed within the current space being leased in St. Andrews College;

That in addition to the Certified Respiratory Educator (RespTREC) program, that the proposal emphasizes the ability of the centre to provide training of graduate students and post-doctoral fellows as highly qualified personnel, and that these costs be included in the centre budget;

That the list of the steering committee membership and active members be updated;

That new letters of support from the Western College of Veterinary Medicine, under the signature of the new associate dean research, and from the College of Medicine, emphasizing the college’s role as home of the centre, be obtained.

In addition to the above comments discussed at the centres subcommittee meeting, attached are questions and comments about the centre resources submitted by Piya Sen, director, budget and special projects, Financial Services Division and member of the centres subcommittee. Given the specificity of the comments and as Ms. Sen could not attend the meeting, providing these comments to you directly seemed best. If you require any clarification, please contact Ms. Sen.

You are also encouraged to follow-up on the invitation of Troy Harkot, director, institutional effectiveness within the Institutional Planning and Assessment Office, to establish metrics to measure progress over time.

Members agreed that the proposal has much potential and were enthusiastic about its ability to support clinical research in the area of respiratory disease. The above comments and requests are provided with the view of assisting you in preparing a final proposal. I look forward to working with you to bring about the establishment of the centre by Council.

Sincerely,

_______________________________
Dirk de Boer

cc Karen Chad, vice-president research
    Paul Jones, research, scholarly and artistic work committee chair
Attach: comments from Piya Sen
APPLICATION FOR ESTABLISHMENT OF A RESPIRATORY RESEARCH CENTRE

1. Name of Centre
   ‘Respiratory Research Centre’

2. Type of Centre
   Type A – College of Medicine

3. Academic Plan
   We take our breathing and our respiratory health for granted, but respiratory illness is a big concern. More than one in four Canadians will suffer from lung disease during their lifetime. COPD (Chronic Obstructive Pulmonary Disease) is the number one chronic medical condition leading to hospitalization in Canada and the 3rd leading cause of death in North America (recently surpassing stroke). Sleep Apnea has become an epidemic, partly fueled by obesity. Respiratory illness is the most common cause for hospitalization of our children (85% of hospitalization of First Nations children is due to respiratory illness). Lung cancer kills more people than breast, ovarian, colon and prostate cancers combined. The rapid growth of chronic lung disease affects us dearly not only in lives lost, suffering and quality of life, but also in our economic well-being. Lung disease and illness costs the Canada economy more than 12 billion dollars each year. Many of us are naïve to these stark realities.

   We also tend to too narrowly focus on the problem (and therefore potential solutions). The respiratory ‘space’ is vast, and realistically involves much more than just the lung. In addition to COPD, asthma, sleep apnea, pneumonia, lung cancer, tuberculosis and others, it also encompasses:

   Medical Imaging  Preventive medicine and public health
   Mental health and illness issues  Indigenous people’s needs/understanding
   Rural and remote needs and realities  Health care system delivery and design
   Business/Industry engagement and support  Community/government/society partnerships
   ‘Systemic’ manifestations of lung disease  Human responses to illness
   Acute and chronic infectious diseases such as tuberculosis, influenza, etc.
   Environmental (physical, social and societal) health concerns and interactions.

   We need a respiratory research strategy that allows us to learn more about lung disease, boldly intended to reduce risk, discover cures, save lives, and improve the quality of life for all Canadians. There is recognition and acknowledgement of strength and leadership at the University of Saskatchewan in respiratory health and disease. There is also a sense of purpose that collectively we can become more effective, more productive, and more successful in the area. The prospect of significant therapeutic breakthroughs or cures is not beyond our imagination or possibility. Focused strength is notable in the College of Medicine Division of Respiratory Medicine, Critical Care and Sleep Medicine, Veterinary Medicine, Vaccine and Infectious Disease Organization (VIDO), Canadian Centre for Health and Safety in Agriculture (CCHSA), and with the One Health initiative. There is also expertise and know-how, but as yet unrealized potential/linkages with the Indigenous Peoples’ Health Research Centre (IPHRC), Pharmacy and Nutrition, the Canadian Light Source (CLS), the College of Nursing, the College of Engineering, the Schools of Public Health and Public Policy, and others. Significant opportunity exists with novel external relationships with Industry and related entities, the Lung Association of Saskatchewan (LAS), and with augmented access/study of administrative healthcare databases (both government and private). Finally,
there are new opportunities to engage more meaningfully with patients and families with ‘real-life’ (patient-oriented) clinical research and clinical trials, the proposed CIHR Saskatchewan Support Unit (SCPOR), Pediatric Lung Health (and the new provincial Children’s Hospital), rebuilding at the College of Medicine, and others.

An environmental scan (Jan 2015) revealed that while there is work in Canada (and beyond) in ‘traditional’ respiratory research areas (see Appendix A - Environmental Scan and Appendix B – Environmental Scan synthesis), there is no existing entity (or output) exploring upstream and translational respiratory research focused on chronic illness in the integrated manner proposed with the Respiratory Research Centre (RRC). There is little redundancy in the proposed activities of the RRC, and most proposed undertakings would be unique to the RRC and to the UofS. The RRC would foster new respiratory research with an academic Discovery Stream integrated with an applied clinical and integrated Knowledge Translation (Implementation Science) Stream:

**Integrating Research and Clinical Applications, with Broad Community Implementation**

The establishment of the RRC aligns with recent initiatives by the LAS and the Lung Health Institute of Canada. The Lung Health Institute of Canada (LHI) was federally incorporated in March 2014 to assist the LAS in augmenting programming and services beyond a typical healthcare charity organization. The LHI was established with intentions of enhancing access to and delivery of diagnostic and therapeutic lung health services (in coordination with the health care system), enabling and supporting clinical research and quality improvement (ie. establishment of clinical trial research participant registries, research funding support, program evaluation, etc.), and enhancing knowledge transfer and clinical training expertise in the respiratory field. While the LHI is associated with the Lung Association of Saskatchewan, the RRC will be housed in and governed by the University of Saskatchewan. Nonetheless, the RRC recognizes the opportunities afforded by the LHI, and will leverage these intentions and assets in enabling patient-oriented research and innovation to help achieve the goals of the RRC.
It deserves emphasis that the goals of the RRC also align with the stated aims and priorities of the Colleges of Medicine, Pharmacy and Nutrition, and Veterinary Medicine (see attached letters of support).

The RRC will:

1. Build knowledge and understanding of respiratory health and well-being across the life span and within at-risk groups, using patient/person, family, population-health, and ‘One Health’ focused approaches;
2. Enable and undertake interdisciplinary and intersectoral research in the respiratory field addressing chronic respiratory conditions, including their prevention;
3. Develop and evaluate innovative approaches to health care design and delivery for persons with respiratory illness and disease that also optimize health and well-being, are attentive to healthcare system expenditure and value, support quality improvement, and acknowledge public and professional educational needs and perspectives;
4. Ensure meaningful application of research findings using an integrated knowledge translation approach, utilizing and coordinating the activities of the RRC with UofS students and faculty, other universities/institutions, government, private industry, health regions and care delivery systems, the Saskatchewan Health Quality Council, First Nations, national and international professional societies, and others.

The RRC will be unique because of:

A. Collaboration, alignment and integration of local, regional, national and international partners, with represented perspectives, expertise and interests of patients/consumers, healthcare professionals, healthcare organizations and systems, academic institutions, governments, workplaces and industry, and professional societies;
B. Patient focus, with life span considerations and study of interactions (from pregnancy to pediatrics to aging and late life) contributing to both respiratory health and disease. In doing so, the RRC will highlight the importance of embedding lung health within a paradigm of overall health and wellness, and account for the interaction of chronic respiratory conditions with related comorbidities;
C. Leadership in understanding and influencing respiratory health and disease in varied populations, communities and settings. Health concerns, perspectives, and engagement of Indigenous peoples, rural and remote individuals, and disadvantaged populations, within the context of social determinants of health and distinct settings would be explored. The contributions and interactions of environmental factors (physical, social and societal) to respiratory health and the human-animal interface would also be studied, as well as methods to enhance the effectiveness of preventative and public health medicine in these populations, communities, and settings;
D. Dedicated inter-professional training, with work towards potential granting of diplomas for Certified Respiratory Educators (CRE). In addition the RRC will provide opportunities and training for graduate students and post-doctoral fellows as highly qualified personnel (funding is embedded in the proposed budget).

The RRC would, in a sustainable manner and building from existing respiratory research expertise and strength, enhance effectiveness, integration, breadth, and competitiveness, as well as provide
opportunity for new direction and discovery. The UofS would be recognized and known as an international leader in this key field.

What would be the impact and expected scholarly outcomes (specific, but not all-encompassing, examples are provided in Appendix C)?

The RRC would:

i. Address gaps in respiratory health and disease knowledge impacted by developmental and life span considerations (prenatal, infant, children, youth, older adults and end-of-life);

ii. Develop tailored approaches to improving respiratory health that account for the unique contexts and ecology of indigenous peoples, immigrant, rural and remote populations and socially disadvantaged persons;

iii. Advance the science and conduct of patient/consumer-centred decision-making and engagement within respiratory health;

iv. Examine and inform local, provincial and national health policy and decision-makers on best practices in respiratory health (with implications for related conditions and settings);

v. Develop, implement and evaluate e-health and other technology solutions that improve care quality, and bring value, for a greater number of individuals with respiratory illnesses and comorbid conditions;

vi. Training and mentoring of highly qualified personnel (researchers, professionals and students) in an integrated and effective team environment;

vii. Integrate actions to improve respiratory health within a holistic approach that addresses common comorbidities of lung disorders. Underlying conditions and factors that give rise to lung disease and also to obesity, mental illness, cardiovascular diseases, autoimmune diseases and various cancers can be identified and acted upon to reduce their manifestations and consequences in the whole person.

Although significant thoughtfulness was used to focus the longitudinal endeavours of the RRC, it is appreciated that the ‘list’ of potential academic undertakings remains lengthy. At the outset, it is anticipated initial effort will be directed to optimizing COPD chronic disease management within the context of improving outcomes and reducing healthcare utilization and benefitting from opportunities afforded by the provincial healthcare administrative database (this work knowingly parallels efforts of the new CIHR Patient-Oriented Research Support Unit).

Who would be involved with the RRC?

Proposed Active Members

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<th>Name</th>
<th>Affiliation</th>
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<tr>
<td>Adamko, Darryl</td>
<td>Pediatrics</td>
<td>Babyn, Paul</td>
<td>Medical Imaging</td>
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<td>Graham, Brian</td>
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<td>Hoepnner, Vern</td>
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<td>Kirychuk, Shelley</td>
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<td>Marciniuk, Darcy</td>
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<td>Rotter, Thomas</td>
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<td>Teare, Gary</td>
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Proposed Collaborating Members
Alexander, Ewan  BHP Billiton  Aulakh, Gupreet  WCVM
Beaudin, Gary  Whitecap Dakota First Nation  Butcher, Scotty  Physical Therapy
Davis, Beth  Medicine  Detmer, Susan  WCVM
Ellis, Tom  Canadian Light Source  Gerdts, Volker  VIDO
Gjevre, John  Medicine  Gomis, Susantha  WCVM
Harding, John  WCVM  Horsburgh, Beth  Nursing
Laframboise, Karen  Medicine  Loewen, Matthew  WCVM
Miller, Corey  Saskatoon Cancer Agency  Montgomery, Julia  WCVM
Osgood, Nathaniel  Computer Science  Rennie, Donna  Nursing/CCHSA
Sari, Nazmi  Economics  Sukut, Sally  WCVM
Tait, Carolyn  IPHRC  Tournier, Ceil  Saskatoon Tribal Council
Vanderby, Sonya  Engineering  Bergstrom, Don  Engineering

Proposed Community Partners
City of Saskatoon  CUMFI (Central Urban Metis Federation)
Health Quality Council  Lung Association of Saskatchewan (LAS)
Lung Health Institute of Canada (LHI)  Open Door Society of Saskatoon
Regina-Qu'Appelle Health Region  Saskatchewan Polytechnic
Saskatoon Chamber of Commerce  Saskatoon Council of Aging
Saskatoon Tribal Council  Saskatchewan Cancer Agency
Saskatoon Health Region

Proposed International Advisory Panel
Bourbeau, Jean  Chronic Disease Management  McGill University  Montreal, PQ
Celli, Bart  COPD  Harvard University  Boston, MA
Cooper, Brendan  Pulmonary Function/Physiology  University Hospitals  Birmingham, UK
Gibson, Peter  Asthma  University of Newcastle  Newcastle, Australia
King, Malcolm  Indigenous People's Lung Health  Simon Fraser  Vancouver, BC
Kryger, Meir  Sleep-Disordered Breathing  Yale University  New Haven, CT
Midha, Kamil  Inhaled Pharmaceuticals  University College  London, UK
Pinnock, Hilary  Telemonitoring/Implementation  University of Edinburgh  Edinburgh, UK
Rubin, Bruce  Pediatric Pulmonary, Asthma  VCU  Richmond, VA
Samet, Jonathan  Environmental Lung Health  Keck Medicine, USC  Los Angeles, CA
Reid, Darlene  Rehabilitation, KT  University of Toronto  Toronto, ON
Zhong, Nanshon  Global Lung Health, SARS  Guangzhou Institute of Respiratory Disease  Guangzhou, China

4. Proponents - Sponsors
Chad, Karen  Vice-President Research
Freeman, Douglas  Dean, Veterinary Medicine
Smith, Preston  Dean, Medicine
Wasan, Kishor  Dean, Pharmacy and Nutrition

Consultation Process:
• An initial scan of the existing university database (October 2014) revealed 78 researchers and 10 colleges/units with expertise and demonstrated interest in the area;
• At the encouragement of the Vice-President Research, Karen Chad, an implementation Steering Committee (membership listed in Appendix D) was established to develop a proposal for a research institute at the University of Saskatchewan focused on respiratory research. The Steering Committee held face-to-face meetings on Oct 4 and Nov 7, 2014; Jan 22, Mar 16, and May 21, 2015;
• Presentation and discussion at the Associate Deans Research forum Oct 21, 2014;
• A RRC Information Sheet was completed in Nov 2014, and distributed (Appendix D);
• A RRC Visioning Retreat was held on Nov 24, 2014. There were 55 UofS faculty attendees. Meeting notes and iClicker audience responses are noted in Appendix E.

5. Centre Management.
The Respiratory Research Centre (RRC) will be led by a Director and as a Type A Centre will report directly to the Vice-Dean Research, College of Medicine. Through the Vice-Dean Research, the RRC would be accountable to the Dean, College of Medicine. The proposed internal governance and management structure is designed to foster a collaborative, multi-disciplinary environment, engaging end-users, stakeholders and patients in the development of an innovative research, training and knowledge transfer agenda. The RRC will encourage interdisciplinary approaches to respiratory health both internally and through collaborations with other academic institutions, governments, research organizations, industries, communities, and patient groups.

RRC Executive Committee
Composition: Centre Director (Chair), up to 3 individuals elected from and by the Centre members, with rotating 3 year terms.
Responsibilities:
• Recruit and select members for the Centre;
• Develop recommendations for the research, training and outreach focus and activities of the Centre, and strategies to implement the approved activities;
• Develop and implement strategies to foster inter-disciplinary research and overcome related challenges;
• Develop and implement strategies to promote public awareness and engagement with external partners, as well as to address any issues or concerns related to the Centre’s activities and mandate;
• Approve processes related to internal programs, including research funding programs, graduate student education, undergraduate and graduate student internships and/or work placements;
• Establish new and maintain existing relationships with external research partners and funding agencies.

RRC Advisory Board
Composition: Vice-Dean Research or designate (Chair), Centre Director (ex-officio), Associate-Dean Research or designate from the 3 core participating colleges (Medicine, Pharmacy and Nutrition, Western College of Veterinary Medicine), and up to 5 representatives from external stakeholders including at least one patient/citizen representative (patient/citizen, LAS, SHR, HQC, IPHRC]
Members will serve a three-year term and will be appointed by the Vice-Dean Research. The term of the Chair shall be for 3 years, potentially renewable once for an additional 3 years. Advisory Board members shall be appointed for 3 years, potentially renewable once for an additional 3 years.

**Responsibilities:**
- Review activities of the RRC providing feedback regarding alignment with the Centre’s mandate;
- Provide input on the strategic directions of the RRC ensuring they reflect best practice and emerging challenges and opportunities in the provincial, national and international respiratory health field.

**RRC International Science Advisory Panel**

**Composition:** Vice-Dean Research or designate (Chair), Centre Director (ex-officio), and 8-14 individuals of significant international research stature and/or leadership will be appointed by the Vice-Dean Research. Members of the Panel will possess expertise in areas aligned with the goals and direction of the RRC. Up to one-third of the International Science Advisory Panel may reside in Canada. Members will be appointed for 3 years, potentially renewable once for an additional 3 years.

**Responsibilities:**
- Provide strategic scientific oversight and direction, within the context of national and international respiratory health research;
- Review ongoing activities of the RRC regarding alignment with the Centre’s stated mandate, as well as potential for new or expanded research opportunities.

**Members**

Membership in the RRC will be open to individual faculty members of the UofS, including from any discipline and entity across campus whose research is [or may be] linked to respiratory health, after application/approval from the RRC Executive Committee. It is the intent of the RRC to engage both traditional and non-traditional respiratory health researchers in order to foster innovative, multi-disciplinary collaborations. It is anticipated members will include individuals from: Medicine, Pharmacy and Nutrition, Nursing, WCVM, Kinesiology, Arts & Science, Engineering, School of Public Policy, IPHRC, and others. It is also anticipated, and desired, that members from other institutions in Canada and elsewhere will hold affiliate membership with the RRC. Affiliate membership will be subject to similar intent/processes to membership.

**Staff and Key Responsibilities**

Centre management and administration will include a Director (responsible to the Vice-Dean Research or designate) who will have overall responsibility for the Centre, supported by a Coordinator (responsible to the Director) who will provide the necessary day-to-day management and operations support. Drs. Darcy Marciniuk and Brian Graham are currently serving as acting Co-Directors during this initial development phase. It is anticipated a new permanent Director will be selected later in 2016.

Responsibilities of the RRC staff are:

**Director (0.5 FTE):**
- Promote and act as a spokesperson for activities and opportunities associated with the Centre;
- Work with the RRC Executive Committee, Advisory Board, International Science Advisory Board, and members, to establish a founding strategic plan for the RRC which articulates research, education, communication, and outreach priorities;
• Maintain and foster new partnerships to enable research, education and knowledge translation;
• Direct and supervise the work of the Centre staff;
• Identify opportunities for collaboration with other institutions, agencies and government
• Centre financial budgeting, reporting and accountability.

Coordinator (0.5FTE):
• Manage and support RRC initiatives, including internal grant programs, workshops and conferences;
• Research and prepare a broad range of materials, including strategic documents, reports, literature reviews, funding proposals, both independently and in collaboration with the Director and internal and external partners;
• Ensure the decisions of the Director and Advisory Committee are administered effectively;
• Research, prepare and present annual or official reports to funding agencies and University leadership/administration;
• Maintain, prepare and present financial reports and records of the RRC.

Financial budgeting, reporting and accountability are core responsibilities/expectations of the Centre, and will be a delegated obligation of the Director. Support and oversight will be provided by the College of Medicine, with annual OVPR review because of funding provided via the Strategic Research Fund.

Office space for the RRC (offices for Director and Coordinator) is anticipated to be in St. Andrew’s College while renovations to the ‘A’ wing Health Sciences Building are performed. No additional space requirements are anticipated at the outset. All activities and member gatherings will utilize existing meeting and research lab space (from existing departments and allocations) for trainees, seminars, rounds, working group gatherings, research cluster gatherings, etc..

6. Resources and Budget.
Initial funding and resources will be furnished by the Office of the Vice-President Research, the Colleges of Medicine, Pharmacy and Nutrition, and Veterinary Medicine, the Lung Association of Saskatchewan, the Lung Health Institute of Canada, and the Saskatchewan CIHR Support Unit.

A RRC draft budget (2015-2020) is attached (Appendix F). It is recognized that funding requested from the OVPR may not be renewed beyond 2021, in part reflected by the diminished allocation in year 4 and 5. It is anticipated the RRC will seek and be successful in obtaining sustained external funding to support its people and activities, becoming less reliant on the initial funding model over time. The Steering Committee did not seek or suggest outside funding support (beyond the UoS, the LAS, and the LHI) at this stage reasoning that a more concrete initiative, officially endorsed by the UofS, would be necessary to seek (and secure) meaningful engagement and contribution from external partners. Nonetheless the initiative has been informally discussed with potential partners (local business and national pharmaceutical industry companies to date) – it has garnered much interest and been very well received. Feedback from these preliminary meetings relates to the significant benefits of working in partnership and harnessing singular expertise towards common translational discovery and program goals, and the innovative intent/direction of the RRC compared to other entities currently in this space (as per Appendices A and B).

The draft budget projects a funding shortfall with time. While expenditures could be pruned at this time, the Steering Committee preferred that external support be secured not only for growth, but to support
some of the listed initial activities of the RRC. This arrangement would essentially stimulate the RRC to actively seek external partnerships and funding in support of its stated mission and activities.

7. **Support**

Karen Chad  
Vice-President Research  
Letter of Support attached

Elisabeth Snead  
Veterinary Medicine  
Letter of support attached

Marek Radomski  
Medicine  
Letter of Support attached

Kishor Wasan  
Pharmacy and Nutrition  
Letter of Support attached

8. **Governance**

A proposed organizational structure is provided in Appendix G. The Director will be the primary contact person for RRC information, activities, and administration.

9. **Systematic Assessment**

The RRC would be judged to be meaningful and to provide value based on a number of measurement endpoints. As annual assessment of achievement/progress towards each of the 4 stated goals (see section 3. Academic Plan) would be undertaken and include:

- number/amount of external research grants and contracts
- number/amount of peer-reviewed publications
- number of invited national/international presentations
- application and successful awarding of grants, extension, and training positions
- ability to secure external funding, and the amount of external funding received

Specific process and outcome milestones would include:

- a 20% increase in the number and amount in external research grants and contracts after year 3, and a 35% increase after year 5
- a 20% increase in the number of peer-reviewed publications after year 3, and a 35% increase after year 5
- a 10% increase in the number of invited national/international presentations after year 3, and a 30% increase after year 5
- all Master and PhD positions filled after year 2.

Dr. E. Penz, a health economist and proposed active member, will assist the RRC in preparing for, and undertaking, an economic evaluation of specific activities, as well as the overall conduct of the RRC. Finally, and in addition to annual assessment of activities and conduct, a comprehensive external review would be undertaken at the end of Year 4 to facilitate a thorough review of the RRC as proposed.

**Attachments**

- Appendix A  
  Environmental Scan of Respiratory Research
- Appendix B  
  Environmental Scan synthesis
- Appendix C  
  Specific examples of impact and expected scholarly outcomes
- Appendix D  
  RRC Information Sheet (Nov 2014), Implementation Steering Committee members
- Appendix E  
  RRC Visioning Retreat meeting notes and iClicker audience responses
- Appendix F  
  Proposed Business Plan (2016-2021)
- Appendix G  
  Proposed RRC Organizational chart

Letters of Support – Karen Chad, Marek Radomski, Kishor Wasan, Elisabeth Snead

Consultation Forms with Library, Information and Communication Technology, and Facilities Management.
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<tr>
<td>University of Alberta (U15) Pulmonary Research Group (PRG) <a href="http://www.prg.ualberta.ca">http://www.prg.ualberta.ca</a></td>
<td>A multi-disciplinary group composed of 24 full members and 20 associate members who pursue research interests in respiratory disease. The PRG has a strong basic science research program that promotes close collaborations and interactions with the clinical component of the group, which is mainly based in the Divisions of Pulmonary Medicine and Pediatric Pulmonary Medicine at the University of Alberta Hospital.</td>
<td><strong>Mission</strong>: To bring together researchers in different areas of Pulmonary Research and foster an environment of translational research through collaborations between researchers with different skill sets. <strong>Vision</strong>: An outstanding research group that promotes excellence in clinical and basic science research and contributes to understanding and management of pulmonary disease. <strong>Main Goal</strong>: To promote and advance novel applied translational studies that unite basic and clinical scientists in a highly integrated program. <strong>Objectives</strong>: - To acquire a better understanding of the pathogenesis and molecular events in asthma, chronic obstructive pulmonary disease (COPD), and other lung diseases. - To translate basic science discoveries and clinically relevant observations into improvements in patient management. - To improve knowledge about health outcome measurements with a view to better application of evidence-based medicine. - To identify the impediments to optimal care of patients with asthma and COPD and develop approaches to minimize these barriers. - To study and through educational programs modify human behavior with a view to improving health care management in patients with COPD and asthma.</td>
<td>Current studies focus on asthma, chronic obstructive pulmonary disease (COPD), and pulmonary fibrosis, but our interests span across all lung diseases. Members of the PRG belong to several Research Teams. Each Research Team focuses on specific areas of pulmonary research. Together, our Research Teams cover the full spectrum of basic to clinical science, with special emphasis in translational research approaches. Members cover all 4 Canadian Institutes of Health Research (CIHR) pillars of research: Biomedical, Clinical, Health Systems and Population Health.</td>
<td>N</td>
<td>Training &amp; Mentorship: Many PRG graduate students and postdoctoral fellows have been funded externally, including a prestigious Parker B. Francis Fellowship in Pulmonary Research, CIHR and NSERC Fellowships and Studentships, Lung Association of Alberta &amp; NWT Studentships, AllerGen NCE Studentships, and Alberta Innovates – Health Solutions (AIHS) Fellowships and Studentships. Members of the PRG are involved in coordinating and teaching a number of successful undergraduate and graduate courses. They have established a new course, Inflammation MMI 436/MED 536 in the Fall of 2012.</td>
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<td>University of British Columbia (U15) UBC James Hogg Research Centre (JHRC) Centre for Heart Lung Innovation (HLI) <a href="http://www.hli.ubc.ca">http://www.hli.ubc.ca</a></td>
<td>University of British Columbia and St. Paul’s Hospital. The success of the HLI is built on: 1) The rare combination of world-class clinical and basic research expertise in cardiovascular and pulmonary disease.</td>
<td><strong>Mission</strong>: We discover and implement solutions for heart, lung, and blood vessel diseases. We attract and support the best people. <strong>Vision</strong>: To be the world leader in understanding and eliminating heart, lung, and blood vessel diseases.</td>
<td>Investigators and trainees at the HLI are using the best available technology to image and measure changes in molecules, cells, tissues, organs and whole organisms, including patients, in order to understand the link</td>
<td>N</td>
<td>Faculty at JHRC provide graduate training for students in the Faculty of Medicine and Pathology Department of the UBC. Advanced courses in</td>
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<td>University of British Columbia (U15) Centre for Lung Health (CLH)</td>
<td>CLH brings together researchers based at the University of British Columbia and its affiliated academic teaching hospitals and organizations, including BC Cancer Agency, BC Centre for Disease Control, Children’s &amp; Women’s Health Centre, St. Paul’s Hospital, and Vancouver General Hospital. The integration of lung health researchers across a broad spectrum will foster a multidisciplinary approach, combined with a philosophy of values: Creativity, Integrity, Quality and Teamwork. Goals: • Discover - To pursue internationally superior quality and impact of research. • Translate - To integrate our discoveries in the clinic and implement creative solutions in the community. • Synergize - To assure our success by harnessing the power of multi-disciplinary research. • Attract - To be the premier centre for trainees and scientists committed to the elimination of heart, lung, and blood vessel diseases. • Communicate - To educate and promote awareness of our research activities in order to inspire support for our work and to inspire better health for all. • Sustain - To link our knowledge and experience with responsible financial practices to create organizational sustainability.</td>
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<td>Vision: To foster excellence among the Lung Health community to create global leadership in research, education, and the delivery of clinical care to patients with lung diseases. Mission: • To carry out multidisciplinary research to better understand the underlying causes of lung diseases. • To develop novel methods for early identification, prevention, diagnosis, treatment, and ultimately the cure for lung diseases. • To educate patients, the public, and health care professionals of British Columbia in managing and preventing lung diseases.</td>
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<td>Cardiovascular and Pulmonary Pathophysiology and Pathogenesis of Human Disease are organized by faculty members.</td>
<td>Y - The following lung health fellowships are offered: 1. Fellowship In Respiratory Medicine (Clinical and Research) 2. Fellowship In Chest Imaging (VGH) 3. Fellowship In Critical Care Medicine 4. Fellowship In Thoracic Surgery 5. Fellowship In Occupational Health</td>
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<td>between our genes and the environment, in causing heart, lung, and blood vessel diseases.</td>
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<td>visiting scientists on sabbatical leave. Details are at <a href="https://www.hli.ubc.ca/research/training/opportunities.html">https://www.hli.ubc.ca/research/training/opportunities.html</a></td>
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<td>• Training at the HLI is organized to address a spectrum of needs in the scientific community: 1. Attraction of promising scientists during the initial and formative stages of their careers; 2. Provision of rigorous training for developing scientists; 3. Updating of strategic and experimental skills for established academic and industrial scientists; and 4. Training and updating of skills for technologists.</td>
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Diseases – and a profound understanding of the many levels of interaction between these two organ systems; 2) State-of-the-art core technology funded in part by previous CFI grants; and 3) Unparalleled registries of human biological samples (DNA, RNA, protein, tissue, blood) from a spectrum of cardiovascular, pulmonary and critically ill patients.
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|                            | cooperation and collaboration among the researchers, physicians, and technicians. | **Goal:** To reduce health care utilization by 20% for COPD related acute exacerbations in British Columbia in the next three years. We will achieve this by developing uniform clinical pathways and action plans for acute COPD exacerbations.  
**Objectives:**  
- Refine established models of chronic disease management and improve care delivery models for such common diseases as COPD and asthma  
- Establish BC as a major partner in the National Framework for Lung Health  
- Continue in a leadership role to better define the pathogenesis of novel disease mechanisms involving gene/host/ environment in order to improve the care of patients  
- Focus on tuberculosis as there is an ongoing epidemic in less developed countries as well as in marginalized groups such as Aboriginal Canadians  
- Focus on, and take a leadership role in, assessing the impact of climate change on lung health  
- Focus on research and discovery in acute lung injury and the often associated sepsis syndrome  
- Discover new avenues of research for early detection and treatment of lung cancer  
- Identify and better characterize patients with sleep disordered breathing and its systemic impact with a focus on cardio vascular effects  
- Promote research, discovery, and better management of patients with interstitial lung disease and pulmonary hypertension  
- In collaboration with community partners:  
  - improve public lung health education  
  - provide a framework to deliver new knowledge to the community |
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| **University of Calgary (U15)**  
Respiratory Clinical Trials Centre  
http://www.ucalgary.ca/anewbreath | The Centre provides detailed clinical assessments and cutting edge therapies. | **Mission:** To advance scientific and clinical knowledge in respiratory medicine. We accomplish this through excellence in clinical research. | ● Common Cold Research  
● COPD  
● Asthma  
● Allergic Asthma Research | N | Calgary COPD & Asthma Program (www.ucalgary.ca/asthma) is an Alberta Health Services program working with both patients and health care professionals in treating asthma, COPD, tobacco reduction and chronic cough by providing continuing medical education. |
| **Université Laval (U15)**  
Quebec Heart and Lung Research Centre (IUCPG)  
http://lucpq.qc.ca/en/research/research-center | The UCPG is the only centre funded by the Fonds de recherche du Québec – Santé (FRQS) that regroups three research areas (cardiology, respirology and obesity-metabolism) deemed to be a priority because of the considerable economic and social impact of their related diseases. The Centre now employs 758 people, including 143 researchers. 11 researchers hold research chairs. The Centre is also funded to the tune of $33 million annually in the form of awards, contracts and grants. | **Mission:** To improve the quality of care available to individuals with respiratory disease through basic and clinical research, innovation, close collaboration between researchers and clinicians, and the rapid transfer of knowledge for the benefit of patients. | ● Cardiology:  
○ Cardiac electrophysiology and treatment of arrhythmias  
○ Coronary disease: pathophysiology, diagnosis and therapies  
○ Metabolic cardiology: prevention, cardiometabolic risk and rehabilitation  
○ Valvular heart disease: pathophysiology, diagnosis and treatment  
● Respirology:  
○ Sleep respiratory disorders: mechanisms, therapies and cardiometabolic risk  
○ Asthma: pathophysiology and interventions  
○ Aerobiology and respiratory health | N | Graduate student training is a core component of GESA researchers’ work. GESA members currently supervise 46 graduate students, who enjoy access to cutting-edge facilities, a modern animal house, and the statistical and technical services essential to graduate research. |
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| McGill University (U15) Health Centre - Respiratory Division [Link](http://www.mcgill.ca/respdv/mcgill-respiratory-division) | • The Respiratory Division is a component of the McGill University Department of Medicine. It is responsible for clinical care, research and teaching in the field of respiratory medicine.  
• The Division maintains sites at the Montreal General Hospital, the Royal Victoria Hospital, the Montreal Chest Institute, the Jewish General Hospital and the Montreal Children’s Hospital.  
• The Division has two affiliated research groups: the Meakins-Christie Laboratories and the Respiratory Epidemiology and Clinical Research Unit (RECRU). | - Chronic lung diseases: pathophysiology, muscle wasting and exercise intolerance  
- Pulmonary oncology  
- Pulmonary vascular diseases  
- Obesity-Metabolism  
- Regulation of energy balance: central and peripheral mechanisms  
- Tissue and cell metabolism of energy: endocrine and molecular aspects  
- Mechanisms of obesity and diabetes complications  
- Impact of bariatric surgery on morbid obesity and its complications  
- Obesity treatment/prevention interventions and their effectiveness | • Meakins-Christie Laboratories - asthma and respiratory failure  
• Respiratory Epidemiology and Clinical Research Unit (RECRU): Epidemiology of chronic obstructive pulmonary disease, tuberculosis, occupational lung disease and asthma, and health economics. | Y - Residency Training Program in Adult Respiratory Medicine:  
1. Two year clinical training programme – in adult respiratory medicine  
2. Three year combined clinical and research training programme – in adult respiratory medicine (clinician-scientist) | The Division provides clinical services at Montreal General Hospital, the Royal Victoria Hospital, the Montreal Chest Institute, the Jewish General Hospital and the Montreal Children’s Hospital. |
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<td>McMaster University (U15) Firestone Institute for Respiratory Health (FIRH) <a href="http://fhs.mcmaster.ca/firh/">http://fhs.mcmaster.ca/firh/</a></td>
<td>• Firestone is based at St. Joseph's Healthcare in Hamilton Ontario Canada. It is also an Institute of McMaster University. • Clinical, research and educational activities are closely integrated and largely collaborative within FIRH. The intent is to create a link between patient care, translational research and training of health care professionals.</td>
<td>Mission / Values: To conduct research to increase understanding of respiratory health and disease across the life cycle through collaborative basic and clinical investigations with the expectation of improving patient care. (Innovative Education, Translational Research, Exemplary Clinical Services)</td>
<td>Research is wide-ranging, from studies of smooth muscle physiology and intracellular signalling through experimental disease models to clinical trials which enhance patient quality-of-life and extends not only from bench to bedside, but to population health and policy.</td>
<td>Y - FIRH is the home for the Respirology Residency Training Program of the Division of Respirology, Department of Medicine, Faculty of Health Sciences, McMaster University. FIRH research faculty supervised 11 full-time graduate students (candidates for Masters and for Ph.D.) along with 3 postdoctoral fellows. In addition, FIRH hosted numerous placements for nursing students, respiratory therapist students, undergraduate and post-secondary work placements as well as countless hours of high school students earning mandatory community service hours.</td>
<td>• FIRH research faculty train young investigators to become independent researchers, encourage partnerships across disciplines nationally and internationally, and create synergies with the public and private sectors. • The Firestone Institute provides comprehensive outpatient and inpatient respiratory care as the regional respiratory service for the City of Hamilton and the Hamilton Niagara Haldimand Brant Local Health Integrated Network (LHIN). • FIRH has a unique Chest Programme that encompasses respiratory medicine together with affiliated head-and-neck and thoracic surgery services; all are located on one site.</td>
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<td>Université de Montréal (U15) Chaire pharmaceutique AstraZeneca en santé respiratoire <a href="http://www.recherche.umontreal.ca/en/research-at-udem/our-research-units/profile/unite/78/pid/655/">http://www.recherche.umontreal.ca/en/research-at-udem/our-research-units/profile/unite/78/pid/655/</a></td>
<td>This Chair, funded by AstraZeneca, concerns the therapeutic management of respiratory diseases and is interested in the use of drugs in the treatment of respiratory diseases. The activities of this Chair are conducted at the Hospital of the Sacré-Cœur of Montréal.</td>
<td>• Education • Pharmaceutical Care • Research</td>
<td>N</td>
<td>Research infrastructures: • Quebec Asthma and Pregnancy Cohort • ReMeD • BD- BD- asthma</td>
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| University of Toronto (U15) | St. Michael’s Hospital Critical Illness and Injury Research Centre (CIIRC) [http://www.stmichaelshospital.com/research/ciirc/](http://www.stmichaelshospital.com/research/ciirc/) | • St. Michael’s, a major teaching and research hospital affiliated with the University of Toronto, offers an excellent educational environment.  
• By bringing together a unique and diverse cohort of researchers in the areas of fundamental lung biology, translational research, clinical trials and knowledge translation, the CIIRC will work to understand the biology of critical illness, discover novel treatments and ultimately enhance the survival and quality of life of people suffering from critical illnesses.  
• Research pillars and platforms are:  
  o Acute lung injury  
  o Sepsis  
  o Trauma/Resuscitation | Mission: The mission of the acute lung injury pillar of the Centre for Critical Care Research is to foster and deliver internationally leading research into the causes, consequences and therapy of acute respiratory distress syndrome (ARDS).  
• Research interests include clinical research in Cystic Fibrosis and Hereditary Hemorrhagic Telangiectasia, addressing the natural history and complications, using clinical databases to assess outcomes and interactions between sleep disordered breathing and the cardiovascular system. Basic science foci include use of molecular biology to examine muscle and lung growth and repair. | N | • The CIIRC is home to national and international leaders in knowledge translation and works closely with the breaKThrough Program. The program’s mandate is to identify best practices so that they can be quickly adopted at the clinical level by health care professionals. By focusing on the processes through which knowledge is effectively translated into clinical practice, breaKThrough plays a critical role in enabling the creation and delivery of outcome-based learning experiences, ultimately improving health outcomes. |
| Thompson Rivers University (BC) | TRU Center for Respiratory Health and Sleep Science [http://www.tru.ca/science/research/sleep.html](http://www.tru.ca/science/research/sleep.html) | The Center promotes and facilitate research into the best practices in the arena of respiratory health and sleep science. | Mission: The Center will strive to provide a clinical venue to promote knowledge dissemination, education and research. It will facilitate innovation and knowledge translation. As an extension of the Faculty of Science the center will promote and facilitate research into the best practices in the arena of respiratory health and sleep science. With a focus on education, applied research and practical applications of new knowledge the center will become a catalyst for scholarly activity expanding the educational, research capacity and productivity of associated faculties.  
Objectives:  
The Center will promote:  
1. The scholarship of teaching to promote best practice in the education of students. | Y - The Respiratory Therapy program at TRU is a national leader in providing a high quality educational experience for future Respiratory Therapists. The program is accredited by the Council on Accreditation for Respiratory Therapy Education (COARTE). Following successful completion of the program, the graduate is eligible to sit the National Certification Examination for the professional qualifications |
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<td>Queen's University</td>
<td>The Cardiac, Circulatory and Respiratory Research (CCR) Program <a href="http://dbms.queensu.ca/research-groups/ccr">http://dbms.queensu.ca/research-groups/ccr</a></td>
<td>The CCR program consists of a multidisciplinary group of researchers involved in basic molecular and clinical health research into the prevention, diagnosis and treatment of cardiovascular and respiratory diseases. The group consists of 30 lead investigators whose research funding corresponds to over 10 million dollars.</td>
<td>Mission: The Cardiac, Circulatory and Respiratory Research Program at Queen's University comprises a multidisciplinary group of researchers involved in basic molecular and clinical health research into the prevention, diagnosis, and treatment of cardiovascular and respiratory diseases.</td>
<td>The CCR Research Program consists of four nodes: 1. Vascular Function/Disease 2. Cardiac Dysfunction 3. Respiratory Disease 4. Circulatory Control</td>
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- The Centre has over 47 researchers and clinicians and 22 trainees.  
- The multidisciplinary teams are made up of physicians, nurses, physiotherapists and other health professionals work to improve prevention, diagnosis and treatment of respiratory, cardiac and critical care illnesses including: lung cancer, asthma, chronic obstructive | Mission: To improve the prevention, diagnosis and treatment of lung problems and serious illnesses like lung cancer and asthma that may require critical care. | Recognised internationally for research in obstructive lung disease, lung cancer, tuberculosis, and sleep apnea. The multidisciplinary teams are made up of physicians, nurses, physiotherapists and other health professionals work to improve prevention, diagnosis and treatment of respiratory, cardiac and critical care illnesses including: lung cancer, asthma, chronic obstructive | N | - The Centre brings research to patients by linking respiratory research to clinical practice.  
- The Interventional Cardiology team is one of the largest programs of its kind in Canada |
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<td>College of Respiratory Therapists of Ontario (CRTO) <a href="http://www.crto.on.ca">http://www.crto.on.ca</a></td>
<td>There are services for students in approved Respiratory Therapy programs at Canadian colleges. It is designed to help students understand the CRTO’s role as a regulatory body and to prepare them for their Respiratory Therapy careers.</td>
<td><strong>Mandate:</strong> To fill the knowledge gap by providing training to respiratory investigators and by collecting, processing and analyzing national and global data to identify trends, gaps and solutions to improve respiratory care and reduce related burden on individuals, families, and society. <strong>Vision:</strong> To help fight the epidemic of chronic respiratory diseases and reduce their global impact by providing current and reliable national and international statistics that are useful to health policy and decision makers, clinicians and researchers. <strong>Mission:</strong> To train and build a unique network of clinicians and researchers and engage them in global respiratory health research with a focus on chronic respiratory diseases, in an effort to facilitate and advance science.</td>
<td>Pulmonary disorder (COPD), sleep apnea and tuberculosis.</td>
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<td>The Respiratory Global Research And Training Network (The Respiratory GREAT Network) <a href="http://www.sickkids.ca/Research/Respiratory-GREAT-Network/">http://www.sickkids.ca/Research/Respiratory-GREAT-Network/</a></td>
<td>The Respiratory GREAT Network initiative, headquartered at the Research Institute at The Hospital for Sick Children in Toronto, is supported in principle by other major Canadian respiratory health professional groups. These include: the Allergy, Genes and Environment Network (AllerGen NCE); the Ontario Ministry of Health and Long-Term Care; the Canadian Thoracic Society and Lung Association; the Canadian Asthma Society; and the Public Health Agency of Canada.</td>
<td>The Respiratory GREAT Network (GREAT) is a global network for surveillance and research:  - Collect national and international chronic respiratory disease data from countries with multi-level health indicators (health status, determinants and health services utilization).  - Standardize methods and activities of surveillance, outcomes, monitoring and evaluation.  - Provide national and international data for surveillance and research.  - Form a link between the data systems.</td>
<td>The Respiratory GREAT Network Training Program on Knowledge Translation and Exchange: Provide uniform training and exchange to investigators who are involved in respiratory health research and surveillance Streamline support in data gathering and analysis of country-specific and global chronic respiratory disease data.</td>
<td>Y - The training program is established in collaboration with the Ontario Asthma Surveillance Information System (OASIS) and the Research Institute at The Hospital for Sick Children. Investigators from countries using the approach to combat chronic respiratory diseases proposed by the Global Alliance against Chronic Respiratory Diseases (GARD) will be encouraged to apply for a three-month fellowship training opportunity in Toronto, Ontario, Canada. Participants can opt to attend the session on-site in Toronto or remotely via web conferencing. The Respiratory GREAT Network faculty will provide expert knowledge and guidance on the methods and techniques for collecting, processing and analyzing and reporting the data.</td>
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| **Institute of Circulatory and Respiratory Health (ICRH)**  
http://www.cihr-irsc.gc.ca/e/8663.html | • The Institute of Circulatory and Respiratory Health is one of thirteen institutes, each with a specific focus, that together make up the Canadian Institutes of Health Research (CIHR).  
• ICRH staff members are located at the Montreal Heart Institute and in Ottawa | **Mandate:** To ensure that various ICRH researchers from different communities would relate to the new priorities and benefit from upcoming funding opportunities, we focused on selecting common themes (identified through the consultations) that would be of relevance to as many research areas as possible.  
**Strategic Priorities (2013-2016):** ICRH identified the following 4 objectives, which align with CIHR’s strategic directions:  
1. Increase the number and competitiveness of ICRH researchers in national and international grant competitions  
2. Achieve better balance across the four CIHR research themes in ICRH-relevant fields  
3. Enlarge the clinical trials activity in ICRH fields, particularly in respiratory health and stroke, and increase international collaborations in clinical trials  
4. Enhance transparency in priority-setting, planning, and decision-making | ICRH supports research into causes, mechanisms, prevention, screening, diagnosis, treatment, support systems, and palliation for a wide range of conditions associated with the heart, lung, brain (stroke), blood, blood vessels, critical care and sleep. | N |
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<td>University of Arizona Arizona Respiratory Centre (ARC) <a href="http://www.arc.arizona.edu">www.arc.arizona.edu</a></td>
<td>The University of Arizona Arizona Respiratory Centre (ARC) is dedicated to understanding the causes of respiratory disease, to improve the lives of people suffering with these illnesses, and to find cures for respiratory diseases that plague the citizens of our nation and world.</td>
<td>AsthmaNet American Lung Association - Asthma Clinical Research Center Sleep Studies Tucson Children’s Respiratory Study (CRS) Infant Immune Study (IIS) The Childhood Asthma Research and Education Network (CARE)</td>
<td>Y - Pulmonary, Allergy, Critical Care, and Sleep Fellowship Programs</td>
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<td>University of California, Davis California National Primate Research Center (CNPRC) Respiratory Disease Center <a href="http://www.cnprc.ucdavis.edu/our-services/associated-laboratories-and-centers/respiratory-building/">http://www.cnprc.ucdavis.edu/our-services/associated-laboratories-and-centers/respiratory-building/</a></td>
<td>The CNPRC has been a leader in understanding primate lung development and function for more than 30 years. It has the distinction of being the only National Primate Research Center (NPRC) with a Respiratory Diseases research unit, and has scientific expertise in airway immunity, environmental air pollutants, pediatric pulmonary disease, and asthma. The CNPRC developed the first rhesus monkey model of adult and childhood asthma using a human allergen, which has given researchers the ability to test numerous biological mechanisms and new therapies.</td>
<td>Research using nonhuman primate models of lung disease may be conducted by independent investigators with the assistance of CNPRC Research Cores. Scientists and staff associated with each of the Cores provide consultation in experimental design, sample collection, and data analysis, and offer assays that utilize species-specific reagents wherever possible. Core scientists can also work with users to develop new assays to meet research needs.</td>
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<td>University of Colorado Denver Colorado Pulmonary Alcohol Research Consortium (CoPARC) <a href="http://www.ucdenver.edu/academics/colleges/medicalschool/departments/medicine/Pulmonary/Research/AlcoholLungResearch/Pages/default.aspx">http://www.ucdenver.edu/academics/colleges/medicalschool/departments/medicine/Pulmonary/Research/AlcoholLungResearch/Pages/default.aspx</a></td>
<td>The primary focus is on alcohol-related pulmonary processes.</td>
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<td>University of Pennsylvania Center for Sleep and Circadian Neurobiology</td>
<td>It is a multidisciplinary center dedicated to exploring and understanding the basic mechanism of sleep and circadian</td>
<td>The goals of basic science research in the Center include the understanding of the molecular mechanisms regulating sleep and wakefulness,</td>
<td>Y – Clinical Fellowships, Research Fellowships, Post-Doctoral Education, and</td>
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<td>Name of Institution and URL</td>
<td>Brief Overview</td>
<td>Mission Statement / Vision / Goals / Mandate</td>
<td>Types of Research</td>
<td>Academic Programs? (Y/N)</td>
<td>Comments (e.g. KT)</td>
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| [http://www.med.upenn.edu/sleep ctr/](http://www.med.upenn.edu/sleep ctr/) | Rhythm, the pathogenesis of sleep disorders and the outcomes of therapy. The broad range of research activities, the frequent seminars and the excellent mentorship combine to make the CSCN a leader in the training of sleep medicine researchers. | Mission: To conduct clinical and translational research activities to understand the etiology and impact of viral and bacterial respiratory pathogens, and to develop and evaluate strategies for their control, treatment, and prevention. Goals: The primary objective of the RPRC Innovation Research Program is to facilitate highly innovative research activities that take advantage of novel technologies and new research opportunities, or that respond to emergent issues in viral respiratory pathogens, focusing on high priority translational and/or clinical research. A major set of goals for the program is to:  
   - Encourage new collaborations with investigators outside of the RPRC  
   - Infuse the RPRC with novel technologies and approaches  
   - Attract new faculty to the Center and to viral respiratory pathogens research | the functions of sleep at a most basic molecular level, and how aging and disease disrupt these processes. Patient-Oriented Research and Patient-Centered Outcomes Research are also offered. | Behavioral Sleep Medicine Program. | |

University of Rochester (NY)  
Respiratory Pathogens Research Center (RPRC)  
[http://www.urmc.rochester.edu/respiratory-pathogens-research-center.aspx](http://www.urmc.rochester.edu/respiratory-pathogens-research-center.aspx)  
- This Center has established a multidisciplinary, collaborative, integrated, and iterative program focused on the conduct of research activities to understand the etiology and impact of viral respiratory pathogens and to develop and evaluate strategies for their control, treatment, and prevention.  
- This Center is comprised of faculty and staff from the University of Rochester, the University of Alabama, J. Craig Venter Institute, and Oregon Health and Sciences University. | Mission: To conduct clinical and translational research activities to understand the etiology and impact of viral and bacterial respiratory pathogens, and to develop and evaluate strategies for their control, treatment, and prevention. Goals: The primary objective of the RPRC Innovation Research Program is to facilitate highly innovative research activities that take advantage of novel technologies and new research opportunities, or that respond to emergent issues in viral respiratory pathogens, focusing on high priority translational and/or clinical research. A major set of goals for the program is to:  
   - Encourage new collaborations with investigators outside of the RPRC  
   - Infuse the RPRC with novel technologies and approaches  
   - Attract new faculty to the Center and to viral respiratory pathogens research | | N | |
<table>
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<tr>
<th>Name of Institution and URL</th>
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<th>Mission Statement / Vision / Goals / Mandate</th>
<th>Types of Research</th>
<th>Academic Programs? (Y/N)</th>
<th>Comments (e.g. KT)</th>
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</thead>
<tbody>
<tr>
<td>University of Utah Lung Health Research Center [<a href="http://medicine.utah.edu/internal">http://medicine.utah.edu/internal</a> medicine/pulmonary/research/](<a href="http://medicine.utah.edu/internal">http://medicine.utah.edu/internal</a> medicine/pulmonary/research/)</td>
<td>The Center was established in 1986 as part of the first major initiative of The Heart, Lung, and Blood Institute in screening for an intervention in early lung disease.</td>
<td><strong>Mission:</strong> To conduct translational research, primarily in the obstructive and fibrotic lung diseases, to help alleviate the suffering experienced by these patients. In addition to Chronic Obstructive Pulmonary Disease (COPD) studies, the University of Utah Lung Health Research Center serves as one of the major clinical research sites for patients suffering from Idiopathic Pulmonary Fibrosis (IPF). The Lung Health Research Center is also one of the centers in the IPFnet.org network. There are 26 medical centers across the country that are considered “centers of excellence” and that “excel in the treatment of IPF” (<a href="http://ipfnet.org">http://ipfnet.org</a>).</td>
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<tr>
<td>Harvard University Lovelace Respiratory Research Institute (LRRI) <a href="http://www.lrri.org/">http://www.lrri.org/</a></td>
<td>LRRI is a private, biomedical research organization that has formed a strategic partnership with Brigham and Women’s Hospital of Harvard University. The partnership leverages the clinical research excellence of BWH and the basic science and animal model expertise of LRRI.</td>
<td><strong>Goal:</strong> To foster cures for respiratory disease and drug development. - Respiratory disease - Biodefense countermeasures to other diseases - Investigating environmental toxicology and human health - Drug development - Studying mental illness and brain disorders</td>
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<td>Y - The Lovelace Latin American Respiratory Research (LLARR) Fellowship will provide eligible candidates with structured scientific and clinical research training in respiratory disorders.</td>
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<td>University College London Lungs for Living Research Centre <a href="http://www.ucl.ac.uk/lungs-for-living-research">http://www.ucl.ac.uk/lungs-for-living-research</a></td>
<td>The Lungs for Living Research Centre (L4L) is part of the UCL Respiratory collaborative network with close links to Centre for Inflammation and Tissue Repair (CITR) and Centre for Respiratory Medicine (CRM).</td>
<td>The Centre has a comprehensive research program that involves laboratory investigation with a strong theme of developing new treatments for lung cancer and understanding the processes causing and controlling the disease.</td>
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<td>Y - The Centre provides PhD training for scientists and Clinical Fellows. Members of the Centre actively contribute to the undergraduate MBBS, iBSc, BSc and Masters teaching programmes within the Division. The Centre provides BSc and MSc/MRes research project supervision for highly motivated students.</td>
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<td>Name of Institution and URL</td>
<td>Brief Overview</td>
<td>Mission Statement / Vision / Goals / Mandate</td>
<td>Types of Research</td>
<td>Academic Programs? (Y/N)</td>
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| University of Manchester Centre for Respiratory and Allergy [http://www.inflammation-repair.manchester.ac.uk/respiratoryallergy/](http://www.inflammation-repair.manchester.ac.uk/respiratoryallergy/) | Objective: To develop novel interventions for patient benefit in our themed areas, including strategies for disease prevention, pharmacological therapies and optimisation of interventions to reduce toxicity and the development of resistance, to allow the customisation of healthcare. | World-leading research and development in four main themes:  
  • Asthma and Food Allergy  
  • Chronic obstructive pulmonary disease (COPD)  
  • Chronic cough  
  • Fungal lung disease | Y - There is an active programme of postgraduate research with over 40 students currently registered. These include both Clinical Fellows and science graduates. | Y - There is an active programme of postgraduate research with over 40 students currently registered. These include both Clinical Fellows and science graduates. |                                                                                     |
| University of Newcastle Australia Priority Research Centre for Asthma and Respiratory Diseases [https://www.newcastle.edu.au/research-and-innovation/centre/card/about-us](https://www.newcastle.edu.au/research-and-innovation/centre/card/about-us) | • The Centre focuses on understanding the cellular and molecular processes that are associated with the development and progression of respiratory diseases, such as asthma and chronic obstructive pulmonary disease (COPD).  
  • The Centre acts as a national training centre for clinician scientists, postdoctoral fellows, PhD scholars and undergraduates in respiratory medicine and continues to actively contribute to the development of health policy. | The Centre researchers are involved in basic research and translational research, working in the area of asthma and other airway diseases, as they relate to pregnancy, childhood, adult life and the elderly. This research is increasing the understanding of asthma and pregnancy, dietary influences on asthma, the role of viruses in asthma, innate immunity in airway disease, the link between bacterial infections and asthma and the role of pneumococcal infection in treating asthma. | Y - PhD and Masters opportunities |                                                                                     |
| Westmead Millennium Institute for Medical Research (WMI) Ludwig Engel Centre for Respiratory Research [http://www.wmi.org.au/ourresearch/cardiorespiratory/Pages/leccr.aspx](http://www.wmi.org.au/ourresearch/cardiorespiratory/Pages/leccr.aspx) | • WMI is one of Australia’s largest and most productive medical research centres, internationally recognized for our groundbreaking work into many of the most significant diseases affecting humankind.  
  • Closely affiliated with both Westmead Hospital and the University of Sydney, our research extends from the laboratory to the patient using the basic tools of molecular and cell biology, genomics, genetic epidemiology, human and cell imaging technology, | Combining laboratory research and clinical studies the Cardio-respiratory Division is investigating common cardio and respiratory disorders like abnormal heart rhythms and sleep apnoea. | N |                                                                                     |
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<th>Name of Institution and URL</th>
<th>Brief Overview</th>
<th>Mission Statement / Vision / Goals / Mandate</th>
<th>Types of Research</th>
<th>Academic Programs? (Y/N)</th>
<th>Comments (e.g. KT)</th>
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| University of Oulu Finland Center for Environmental and Respiratory Health Research (CERH) [http://www.oulu.fi/cerh/](http://www.oulu.fi/cerh/) | • A multidisciplinary group of researchers from various departments, such as the Institute of Health Sciences and Respiratory Medicine Unit and Institute of Clinical Medicine.  
• World Health Organization has designated the Center for Environmental and Respiratory Health Research as a WHO Collaboration Centre in Global Change, Environment and Public Health starting from May 2014. | **Objectives:**  
• To assess the role of global change and environment on public health with special references to health effects of extreme temperatures and other climatic factors, air pollution, and housing characteristic, with a special reference to susceptible populations (age, gender and social, economic, genetic factors) and gene-environment interactions and joint effects of environmental exposures.  
• To address the effects of global change related factors on the burden of disease under different scenarios on the basis of own empirical results and a synthesis based on continuous systematic literature searches, meta-analyses and burden of disease assessment on relations between climatic conditions and health. This research will be designed to support evidence-based policy work and dissemination of information. | The research activities are versatile and employ registry, population-based, clinical and experimental studies. The information is synthesized through meta-analyses and burden of disease assessments. | Y - CERH produces and promotes both basic and postdoctoral education and will arrange national and international courses in the field of global environmental change and human health. |
### Appendix B

#### Respiratory Research Center Environmental Scan Summary

<table>
<thead>
<tr>
<th>Research Focus</th>
<th>Firestone</th>
<th>Laval</th>
<th>McGill</th>
<th>Queens</th>
<th>Sick Kids</th>
<th>St. Mikes</th>
<th>TRU</th>
<th>UofA</th>
<th>UofC</th>
<th>UBC</th>
<th>UBC Hogg</th>
<th>Vancouver</th>
<th>UofS Current</th>
<th>RRC Projected</th>
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<tbody>
<tr>
<td><strong>Primary Focus Pulmonary</strong></td>
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<td><strong>Combined Foci: Lung and Other</strong></td>
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<td><strong>Basic Science</strong></td>
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<td><strong>Epidemiology / Population Health</strong></td>
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<td><strong>Health Services Research</strong></td>
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<td><strong>Patient-Centred Focus</strong></td>
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<td><strong>Knowledge Translation</strong></td>
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<td><strong>Integrative</strong></td>
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<td><strong>Climate Change</strong></td>
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<td><strong>Tuberculosis</strong></td>
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<td><strong>Sleep Disordered Breathing</strong></td>
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<td><strong>Lung Cancer</strong></td>
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<td><strong>Research Training and Mentorship</strong></td>
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<td><strong>Clinical Training</strong></td>
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<td><strong>Govt/Health Agencies Partnerships</strong></td>
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<td><strong>Partnership with Advocacy Groups</strong></td>
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<td><strong>Lung Cancer</strong></td>
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<td><strong>One Health Human - Animal Interface</strong></td>
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<tr>
<th>Research Center</th>
<th>Institution</th>
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<tr>
<td>Firestone</td>
<td>Firestone Institute for Respiratory Health - McMaster</td>
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<tr>
<td>Laval</td>
<td>Laval Quebec Heart and Lung Research Centre</td>
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<tr>
<td>McGill</td>
<td>McGill Chest Hospital and Meakins Christie Laboratory</td>
</tr>
<tr>
<td>Queens</td>
<td>Queens’ Cardiac, Circulatory and Respiratory Research Program</td>
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<tr>
<td>Sick Kids</td>
<td>Sick Kids Respiratory Global Research and Training Network (GREAT)</td>
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<tr>
<td>St. Mikes</td>
<td>St. Michael’s Hospital/U of T - Critical Illness and Injury Research Centre</td>
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<tr>
<td>TRU</td>
<td>Thompson Rivers University Centre for Respiratory Health and Sleep Science</td>
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<tr>
<td>UofA</td>
<td>U of Alberta Pulmonary Research Group</td>
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<tr>
<td>UofC</td>
<td>U of Calgary (Respiratory Clinical Trials)</td>
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<tr>
<td>UBC</td>
<td>UBC Centre for Lung Health</td>
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<td>UBC Hogg</td>
<td>UBC James Hogg Research Centre</td>
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<td>Vancouver</td>
<td>Vancouver Coastal Health Research – Centre for Respiratory Cardiac and Critical Care Medicine</td>
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APPENDIX C

Impact and Scholarly Outcomes (specific, but not all-encompassing, examples)

i. Address gaps in respiratory health and disease knowledge impacted by developmental and life span considerations (prenatal, infant, children, youth, older adults and end-of-life).

_Nuclear Magnetic Resonance (NMR) and Mass Spectrometry (MS) analysis may allow clinicians to better phenotype (characterize) patients suffering from various lung diseases. Current testing methods are typically invasive and not without discomfort – accurate non-invasive diagnostic testing, in both the young and old, would be a powerful tool to help both primary care physicians and specialists better assess and manage lung conditions, such as asthma and COPD, and their complications. Pilot work at the UofS, in collaboration with researchers at the UofA, is currently underway, but the RRC would accelerate comprehensive and multi-site study in this exciting field._

ii. Develop tailored approaches to improving respiratory health that account for the unique contexts and ecology of indigenous peoples, immigrant, rural and remote populations and socially disadvantaged persons.

_There are overwhelming First Nations issues in Respiratory health and disease:_

<table>
<thead>
<tr>
<th>Hospitalisation for Respiratory Disease</th>
<th>&gt;298% higher for First Nations vs the population as a whole (Source: 2004 Report-Regina Health Authority)</th>
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<tbody>
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<td>85% of hospitalisation of First Nations Children due to respiratory illness, including infections (Source: 1998 Respiratory Health Symposium, Saskatoon)</td>
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<tr>
<td>COPD</td>
<td>Fastest growing chronic disease in adults</td>
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<td>Hospitalisation of women for COPD in the Athabasca health district is 7x the provincial average</td>
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<tr>
<td>Lung Cancer</td>
<td>Northern Saskatchewan, which is predominantly Aboriginal, has the highest rates of lung cancer.</td>
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<td>Smoking rates in the Saskatchewan Aboriginal community are about 3x the smoking rates in the non-Aboriginal population.</td>
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<tr>
<td>Obesity &amp; Sleep Apnea</td>
<td>First Nation rates &gt; general population leads to higher risk of Sleep Apnea, cardiovascular risk, stroke and diabetes</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>Rates are almost 100 x higher in First Nations and Métis compared to Canadian-born, non-Aboriginal Saskatchewan residents.</td>
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</table>

_Research that only considers generic social determinants of health has been shown to be ineffective in addressing the complex interaction of factors affecting the health of Aboriginal people. Aboriginal health research must be grounded in an understanding of the socio-political_
context of today’s health inequalities, paired with an understanding of Indigenous peoples’ holistic view of health. A close partnership with the Indigenous Peoples’ Health Research Centre (IPHRC) would link the RRC with specialized expertise in this area of research. Furthermore, several IPHRC Research Affiliates are also engaged in respiratory research, and thus the partnership would also further build capability in the RRC.

iii. Advance the science and conduct of patient/consumer-centred decision-making and engagement within respiratory health.

Patient engagement is pivotal in achieving improved health status. Patient voices need to be heard and responded to - working together can improve outcomes. There is much to be learned and implemented to achieve more effective engagement of consumers, patients and populations with their health. Expertise throughout the UofS, harnessed with other groups and organizations such as the Lung Association of Saskatchewan (LAS), Saskatoon Tribal Council (STC), IPHRC, local and global businesses, the healthcare system, and others would be focused on discovering more effective means of engaging and arming consumers, patients and populations. Current [ie. past] approaches, largely disconnected and top-down, are not effective in today’s environment. The RRC would work directly with consumers and patients in discovering and implementing new methods and techniques. Better self-efficacy and self-management, an enhanced understanding of and commitment to risk factor management and the prevention of disease are both necessary and achievable.

iv. Examine and inform local, provincial and national health policy and decision-makers on best practices in respiratory health (with implications for related conditions and settings).

The RRC would harness the potential inherent in the reality that Saskatchewan arguably possesses the most complete and comprehensive healthcare system database in North America. While this database has facilitated some work in quality improvement research as well as informed policy and planning, its potential has not yet been fully appreciated or capitalized upon. Healthcare “big data” has unique challenges in terms of volume, variety, velocity, variability, veracity, and complexity – but these challenges are not unique. The UofS is currently reassessing its activity and capabilities related to big data, and the healthcare ecosystem has been identified as a meaningful opportunity. The RRC would help build a robust pathway that carefully links the capabilities, expertise and needs at the UofS with those in government and its agencies, utilizing these provincial resources to address important health care challenges in Saskatchewan and beyond. This would realistically lead to:

- a better understanding of individual and population health and disease;
- effective, innovative approaches, more readily informed by data, to enhance care, quality and system efficiency;
- increased research expertise, productively and competitiveness for both the UofS and its partners, including the Government of Saskatchewan;
- stronger relations, driven by value and effectiveness, between the UofS and the healthcare system;
Appendix C - Page 3 of 4

- opportunity to assess the impact of inter-professional care delivery, system redesign, public health initiatives, and other interventions leading to better informed policy and healthcare system decision-making.

The UofS, and Saskatchewan, are situated to be recognized as the leader in these areas of big data utilization? We can develop and test innovative solutions to high-priority issues. This collaboration will be pursued recognizing and fully respecting the essential necessity to protect (without risk) confidentiality, perceptions and integrity of the healthcare system, and other genuine sensitivities and concerns.

v. Develop, implement and evaluate e-health and other technology solutions that improve care quality, and bring value, for a greater number of individuals with respiratory illnesses and comorbid conditions.

Canada Health Infoway (CHI) has funded a pilot study of remote patient monitoring in chronic lung disease in Saskatchewan. This pioneering work, an effective collaboration between the UofS, the Saskatoon Health Region, the Health Quality Council of Saskatchewan and Industry partners, is discovering new possibilities in the provision of state of the art, tertiary care for individuals at home and in rural and remote areas. The learnings from this work, while initially focused on chronic lung disease, have direct implication for the structure and function of healthcare teams and other chronic medical conditions such as diabetes and heart diseases. The RRC would help position competitive, peer-reviewed funding applications, and enable further refinement and adaptability of this innovative technology.

vi. Training and mentoring of researchers, professionals and students in an integrated and effective team environment.

Post-graduate education that cultivates highly trained professionals in an interdisciplinary environment is of vital importance to care quality and future innovation. Training offered by the LAS for individuals to be eligible to seek national certification as a Certified Respiratory Educator (CRE) has been provided to more than 4000 individuals in Canada and the United States thru its RespTREC™ initiative [https://www.resptrec.org]. First established in 1999, RespTREC™ provides health care professionals with the highest standard of training in respiratory diseases and education. Courses are designed to help learners develop the knowledge, skills and competencies required to empower people and their caregivers to optimally manage their chronic disease. The LAS currently has developed and maintained more than 75% market share in this area, and is actively exploring growth into the United States. The RRC will work towards establishing the CRE as a university-recognized certificate program, cementing the UofS as a key, recognized leader in promoting and building excellence of the inter-professional health care team. This initiative is completely aligned with current stated goals of the UofS, and presents a ‘ready to move in’ opportunity.

vii. Integrate actions to improve respiratory health within a holistic approach that addresses common comorbidities of lung disorders. Underlying conditions and factors that give rise to lung disease and also to obesity, mental illness, cardiovascular diseases, autoimmune diseases
and various cancers can be identified and acted upon to reduce their manifestations and consequences in the whole person.

The structure, expertise, and facilities at the UofS provide us with the potential to be a leading One Health research institution. The recent One Health initiative brings significant synergy to the RRC, enabling long-term integration of varied expertise. Another prime example of practical integration is the LiveWell Chronic Disease Management (CDM) Program offered by the Saskatoon Health Region. Many individuals suffering from respiratory disease also suffer from other chronic conditions, most notably anxiety, depression, heart disease and diabetes. The LiveWell CDM Program offered by the Saskatoon Health Region is structurally designed to detect and manage these comprehensive set of co-morbidities. The RRC would more objectively assess and investigate these comorbidities and risk factors, and explore means to better prevent and manage these common conditions and outcomes.
Proposed Respiratory Research Centre

At the encouragement of the Vice-President Research, Karen Chad, an implementation Steering Committee was formed to develop and put forth a proposal for a research institute at the University of Saskatchewan focused on respiratory research. The proposed institute will foster new collaborations with researchers across the U of S campus.

Initial work and exploratory discussions are ongoing. The topic was also recently discussed at the Associate Deans Research Forum on October 21st, 2014. Information shared included:

- Outcomes from an initial scan of the university database which identified 78 researchers and 10 colleges/units with expertise and interest in the area.
- Recognition of significant strength and leadership at the University of Saskatchewan in the area of lung health and disease, most notably in the Division of Respirology, Critical Care and Sleep Medicine, Veterinary Medicine, VIDO, IPhRC, CCHSA, Pharmacy and Nutrition, the CLS, the One Health Initiative, and others.
- Potential new opportunities with novel/strengthened relationships with Industry, access to and study of administrative databases, ‘real-life’ clinical research, the proposed CIHR Saskatchewan Patient Oriented Research (SPOR) Unit, Pediatric Lung Health, rebuilding at the College of Medicine, and others.
- Related considerations including potential U of S recognition of Certified Respiratory Educators, enhanced inter-professional interactions, expanded opportunities for development of highly qualified personnel, chronic disease management system re-design and delivery, rural and remote health, and others.
- A sense that collectively we can become more effective, more productive, and more successful in the area.

Focused on “respiratory” research and education, the institute is envisioned to encompass:

- All aspects of respiratory physiology and health
- Integrating lung health with overall health & wellness
- Interactions with related comorbidities
- Preventive medicine and public health
- Environmental (physical, social and societal) health
- Rural and remote needs/realities
- Business/industry engagement and support
- Indigenous people’s needs and engagement
- Health care system delivery, design and economics
- Community, government, and society partnerships
- Social determinants of health
- Translation of new knowledge into practice
- Developing & applying new technology & ideas
- Creating new opportunities ...

The steering committee would like to continue the discussion with members of the university community. Faculty, researchers, clinicians and graduate students – are invited to a mini retreat on Monday, Nov 24th, 0800-12:30 pm, in room C280 Administration Building (green room). Please contact either Steering Committee Co-Chairs or Laura Zink if you have any questions, comments, or required further information.

Respiratory Research Centre Steering Committee Membership:

Darcy Marciniuk, Co-Chair  
Respirology, Critical Care and Sleep Medicine, College of Medicine  
darcy.marciniuk@usask.ca  306.844.1148

Brian Graham, Co-Chair  
President and CEO, Lung Association of Saskatchewan  
brian.graham@sk.lung.ca  306.955.4511

Laura Zink  
Director, Strategic Projects and Operations, Office of the VP Research  
laura.zink@usask.ca  306.966.1778

Ewan Alexander  
Vice President, Health, Safety & Environment, BHP Billiton

Jo-Ann Episkenew  
Director, Indigenous Peoples’ Health Research Centre (IPHRC)

Donna Goodridge  
Respirology, Critical Care and Sleep Medicine, College of Medicine

Beth Horsburgh  
Associate Vice-President Research Health (UofS)/ Vice-President - Research & Innovation (SHR), University of Saskatchewan / Saskatoon Health Region

Gordon McKay  
(Acting) Vice Dean, Research, College of Medicine

Donald McKercher  
Patient Representative

Corey Miller  
Vice-President, Integrated Health Services, Saskatoon Health Region
University of Saskatchewan
Respiratory Research Centre
Organizational Structure – DRAFT

Potential Advisory Panel Membership:

Lung Association of Saskatchewan
Saskatoon Health Region and others]
Saskatchewan Ministry of Health
Business Partners
Patients

Lung Health Institute of Canada
Indigenous Peoples Health Research Centre
Other Universities/Institutions/Entities
Pharmaceutical Partners
Others ...
Proposed Respiratory Research Centre

Visioning Meeting Notes  November 24, 2014  8:00 am 12:00 Noon
Room 280 Administration Building (Green Room), University of Saskatchewan

The meeting began at 8:00 am with introductions and a few brief opening remarks. Participants were thanked for their attendance, and asked a few questions utilizing an anonymous iClicker audience response system, which enabled real-time feedback to the audience (see attachment for questions and responses).

The stated objectives of the retreat were:

- To inform and further discuss the proposed University of Saskatchewan Respiratory Research Centre
- To collate the research areas/themes of strength, opportunity and need that might be facilitated by the Respiratory Research Centre
- To help identify research partners and partnerships that would align with the vision and goals of the Respiratory Research Centre.

It was emphasized that this was an opportunity for attendees to partner and collaborate. Doug Robertson, Facilitator for this meeting, encouraged everyone to participate and began the meeting, asking everyone to help “develop the agenda”. Utilizing ‘open space meeting’ principles, agenda items were collected and organized into five groups (A,B,C,D,E) as follows for the break-out session:

**Group A:**
- Sustainability and commercialization
- accurately assessing (hidden and visible) burden,
- governance,
- environmental scan existing and gaps,
- chronic disease management,
- hub for national/international networks
- resources: technical; knowledge, patient/family community centred
- multisystem integration
- respiratory educators - a place to hang your hat

**Group B:**
- Translational research,
- Art of implementation

**Group C:**
- Acute care vs chronic care,
- Connecting body systems (ie. sleep and rheumatic disease)
- Improved diagnosis thru new biomarkers of disease
- Innovations in community based care

**Group D:**
- Air quality treatment for indoor air
- Prevention and early origins beyond biology
- Health behaviours and exposures
Group E:

- Unique Niche
- Integrated Research,
- Students and Education as drivers of research
- Research <=> Care – University, Governance, Patients/Population, not-for Profit
- Saskatchewan Advantage
- $\$ - Where is the money coming from
- Where is the field going.....where do we want to be when....

Break-out sessions lasted for approximately an hour during which participants generated a few “Action List” items. These were then presented and shared with the entire group generating further discussions and networking.

Wrap-up iClicker questions were asked, answered and reviewed with the group (see attached) and the meeting adjourned with lunch served at 11:15 am. Numerous small-group discussions were evident during lunch.
<table>
<thead>
<tr>
<th>WHO</th>
<th>WHAT</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Fenton, Darryl Adamko, John Gjevre, Regina Taylor-Gjevre, George Katselis, Greg Starrak, Tom Porter, Tanya Duke, Ina van der Spuy</td>
<td><strong>Phenotyping diseases:</strong> Prevent exacerbation/progression of disease using biomarkers and other tools for disease identification. Engage investigators to come together in defined hypotheses for defined clinical problems.</td>
<td>Research Retreat</td>
</tr>
<tr>
<td>Donna Goodridge, Thomas Rotter, Liz Harrison</td>
<td><strong>Knowledge Translation Expertise/Patient engagement:</strong> Develop and provide expertise for patient engagement, knowledge translation and implementation science across as large type of research: Incorporate KT, patient engagement, implementation science into mission statement; 2) identify faculty with expertise/interest in these areas; 3) convene group to begin education and develop strategy</td>
<td>Committee to get together</td>
</tr>
<tr>
<td>Brian Graham – Group A</td>
<td><strong>Base Fund:</strong> Some sort of fund to facilitate the work being done and create new connections and training. Next steps include public and private funding: rural municipalities, Ministry of Health, Ministry of Agriculture, Lung Association of Saskatchewan training programs, Industry (mining groups, insurance, pharma)</td>
<td></td>
</tr>
<tr>
<td>Donna Rennie – Group A</td>
<td><strong>CCHSA and Respiratory Research Centre:</strong> Integration of research with current institute without duplication (integrate Respiratory CCHSA researchers). To do this, determine current structure of CCHSA and resources available, building networks.</td>
<td></td>
</tr>
<tr>
<td>Susan Detmer &amp; Group A (Penz, Corley, Fenton,</td>
<td><strong>Databases of research:</strong> An up-to-date and accurate database housed at the U of S that we can access that has techniques, diseases studied, equipment so we can find someone local to either collaborate or co-investigate with.</td>
<td>Research Services</td>
</tr>
<tr>
<td>Volker Gerdts, J Montgomery, B Horsburg, H Townsend, J Perez Casal, B Reeder</td>
<td><strong>Research Excellence:</strong> Create a focused institute based on our research excellence that will have impact nationally and internationally. Need an environmental scan at the U of S, U of R, and SIAST of the strengths of the CD research. Do not want to replicate an enterprise already existing in Canada or internationally – research what exists.</td>
<td></td>
</tr>
</tbody>
</table>
### Respirology Research Centre
#### Action List from November 24, 2014

<table>
<thead>
<tr>
<th>WHO</th>
<th>WHAT</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wojciech Dawicki, Sylvia van den Hurk, Donna Goodridge, Beth Davis, Erin Prosser-Loose</td>
<td><strong>Dendritic cell immunotherapy:</strong> Take it into the clinic by getting funding for amprograde GMP(?) facility, Engage SCIPOR in Phase I Clinical Trials Health Canada Approval, identify asthma subjects</td>
<td>2015</td>
</tr>
<tr>
<td>Erika Penz, Donna Rennie, Susan Detmer – Group A</td>
<td><strong>Mandate and Structure of Respiratory Research Centre:</strong> Flexibility within the structure of the Centre to move with the mandate. Structure needs to be more fluid than hierarchal (maybe more a “Secretariat”) with networks, policies, data, methods, expertise, knowledge translation, education, community-centred, engagement with stakeholders, patient care and implementation science.</td>
<td>2015 – 2016</td>
</tr>
<tr>
<td>Allan Rosenberg, Nate Osgood, Josh Lawson, Shelly Kirychuk</td>
<td><strong>Behavioral, Environmental Exposures in Pregnancy and Early Childhood on Development:</strong> Understanding impacts of exposures on outcomes, and understanding impact of interventions on exposure and outcomes (electronic surveillance) Josh, Shelly, Nate Donna, and Allan will get together</td>
<td>By end of year</td>
</tr>
<tr>
<td>Shelly Kirychuk, Josh Lawson, Jafar Soltan, Nate Osgood</td>
<td><strong>Air Quality Exposure and Symptomatology Surveillance and Remediation:</strong> Understanding antecedents leading to adverse health impacts via electronic surveillance; mitigation and remediation for air quality; assess mitigation impact on various pathways of outcomes of health Josh, Shelly, Jafar, Nate will get together</td>
<td>By end of year</td>
</tr>
</tbody>
</table>
proposed
Respiratory Research Centre

Visioning Meeting
November 24, 2014

Warm-up question: Please press one the following letters at random.

A
B
C
D
E

Which of the following best describes your current position?

A Researcher – Faculty / Staff
B Researcher – Student (PhD, MSc, etc.)
C Research Facilitator
D Administrator
E Other
Have you or someone in your family ever had a respiratory illness?

A Yes
B No

Have you or a family member ever had:
If more than one lung disease: pick the disease that has the most impact.

A asthma
B COPD
C sleep apnea
D lung cancer
E pneumonia

In which type of respiratory research are you currently engaged?  
Abstain if none

A Clinical
B Basic science
C Community-based participatory
D Other directly related research
E Indirectly related to respirology
Respiratory research should include:
*Abstain means none of the 5 choices*

A  the lungs and airways (throat, mouth and nose)
B  above + health care system (CDM, access, etc.)
C  all above + public health (clean air, prevention, ....)
D  all above + interactions with related comorbidities
E  all above + socio-economic factors & at-risk groups

Which single one of the following best fits your research interests?
*Abstain means none of the 5 choices*

A  the lungs and airways (throat, mouth and nose)
B  above + health care system (CDM, access, etc.)
C  all above + public health (clean air, prevention, ....)
D  all above + interactions with related comorbidities
E  all above + socio-economic factors & at-risk groups

Why did you come to this session?

A  To find out more about the proposed Type “B” Respiratory Research Centre
B  To see how I might contribute to, and benefit from, the proposed Respiratory Research Centre
C  To establish links with other researchers in the field for potential collaboration and/or support
D  All of the above
E  Other
Was this morning worthwhile to you?

A Strongly agree  
B Agree  
C Neither agree nor disagree  
D Disagree  
E Strongly disagree

I want to participate in ongoing activities to create the Research Centre.

A Strongly agree  
B Agree  
C Neither agree nor disagree  
D Disagree  
E Strongly disagree

My understanding is more clear now of the possibilities for the Research Centre.

A Strongly agree  
B Agree  
C Neither agree nor disagree  
D Disagree  
E Strongly disagree
**Respiratory Research Centre**

**DRAFT BUDGET**

<table>
<thead>
<tr>
<th>APPENDIX F</th>
</tr>
</thead>
</table>

### Income

<table>
<thead>
<tr>
<th>Source</th>
<th>2016-17*</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
<th>2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung Association of Saskatchewan</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Office Vice-President Research</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>College of Medicine</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>College of Pharmacy and Nutrition</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Western College of Veterinary Medicine</td>
<td>$15,000</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Lung Health Institute</td>
<td>none</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>CIHR Support Unit</td>
<td>none</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
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</tbody>
</table>

| Total Income                                | $220,000 | $305,000| $305,000| $280,000| $330,000|

### Expenditures

#### Personnel and Support

<table>
<thead>
<tr>
<th>Category</th>
<th>2016-17*</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
<th>2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Director Stipend</td>
<td>$10,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>Coordinator (0.5 FTE)</td>
<td>$17,500</td>
<td>$35,000</td>
<td>$35,000</td>
<td>$35,000</td>
<td>$35,000</td>
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<tr>
<td>Office Supplies</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Web development/maintenance</td>
<td>$4,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Communications (0.20 FTE)</td>
<td>none</td>
<td>$14,000</td>
<td>$14,000</td>
<td>$14,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>$3,000</td>
<td>none</td>
<td>none</td>
<td>$3,000</td>
<td>none</td>
</tr>
</tbody>
</table>

**Total Expenditures**

|                      | $125,500 | $301,000| $341,000| $366,000| $363,000|

**Yearly Net Balance**

| Yearly Net Balance | $94,500 | $4,000  | -$36,000 | -$86,000 | -$33,000 |

**Cumulative Net Balance**

| Cumulative Net Balance | $94,500 | $98,500 | $62,500 | -$23,500 | -$56,500 |

* = some expenditures in 2016-2017 are pro-rated because of the anticipated mid-year startup

# = linked with funding from the CIHR SCPOR Support Unit for healthcare administrative database and system research

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In-kind Support

- Space (College of Medicine)
- IT (College of Medicine)
September 7, 2016

Dr. Lisa Kalynchuk  
Chair, Planning and Priorities Committee  
Office of the University Secretary  
University of Saskatchewan

RE: Respiratory Research Centre

Dear Dr. Kalynchuk,

The Office of the Vice-President Research (OVPR) is pleased to support the establishment of the Respiratory Research Centre (RRC) at the University of Saskatchewan (U of S). The RRC will build on the university’s existing respiratory research expertise and strength, enhance effectiveness, integration, breadth, and competitiveness, as well as provide exceptional opportunity for new research directions and discoveries. As a result, the U of S will be poised to become recognized as both a national and international leader in respiratory health and disease.

The College of Medicine is well positioned as the home for the RRC since it includes a Division of Respirology, Critical Care and Sleep Medicine. The RRC also presents a unique opportunity for multidisciplinary collaborative research on campus that will overtime extend beyond the College of Medicine to leverage new and existing relationships. The field of respiratory research can utilize experts in the Western College of Veterinary Medicine, Vaccine and Infectious Disease Organization, Canadian Centre for Health and Safety in Agriculture, and the University’s One Health initiative. There is also expertise, but as yet unrealized linkages, with the Indigenous Peoples’ Health Research Centre, College of Pharmacy and Nutrition, Canadian Light Source, College of Nursing, College of Engineering, School of Public Health, Johnson-Shoyama School of Public Policy, and potentially many others. The RRC will benefit from these extensive investments to outstanding personnel and large-scale infrastructure on campus, making the Centre well-positioned for future success.

Beyond commitments from other Colleges and entities, the OVPR is pleased to commit $200,000 over the next five years to support the establishment of this Centre.

I believe the RRC will make important and lasting contributions to respiratory research both nationally and internationally. With the active engagement of industry and public sector partners translating research results from bench to bedside, patients and their families will directly benefit, and in effect shape the field of respiratory health moving forward.

Warm regards,

Karen Chad, Ph.D.  
Vice-President Research

C Laura Zink, Director, Strategic Research Initiatives  
Darcy Marciniuk, Associate Vice-President Research – Health (Interim)  
Kevin Veitenheimer, Senior Financial Officer
November 7th, 2016

Dr. Darcy Marciniuk  
Leader, Steering Committee  
Respiratory Research Center  
University of Saskatchewan

Dear Dr. Marciniuk,

The College of Medicine is delighted to support the initiative to develop a Respiratory Research Center at the University of Saskatchewan as well as to provide a home for the center.

As you know the College has been a long-time supporter of research in respiratory disease and acknowledges the already present expertise in this area. The creation of a dedicated center to further existing efforts and expand the research opportunities is both timely and exciting for the University and especially the College of Medicine.

Most recently we hired a respiratory specialist in Cystic Fibrosis, Dr. Julian Tam whom I know you are very familiar and played a key part in his early training and bringing him back to Saskatoon. Our research team headed by Dr. Juan lanowski and involving Drs. John Gjevre, John Gordon, Veronica Campanucci and Dean Chapman have been successful in attracting significant funding from CIHR to further basic research into Cystic Fibrosis and will be a national treasure to your respiratory center. Dr. Darryl Adamko was successful in attracting new support for technologies to further his efforts at discovering early biomarkers for childhood asthma. Other new initiatives are in the planning and implementation phases to add additional human resources to your initiative.

For these reasons the College is fully supportive of your Respiratory Research Centre. To help in this regard the College is providing $100,000 per year in cash or cash equivalents for a period of 5 years. Please work with Megan Steeves in order to properly coordinate this effort and obtain the above promised funding. All funding released from this office requires the submission of a final report at the end of the funding period. This report will include details outlining what was accomplished during the funding period (papers published, grants applied for, study results, etc.) and the PI will not be eligible for further funding initiatives from this office until this report is submitted.

We know you have a tremendous need for highly skilled research methodologists, biostatistics support and database analysis of both quantitative and qualitative data. The College already has considerable capacity in all of these fields but will be further developing these resources in the near future. The commitment the College is providing will ensure you receive the support you require and should be used in this direction.

Thank you for your excellent and continued hard work. We look forward to the success and further growth of Respiratory Research in the province of Saskatchewan.

Marek W. Radomski, MD, PhD, DSc, Dhc  
Vice-Dean, Research
November 8, 2016

Dr. Darcy Marciniuk
Leader, Steering Committee
Respiratory Research Centre
University of Saskatchewan

Re: Support for the Respiratory Research Centre

Dear Dr. Marciniuk:

On behalf of Western College of Veterinary Medicine, I am delighted to provide this letter of support for the initiative to establish a Respiratory Research Centre at the University of Saskatchewan. The Western College of Veterinary Medicine has a long history of fundamental and applied research in respiratory diseases in animals that often serve as very good models of similar diseases in people.

The College currently has respiratory research programs directed by Drs. Matthew Loewen, Susan Detmer, John Harding, and Susantha Gomis. Dr. Julia Montgomery, Sally Sukut, Kevin Cosford and Gupreet Aulakh are all recently recruited specialists with a strong interest in respiratory medicine and all are in the process of establishing their research programs. While these researchers will strengthen the proposed Respiratory Research Centre, they will also develop more interdisciplinary collaborations through the Centre.

Our college is very committed to the One-Health approach to biomedical and social sciences research. The College also houses an NSERC funded Collaborative Research and Training Experience (Itrag) program in the area of Infectious Diseases, Food Safety and Public Policy. The program has supported graduate students engaged in research related to respiratory research under the One Health umbrella. The proposed Respiratory Research Centre will provide enhanced opportunities for the training of students in respiratory research and we very much hope will increase opportunities for collaborations between our faculty and faculty in other Colleges across campus.

The College has made significant investments or commitments to several major collaborative research endeavors at the U of S this year including to the CFI for Nuclear Probes and Translational Nuclear Isotope Research, the Livestock and Forage Center of Excellence and the Cancer Center at the WCVM. Because of these commitments we are not in a good position to provide further funding at this time but will consider doing so next year. To demonstrate our commitment to the proposed initiative, the College will contribute $15,000 in cash towards the establishment of the Respiratory Research Centre this year. I also would like to take this opportunity to thank you for your leadership to develop the Respiratory Research Centre! Thank you.

Yours truly,

Dr. Elisabeth Snead
Bsc., DVM, MSc, Diplomate ACVIM
Professor, Small Animal Medicine
Acting Associate Dean of Research
Western College of Veterinary Medicine
University of Saskatchewan
August 31, 2016

Dr. Darcy Marciniuk  
Faculty, Respiratory, Critical Care and Sleep Medicine  
College of Medicine  
107 Wiggins Road  
Saskatoon SK S7N 5E5

Dear Dr. Marciniuk:

RE: Letter of Support for the Respiratory Centre

The College of Pharmacy and Nutrition fully supports the "application for the establishment of a respiratory research centre". This is an excellent opportunity for the University of Saskatchewan to demonstrate its leadership and strength in this most important area of health care. We need to continue to build on opportunities with all of our campus health science colleagues in Medicine, Pharmacy and Nutrition, Nursing, Dentistry, Veterinary Medicine, Kinesiology Schools of Public and Health and Physical Therapy.

The College of Pharmacy and Nutrition has identified three faculty from pharmacy who will have an immediate impact with the Respiratory Centre. Two of these individuals are Chairs, Dr. Thomas Rotter in Health Quality and Dr. David Blackburn in Adherence, while Dr. Anas El-Anreed is an expert in mass spectrometry. We believe as the centre becomes more established, there will be more faculty who will be involved including those in nutrition as respiratory conditions are associated with numerous medical and psychiatric co-morbidities. We have been one of the most successful health science colleges in obtaining grant funding and despite being a small unit, we have more than 60 graduate students covering all health care research from basic science, clinical sciences, nutrition, health care policy and outcomes. In addition, collaborative research with all health care disciplines is a priority. We believe the faculty of our college will benefit from the respiratory centre and are prepared to contribute $25,000 per year over 5 years.

We look forward to our future opportunities and collaborations once the respiratory centre has been established.

Sincerely,

Kishor M. Wasan, Ph.D.  
Professor and Dean

KMW:smk
Information Technology Requirements for New Centres

This form is to be completed by the person responsible for submitting the centre proposal in consultation with Information and Communications Technology. Contact ICT Research Computing (phone 2070, research_computing@usask.ca) for assistance.

This form is intended to ensure that the Centre
- Articulates what information technology needs it has;
- Can cost and fund these needs (or find alternatives);
- Determines in agreement with ICT what needs ICT can meet;
and this form also ensures that ICT considers the Centre’s impact on the institution’s information technology infrastructure.

Costs for the components should be estimated in conjunction with ICT. Funding sources should be identified.

1. **Centre Identification:** Respiratory Research Centre

2. **Sponsoring Unit:** Office of the Vice-President Research

3. **Network Requirements**
   If you need new network connections or new wireless access, please list locations for these. **N/A**

   Please describe any special network requirements that the centre will have. These would include high speed data transfers, video conferencing, media streaming, firewall protection, or similar. **N/A**

   Will the centre use locations that require networking beyond the extent of the current campus network? (E.g., new buildings or sites in other cities.) **No**

   Will centre employees access University IT resources from off-campus locations, such as their homes, other non-university sites (such as the provincial health regions), or from field locations? How would this access be provided? **No**

   Are there any special telephone needs? (E.g. multiple line telephones, call centre, call recording.) **No**

4. **Software Requirements**
   Does the Centre require specialised software and if so what? (This would include software for modelling, analysis, statistics, visualisation, presentation, animations, etc.) Consider purchase and maintenance or development and ongoing support. **No**
10. Comments
Please list any other factors that may affect the Centre’s IT requirements. **None**

**ICT Comments [K. Jeffrey, 2015-08-24]:**
Keith Jeffrey and John Costa met with Darcy Marciniuk on August 20, 2015, to discuss the IT implications of the proposed Centre. We understand that the creation of the Centre itself will not introduce significant immediate needs for IT and their needs can be met by existing investments in ICT by, as appropriate, the UofS or SHR. The research associated with the Centre will be done by, and is already being done by, the associated researchers. The Centre itself will start with a very small administrative staff in office space yet to be determined. They did not anticipate particular needs for networking, data storage, teleconferencing, etc. The research group indicates awareness of data and information sensitivities and have followed clinical trial protocols to secure data and computing. Certainly the research themes undertaken by the researchers will have IT needs that will need to be addressed as they arise. ICT looks forward to working with the Centre as it looks to facilitate researchers’ access to SK health datasets.

11. Signatures

<table>
<thead>
<tr>
<th>Centre Representative</th>
<th>ICT Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Keith Jeffrey</td>
</tr>
<tr>
<td>Signature</td>
<td>Darcy D. Marciniuk</td>
</tr>
<tr>
<td>Date</td>
<td>August 31, 2015</td>
</tr>
<tr>
<td></td>
<td>August 24, 2015</td>
</tr>
</tbody>
</table>
Library Requirements for New Centre
This form is to be completed by the faculty member responsible for the centre proposal in consultation with the subject area librarian from the University of Saskatchewan Library. Contact the Director of Libraries (phone 5927) for assistance.

1. Proposal Identification
   Centre: **Respiratory Research Centre**

2. Library Resources
   2.1 Resources are/will be located mainly in the Leslie and Irene Dubé Health Sciences Library.

   2.2 Comment on the adequacy of the current level of Library acquisitions in support of this discipline. Materials in this area are mainly purchased through the Medicine monograph fund. The current level of acquisitions is adequate.

   2.3 Specify any serial titles that are core to this centre. The University of Saskatchewan Library subscribes to thousands of electronic journals. It has current subscriptions to 46 of the 57 journals listed in the “Respiratory System” category of the 2014 edition of Journal Citation Reports, the database which lists journals with an impact factor. Examples of titles which may be used by members of the Centre include *Lancet Respiratory Medicine, Thorax, Chest, and Journal of Breath Research*. The Library currently subscribes to all of these.

   2.4 What access is required to resources held elsewhere? (Identify additional costs for access e.g. networking of databases, consortial access to databases, document delivery options).
   No additional resources are required. The Library subscribes to a large number of databases that would be useful for searching the literature in this field. These include *Medline, Embase, Scopus, and Web of Science*. Interlibrary loan can be used to obtain articles from journals to which the Library does not subscribe. Desktop delivery of interlibrary loan articles is now often available.

   2.5 Will any resource re-allocation within the broad discipline be necessary to support this new centre?
   No.

   2.6 What are the human resource requirements to support this centre? (Does the Library have the subject expertise amongst its staff? Are more staff required to develop collections, provide user education, develop and promote web access to resources, etc.).
   There are no additional human resource requirements.

   2.7 If the centre has a teaching component, particularly for graduate students, are library resources sufficient for this program.
   There will be no credit courses taught by the centre. A Certified Respiratory Educator certificate may be offered, but registrants will be responsible for purchasing their own textbooks and course materials.
3. Additional Library Resources Required

3.1 Are new subject areas of acquisition, new electronic resources/databases, new/additional library technology requirements are needed to meet centre requirements?
No; the materials needed to support the centre are already being purchased through existing monograph funds, so no new subject areas of acquisition are needed. The Library already subscribes to a variety of databases to support programs in the areas in which the centre’s members will be working, so no additional electronic resources are needed. There are no new/additional library technology requirements.

3.2 Are there distance education service needs and costs?
No; no distance education is planned.

3.5 Provide an estimated budget required for library resources to support this centre annually.
No additional funds are needed; the Library currently has the capacity to support this centre.

Date: July 13, 2015
Librarian’s Signature: [Signature]
Director of Libraries Signature: [Signature]
Faculty member (for the sponsoring college/dept): [Signature]
Physical Resource Requirements for Programs and Major Revisions (Space, Renovations, and Equipment)

Name of Program: Respiratory Research Centre

Sponsoring College: Colleges of Medicine, Pharmacy and Nutrition, and Western College of Veterinary Medicine

This form is to be completed by the Faculty member responsible for the Program Proposal in consultation with the Facilities Management Division. For assistance, please contact the Associate Director, Space Management and planning (966-6106.)

Prior to sending your submission to the Academic Programs Committee, attach this form when completed, to the Program Proposal. If required, additional comments may be attached.

1. SPACE/RENOVATIONS

1.1 Does the new/revised program require space resources in addition to the college’s present space allocation?

  _ No (Skip to question 1.3.)

  _X_ Yes (Please describe below.)

<table>
<thead>
<tr>
<th>Type of Space*</th>
<th>Amount</th>
<th>Occupants</th>
<th>Area or Capacity</th>
<th>Special Requirements (fume hoods, cold room, A/C, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>One</td>
<td>Director</td>
<td>Standard Office</td>
<td>N/A</td>
</tr>
<tr>
<td>Office</td>
<td>One</td>
<td>Coordinator</td>
<td>Standard Office</td>
<td>N/A</td>
</tr>
</tbody>
</table>
* Some examples of types of space include: classroom; office (faculty, staff, and graduate student); laboratory (teaching, research); workshop; studio; rehearsal room; field plot; animal facilities; etc.

1.2 Is the college aware of space outside of its current resources that could accommodate these needs?

__ No  

_ X_ Yes (Please describe below.)

Through the University and the Council of Health Sciences Deans, a commitment has been made to secure office space at St. Andrew’s College for the Centre. Centrally scheduled meeting rooms will also be accessible for the Centre.

1.3 Does the new/revised program require renovations to the college’s current space?

_ X_ No (Skip to section 2.)

__ Yes (Please describe below.)

General Description of Renovations: Pending the final designation of offices, it is not anticipated that renovations will be required.

Room #(#s): Present Use

________________________________________________________________________

Proposed Use: (Including special installations, e.g. fume hoods.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

1.4 Has a Work Initiation Request Form (WIRF) been submitted to Facilities Management for any of the above additions or renovations?

_ X_ No

__ Yes (Please attach a copy of the form.)
1.5 Can development of any of the proposed additions or renovations be phased or completed in stages?

No  N/A

Yes:

Please provide timeframe and FMD cost estimates for each stage. (Note: Cost estimates for additions and renovations may be obtained by submitting a Work Request Initiation Form (WIRF) to FMD Work Control. For more information, please visit: http://www.facilities.usask.ca/services/workcontrol/

_____________________________________________________

2. EQUIPMENT

2.1 Does the new/revised program require additional equipment or upgrades to current equipment?

No

Yes (Please describe below.)

<table>
<thead>
<tr>
<th>Equipment Required (Including special requirements*)</th>
<th>Quantity</th>
<th>Estimated Required</th>
<th>Estimated Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop Computing and accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note whether the installation of equipment will require additional space or renovations, or if there are special electrical, cooling, ventilation, plumbing, etc. requirements.

3. FUNDING

3.1 Are college funds available for the required new space, renovations, or equipment? N/A

Initial costs: No
3.2 Are funds available from non-base budget/external sources towards the cost of any of the new space, renovations, or equipment?

Initial costs:  ____ No

Yes: ___ Yes

Ongoing operating/maintenance costs:  ____ No  N/A – the University will cover space lease costs.

___ Yes

If yes, provide details, including any special conditions:

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

3.3 Will there be a request to the Provost’s Committee on Integrated Planning for capital funds to accommodate the program?

____ X_ No

___ Yes

4. ADDITIONAL COMMENTS

If relevant, please comment on issues such as the adequacy of existing physical resources for delivering the proposed program, the feasibility of proposed additions or renovations, sources of funding, etc.
Capital funding required for furnishings, office set up (e.g. computer access, telephones, consumables) and computer equipment will be provided by the Office of the Vice-President Research, the Colleges of Medicine, Pharmacy and Nutrition, Veterinary Medicine, the Lung Association of Saskatchewan, the Lung Institute of Canada, and the Saskatchewan Centre for Patient Orientated Research.

Date: June 3 2015

Andrew Wallace, Facilities Management

Bryan Bilokreli, Office of the V-P (Finance and Resources)

Faculty Member (Sponsoring College)

Print Name

Phone