

UNIVERSITY COUNCIL
PLANNING AND PRIORITIES COMMITTEE
REQUEST FOR DECISION

PRESENTED BY: Bob Tyler, Chair, Planning and Priorities Committee

DATE OF MEETING: February 28, 2013

SUBJECT: **Establishment of the Centre for Applied Epidemiology as a Type A Centre in the Western College of Veterinary Medicine**

DECISION REQUESTED:

It is recommended:

That Council approve the establishment of the Centre for Applied Epidemiology as a Type A Centre in the Western College of Veterinary Medicine, effective February 28, 2013.

PURPOSE:

The Centre for Applied Epidemiology will enable members to establish a national presence in the field of applied epidemiology, attract new graduate students, and strengthen ties with public health agencies and other researchers.

CONSULTATION:

The Centres Subcommittee considered the proposal to establish the Centre on February 6, 2013, and the Planning and Priorities Committee considered a revised proposal on February 13, 2013. Suggested revisions included clarifying the definition of applied epidemiology, broadening the list of collaborators, and consulting with the Department of Community Health and Epidemiology and the School of Public Health.

SUMMARY:

The Planning and Priorities Committee supports the establishment of the Centre for Applied Epidemiology as a Type A Centre at the University of Saskatchewan. The Centre is well positioned to achieve its objectives, utilizes existing resources, and presents a logical and strategic plan for growth.

ATTACHMENTS:

1. Proposal to establish the Centre for Applied Epidemiology.

The Centres Policy and Guidelines may be found at:

www.usask.ca/university_secretary/policies/research/8_23.php

Application for the Establishment of a Centre for Applied Epidemiology at the University of Saskatchewan within the Western College of Veterinary Medicine

1. Name of Centre:

Centre for Applied Epidemiology

The name was chosen to be broad but focused on the aspect of Epidemiology that the Western College of Veterinary Medicine (WCVM) should be known for, while allowing for the Centre to be recognizable nationally. In epidemiology training and application of those principles to real world problems, there is no distinction between veterinary epidemiology and human health epidemiology. Therefore, although started within the WCVM, using the name “applied epidemiology” will hopefully not limit the future scope of those that might affiliate with the Centre.

Applied Epidemiology has been defined as *the application or practice of epidemiology to address issues of public or animal health*. Examples of the activities that are included in applied epidemiology include: (1) monitor and describe the distribution of health-related outcomes in populations (current and historical patterns), (2) studying particular risk factors for the development of a health-related outcome, (3) evaluating the effectiveness or impact of an intervention, health program, or policy (4) synthesizing results of etiologic studies across disciplines to assess disease causation, and (5) communicating epidemiologic findings effectively to policy makers and the public.

2. Type of Centre:

Type A centre; located within the Western College of Veterinary Medicine.

Future expansion of the Centre might entail a change to a Type B or C Centre, but the present vision is to begin small in order to build the Centre properly and efficiently.

3. Academic Plan:

Goals and Objectives:

Epidemiology was identified in the Third Integrated Plan of the Western College of Veterinary Medicine (WCVM) as one of its strengths to be promoted and supported. Over the last 15 years, the faculty and non-faculty contingent dedicated to epidemiology (research and teaching) within the WCVM has changed and grown, but the focus of applied epidemiology has remained consistent. Despite this internal growth, the College’s collection of epidemiologists, while renowned nationally for their individual achievements, has not capitalized strategically as a collective group. A move among the other Canadian Universities with veterinary colleges (University of PEI, University of Guelph, University of Calgary, Université de Montréal) has been to establish a name for themselves through formal recognition of a centre, collaborative groups or specialized departments dedicated to epidemiology or population health.

The formation of the Centre would also provide a central and visible entity to attract highly-qualified graduate students to fulfill current research projects in epidemiology that are developed by Centre members. The formation of the Centre would formalize collaborative networks that exist within the Province of Saskatchewan

(and beyond its borders), networks that have been established by collaborations with public health epidemiologists, with previously graduated qualified epidemiology Master's and PhD students, and the cadre of faculty and non-faculty that participate in epidemiology activities within the WCVM.

The collective group would also benefit from the formation of a centre as it would provide a home for various future initiatives and collaborations that are potentially underdeveloped. The Centre would provide a recognizable entity through which to develop and provide continuing education opportunities for epidemiologists across Canada, whether in the veterinary field or within public health.

The Centre for Applied Epidemiology would be the logical affiliation for the Disease Investigation Unit (DIU) that presently exists within the Large Animal Clinical Sciences (LACS) department. The DIU is currently designed for investigating food animal outbreaks, but could be grown to include companion animal, exotic pet and other public health related outbreaks. The creation of the Centre would provide the visibility necessary for the DIU to successfully attract funding to enhance and expand its investigative capacity.

The Centre would establish a "virtual place" for all Centre members who practice applied epidemiology within the College to come together; at present we are spread across the College and other University entities. Our activities, interests and projects are varied but our mandate and purpose is common. The Centre would provide an avenue to promote our skills collectively on a national level and make us more visible and recognizable as leaders in applied epidemiology. Each Centre member already is asked to provide consultation to other departments in the College on faculty and graduate student projects, both in designing research proposals and in statistical consultation. Sometimes we are recognized for these efforts, but many times we are not.

Part 1 of the 2012-2016 WCVM Third Integrated Plan document

(<http://www.usask.ca/ipa/documents/protected/plans/Western%20College%20of%20Veterinary%20Medicine.pdf?ticket=ST-160909-aPgdn7sSnUGWhFaRFzZt-%24HOST>) speaks directly to the importance of epidemiology within the WCVM.

7. EPIDEMIOLOGY AND PUBLIC HEALTH – ONE HEALTH -- *Our objectives included maintaining a leadership role; developing our areas of expertise, capacity, and excellence within Epidemiology; collaborate on campus and beyond; expand the "One Health" theme; and increase activities in comparative medicine. We have addressed many of the objectives, and this area will also be part of our next planning cycle.*

In addition, in Part 2 of that document the College recognized the need to further support the area of One Health. As the Centre for Applied Epidemiology develops, the integration of non-veterinary epidemiologists as collaborators will further support the development of the One Health theme.

One Health

The college will become a leader in Canada and internationally in the area of One Health. The college will enhance research around the One Health initiative and develop solutions at the animal-human-environment interface. These are critical to addressing today's complex human and animal health problems (emerging and re-emerging diseases, food safety and security, public health). The focus on this area will also foster development of integrative and larger research programs among the health science colleges, the graduate school, VIDO, the Toxicology Centre and the Canadian Centre for Health and Safety in Agriculture.

The WCVM is committed to partnerships with the School of Public Health and the School of Environment and

Sustainability through joint appointments and research collaborations. The Centre will provide a mechanism to promote the collaborative epidemiologic research that is on-going at the University of Saskatchewan between these schools as well as other health science colleges and departments across campus. The Centre may in the future incorporate collaborators from a wealth of backgrounds, with specific emphasis on those who have an applied epidemiology focus to their work, irrespective of their employment location.

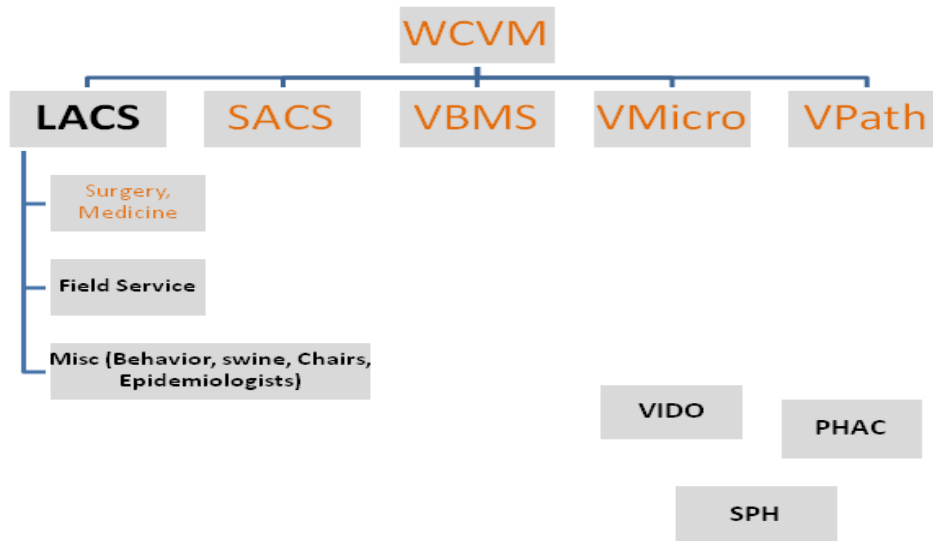
Specifically regarding research, the WCVM has committed to increasing its presence and funding sources, specifically Tri-council funding. Centre members have a history of successful funding from a wide variety of sources, including Tri-council. In the last five years, success with the Canadian Institutes of Health Research (CIHR) reached \$152, 900 (see previous figures), a four-fold increase over the previous five-year period.

In addition, WCVM has identified training of highly qualified graduate students as a key area for future development. This will increase the research capacity, research funding obtained and publications that ensue. The formation of the Centre will strengthen the ability to recruit and train graduate students with a focus in epidemiology through raising awareness of our program internally, nationally and internationally.

Impact and relationships:

Epidemiology at the other veterinary institutions across Canada is a prominent feature of the departments in which it is housed; e.g. Ontario Veterinary College has the Department of Population Medicine (<http://www.ovc.uoguelph.ca/popm/>) and the established Centre for Public Health and Zoonoses (<http://www.ovc.uoguelph.ca/cphaz/>); the new veterinary faculty in Calgary has the both the Department of Ecosystem and Public Health and the Department of Production Animal Health which list epidemiology as components (<http://vet.ucalgary.ca/departments>); the faculty of veterinary medicine at the Université de Montréal is the only all-French veterinary college in Canada with a strong group of epidemiologists and an emphasis on ecosystem health (<http://www.medvet.umontreal.ca/departements/PathologieMicrobiologie.html>); and the Atlantic Veterinary College has the Department of Health Management (<http://healthmgt.upei.ca/>) but has recently promoted their expertise in epidemiology through the Centre for Veterinary Epidemiological Research (CVER; <http://cver.upei.ca/>). Both OVC and AVC have significant numbers of graduate students in the area of epidemiology and have great reputations for their epidemiology programs.

Epidemiology at the WCVM consists of a growing collection of faculty and non-faculty members. In the figure below, the black lettering is the current location of the departments that have at least one faculty with an epidemiology background. Within the LACS department, these individuals are either primarily epidemiologists or those that primarily work within field service, industry chair positions or clinical service while doing epidemiology as a component of their daily jobs. Outside of the College, Centre members are also located in VIDO and the Public Health Agency of Canada (PHAC). Two of our Centre members from the LACS have joint appointments within the School of Public Health (SPH) and contribute to the bulk of the epidemiology teaching that occurs in the school.



In contrast to other schools, potential graduate students looking for training in epidemiology do not identify the Department of Large Animal Clinical Sciences as a place to apply. In a recent email from a potential graduate student who was directed to inquire through a faculty member of a different department within the WCVM, the student requested information on how to obtain a PhD in epidemiology as he/she understood that we didn't have a formal training program in place for this. This statement is far from the truth; numerous graduate students have graduated from the LACS with a degree focus in epidemiology and have gone on to employment opportunities in federal and provincial government positions (Public Health Agency of Canada, Canadian Food Inspection Agency, agriculture ministries in various provinces, etc.), consulting businesses (in Canada and the United Kingdom) and academia across North America (Colorado State University, University of Saskatchewan, University of Calgary, etc.).

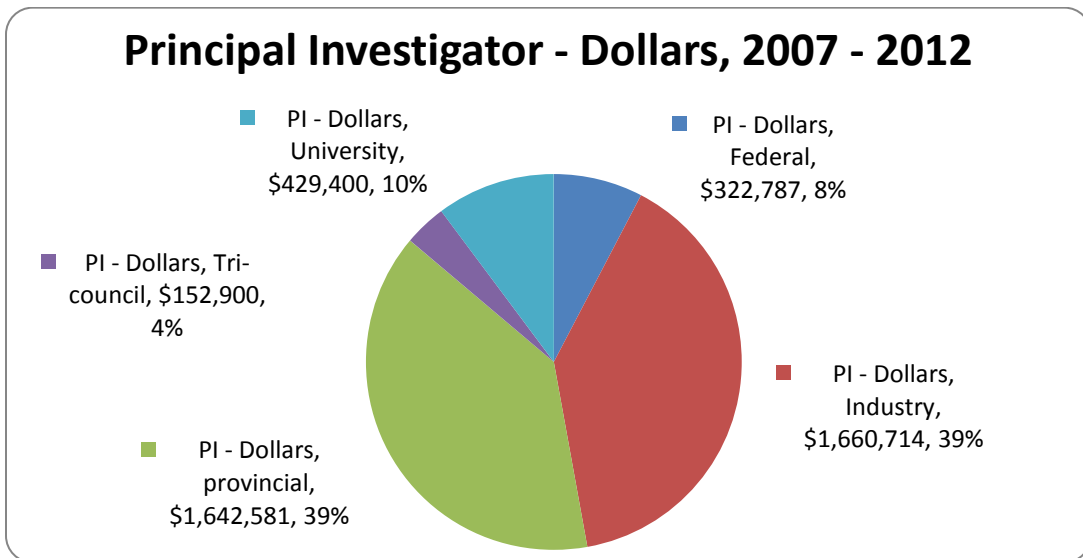
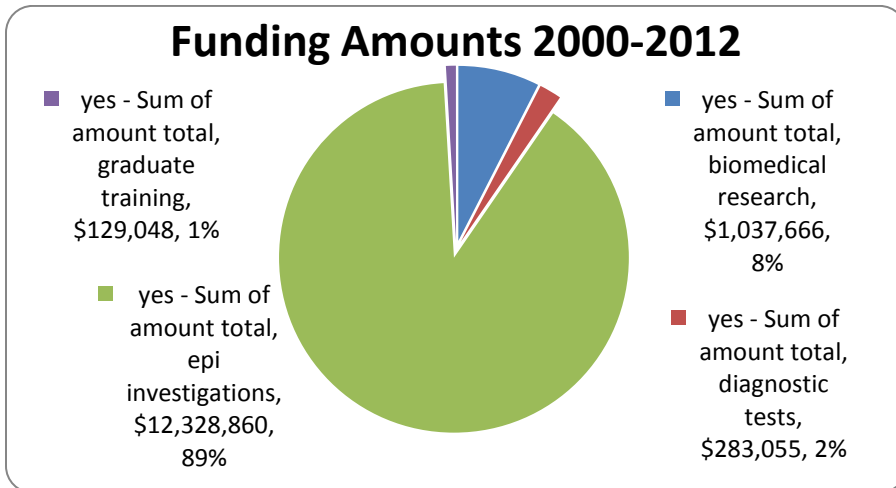
The LACS department website promoting graduate opportunities (http://www.usask.ca/wcvm/departments/large_animal/graduate_programs.php) does not provide a visible and transparent method to promote training in epidemiology within our College. One reason for this is that all of the epidemiology courses are located within the School of Public Health, but are primarily taught by faculty within the WCVM – LACS. Another is that a student has to scroll down through a long list of faculty names to find individuals with research interests in “epidemiology”. The inclusion of a link to the website for the “Centre for Applied Epidemiology” would increase the awareness of potential graduate students to the research interests of Centre members and the possible epidemiology-related opportunities that are available at the WCVM, University of Saskatchewan.

Scholarly Work:

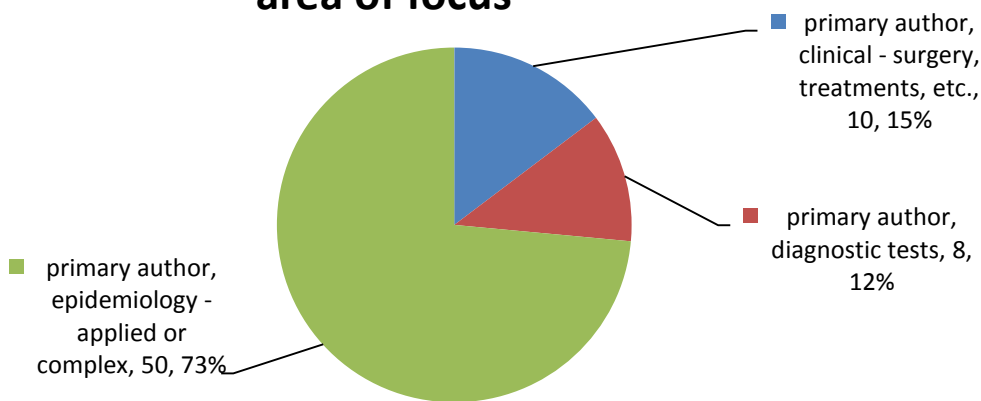
The Centre would be focused on those researchers with epidemiology as an active component of their employment. A list of direct Centre members and indirect members that have expressed interest or would likely be collaborators in the future with the Centre are listed in section 4: Proponents.

At present, the projects where direct Centre members have been the Principal Investigator reflect the applied aspects of epidemiology at the University of Saskatchewan. In 2012, an extensive inventory of the contributions to epidemiology by direct proponents of the proposed Centre (see section 4: Proponents) was created. Just focusing on the last 12 years, the contributions to applied epidemiology are evident; funded research grants

included epidemiology-related projects (such as specific outbreak or disease investigations, assessment of contributing risk factors, etc.) (89%); diagnostic test evaluation (2%); biomedical research (such as vaccine, treatment or immunology projects) (8%); and graduate training grants or programs (1%). Research dollars that were contributed to the WCVI over the last 12 years indicate a significant contribution from a relatively small group of researchers (over \$12 million for epidemiology investigations where a Centre member was the principal investigator). Of the papers where direct Centre members were the primary author (from 2000-2012, n=68), 73% (n=50) relate to applied epidemiology, 15% (n=10) relate to biomedical research (such as vaccines or treatments) and 12% (n=8) relate to diagnostic test evaluations. The following figures highlight these results:



Papers (2000-2012) from primary author by area of focus



The Centre would be a logical place to showcase the contributions of its members to the field of applied epidemiology. It would provide an arena to develop and promote educational opportunities for continued learning in epidemiology and attract qualified graduate students to further the work of Centre members. It would provide a visible location to attract highly qualified graduate students to further the work of applied epidemiology at the University of Saskatchewan, with a specific focus on veterinary medicine (diagnostic tests and production medicine) and One-Health (food safety and zoonotic diseases) research themes. The direct and indirect Centre members would not have to alter their daily activities in any way; the Centre is merely to make their contributions more visible locally, nationally and internationally to collaborators, graduate students and other organizations.

4. Proponents:

Direct proponents:

- Dr. John Campbell; Professor - LACS, WCVM U of S;
- Dr. Cheryl Waldner; Professor - LACS, WCVM, U of S;
- Dr. Hugh Townsend; Professor - LACS, WCVM, U of S; Program Manager – Bacterial Vaccine Development – VIDO, U of S;
- Dr. Tasha Epp; Associate Professor - LACS, WCVM, U of S;
- Dr. Steven Hendrick; Associate Professor - LACS, WCVM, U of S;
- Dr. Sarah Parker; Research Associate - LACS, WCVM, U of S;
- Dr. Murray Jelinski; Professor - Alberta Chair in Beef Cattle Health and Production Medicine, (LACS), WCVM, U of S;
- Dr. Sheryl Gow; Epidemiologist - PHAC – CIPARS group;
- Dr. Joanne Tataryn; Epidemiologist - PHAC – Outbreak Management Division, Centre for Food-borne, Environmental and Zoonotic Infectious Diseases.

All direct proponents work within, are directly affiliated with or are located within the Western College of Veterinary Medicine. The Centre was intended to bring us together in order to strengthen our profile locally,

nationally and internationally. The Centre will likely attract further individuals located locally, nationally and internationally; which will be a mechanism for future research or training collaborations as well as attract future members to the Centre as it grows.

Here is a list of other collaborative proponents that have expressed interest in or may be interested in the Centre:

- Dr. Dale Douma – Manitoba Ministry of Agriculture
- Dr. Leanne van de Weyer – private epidemiology consultant
- Dr. Leigh Rosengren – private epidemiology consultant
- Dr. Wendy Wilkins – Saskatchewan Ministry of Agriculture
- Dr. Sherry Hannon – Feedlot Health, Alberta
- Dr. Bobbie Lundquist – Canadian Food Inspection Agency
- Alvin Gadjadhar - Canadian Food Inspection Agency
- Cindy Feng – Biostatistician (SPH and WCVM)
- Proposed Chair in Food Safety
- University of Saskatchewan CERC Chair in Infectious Disease Mitigation
- Dr. Bruce Reeder – Community Health and Epidemiology; One Health Initiative

Consultation Process:

The group of direct proponents has intermittently met over the past 5 years to discuss training and recruitment of qualified graduate students towards a degree with a focus in epidemiology. This group met most recently in June, 2012, to discuss further development of epidemiology expertise and contribution areas at the University of Saskatchewan. Not all members were able to attend, but all have contributed their comments to what was discussed at this meeting through emails and other hallway conversations.

The stimulus for our conversations was a recognized need to be able to clearly articulate and promote the specific area of epidemiology that our group excels at. It is clear that promotion of such focused expertise is an important component. All other veterinary colleges across Canada are actively promoting what they are known for, often using the creation of Centres of Excellence or collaborative groups to provide the platform for that promotion. For example, the Atlantic Veterinary College has the Centre for Veterinary Epidemiologic Research; the Ontario Veterinary College has promoted its collaborative partnership with Public Health Agency of Canada and the established Center for Public Health and Zoonoses; and the newly created University of Calgary Faculty of Veterinary Medicine is promoting itself as a unique veterinary school that has extensive linkages with the Faculty of Medicine and was designed to meet both animal and public health needs. In the past few years, there have been a number of approaches made to this College to elicit what expertise it contained that could conduct research in applied epidemiology. Having participated in these meetings, members of this group recognized the advantage that would have been attached to having already existing recognition for capacity to conduct applied epidemiology research. Some examples include meetings with the Food Safety Division of the Canadian Food Inspection Agency to provide proposals for *Listeria* control within processing facilities, ELANCO Animal Health, the Northwest Territories government regarding anthrax outbreak in bison, and more.

Collectively, our group focused its conversations on what we excel at here at the University of Saskatchewan. While much work across campus has gone into developing and highlighting our unique contributions and abilities in the field of One Health, our group felt that we had another area in which we have excelled for a more substantial period of time: Applied Epidemiology. Although many members wear multiple hats, each member

has made significant contributions to the field of epidemiology.

Our group is relatively small in comparison to those in other veterinary schools across Canada, but it has been growing over the last five years. At this time, we have developed a critical mass that would allow us to function collectively as a named group or unit on campus. We are not significant enough to warrant a department unto our own, but the naming of a centre would be a great way to increase our visibility nationally.

The next step was to create an inventory of our successes over the last 12 years. A database was set up to collectively display our achievements as individuals in our various positions. A cut-off point of 2000 was used; however, some of our direct proponent members have contributions that date back to the early 1990's. The inventory highlights are included in this application; the highlights are focused on funding directly garnered by members of this group as the PI of the fund, peer-reviewed publications of direct members of this group or their graduate students, and the breadth of graduate students that have been trained by this group and where they have ended up.

As part of the consultation process, a number of non-faculty epidemiologists were approached to discuss the need for expertise in applied epidemiology, the need for a focused research network, and their interest in being connected with the network. A short list of individuals is included within section 4: Proponents. As the Centre grows, the inclusion of epidemiologists of non-veterinary background is expected.

The final step was to set up a meeting with the Dean and the Associate Dean of Research from the Western College of Veterinary Medicine (Doug Freeman and Baljit Singh, respectively); see the accompanying letter of support from the Dean for specific comments. At this meeting, the Dean and Associate Dean of Research pledged support of \$1500.00 from the college budget as start-up funds for the Centre. In addition, they were extremely supportive of the development of the Centre with the hopes of linking other initiatives with the Centre in the future; e.g. a proposed Food Safety Chair, proposed CERC chairs, the Global Institute for Food Security and potentially an international collaboration (African projects under a USAID grant).

5. Centre Management:

The following is the proposed 1 year, 5 year and 10+ year plan:

Year 1:

As a Type A Centre, the Dean of the Veterinary College (Doug Freeman) would be the individual to whom the Centre is administratively accountable. Annual reports on the work of the Centre, the contributing members and all financial aspects would be sent to the Dean by June 30th of each year.

The Centre would rely on a primary leader or manager for the first year, with no other paid or unpaid full-time positions. The Centre member that would take on the leadership task is Dr. Tasha Epp. The leader will be the official contact for all administrative matters (i.e. to ensure that an annual report is created and meetings are called on an annual basis).

Inclusive meetings of the direct Centre members will be conducted as the Centre is developed during this year, and then minimally on an annual basis thereafter. Promotional materials (website, promo cards, etc.) will be created for both University and national coverage; Sarah Parker has agreed to be the liaison of information for such endeavours. A promotional event within the College will be held to announce the creation of the Centre in

early 2013; further promotion of the Centre will coincide with the Canadian Association of Veterinary Epidemiology and Preventive Medicine conference, which is to be held in Saskatoon in May 2013.

Year 2-5:

Upon establishment of the Centre, annual meetings of the Centre members would be conducted. The Disease Investigation Unit in its present capacity will be affiliated with the Centre with its current management structure intact (John Campbell as the lead and Sarah Parker as the paid part-time manager).

The Centre will look to develop a group profile within the Canadian Network for Public Health Intelligence (CNPHI - https://www.cnphi-rcrsp.ca/cnphi/cnphi_root/login.jsp?lang=en&src=CNPHI). This online web-portal has capacity for group collaborations, outbreak response and surveillance; key components of applied epidemiology. This network has the capacity to provide a portal for One Health initiatives as it is widely being adopted by the Canadian Food Inspection Agency, Public Health Agency of Canada, local and provincial health departments and agriculture commodity groups.

As the Centre becomes more established, the breadth of activities within the Centre will increase. These include but are not restricted to:

- Annual advertisement of vacant and upcoming graduate training opportunities in epidemiology within the WCVI; this would not be a new program in the College but merely a route to more explicitly advertise for epidemiology faculty linked to the LACS website for graduate opportunities.
- Seeking external funding sources and collaboration to potentially increase the breadth of the Disease Investigation Unit. The growth of the unit will provide outbreak investigation opportunities for all epidemiology graduate students in the College; there is also the potential to create specific animal applied epidemiology graduate and undergraduate courses. The addition of epidemiologic assistance in the investigations will increase the potential for publishable papers and spin-off research projects.
- Collectively writing a book on Applied Epidemiology for Veterinary Field Investigation has been discussed. At present, the feasibility of such an endeavour is being researched by Cheryl Waldner, a Centre member.
- The creation of professional continuing education opportunities with a focus on applied epidemiology will be pursued. This has been identified by collaborators within federal and provincial government organizations as an area for development.
- Collaborations for projects between non-faculty, faculty and indirect Centre members will be explored as they become apparent. The Centre would provide an avenue to promote the skill basis that exists at the University of Saskatchewan.
- Consultation services could be established whereby Centre members could be compensated for their time. Analytical support is a key request from faculty in the Veterinary College; at present, these skills are sometimes not formally recognized or compensated.
- Aid in the development of international connections for Centre members. A Centre Member, Joanne Tataryn, has already offered to pursue inquiries into the development of an Epidemiology Placement option; a method to provide epidemiologic assistance to developing countries in the form of short-term placements.

Year 6-20:

As the Centre's obligations and projects/programs increase, there is the potential to explore augmenting the Centre from a Type A centre to a Type B or C centre. This would involve moving towards a more elaborate management structure including a Director, a board, full-time staff and perhaps a physical location on the University campus. The potential of this future expansion highly depends on the success of the Centre as a Type

A, and the development of the research paths of the Centre members to date as well as future potential Centre members. As this would require a separate application to the University, it will not be discussed in more detail at this time.

6. Resources and Budget:

Year 1:

In the establishment of the Centre, the only costs will be in creating promotional materials. We requested a small amount (\$1500) of start-up funds or in-kind resources from the College for the creation of a website and promotional materials. This amount will be provided to the Centre from the budget of the Dean of the WCVM.

Year 2-5:

Once the Centre is established, it will operate on minimal funds each year, consisting primarily of administrative costs related to reporting of the Centre's activities.

Initially, the Disease Investigation Unit will continue in its present state with funding obtained from the Saskatchewan Ministry of Agriculture and administered through the Large Animal Clinical Sciences department. Any augmentation of the DIU will involve sourcing funding from outside agencies or industry partners (e.g. provinces, federal, specific commodity partners, pharmaceutical companies, etc.); therefore, branching out of the services provided will occur only as funding is secured and personnel are identified. If branching out of services does occur, there will be consideration of incorporating the DIU as a component of the Centre which may result in modifying the Centre into a Type B or C entity.

Year 6-20:

Whether or not the Centre is expanded beyond a Type A centre will depend on its functioning during the first five years. It is possible that the Centre will remain a viable entity without any need for expansion to a Type B or C entity.

7. Support: See attached letter from the Dean of the WCVM.

8. Governance:

As a Type A centre, the Dean of the WCVM (Doug Freeman) would be the individual to whom the Centre is administratively accountable. Annual reports on the work of the Centre, the contributing members and all financial aspects would be sent to the Dean by June 30th of each year.

As a Type A centre, the primary leader or manager for the first year would be Dr. Tasha Epp (an un-paid position in title only), with no other paid or unpaid full-time positions. The leader will be the official contact for all administrative matters (i.e. ensure that the report is created and meetings are called on an annual basis). The Disease Investigation Unit will continue in its present administrative state (John Campbell as the lead and Sarah Parker as the paid part-time manager). As the breadth of the DIU increases, the potential for a full-time managing position will be considered and could in the future be housed primarily within the Centre (not part of this application at this time).

9. Systematic Assessment:

The Centre will be subject to systematic review as specified in the University's *Policy on Centres*. A review will be conducted every four years as part of the integrated planning process in the Western College of Veterinary Medicine.

Attachment:

Letter of support from Doug Freeman, Dean, Western College of Veterinary Medicine

12 December 2012

Dr. Tasha Epp
Western College of Veterinary Medicine

RE: Center For Applied Epidemiology

Dear Dr. Epp:

This letter is in strong support for the establishment of the Center For Applied Epidemiology. The initiative is timely, important, and fills specific needs. Epidemiology has been a component of our integrated planning process, and is certainly an area of strength within the college. As your proposal notes, the Center For Applied Epidemiology will strengthen, formalize and likely expand existing collaborative networks and related opportunities. It will also provide a place to "locate" these related initiatives and collaborations, as well as enhance affiliations with entities such as the Disease Investigation Unit. A formal Center will support our ability to attract top graduate students, faculty and other partners. The Center will provide a much needed virtual home for members scattered across our college and across campus.

It seems clear that the establishment of the Center For Applied Epidemiology will build upon our existing strengths and enhance our ability to grow the scope of activities related to epidemiology. The college will provide start up funds and otherwise support this important proposal.

Thanks to you and your colleagues for your efforts in developing the Center For Applied Epidemiology.

Sincerely,



Douglas A. Freeman DVM, PhD
Dean