S.11-64

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MEMORANDUM

ATTENTION	Senate	**DATE**	April 18, 2011
FROM	Jon Driver, Vice-President, Academic and Provost, and Chair, SCUP	**PAGES**	1/1
RE:	Faculty of Health Sciences (SCUP 11-15)		

At its April 6, 2011 meeting SCUP reviewed and approved the Full Program Proposal for a PhD in Health Sciences within the Faculty of Health Sciences, effective Fall 2011.

Motion:

That Senate approve and recommend to the Board of Governors the Full Program Proposal for a PhD in Health Sciences within the Faculty of Health Sciences, effective Fall 2011.

encl.

c: J. Scott
C. Janes

SFU

SCUP 11-15

MEMO

Dean of
Graduate Studies

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TO Senate Committee on University Priorities | TEL 1486

FROM Wade Parkhouse, Dean, Graduate Studies

RE Faculty of Health Sciences: PhD program
NOI [GS2007.31a] Program Proposal [GS2009.10]

DATE 15 March 2011

At its March 2011 meeting, SGSC unanimously approved the enclosed proposal for a Doctoral Program in Health Science.

We are forwarding this to SCUP, with the recommendation that the proposal be approved. In addition to the full proposal, we also enclose copies of the new course proposals, external reviews of the proposed program, and curriculum vitae of the faculty.

Proposal for PhD Program in the Faculty of Health Sciences

Sept 2007	NOI approved by SGSC subject to revisions
Feb 2008	Revised NOI received
Apr 2008	NOI approved in principle by SCUP
Feb 2009	Received Full Program Proposal
May 2009	Received revised Full Program Proposal
June 2009	Reviewed by SGSC – revisions requested
Aug 2009	Received revised Full Program Proposal
Sep 2009	Sent proposal to external reviewers
Feb/Mar 2010	Received two external reviewers' reports
Mar 2010	Forwarded external reviewers' comments to the Faculty of Health Sciences
Apr 2010	Received revised Full Program Proposal
Apr 2010	Reviewed by SGSC – approved subject to revisions
Jan 2011	Received revised Full Program Proposal
Feb 2011	Provided to SGSC for information and for approval of all associated courses.
Mar 2011	SGSC approved Full Program Proposal
Mar 2011	Proposal submitted to SCUP

PROPOSAL TO OFFER A DOCTOR OF PHILOSOPHY DEGREE IN HEALTH SCIENCES

Simon Fraser University Faculty of Health Sciences

4 February 2011

CONTACT: CRAIG R. JANES, ASSOCIATE DEAN-ACADEMIC, AND ACTING GRADUATE PROGRAM DIRECTOR, cjanes@sfu.ca, 778-782-7189

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1. EXECUTIVE SUMMARY

a) The organization's history, mission, and academic goals: Simon Fraser University (SFU), a public tertiary institution within the province of British Columbia, Canada, was established in 1965. It has since grown into a mature, comprehensive university with a combined annual student enrolment of nearly 32,000 (26,332 full-time equivalent (FTE) undergraduate students, and 5,341 FTE graduate students), an academic complement of approximately 950 FTE research and instructional staff, and a non-instructional support staff of 1,450 FTE.

The SFU Senate and the Board of Governors formally created the Faculty of Health Sciences (FHS) in September, 2004. In 2005, the first members of the faculty complement were hired and the Faculty accepted its first cohort of graduate students into an MSc program in Population and Public Health (MSc-PPH). In 2007 the practice-based stream in the MSc-PPH was renamed the Master's of Public Health Degree (MPH). The research stream of the MSc-PPH degree was then given the simple designation of MSc, and the first MSc-research stream students were admitted in 2009. Beginning in 2006, two bachelor's degree programs were developed: a BA, and a BSc. The BA degree in health sciences emphasizes health policy and social science approaches in population and public health. Currently the BSc degree program offers students two streams: one in population and quantitative health sciences, and one in laboratory-based life sciences. With its increasing size, diversity, and research capacity, the FHS is now prepared to mount a research-intensive doctoral program that offers research training in areas of faculty research expertise spanning the multiple disciplines that pertain to health.

In June 2008 the FHS moved into a new purpose-built building – Blusson Hall -- in the heart of the institution at the main Burnaby Mountain campus. This facility includes faculty and graduate student office and research space, teaching laboratories, and state-of-the-art research laboratories and a data centre, including a CL-3 laboratory dedicated to infectious disease research.

Faculty growth has been rapid. Beginning with a core of 9 faculty in 2005, the currently complement stands at 44 full-time equivalent faculty (FTEf), which includes 6 research chairs (3 Canada Research Chairs, 1 CIHR/PHAC Chair in Public Health, and 2 endowed chairs), 3 clinical professors, and 3 lecturers. Hiring is currently underway for two additional tenure-track faculty.

From its inception, the vision of the FHS has been the integration of biological and sociological conceptions of health and evidentiary practices to understand health from a life-course perspective. Employing a "cell-to-society" motif, the core mission of the Faculty, (http://www.fhs.sfu.ca/deans-message), is to:

- Support scholarship through the creation, advancement, application, transmission and preservation of knowledge, and the stimulation of critical and original thinking;
- Engage in and support research that embraces an overarching, interdisciplinary approach and understanding of health recognizing the interactions and relationships among multiple determinants of health, which include molecular mechanisms;
- Enable students to reach their full potential and become ethical, responsible and informed citizens through creating an intellectually stimulating and culturally vibrant environment;
- Employ effective, efficient, and innovative approaches to teaching, research, service and administration and participate as a valued partner in the social, cultural and economic life of the community;
- Create an integrative approach to health sciences that is ideally greater than the sum of the approaches represented by each of the constituent disciplines;
- Engage with the community – both locally and globally – in the effective transfer and application of knowledge;
- Consider the pursuit of social justice as a central value of scholarship and educational programs.

This degree proposal follows naturally from the rapid and successful development of the FHS, is fully consistent with the FHS's vision and mission, and will be able to draw on the considerable research strengths of the Faculty and as well as its physical and technical research infrastructure.

b) Proposed credential to be awarded: PhD in Health Sciences

c) Location: The main site of the program will be SFU's Burnaby Mountain campus. There is also considerable research activity at SFU's Harbour Centre campus and we expect that several PhD students will work primarily with faculty based there.

d) Faculty of school offering the program: Faculty of Health Sciences

e) Anticipated program start date: September 2011

f) Anticipated length of program: Approximately 3 years (post-Master's)

g) Summary of the proposed program: The PhD degree program is designed to prepare students to conduct advanced research in health sciences, and, upon graduation, to occupy positions of leadership in academic and policy institutions whose main focus is on improving health, both in Canada, and globally. We define health sciences here to include most of the disciplines that comprise the four "pillars" of scholarship identified by the Canadian Institutes for Health Research: basic biomedical research; clinical research; research that focuses on the performance of health systems and the delivery of health services; and the social, cultural and environmental factors that affect the health of populations. This program will draw on the considerable research strength of the Faculty, which ranges across health sciences disciplines. Areas of focus include: global health; environmental health and toxicology; maternal and child health, epidemiology and biostatistics; health promotion and disease prevention; infectious diseases; chronic diseases and aging; mental health and addiction; social inequities and health outcomes; adolescent and child development; reproductive health; and health policy. In addition to offering students the opportunity to develop research expertise in a particular field of health research, the program has also been designed to introduce students to interdisciplinary approaches to research so as to encourage them to develop cross-disciplinary research skills.

An important outcome of the proposed PhD program is to train a cadre of researchers capable of meeting a growing need in Canada for graduates with advanced and interdisciplinary training in critical aspects of health sciences. This need has arisen from a dramatic shift in scientific paradigms that have occurred over the past decade from a focus on discipline-specific to problem-specific areas in health sciences. Importantly, the SARS epidemic made it clear that a more integrated approach to and expansion of public health infrastructure was needed. In addition, establishing CIHR created an institute structure that is problem-oriented and interdisciplinary. Responding to this trend, a number of Canadian university programs in health sciences (including medicine) have incorporated undergraduate programming, strengthened their socio-behavioral, population and public health programs, and founded public health schools. In offering the proposed PhD program, the FHS is uniquely prepared to train researchers and educators to respond to this new approach to health sciences. The FHS comprises faculty whose expertise spans the spectrum of traditional public health, socio-behavioral and biomedical science programs, and who are committed to interdisciplinary research and teaching. Consistent with the mission of the FHS, the proposed PhD program is designed to provide students with the skills to work across disciplinary boundaries in addressing specific problems in health.

The proposed curriculum endeavors to balance interdisciplinary breadth with depth and rigor in a particular research area. Students will complete a core curriculum that focuses on the underlying logics of scientific inquiry in health sciences and which will be applied in colloquium courses that feature introductions to the full range of research conducted in the Faculty as well as in comparable programs elsewhere. This curriculum is intended to acquaint students with the full range of research topics, strategies, and methods of inquiry in health sciences, and thereby to develop scholars able to cross discipline boundaries in problem-focused research, and to be able to work effectively on interdisciplinary teams. Such teamwork is increasingly recognized as essential to effective basic and applied research in health sciences.

Many of the courses available to prospective students in the program will be shared with the Faculty's MPH program, which has been accredited by the (US-based) Council on Education for Public Health, as well as the Faculty's MSc program. Accreditation guidelines and requirements will ensure that these courses meet international standards of rigor and currency. All applicants who possess a master's degree in a health sciences relevant discipline or area are eligible to apply to the program. Exceptional students performing at a very high level in their master's programs at SFU may also be eligible to transfer into PhD program prior to completion of the master's degree.

The proposed PhD program will complement rather than compete with other PhD programs in the Province. UBC offers a PhD in Population and Public Health with an emphasis principally in epidemiology and in health

services research; conventional discipline-based degrees in areas relevant to health sciences; and an interdisciplinary degree program in the basic medical sciences. It does not offer in the context of a single program the kind of flexible and fully interdisciplinary approach to health sciences that we propose here. Yet general programs of research and areas of faculty expertise will inevitably overlap those at UBC. This said, PhD students are typically attracted by specific areas and faculty expertise. Even though there is some inevitable overlap in these areas of expertise; the overlap is partial, and, in fact, offers considerable complementary strengths to UBC's program. Already we have noted considerable intercampus exchanges in several areas where graduate students flow back and forth between the two campuses to take advantage of particular curricular or research strengths. Facilitated by the Western Dean's Agreement, these exchanges will offer considerable synergies and play an important role in enhancing the quantity and quality of health sciences research both in the Province and across Canada.

h) Name, title, phone number and e-mail address of the institutional contact person: Craig R. Janes, Associate Dean and Acting Graduate Program Director, Faculty of Health Sciences, 778-782-7189, cjanes@sfu.ca.

2. DEGREE LEVEL STANDARD

The program is designed to provide students the opportunity to develop the skills, content area expertise, analytical and critical-thinking capabilities required to pursue advanced and independent health-related research. The overall goals of the PhD program are to ensure that graduates are capable of conducting and communicating research of the highest calibre in one of the identified areas of the Faculty, and can frame their research topic across a range of disciplinary perspectives.

The specific learning objectives related to these goals are that PhD candidates:

- Develop a broad, full, and critical knowledge of the key scientific dimensions of their chosen specialty area.
- Advance knowledge in their research area through the application of appropriate elements of study design, methodology, analysis, and communication.
- Develop the ability to conduct original research that addresses an important problem in health sciences
- Produce an integrated framework for conceptualizing their research topic across diverse disciplinary perspectives.
- Are capable of publishing findings that are recognized in the context of peer review as being consistent with high quality scholarship in health sciences.

These objectives, referencing the essential elements of originality in conducting and communicating the results of research, warrant the granting of the PhD degree.

3. CREDENTIAL RECOGNITION AND NOMENCLATURE

The aims and objectives identified above are widely recognized as consistent with the PhD degree. Expectations for granting of the degree are consistent with other PhD programs at SFU, which are recognized be to meet national and international standards. There are no professional bodies that provide accreditation for research doctoral degrees in health sciences (though note that the professional MPH degree, from which the PhD program will draw courses and research expertise, is formally accredited by the Council on Education for Public Health.)

4. CURRICULUM DESIGN

What will the student gain from this program?

The proposed PhD degree program is designed to be flexible enough to allow students to develop unique expertise, while at the same time benefitting from the conceptual breadth of scholarship available in the FHS. The program therefore accommodates the needs and interests of each student in planning his/her specialized coursework and research experience. At the same time, the program will require students to complete four core courses designed to ensure interdisciplinary engagement and cohesion within student cohorts. We expect that this balanced and flexible approach will train students who are uniquely positioned to assume leadership roles in health sciences research, teaching, and academic scholarship.

What are the course and curriculum requirements of the program?

All students are required to take the following four courses over the first 4 terms in the PhD program (excluding summer term): 1) the core course, Interdisciplinary Seminar in Health Sciences (HSCI 902-3) and 2) three Interdisciplinary Research Colloquia (HSCI 903-1, 904-1 and 905-1). These are all new courses (see Appendix 7 for new course proposals). Students will also enrol in comprehensive exam and proposal development, thesis research, and thesis completion courses as they move through the program (these are independent/directed study courses).

The learning objectives of these courses are to: enable students to understand the logic, strategies and methodologies of health sciences; apply this understanding to the full range of research topics and approaches taken by faculty within the program as well as elsewhere; appreciate the social context of scientific inquiry; develop critical thinking and analysis skills; develop professional-level skills in oral and written communication; and gain a general understanding of and respect for the strengths and contributions made by the various disciplines and research approaches in health sciences.

The courses are taken in sequence, beginning with the student's first semester in residence. HSCI 902 provides an advanced review of the logic, strategies and methodologies of research in health sciences. This knowledge will be applied in the following colloquium courses (HSCI 903, 904, and 905) in which a cohort of students will develop interdisciplinary skills in a simple-to-increasingly complex trajectory.

Once accepted into the program, and no later than the end of the first term, the student in consultation with the Senior Supervisor will identify and appoint a Supervisory Committee. The composition of the Supervisory Committee will follow SFU Policy (Graduate General Regulations 1.6.4 and 1.6.5), and will consist of a minimum of three members, including the Senior Supervisor.

In addition to the core curriculum, and based upon a student's declared career and learning goals, the student's Supervisory Committee will develop a curricular plan in the first semester after entry into the PhD program. The plan should include training for research permit approvals (*e.g.*, human subjects, animal care, biosafety training courses). It is expected that most students will be required to take additional coursework and/or directed studies, both to deepen their methodological expertise and theoretical/conceptual grounding in their chosen area of specialization, and/or to broaden their expertise and skills beyond that area. Students must maintain good academic standing as judged by the Supervisory Committee and the Graduate Studies Committee and in accordance with SFU policy (Graduate General Regulations 1.8.2) to remain in the program. Student progress is formally reviewed annually by the Supervisory Committee and the Faculty Graduate Studies Committee.

Students are expected to write and successfully defend a **three-step comprehensive examination**. In **step one** the student submits a paper addressing a research question or topic that is chosen in collaboration with their Supervisory Committee. In most cases this research question or topic will encompass the student's proposed PhD research topic. The comprehensive paper may include a critical review of the literature relevant to the research question, discussion of the theoretical frameworks used to understand or frame the research question, and/or an in-depth analysis of a specific content area. In **step two**, the Supervisory Committee prepares written questions or comments on the student's paper to which the student must respond in writing. The Supervisory Committee's questions and comments posed in response to the student's paper will address the broad field encompassing the student's proposed research, such as methodologies used and interdisciplinary aspects of the research. In **step three** the student must orally defend both the paper and the written responses to the questions posed by the examiners. At the conclusion of the defence the examination committee will issue one of four judgments: 1) the candidate passes without comment or requirement for revision; 2) the candidate passes, but with a request for revision to be reviewed by the supervisory committee; 3) the candidate is judged to have failed on some, but not all, dimensions of the exam, in which case the candidate will be asked to rewrite and re-defend the failed portion of the exam, and may also be required to complete additional coursework or directed study to fill in areas where they were deemed academically weak; or 4) the candidate is judged to have failed the exam, and a recommendation to withdraw the student will go forward to the Faculty Graduate Studies Committee for review in accordance with Graduate General Regulations 1.8.2 and 1.8.3. If a candidate fails a portion of the exam and must re-write and re-defend, they may only do so once; if they do not successfully pass on the second try they will be withdrawn from the program in accordance with Graduate General Regulations 1.8.2 and 1.8.3.

The candidate must present and successfully defend a thesis proposal, and must ensure that the proposed research has received required human subjects ethics approvals, relevant animal handling approvals, and/or bio-safety hazards approvals. Documentation (e.g., approval numbers) showing approvals are in place must be provided to the Supervisory Committee before commencing thesis research. Upon the advice of the Supervisory Committee, the thesis proposal preparation and defence may be integrated with the comprehensive examination. Committee adjudication of the thesis proposal will be handled in the same way as the comprehensive examination, with the same possible outcomes and follow-up procedures (pass, pass with minor revisions, pass with major revisions and re-defence, and fail).

The MSc/PhD subcommittee of the Faculty graduate studies committee shall evaluate and oversee the comprehensive examination and thesis proposal defence processes to ensure consistency of standards across the Faculty. It will also recommend changes in processes and procedures to the Faculty Graduate Studies Committee for decision and action.

The candidate will be awarded the PhD upon the submission and successful defence of a doctoral thesis describing the results of original research performed by the student during residency as a PhD candidate. Normally, the thesis will take one of two forms: a "traditional" document that outlines the research undertaken, methods, results, and discussion; or a "multi-paper" option, in which the candidate submits a collection of three or more published or submitted papers "bookended" by introductory and concluding chapters. The composition of the doctoral examination will include the supervisory committee, the Graduate Program Chair, or designate, a member of the faculty of SFU who is not a member of the student's supervisory committee, and an external examiner. The preparation for and conduct of the Thesis examination is described in Graduate General Regulations 1.9.3, 1.9.4, and 1.9.5)

The PhD program will generally require *at least* **three years of full-time study to complete**, and the Faculty will generally provide funding only for these three years. Depending on the student's prior training in the Health Sciences, and whether s/he completed core courses while in the MPH/MSc program at SFU, the length of study may vary. The SFU Graduate Regulations specifies residency requirements and time-to-completion guidelines for PhD programs (1.7.3 and 1.12.3)

It is expected that doctoral students will pass their comprehensive examination and successful defend their thesis proposal within 2 years of enrolment, sooner for transfers from the FHS MSc or MPH program.

Sample Timeline

The following is a *sample timeline* for a doctoral student who has entered the PhD program with a prior master's degree. Depending on the discipline of the student, this timeline (especially research timing) will vary.

Prior to Admission

- Communicate with individual faculty members, identify potential supervisor if they come from a unit outside of FHS, and develop a research topic.
- Where possible, apply for graduate fellowships, scholarships and awards.

After Admission

- Year 1, Term 1 – Coursework, meet with Senior Supervisor and other faculty to form a Supervisory Committee, submit applications for scholarship funding ; finalize supervisory committee *
- Year 1, Term 2 – Coursework; ~~finalize supervisory committee~~, research topic; apply for research funding; begin work on comprehensive examination
- Year 1, Summer – Complete research paper required for the comprehensive examination
- Year 2, Term 1 – Complete oral defence of the comprehensive examination.
- Year 2, Term 2 – If necessary, present and defend thesis research proposal; submission of ethics protocol, animal/biosafety protocols, etc as needed.
- Year 3, to completion-- Complete thesis research, write doctoral thesis, complete oral doctoral defence, submit dissertation to Faculty of Graduate Studies and the SFU Library.

* As amended by Senate on May 24/11

Supervisory Committee composition

The supervisory committee will be comprised of a minimum of three members, constituted in accordance with SFU Graduate Regulation 1.6.4. Composition of the Supervisory Committee, for which the Senior Supervisor is chair, shall be approved by the FHS Graduate Studies Committee. The Supervisory Committee will constitute the examining committee for the comprehensive examination and thesis proposal defence. The doctoral thesis examination will be comprised of the Supervisory Committee, a fourth faculty member with relevant expertise who has not worked with the student, and an external examiner (see SFU Graduate Regulations 1.9.3, 1.9.4, and 1.9.5). The role of the external examiner is described in detail in Graduate General Regulation 1.9.5.

The Supervisory Committee will meet at least annually with the candidate to review their progress in the program, and will prepare a written report to the Faculty Graduate Studies Committee documenting this progress and outlining future plans for the candidate. If progress toward the degree is deemed unsatisfactory, the committee may request in writing to the Faculty Graduate Studies Committee that the student be removed from the program. The Faculty Graduate Studies Committee will make the final decision on such matters.

Program milestones:

The milestones for the PhD Program in FHS will be successful completion of: a) the required coursework (including both core courses and courses required by the Supervisory Committee), b) a comprehensive examination, c) presentation and defence of a thesis proposal, d) an original research project, e) preparation of a doctoral thesis, and f) a formal and public defence of the thesis.

New courses required for the program

In addition to the four 900-level courses described above, we propose to add three additional administrative courses, HSCI 983-6, Comprehensive Examination and Thesis Proposal Preparation; HSCI 990-6, Thesis Research; and HSCI 998-6, Thesis Completion and Defence. Students will enrol in these courses as they move through the relevant stages of their program. The courses are independent/direct study format (i.e., no formal faculty involvement is required other than what would be expected of the supervisor and supervisory committee). Enrolment in these courses will permit us to identify which students are at what stages in their program. Other than these courses, course requirements may be fully met from existing graduate courses at SFU. These include an array of 700-level and 800-level graduate courses offered by FHS (including courses from the MSc/MPH program). Students will also have access to graduate-level courses offered in other units at SFU. Because of the emphasis on interdisciplinary training in the FHS PhD Program, it is expected that matriculated PhD students will take existing courses in other Faculties, with the approval of those units. Courses are also available at other BC Universities through the mechanism of the Western Dean's Agreement.

Anticipated Course Sizes and Faculty-Student Ratios

The FHS faculty complement currently stands at 44 faculty (comprising approximately 41 FTEs), including: 11 Professors; 10 Associate Professors; 19 Assistant Professors; and 4 lecturers, senior lecturers, and clinical professors. Among these 44 faculty, there are 4 Canada Research Chairs, 2 endowed Research Chairs, 1 CIHR-Public Health Agency of Canada Chair, and 3 CIHR New Investigators. Recruitment is currently underway for 2 open positions (see table of open positions below). See the section below under "FACULTY" for a tabular listing of program faculty and FTE distributions.

The general distribution of FTEs across the different degree programs in the Faculty, ***including two unfilled positions***, is as follows: BA/BSc = about 16 FTEs; MPH = 10 FTEs; MSc/PhD (proposed) = 18 FTEs. Note that these are only rough estimates, based on relatively equitable distribution of teaching resources across the degree programs; the actual numbers will vary from term to term, and year to year. The projected enrolment target for the PhD program at steady state is expected to vary between 25 and 35 students (depending on funding; see below). Master's student enrolment targets are 100 for the MPH and 25-35 for the MSc (also dependent on funding). Thus we project a steady-state enrolment of 50-70 research-track graduate students, or about 4 research stream students per FTE and 1-2 students per tenure/tenure track faculty member. Courses will vary in size, depending on the student's program of study. The core course series will be required of all MSc and PhD students; given a projected intake of 8-10 PhD and 8-10 MSc students per year, that series will involve 16-20

students per year in each of the four courses. Graduate courses in FHS will vary in size from about 20 (core MSc/PhD required and elective/advanced courses) to 60 (core MPH courses).

How is the curriculum structured to ensure interdisciplinary learning?

Our objective for interdisciplinary learning is for students to develop diverse perspectives in health sciences, and to be able to apply these perspectives to frame research problems. The graduate core curriculum is designed to develop a basic appreciation of the disciplines spanning health sciences research and skills in communicating across disciplines. It is expected that students will develop different disciplinary perspectives outside their area of expertise in addition to mastering their own research area. The graduate core curriculum will be delivered through a combination of didactic instruction and problem-based learning.

The graduate curriculum will offer students a range of opportunities to engage in interdisciplinary learning and discourse, including the graduate core seminar course and the three required interdisciplinary colloquia, as well as the weekly FHS research seminars. In addition, students will be regularly asked to address the interdisciplinary aspects of their research topic. Starting in the first semester in the program, students will develop plans for interdisciplinary learning and research with the Supervisory Committee. Students will report on the interdisciplinary aspects of their research and coursework in the yearly update and progress review conducted by the Graduate Studies Committee. The Comprehensive Examination, Thesis Proposal, and Thesis Defence also must address interdisciplinary aspects of their research (as described earlier). Our goal is for students to have the ability to work on interdisciplinary, collaborative research teams, and to be able to contribute meaningfully to interdisciplinary research programs and projects.

What are the research expectations or implications for this program?

It is expected that the thesis will meet library requirements, those of Dissertation Abstracts, and the clearinghouse for distributing the full text of theses. Theses are expected to advance the state of knowledge in the area of study, to the extent that the results are publishable in national and international peer-reviewed journals. To this end, we propose to offer students the option of submitting three published, in press or submitted papers as part of their thesis. These papers should be bracketed by introductory and discussion/concluding sections that set forth the overall research questions, methods, and importance of the work.

We expect that PhD students will be funded in part through faculty grants, tri-council scholarship awards, and other agencies. They will be eligible for awards from the Dean of Graduate Studies and from the FHS Graduate Studies Committee. As with any graduate program, graduate activity will both support and stimulate Faculty research activity. See below (section10) for some discussion as to how this may impact SFU Graduate Studies funding.

What are our plans for ongoing review and evaluation?

As with all programs at SFU, the faculty and all academic programs in the FHS will be subject to external review at least every seven years. Besides this, the CEPH (described above) will also review the course structure and curriculum of the MPH program and the undergraduate BSc and BA programs every five years. MPH courses that are relevant to the PhD program will be reviewed by CEPH on a regular basis, and FHS self-study exercises will ensure relevance and currency of the program.

Given that the Faculty is new, and many of its members have limited experience with doctoral-level mentorship, we will engage in a deliberative process of quality improvement, which will include annual evaluations of mentoring relationships to ensure that we identify and correct any problems early on. The Terms of Reference of the FHS Graduate Studies Committee (FHS-GSC) established responsibilities for two subcommittees: a MSc/PhD subcommittee and an MPH subcommittee. Annual review of the MSc and PhD programs will be undertaken by the MSc/PhD subcommittee of the FHS-GSC, with findings and recommendations reported to the FHS-GSC for action. The terms of reference for these subcommittees are to be found in Appendix 3.

5. LEARNING METHODOLOGIES

How will the learning environment and methodologies be developed to achieve desired outcomes?

The FHS has been successful in developing MPH and Diploma programs and attracting high quality graduate students. In 2009 we admitted approximately 65 of about 250 applicants to our MPH program and have enroled 51 students (of approximately 275 applicants) for the 2010 admissions cycle. We currently have approximately 270 applicants for the 2011 MPH cohort. The Graduate Program has developed rapidly as new faculty have come on board. We now offer a sizeable group of graduate courses, including those in the MPH program, as well as introductory courses in the biomedical sciences. Faculty research interests have crystallized around several themes, and have now drawn in faculty from several different units at SFU.

The Faculty has been successful in attracting research funding. Over the three-year period beginning September 1, 2006, approximately 75% of tenured and tenure-track faculty had received extramural research awards. Data have not yet been tabulated for the past year, but we expect that this number will have increased to approximately 80%. Ninety-one percent of tenured and tenure track faculty had produced at least one peer-reviewed publication per year over the same period (self-study for CEPH accreditation, October 2009, Chapter 3, page 29; http://www.fhs.sfu.ca/accreditation-process). Given the relative youth of our Faculty, this is a creditable rate of achievement.

What are the specific learning methodologies?

Course-based learning

FHS graduate courses generally emphasize problem-based learning through case studies, project proposals, or critiques of the literature. The colloquium experience, and other interdisciplinary learning experiences, will enhance students' abilities to communicate in written and oral forms with experts and novices alike. The core seminar course will focus on the different approaches, methods, and philosophies of inquiry that are applied in health sciences. This course, along with the interdisciplinary colloquia and opportunities for engagement with faculty and peers from diverse academic and disciplinary backgrounds, will provide PhD candidates in the FHS with a unique perspective on health research.

Distance education

Web delivery of graduate courses remains in the future, though the Faculty is currently developing several online courses in population and public health and global health. Nevertheless, students will, when appropriate, be able through the mechanism of the Western Dean's Agreement to take some of their courses at other universities and perform some of their research at sites outside SFU. Some of these courses will be delivered via the Internet. UBC and the University of Alberta have sizeable online offerings in population and public health.

Employability skills

Funding agencies, universities, research institutes, and other employers of PhD graduates and postdoctoral fellows have become aware of the professional skills needed for productive employment. The tri-council agencies, in collaboration with the Canadian Association of Graduate Studies (CAGS), have developed an initiative designed to foster skills beyond those required for particular disciplines. They have developed a Statement of Principles that identifies the professional skills thought to be of importance for Canadian researchers. We aim through our program to provide ample opportunity for students to meet these skills. These are summarized from the CAGS documents as follows:

1) Communication and interpersonal skills: the ability to communicate effectively, concisely and correctly in written, spoken, and visual forms to a variety of audiences. Seminar presentations, oral and written program benchmarks (exams, thesis proposal, thesis), presentations at conferences, and active participation in a highly interdisciplinary environment will foster these skills.
2) Thinking/intellectual skills: the ability to use reflective, rational, and critical thinking to gather and interpret information in order to derive a judgment or conclusion. Students will have multiple opportunities, culminating in the comprehensive exam and doctoral thesis, to evaluate and analyze current literature, critically evaluate research results, and develop new models to integrate research findings and propose new ideas.
3) Creativity and imagination: the ability to conceive new ideas, goods, services, and practices to improve current knowledge or apply it to specific purpose. Students will be required through their courses and research to consult with the scientific literature outside of their specific field of expertise and apply disciplinary knowledge to problems in other disciplines to reach novel conclusions or solve unresolved issues.
4) Personal effectiveness: the ability to engage in meaningful reflection about the place of their discipline in the world and where and how they fit in it. Students will develop their individual learning plans, communicate their skills and attributes through CVs, applications and interviews, and develop skills for self-management and lifelong learning.
5) Integrity/ethical conduct: awareness of and adherence to professional codes of conduct and standards in and out of their disciplines. Through their coursework, development of their thesis research, and interaction with ethics, biosafety, animal care standards, students will learn to interpret and apply tri-council and discipline specific guidelines, standards and codes of conduct.
6) Teaching competence: the ability to explain complex concepts related to their discipline in various workplace contexts, learning to inspire, motivate, mentor, and develop others. FHS has a large undergraduate program which provides students multiple opportunities to develop teaching competencies both independently, and with the mentorship of experienced faculty.
7) Research management: the ability to manage the environment in which research is being done for the purpose of seeking new knowledge and the adaptation of that knowledge for practical use. Through the proposal development and project implementation process, and with mentorship from their supervisory committee, students will gain skills in effective project management, learn about various funding mechanisms, develop proposal writing skills, and acquire experience managing budgets and financial documents.
8) Knowledge translation: the ability to translate research results into knowledge understandable to non-specialists in order to generate the best social and economic benefits to society. The unique interdisciplinary nature of FHS and the structure of the core curriculum will encourage students early on to develop knowledge translations skills. As they mature in the program, presentations at the FHS research seminar will further challenge candidates to present knowledge in an accessible format.
9) Leadership: the ability to influence, motivate, mentor, guide, and enable others to contribute toward the effectiveness and success of an organization of which they are members. Leadership skills are more difficult to impart formally, though students will have the ability to serve in a variety of leadership roles within the faculty (committees, etc.). Research opportunities and laboratory experiences should provide students experience with teamwork, building consensus, and working with multiple stakeholders.

10) Societal/civic responsibilities: the ability to contribute to society through their role as a member of various local, national, and global communities. This is an aspirational goal, and while we do not provide direct instruction or opportunities to develop a sense of such a broad set of responsibilities, adherence to various policies, legal requirements regarding health and safety, and adherence to ethical standards are an important aspect of citizenship. Other attributes of civic responsibility may be gained through association with faculty concerned with advancing society through improving health and adhering to principles of social justice, core elements of FHS' mission.

To emphasize some features of the skills and principles articulated above, we consider it to be essential that our PhD graduates have an appreciation of interdisciplinary inquiry and are able to work on interdisciplinary teams. As is clear from the curriculum design described above, we have developed a program that balances research depth with an appreciation of interdisciplinary health research gained through core courses, seminars, and colloquia. To develop teaching skills, we encourage all PhD candidates to apply for teaching assistantship and sessional lecturer positions.

6. ADMISSIONS AND TRANSFER/RESIDENCY

What are the admission and residency requirements?

Applicant must satisfy all university admission and residency requirements as specified in SFU's Graduate General Regulations 1.3.10, 1.3.11, and 1.3.12

In addition, FHS requires students to:

- Demonstrate potential ability to carry out innovative, independent, and original PhD-level research in health sciences, evidenced by prior research experiences and/or products (evidenced by theses, projects, reports, and publications).
- Have earned Master's or a Bachelor's degree in a discipline related to the health sciences.
- Communicate with FHS faculty prior to application in order to assess the degree of "fit" between an applicant's research interests and those of the faculty.

All applicants, except those transferring from a FHS MSc or MPH program (for these, see below), must submit the following documents:

- All post-secondary transcripts.
- A short *curriculum vitae* providing evidence of scholarships and awards, academic performance, publications, and relevant research and work experience.
- A statement of intent describing how the program fits the applicant's research interests and career objectives. This statement must articulate the student's background and expertise, and will ideally evidence commitment to interdisciplinary scholarship.
- Three letters of reference (using the form provided in the application package or on-line) from academics/researchers who have first-hand knowledge of the applicant's research capabilities and academic training.
- For applicants whose first language is not English and whose previous education has been conducted in another language: official results of the TOEFL and TWE or IELTS exams taken in the last two years, achieving the minimum scores identified in the Graduate General Regulation 1.13.12.
- In order to be competitive, students who have completed their undergraduate degree at an academic institution outside of North America may wish to supply the results of the Graduate Record Examination (GRE) taken within five years of the application date.
- Before admission can be finalized, a Senior Supervisor must be identified, and that individual must complete a Supervisory Committee Form and submit a letter attesting to a willingness to act in this capacity. This letter must also indicate funding commitments, or, if funding is not available, a statement as to how the student will be funded in their program of study, and where relevant, commitments to obtaining that funding. Note that while applicants may apply to the program without identifying a Senior Supervisor, a final decision to admit depends on the formal commitment by a faculty member to serve in this capacity.

Transfer from the Master's Programs (MPH/MSc) to the PhD Program

Normally students will complete the requirements for the Master's degree prior to matriculating to the PhD program. In FHS we will accept both MPH and MSc students into the PhD, though MPH students who have not completed a thesis must provide evidence that they can undertake independent research.

Master's students who show *exceptional* ability may apply for transfer or direct entry into the PhD program prior to completion of the master's degree. Such students must demonstrate that they have the ability to carry out innovative and original PhD-level research in an area(s) applicable to their PhD pursuits, and must have obtained high academic standing in previous university work.

All University Regulations governing transfers must be met. Transfers to the PhD program will normally be considered only in the second through fifth semesters after enrolment in the MSc or MPH program. Applications for transfer must be approved by the Dean of Graduate Studies. Students will not be eligible to transfer to the PhD program beyond five semesters of full-time equivalent course work in the MSc or MPH program.

Applicants who are transferring from a FHS Master's program must submit the following with their application:

- All post-secondary transcripts.
- A short curriculum vitae providing evidence of scholarships and awards, academic performance, publications, and relevant research and work experience.
- A statement of intent describing how the program fits the applicant's research interests and career objectives. This statement must articulate the student's background and expertise, and will ideally evidence commitment to interdisciplinary scholarship.
- A letter of recommendation from the student's current Senior Supervisor, confirming that the Master's Supervisory Committee supports the transfer. This letter must contain funding commitments as described above.
- A Supervisory Committee Form naming the proposed Senior Supervisor and proposed Supervisory Committee.

7. FACULTY

How many faculty are required to mount the program?

The total numbers of faculty available to resource the MSc and PhD programs currently totals 44 (headcount), comprising a total of about 18 FTEf dedicated to the research streams (i.e., the MSc/PhD vs. the MPH and BA/BSc programs). Ten of these 44 faculty hold research chairs or research scholarships, freeing them to focus on their own research programmes which will provide considerable opportunities for PhD students. Note that several current FHS faculty also participate in CIHR-STIHR (training grants) that will provide funding and research opportunities for PhD candidates. We consider these numbers sufficient to support a combined PhD/MSc program targeted to reach a total of 50-70 students at steady state.

As noted above, four additional core courses requiring investment of faculty resources (one 3-credit course and three 1-credit courses) are proposed. We currently have the teaching resources to mount these courses (which amounts to two additional courses per year, though the colloquium courses will not be counted toward a faculty member's required teaching complement). In addition to these core courses, all students will have access to 700-level introductory and a full menu of MPH courses that are already in place, as well as discipline-specific graduate courses offered by other units at SFU. As the final faculty are hired, we expect to offer additional seminar courses to further support students in the MSc, PhD and MPH graduate programs. Thus, at 1-2 students per faculty member, the faculty complement will be large enough to supervise, offer directed readings courses, and mount and oversee colloquium courses on subjects of interest to MSc and PhD students as needed. Minimal resources beyond those already committed are required to staff this proposed program.

Who are the faculty, and what are their areas of specialization?

The Appendix provides short biographies of our current faculty. In the table following we provide a listing of faculty by rank, discipline of highest degree, areas of research specialization, and estimated FTE contributions to

various programs in the Faculty. Inspection of the table suggests considerable interdisciplinary breadth spanning the social, biomedical, and population health sciences, with several faculty possessing research and teaching expertise that spans two of these general disciplinary categories.

Table of FHS Faculty Supporting the MSc/PhD Program									*Approximate* FTE Dedicated to FHS Programs (includes teaching, research & service activities)[1]		
Surname	**Name**	**Title, Rank**	**Tenured (Y/N), Limited Term (LT)**	**% Time in FHS**	**Highest Grad degree**	**Institution**	**Discipline(s) of Highest Degree**	**Research interests, activities**	Under-graduate Programs	MPH	Research (MSc/PhD)
Allen	Ryan	Assistant Professor	N	100%	PhD	U Washington	Environmental & Occupational Health	Air pollution exposure assessment, health effects of air pollution	0.33	0.33	0.34
Beischlag	Timothy	Associate Professor	N	100%	PhD	U Toronto	Pharmacology	Molecular mechanisms of gene expression in chemical carcinogenesis and related toxicities	0.50		0.50
Berry	Nicole	Assistant Professor	N	100%	PhD	U Michigan	Anthropology	Social change, maternal health, reproductive health	0.33	0.33	0.34
Brockman	Mark	Assistant Professor, Tier II Canada Research Chair	N	50%	PhD	Yale U	Virology	HIV viral fitness & immune evasion	0.13		0.37
Brumme	Zabrina	Assistant Professor, CIHR New Investigator	N	100%	PhD	U Br Columb	Health Sciences	HIV phylogenetics, viral fitness, immune evasion	0.25		0.75
Calvert	John	Associate Professor	LT	75%	PhD	London School of Economics	Government	Workplace health and safety, international trade agreements and domestic health policy	0.25	0.25	0.25
Corbett	Kitty	Professor	Y	100%	PhD	U Cal-Berk/UCSF	Medical anthropology	Health promotion, health communciation, antibiotic resistance	0.33	0.33	0.34
Erikson	Susan	Assistant Professor	N	100%	PhD	U Colorado	Anthropology	International affairs and women's reproductive health	0.33	0.33	0.34
Fischer	Benedikt	Professor, CIHR/PHAC Research Chair	Y	100%	PhD	U Toronto	Criminology	Substance use, mental health, infectious disease, marginalized	0.25		0.75

[1] This is a ***very general*** effort to illustrate the general distribution of effort across degree programs. Teaching efforts at the BA/BSc and to some extent the MPH program, are course-driven. Teaching efforts at the MSc/PhD level are integrated with research. Research Chairs teach 1 course/year, though we assume considerable research mentorship at the MSc/PhD level.

								populations, public/urban health, interdisciplinary health research			
Goldner	Elliot	Professor	Y	100%	MD	U Calgary	Psychiatry	Quality improvement of mental health services	0.33	0.33	0.34
Goldsmith	Charles	Maureen and Milan Ilich/Merck Chair in Statistics for Arthritis and Musculoskeletal Diseases	N	100%	PhD	North Carolina State U	Experimental/Mathematical Statistics	Quality improvement, experimental design, study design and analysis	0.25		0.75
Goldsmith	Laurie	Assistant Professor	N	100%	PhD	U North Carolina, Chapel Hill	Health Policy & Administration	Access to health care, rural health, qualitative methods in health policy and health services research	0.33	0.33	0.34
Hogg	Robert	Professor	Y	100%	PhD	Austraila National U	Demography	HIV treatment and prevention	0.33	0.33	0.34
Janes	Craig	Professor	Y	100%	PhD	U Cal-Berkeley/UC SF	Anthropology	Environmental change and health, primary care reform, social inequality and health	0.33	0.33	0.34
Joffres	Michel	Professor	Y	100%	MD/PhD	U Hawaii	Biomedical Sciences	chronic disease epidemiology	0.33	0.33	0.34
Kaida	Angela	Assistant Professor, Tier II Canada Research Chair	N	100%	MPH/PhD	UBC	Population and Public Health	HIV status and reproductive health		0.25	0.75
Lanphear	Bruce	Professor	Y	50%	MD/MPH	U Missouri-Kansas City	Pediatrics	Children's environmental health	0.25		0.25
Lear	Scott	Associate Professor, Pfizer/Heart & Stroke Foundation Chair in Cardiovascular Prevention Research	Y	100%	PhD	UBC	Pathology and Laboratory Medicine	Cardiac rehabilitation, obesity, lifestyle management, physical activity	0.25		0.75
Lechner	Mark	Senior Lecturer	N	100%	PhD	U Chicago	Molecular Genetics and Cell Biology	Gene expression, epigenetics	0.75		0.25
Lee	Frank	Assistant Professor	N	100%	PhD	U Toronto	Pharmacology	Neuropathogenesis; dopamine signalling in mental disorders and drug addiction	0.50		0.50

Malcoe	Lorraine	Associate Professor	Y	100%	PhD	U Cal-Berk	Epidemiology & Biostatistics	Social determinants of intimate partner violence, health inequalities in indigenous populations, community-level interventions	0.33	0.33	0.34
McCandless	Lawrence	Assistant Professor	N	100%	PhD	U Br Columb	Biostatistics	Bayesian statistics, causal inference, epi methods	0.33	0.33	0.34
Miller	Cari	Assistant Professor	N	100%	PhD	U Br Columb	Interdisciplinary Sciences	HIV and Hepatitis C virus transmisison among at-risk youth	0.33	0.33	0.34
Morrow	Marina	Associate Professor	Y	100%	PhD	U Toronto	Community Psychology	Social inequities and mental health, mental health policy; women's health	0.33	0.33	0.34
Nepomnaschy	Pablo	Assistant Professor	N	100%	PhD	U Michigan	Anthropology	Stress and health across lifecourse, women's reproductive health	0.50		0.50
Niikura	Masahiro	Associate Professor	N	100%	PhD	Hokkaido U	Virology	Molecular understanding of virus-host interactions	0.50		0.50
Niikura	Takako	Assistant Professor	N	100%	PhD	University of Tokyo	Pharmaceutical Sciences	Molecular mechanisms of age-related neurodegenerative disorders; Alzheimer's disease; Amyotrophic lateral sclerosis (ALS)	0.50		0.50
O'Neil	John	Professor and Dean of Faculty	Y	100%	PhD	U Cal-Berkeley/SF	Medical anthropology	Aboriginal health, global HIV prevention	0.25	0.25	0.50
Palmer	Karen	Senior Lecturer	N	100%	MS/MPH	U Hawaii	Maternal health, international health	Comparative health systems, health reform, Canadian health policy	0.50	0.50	
Pantophlet	Ralph	Assistant Professor, CIHR New Investigator	N	100%	PhD	U Leiden, Netherlands	Microbiology	Antibody response to infection; HIV, flu vaccines	0.25		0.75
Prefontaine	Gratien	Assistant Professor	N	100%	PhD	U Ottawa	Biochemistry & Molecular Biology	Transcriptional mechanisms in cell-type specific gene expression	0.50		0.50
Scott	Jamie	Professor, Tier I Canada Research Chair	Y	50%	MD/PhD	U Missouri-Columbia (PhD) St Louis U (MD)	Biological Sciences, Cell & Molecular Biology	Antibody function & genetics, B cell immunology, HIV vaccine	0.13		0.37
Snyder	Jeremy	Assistant Professor	N	100%	PhD	Georgetown U	Philosophy	Moral obligations toward vulnerable populations, exploitation in global health	0.33	0.33	0.34

Somers	Julian	Associate Professor	Y	100%	PhD	U Washington	Clinical Psychology	Reform of services to produce mental health outcomes	0.33	0.33	0.34
Steinberg	Malcolm	Clinical Assistant Professor	LT	80%	MD/MSc	U Witwaterstrand, South Africa	Medicine, Epidemiology	Population health, health policy, program development and evaluation		0.5	0.30
Tairyan	Kate	Senior Lecturer	LT	100%	MD/MPH	Yerevan State Medical University, Armenia (MD), Emory University (MPH)	Medicine, Public Health	Health promotion, health communication, health systems management, distance education in public health, global health	0.75	0.25	
Takaro	Timothy	Associate Professor	Y	100%	MD/MPH/MSc	U North Carolina (MD) Univ Washington (MS, MPH)	Medicine, Epidemiology, Toxicology	Disease susceptibility factors in environmental & occupational health; inflammatory lung conditions	0.33	0.33	0.34
Tucker	Rochelle	Assistant Professor	N	100%	PhD	Harvard U	Social Epidemiology	Gender, ethnic and socio-economic disparities in adolescent mental health	0.33	0.33	0.34
van Houten	Nienke	Lecturer	LT	100%	PhD	Simon Fraser University	Molecular Biology & Biochemistry	Immunology, vaccine design	0.75		0.25
Venners	Scott	Assistant Professor, CIHR New Investigator	N	100%	PhD	Tulane U	Environmental Epidemiology	Molecular epidemology in environmental and population health, biomonitoring	0.33	0.33	0.34
Waddell	Charlotte	Associate Professor, Tier II Canada Research Chair	Y	100%	MD	McMaster U	Family Medicine, Child Psychiatry	Mental health disparities, children's mental health, children's health policy	0.25	0.00	0.75
Zabkiewicz	Denise	Assistant Professor	N	100%	PhD	U Cal-Berkeley	Epidemiology	Employment and mental health	0.33	0.33	0.34
Zeng	Leilei	Assistant Professor	N	50%	PhD	U Waterloo	Biostatistics	Longitudinal data analysis		0.25	0.25
								Subtotals, occup'd positions (approx.)	**14**	**9.00**	**17.5**

Open Positions (Positions for Recruitment in 2010/2011)

Reference	Targeted rank		General research area	FTE Distribution		
Hayes replacement	Associate/Full Prof		TBD	0.33	0.33	0.34
Bassil replacement	Assistant Prof		Environmental Health, Spatial Epidemiology	0.33	0.33	0.34
			Total FTE by Degree Program	**15**	**10**	**18**

8. PROGRAM RESOURCES

In 2008 the Faculty of Health Sciences at Simon Fraser University moved into a new purpose-built facility enabled in part by the $12 million donation by Canadian diamond pioneer Stewart Blusson and a $5 million gift by Djavad Mowafeghian. The building includes a Level 3 containment lab for infectious disease research. Of the total net assignable square meters of 7,015 by functional category, 818 are dedicated to classrooms, 1,130 to teaching laboratories, 3,210 to research laboratories, 1,427 to academic offices, and 430 to library/student study.

In addition to a generous physical plant, which houses adequate research and teaching laboratory facilities to support FHS programs, the FHS has access to the full range of library, computing, and database resources available at Simon Fraser University. As part of the build-out of the Faculty of Health Sciences, the University committed additional resources (provided out of the FHS base budget) to the expansion of health sciences materials (journals, databases, books, monographs). The library has also reviewed this proposal, and new courses, for their potential impact on library resources. Library staff members have found that their current resources are adequate to mount this program (see Appendix 5).

9. PROGRAM CONSULTATION

In developing the PhD proposal, FHS consulted with units at SFU that involve health sciences research and training at the graduate level. Most such units view the FHS faculty as contributing expertise in areas complementary to their own (e.g., FHS, the new Faculty of Environment and the Department of Biological Sciences share an interest in toxicology/environmental sciences; FHS and the Departments of Molecular Biology and Biochemistry and the Department of Biological Sciences share interest in infectious diseases; the International Affairs Program, the Master's Degree Program in the School of Public Policy, the program in Women's Studies, and the Department of Sociology and Anthropology in the Faculty of Arts and Social Sciences, and the Development Studies Program in the Faculty of Environment, share interests in global health, social inequities and health, and health policy). As a result, FHS has begun to cross-list, and otherwise cooperate in offering graduate courses with these units. Thus the FHS PhD program is expected to enhance graduate education in interdisciplinary areas that are emerging at SFU, including infectious diseases, pharmacology, neurobiology, environmental (health) sciences, development studies, health policy, and global health.

Besides enhancing ongoing areas of graduate research and training at SFU, the FHS has developed a unique professional graduate degree program, the MPH, which was the first program mounted by the FHS. Advice was incorporated from a wide range of external consultants in developing the proposal for the MPH program, which has now been accredited by the US-based Council and Education for Public Health (CEPH), currently the only Anglophone University in Canada to achieve such a standard.

The PhD program was envisioned at the time that the development of FHS was contemplated (2003-2004). Preparatory to the submission of the proposal to create FHS to the SFU Senate, external support was sought through contacts with health decision-makers at UBC and the local health regions, especially the Fraser and Vancouver Coastal Health Authorities. These local discussions and planning exercises were followed by a formal study and report commissioned by SFU. A consulting firm, Simces Associates, conducted interviews with 80 key stakeholders in the health community, an email survey of nine professional health organizations, and internet searches of Canadian graduate health sciences education programs, funding organizations, and research programs. Questions focused on the need for a graduate education in the population and public health sciences at SFU. The study identified national gaps in education and practice in three areas:

- research relevant to evidence-based policy decisions.
- transfer of research knowledge into better remedies for health problems, especially at the community and population level.
- assessment of health outcomes and effective interventions.

External reviews:

An earlier draft of this proposal was sent to two external reviewers who have provided anonymous comments on the proposal. Their reviews are provided in the Appendix. In this draft of the proposal we have endeavored to respond to all comments; here we summarize these responses (in italics).

Positive and/or supportive comments:

Reviewer A: "The UBC PhD appears to be more of a classical PhD in public health with more stringent course requirements and perhaps stronger epidemiology training. Thus, SFU's interdisciplinary PhD program would not directly compete and could be quite complementary to UBC's program."

"The primary advantages of SFU's approach are the fact that it utilizes faculty diversity and has flexibility to groom interdisciplinary thinkers in health sciences."

Reviewer B: "I have reviewed the documents sent to me and really have much positive to say about the proposed program – the faculty is strong, the ground is fertile, the Faculty is poised. The brief sent to me indicates that the program (content, administration, future, fit) is well thought out and articulated."

Questions, issues and concerns raised by the evaluators:

Reviewer A: "The main disadvantage of the proposed program is a risk in the approach – by cultivating a broad interdisciplinary PhD from 'cell to society', the institution may not groom paradigm-changing experts within any specific discipline. This is a risk that is not present in highly focused 'single-discipline' PhD programs – but it is a risk that should be taken – in part to nurture a different type of PhD candidate. The ideal student for this program will harness the strengths of different disciplines to pursue an in-depth solution to a problem that could not be addressed without interdisciplinary collaboration. It is possible that this type of student and approach will foster development of a new hybrid discipline. Health science is increasingly inter-sectoral, and familiarity with collaborative approaches will be important for long-term research, programs, and policy."

We agree that this is a risky approach. We are well aware of the difficulties of working across disciplinary boundaries, especially given the very large differences in research logics and paradigms as one crosses the social and biomedical laboratory sciences. It is important to clarify here that our goal is not to train "interdisciplinarians," in the sense that every graduate should be fully competent as an original PhD-level researcher in all of the constituent disciplines in the faculty. We're not certain at this moment that a new "hybrid science" is either possible or desirable. Rather our goal is to provide candidates the opportunity to develop the skills required of PhDs anywhere -- sufficient depth and evidence of original research success in a particular research area – but to enhance this expectation with a demand that candidates become familiar with the differences, strengths, and complementarity of diverse disciplinary approaches. Our goal is to ensure that graduates appreciate the value of different approaches, and through this appreciation develop the inclination as well as capability to work on the interdisciplinary teams that are increasingly the hallmark of cutting edge health science. The core curriculum and non-course assessment strategies are designed to do this.

Reviewer A: "Candidate selection is critical– the program should aim to enrol students who are original critical thinkers, clear communicators, and self-starters. The quality of faculty one-on-one mentorship of the candidates and careful design of course and research work tailored to optimize potential of individual students is also important. Finally, the timeliness of the research focus will impact on publishability, grant opportunities, and policy implications. Being very selective in the first cadre of students and nurturing these students carefully in terms of mentorship and opportunities will be critical to laying a good reputational foundation for the institution. If this is done well, the investment would be expected to result in these students, in turn, fostering opportunities and networks for the next generation of students."

We fully agree with this assessment, and are aware of the importance of selection and faculty mentorship. As we have described in Section 6 above, we are very concerned that we admit students who evidence both originality and a willingness to join a program that emphasizes an appreciation and respect for multiple disciplinary approaches to health sciences. Critical thinking is also a central element of our core curriculum.

Our objective is also to fully fund our PhD students (based on CIHR stipend levels) for a minimum of three years. Supervisors will be asked to commit resources through grants and contracts to supply these funds, or to evidence commitment to assist the candidate to obtain external scholarship support. We fully recognize that not all disciplines have access to equal amounts of funding, nor will all students have access to external scholarship support (e.g. international students). When and where funding falls short the Faculty has resources (currently about $650,000 in TA-ship and fellowship support) to provide back up funding for students. Such funding commitments are not provided lightly, and will impose on both faculty mentors and the graduate program the necessity of identifying only those students who are likely to be the most successful.

Reviewer B listed a series of specific questions:

1. What happened with the accreditation visit for the MPH program (scheduled for October 2009)? *FHS MPH, BA and BSc programs were accredited for a period of 5 years, beginning September 2010.*
2. Are the masters programs one or two years? *Both MSc and MPH are two-year programs.*
3. Don't quite understand the link to interdisciplinary graduate programs that this would lead to? (p. 3). *We admit that this original language was confusing. We have substantially rewritten this section for clarity, and to identify more specific links between FHS and other Faculties, Departments, and Programs. Our objective, though, remains the same: to identify points of interdisciplinary collaboration and synergy at SFU.*
4. Hard to fathom that a brand new PhD program has no resource implications re: faculty, course offerings, etc. TWO NEW COURSES means resource implications. This is addressed again on page 6, with a very different take home message. This language should be sorted out – it's confusing to a reviewer and misrepresents the needs of the program. *We have endeavored to detail, with greater clarity, both the resources available to, and*

resource implications of, the proposed program. One new seminar course will be offered, which will of course require faculty investment. The colloquium courses, at 1-credit each, will be co-taught by two faculty members over a 3-semester period to keep the progress of each cohort on track. Thus annual resources for one 3-credit course and 3 course credits (three 1-credit colloquia) will be obtained from the faculty to mount this program. A review of the faculty table provided in the proposal indicates that we have substantial FTEs to allocate to our graduate research programmes.

5. Why will it complement as opposed to compete with the UBC program? The rationale given on page 7 is weak, in my view. *We have revised this section to more fully answer this. See also the comments of Reviewer A, above.*
6. Amount of course work required unclear; dependent upon undergraduate/master's training/courses? *We have clarified required coursework (4 courses + requirements of the Supervisory Committee).*
7. Are the core courses for PhD students only or are they mixed with master's students? *At present the courses are dedicated to the PhD program. Subsequent revisions to the MSc program, which will be necessitated by the approval of the PhD, will take up this question. We anticipate some sharing between the MSc and PhD core curricula.*
8. Good idea re: courses in other programs; however, are there limits? X% of the coursework? *There are no limits contemplated at this point.*
9. Will part time students be permitted entry into the program? *We will not at this time permit part-time study for the PhD.*
10. To be clear, admission will be permitted from ANY undergraduate program? *As with other PhD programs at SFU, and following SFU policy, direct admission into the PhD of students with a Bachelor's degree in an area relevant to health sciences will not be the norm, but will be allowed for cases of unusual excellence, which includes submitted evidence that the applicant is capable of undertaking substantial original research. Master's students will be admitted who meet the admissions criteria, which include evidence of ability to undertake original research, familiarity with a relevant area of health sciences, and commitment to investigating interdisciplinary approaches. Faculty research strengths will largely dictate admissions, which further reduces applicants to those whose interests and skills are consistent with those of their proposed Supervisor and Supervisory Committee.*

10. ADDITIONAL INFORMATION REQUIRED BY SFU

Contact information for faculty members responsible for this document

Craig R. Janes, Associate Dean and Acting Graduate Program Chair is the main administrative contact: Faculty of Health Sciences, 11320 Blusson Hall, 778-782-7189, cjanes@sfu.ca.

Summary requirement for graduation

Students must complete: core coursework (4 courses) and additional courses as required by the Supervisory Committee; pass a comprehensive examination (both written and oral elements); write and successfully defend a thesis proposal; conduct original independent research project; and write and defend a doctoral thesis.

Summary of resources required.

FHS believes that it has the necessary faculty resources to mount this program. There may be an additional impact on DGS funding due to the overall increase in the number of graduate students, though this is part of the Senate mandate for FHS (and reflected in SCEMP targets). What follows is a listing of the ***current*** resources available to support graduate students in the Faculty, ***exclusive*** of faculty research funding and SFU/DGS entrance scholarships. Note that these numbers are based on current budget projections for this academic year.

Faculty of Health Sciences Resources Available to Support Graduate Education. 2010-2011 (actuals). Does not include funding from external grants or scholarships.			
Category of Support	AY amount	Number Given	Detail
TA-ships (est.)	$350,000	70	Approx $5,000 each
Graduate Fellowships	$228,528	36	$6348 each
FHS Faculty Entrance Awards	$75,000	25	$3,000 each
(returns from MPH Premium Fees)			
Totals	**$653,528**	**131**	

It is the objective of FHS to fully fund all of its PhD students at the CIHR stipend level (approximately $18,000 annually) for three years. To be considered for admission a supervisor must indicate a funding commitment. If a potential supervisor does not have external funding, they must articulate clearly in their letter accompanying the student's application how they will assist the student in identifying scholarship support, and admission may be contingent on receipt of that support. FHS' resources identified above are for back-up purposes, distribution for recruiting purposes to MSc and MPH students, and, most importantly, to provide some equity across the Faculty. As an interdisciplinary unit we are fully aware that not all disciplines have equal access to external sources of funding. If a faculty member can make a very strong case for an applicant, but cannot provide support, the Graduate Studies Committee will consider whether GF/FHS/TA support should be provided *in lieu* of external support. Competitive incoming students will be nominated for entrance scholarships from SFU.

Programs to be reduced or eliminated?

In order to create a better balance between professional and research stream students that is more reflective of our faculty resources, we expect that as the MSc and PhD programs increase in size (to 50-70 at steady state), the headcount numbers of MPH students will decrease from 130 to about 100 at steady state.

List of faculty who will teach or supervise, showing proportion of effort devoted to the program:

See the Table included above in Section 7.

Will a premium fee be charged for this program?

No.

Will students be eligible to apply for SFU awards?

Yes.

Will funding be available from the DGS?

We expect that successful applicants to the MSc/PhD program will be eligible for entrance scholarships and graduate fellowships from the DGS. We further expect that this will increase the demand on DGS resources, though we anticipate that some decrease in enrolment in the MPH may mitigate these demands somewhat. We emphasize, however, that our overall anticipated enrolments are consistent with SFU's enrolment planning targets for FHS' graduate programs.

Appendices

FHS Proposal to Offer a PhD

APPENDIX 1: PROGRAM CONSULTATION AND EXTERNAL REVIEWS

REVIEWER A

a. Competitive advantages and disadvantages

Simon Fraser University seeks to develop a PhD program with an interdisciplinary focus – from "cell to society". Within the Faculty of Health Sciences a MPH and MSc are currently offered and there is capacity to offer PhD training with the existing faculty. A variety of disciplines spanning social sciences to basic science exist at the University.

The proposed degree will be flexible and will target both external and MPH/MSc internal candidates. The required coursework is minimal – a seminar and interdisciplinary research colloquiam, both of which will provide an overview of disciplines in health sciences and introduce critical thinking. The emphasis is on the mentored development of the students with relevant course advice and research training provided by the student's Supervisory Committee.

SFU currently has >40 full-time faculty and anticipates a complement of 28 PhD students at steady state. A combination of faculty grant and scholarship awards will provide support for PhD students. There is clear student interest (~250 applications for 65 MPH positions).

It is proposed that the SFU approach will complement rather than compete with neighboring UBC's PhD program. The application addresses this concern directly – noting the distinct research areas at SFU that complement UBC's program. Students have requested PhD options from SFU and the faculty diversity and interest could support these students. UBC opened its School of Population and Public Health in 2008 and has a PhD program emphasizing research with epidemiology and biostatistical components. The UBC website includes the following topic areas:

- Epidemiology & Biostatistics
- Global Health & Vulnerable Populations
- Health Care Services & Systems
- Maternal-Child Health
- Occupational & Environmental Health
- Public Health, Emerging Threats, Rapid Response
- Social & Life Course Determinants of Health

The UBC PhD appears to be more of a classical PhD in public health with more stringent course requirements and perhaps stronger epidemiology training. Thus, SFU's interdisciplinary PhD program would not directly compete and could be quite complementary to UBC's program.

The primary advantages of SFU's approach are the fact that it utilizes faculty diversity and has flexibility to groom interdisciplinary thinkers in health sciences. Most PhD candidates will have received MS or MPH training. Dissertation will culminate in either a traditional document outlining the research undertaken or 3 published/to be published papers. The structure of the PhD will include a comprehensive examination, thesis proposal, and defence and is similar to conventional PhD programs. Current funding and research suggests that there will continue to be need for PhD level health scientists of the type proposed from this program.

The main disadvantage of the proposed program is a risk in the approach – by cultivating a broad interdisciplinary PhD from 'cell to society', the institution may not groom paradigm-changing experts within any specific discipline. This is a risk that is not present in highly focused 'single-discipline' PhD programs – but it is a risk that should be taken – in part to nurture a different type of PhD candidate. The ideal student for this program will harness the strengths of different disciplines to pursue an in-depth solution to a problem that could not be addressed without interdisciplinary collaboration. It is possible that this type of student and approach will foster development of a new hybrid discipline. Health science is increasingly inter-sectoral and familiarity with collaborative approaches will be important for long-term research, programs, and policy.

b. Is there potential to train students in this program to produce graduates that have sufficient depth and breadth such that they would be eligible to be considered candidates for national and international leadership positions in health Sciences?

It is unlikely that PhD students on graduation would be considered for national and international leadership positions –the PhD is just the beginning and further experience (post-doc) will typically be necessary. Thus, plans for extended investment in the best candidates and cross-pollination with other institutions will be useful. A combination of candidate leadership qualities, quality of mentorship, and timely research opportunities can converge to result in development of key leaders. Candidate selection is critical– the program should aim to enrol students who are independent critical thinkers, clear communicators, and self-starters. The quality of faculty one-on-one mentorship of the candidates and careful design of course and research work tailored to optimize potential of individual students is also important. Finally, the timeliness of the research focus will impact on publishability, grant opportunities and policy implications. Being very selective in the first cadre of students and nurturing these students carefully in terms of mentorship and opportunities will be critical to laying a good reputational foundation for the institution. If this is done well, the investment would be expected to result in these students, in turn, fostering opportunities and networks for the next generation of students

REVIEWER B

Thank you very much for the opportunity to review the exciting proposal for a PhD program in Health Sciences at SFU. It is not surprising that this successful, if young, Faculty has now matured to the stage where it is ready to embark on a PhD program.

I have reviewed the documents sent to me and really have much positive to say about the proposed program – the faculty is strong, the ground is fertile, the Faculty is poised. The brief sent to me indicates that the program (content, administration, future, fit) is well thought out and articulated.

Rather than spend a lot of time detailing these strengths, I will focus only on what I see as questions/gaps:

1. What happened with the accreditation visit for the MPH program (scheduled for October 2009)?
2. Are the masters programs one or two years?
3. Don't quite understand the link to interdisciplinary graduate programs that this would lead to? (p. 3)
4. Hard to fathom that a brand new PhD program has no resource implications re: faculty, course offerings, etc. TWO NEW COURSES means resource implications. This is addressed again on page 6, with a very different take home message. This language should be sorted out – it's confusing to a reviewer and misrepresents the needs of the program.
5. Why will it complement as opposed to compete with the UBC program? The rationale given on page 7 is weak, in my view.
6. Amount of course work required unclear; dependent upon undergraduate/master's training/courses?
7. Are the core courses for PhD students only or are they mixed with master's students?
8. Good idea re: courses in other programs; however, are there limits? X% of the coursework?
9. Will part time students be permitted entry into the program?
10. To be clear, admission will be permitted from ANY undergraduate program?

I think that if the document can address these few gaps, it should have no difficulty going forward.

APPENDIX 2: FULL CALENDAR DESCRIPTION OF PROGRAM

[Additional material to be added to current calendar]

The PhD Program

The PhD degree program is designed to train students in advanced research in health sciences, and to provide them with the skills, content area expertise, analytical and critical-thinking capabilities required to pursue original research relevant to health. Consistent with the mandate and objectives of the FHS mission, the PhD Program will introduce students to interdisciplinary approaches to research that will encourage them to develop cross-disciplinary research skills.

Areas of disciplinary emphasis in the Faculty include: social science, epidemiology, biostatistics, policy analysis, ethics and laboratory-based biomedical science. Research areas in the FHS are interdisciplinary and include: global health; environmental health and toxicology; maternal and child health, epidemiology and disease prevention; chronic and infectious diseases; population and public health; mental health & addiction; social inequities and health outcomes; adolescent and child development, reproductive health; and health policy.

Admission Requirements

Applicants to the PhD program will normally have previous training in a discipline relevant to their area(s) of interest in health sciences. Admission to the PhD program will depend on the availability of faculty to supervise the student. FHS requires applicants to identify from the faculty a Senior Supervisor who will agree to supervise the student, if accepted into the program.

To qualify for admission, applicants must satisfy all University admission requirements as outlined in SFU's Calendar under Graduate General Regulations (http://students.sfu.ca/calendar_archive/09.10%20calendar/GraduateGeneralRegulations.html, which include

One of the following:

i) a Master's degree from a recognized university, or the equivalent, *or*

ii) a Bachelor's degree, with a cumulative grade point average of at least 3.5 (on a 4.33 scale), from a recognized university, or the equivalent, *or*

iii) completion of at least 75% of the course work units required for the relevant department's Master's program, with a cumulative grade point average of at least 3.5. All graduate courses, whether completed at this University of another university, shall be considered in the calculation.

And

Submitted evidence that the applicant is capable of undertaking substantial original research. Normally, such capability will be judged from letters of reference from qualified referees, and the completion of a master's thesis, projects, published papers, or other scholarly work.

In addition, international students from countries where English is not the primary language must provide test scores from the TWE, TOEFL, or IELTS examinations. Minimum scores are indicated in the SFU Graduate General Regulation 1.3.12.

Admission is competitive: meeting these minimum standards does not guarantee admission to the program.

Application to the PhD program

All applicants, except those transferring from an FHS MSc or MPH program (for these, see below), must submit the following documents:

- All post-secondary transcripts.
- A short *curriculum vitae* providing evidence of scholarships and awards, academic performance, publications, and relevant research and work experience.
- A statement of intent describing how the program fits the applicant's research interests and career objectives. This statement must articulate the student's background and expertise, and will ideally evidence commitment to interdisciplinary scholarship.
- Three letters of reference (using the form provided in the application package or on-line) from academics/researchers who have first-hand knowledge of the applicant's research capabilities and academic training.

- For applicants whose first language is not English and whose previous education has been conducted in another language: official results of the TOEFL and TWE or IELTS exams taken in the last two years
- Students who have completed their undergraduate degree at an academic institution outside of North America may wish to supply the results of the Graduate Record Examination (GRE) taken within five years of the application date.
- Before admission can be finalized, a Senior Supervisor must be identified, and that individual must complete a Supervisory Committee Form and submit a letter attesting to a willingness to act in this capacity. This letter must also indicate funding commitments, or, if funding is not available, a statement as to how the student will be funded in their program of study, and where relevant, commitments to obtaining that funding. Note that while applicants may apply to the program without identifying a Senior Supervisor, a final decision to admit depends on the commitment by a faculty member to serve in this capacity.

Transferring to the PhD Program

Master of science (MSc) or master of public health (MPH) students who show exceptional abilities may apply to transfer to the PhD program only if the student can demonstrate their ability to carry out innovative, independent and original PhD level research in that field, has obtained high academic standing in previous university work, and has the support of their master's supervisor. All university regulations governing transfers must be met (SFU Graduate Regulations 1.3.4). Transfers are only permitted when the student has been in the master's program for two but not more than five terms. Transfer applications must be approved by the student's supervisory committee, the FHS graduate studies committee, and the Dean of Graduate Studies. Students transferring from the master's program will be eligible to earn only the PhD degree. Students will not be eligible to transfer to the PhD program beyond six semesters of full-time equivalent course work in the MSc program,

Student Supervision

By the end of their first semester in the PhD Program, and in consultation with their Senior Supervisor, students must have formed and met with their Supervisory Committee, whose composition must be approved by the FHS Graduate Studies Committee in accordance with SFU policy. The Supervisory Committee will comprise the Senior Supervisor and a minimum of two additional Faculty members, whose expertise will complement the student's research and program goals. The role of the Supervisory Committee is to oversee student curricular planning and progress in the PhD program, and to assess student performance on the Comprehensive Examination, the Thesis Proposal and Defence, the Thesis Research, and the Thesis Defence. At least once each year, the Supervisory Committee shall report on the student's progress and plans for the upcoming year, including course work. The annual report will be submitted for approval by the Graduate Studies Committee with a copy to the student. Students are required to demonstrate adequate progress toward the degree as judged by their committee, and meet the minimum standards described in Graduate General Regulation 1.5.4.

Degree Requirements

The courses listed below are the courses required of all PhD candidates:

HSCI 902-3 Interdisciplinary Seminar in Health Sciences

HSCI 903-1 Interdisciplinary Research Colloquium 1

HSCI 904-1 Interdisciplinary Research Colloquium 2

HSCI 905-1 Interdisciplinary Research Colloquium 3

PhD candidates will register in HSCI 902 in the first semester of their program. In addition, students are required to take three Interdisciplinary Research Colloquia for credit. Students who enter the PhD program from FHS master's programs (MPH, MSc), and who have taken 902, 903, 904, and 905, need not repeat the courses, provided that they achieved a grade of A- or higher in 902, and a grade of satisfactory in 903, 904, and 905.

It is expected that most students will be required to take additional course work or directed studies, which will be determined by the student together with the PhD Supervisory Committee. A student's annual progress report includes the course work plans, and must be approved by the FHS Graduate Studies Committee on an annual basis.

In addition to the courses above, students must register in HSCI 983-6, Comprehensive Examination and Thesis Proposal Preparation as soon as they commence preparation for the comprehensive exam. Once thesis research commences they must enrol in HSCI 990-6, Thesis Research. When they begin writing their thesis, students must register in HSCI 998-6, Thesis Completion.

Comprehensive Examination

PhD students must pass a comprehensive examination that consists of an oral defence of a major written paper. The topic of the paper will be determined by the supervisory committee. Details as to the conduct of the exam are provided to students in the PhD handbook and are found on the FHS website.

The comprehensive examination is normally expected to be completed by the end of the fourth term. There are four possible outcome of the comprehensive exam: pass, pass with minor comment and revision, pass with major revision and a requirement to re-write and re-defend, and fail. A student may only retake the comprehensive exam once. If a student fails the comprehensive exam, progress in the program will be considered unsatisfactory, and will trigger review by the FHS Graduate Studies Committee (as outlined in SFU's Graduate General Regulation 1.8.2), and a student will be required to withdraw from the program.

Doctoral Thesis Proposal

The candidate will prepare a written research proposal that integrates theory, current research, and methods in fields related to the selected research problem. The proposal will be organized and evaluated in accordance to policies and procedures established by the FHS Graduate Studies Committee. Briefly, these policies specify that the proposal:

a) reviews the relevant research literature;

b) reflects original work;

c) describes methodology appropriate to the principal research question(s).

PhD candidates will normally submit the thesis proposal in their 2nd year. The proposal and oral defence will be graded on the same basis, with the same possible outcomes, as the comprehensive exam.

In some cases, and depending on the judgment of the supervisory committee, the comprehensive examination and the thesis proposal presentation and defence may be combined into a single presentation and defence.

Doctoral Thesis

A written thesis is based on the candidate's original contribution to research in the field of his/her expertise, and is the final requirement for the PhD Program. The topic must be approved by the student's supervisory committee. The thesis may take two forms: the "traditional" document which outlines the research undertaken, methods, results, and discussion; and the "three paper" option, in which the candidate submits three published or publishable papers "bookended" by introductory and concluding chapters (~~at least one must be accepted for publication at the time of the defence, and the other two must have been submitted~~). Candidates must obtain human subjects ethics approvals, relevant animal handling approvals, and/or bio-safety hazards approvals prior to conducting their research, and must list approval numbers in the thesis. *

Thesis Defence

All PhD candidates must pass a formal thesis defence that is conducted in accordance with University Graduate General Regulations (1.9.4). The candidate will be awarded the PhD degree upon the submission and successful defence of a doctoral thesis describing the results of independent research.

Committee Composition

Normally the student's Supervisory Committee will conduct the doctoral comprehensive examination and thesis proposal defence. In addition, for the doctoral thesis defence, and in consultation with the Senior Supervisor, the candidate will choose an Internal Examiner, who is a member of faculty at the University or a person otherwise suitably qualified, who is not a member of the candidate's Supervisory Committee, and an External Examiner, who shall be specifically qualified in the field of the thesis and not be a member of faculty at the University (in accordance with SFU Graduate General Requirement 1.9.3.)

Residence Requirement

A PhD candidate must be registered and in residence at SFU for the minimum number of semesters described in the SFU Graduate General Regulation 1.7.

The PhD program requires a **minimum of three years of full-time study**, and the Faculty will generally provide funding only for three years. Depending the student's prior training in the Health Sciences, and whether s/he completed core courses while in the MPH/MSc program at SFU, the length of study will generally vary from 3-5 years.

* Amended by Senate on May 24/11

APPENDIX 3: FHS FACULTY GOVERNANCE PROCEDURES AND PROCESSES

Introduction: Responsibility for the graduate programs in FHS rests with the Faculty Graduate Studies Committee (GSC). The GSC is one of four standing committees in the Faculty (the Undergraduate Studies Committee, the Faculty Executive Committee, and the Tenure and Promotion Committee are the three others). Faculty representatives to the GSC are elected from the faculty as a whole, with the elected members of the Faculty Executive Committee acting, where necessary, as a nominations committee to ensure reasonable balance by rank, discipline, and gender. Students representing the MPH, MSc, and PhD programs are elected by the Health Sciences Student Caucus. The Graduate Program Coordinator serves and on the committee, and has voting privileges. Meetings of the GSC are chaired by the Graduate Program Director, who is nominated by the Dean, and ratified by the Faculty. The Associate Dean-Academic is an ex-officio member of the GSC.

The GSC has two major subcommittees, not restricted in membership: the MPH subcommittee, which oversees the MPH program, and the MSc/PhD subcommittee, which oversees the MSc/PhD programs.

The terms of reference for the GSC and subcommittees follows.

APPENDIX 4: PHD THESIS DEFENCE GUIDELINES & CHECKLIST

1. Pre-Approval for Thesis Defence (3 months in advance of defence date)

- Arrange with Supervisory Committee for your Pre-Approval for Thesis Meeting.
- Pre-Approval for Thesis Defence Form signed, completed and returned to the Graduate Secretary.

Please go to the SFU Library Thesis Office Website and refer to the "Preparing and Submitting Your Thesis: Information Resources" page for guidelines on thesis formatting:

http://www.lib.sfu.ca/researchhelp/writing/thesesinfo.html

At this time, it would also be a good idea to review on-line on references for "Completing and submitting your thesis, extended essay or project": http://www.lib.sfu.ca/researchhelp/writing/submitting.htm

2. Approval of Examining Committee (6 weeks in advance of defence date)

In consultation with your supervisor, you must form the Examining Committee:

- Approval of Examining Committee for PhD Form
- Choose an Internal Examiner – this is usually someone within the department.
- Choose an External Examiner.
- Submit to the Graduate Secretary with the External Examiner's CV.
- Submit to the Graduate Secretary with your completed final title of your thesis and your abstract. Please note that the maximum word count for the abstract of your PhD thesis is only 350 words.
- Check the availability (date and time) of all examining committee members (Supervisory Committee, graduate program chair, and examiners).
- Confirm a date and time of your proposed Examination Date with Graduate Secretary.
- Return signed and completed Approval of Examining Committee for PhD Form to Graduate Secretary
- If you require a change in your Supervisory Committee, please obtain the Change of Supervisory Committee Form from the Graduate Secretary and have it completed, signed and returned.

3. Distribution of your Thesis (5 weeks in advance of your defence date)

You must submit sufficient copies and an electronic copy (pdf) of your unbound thesis to the Graduate Program Assistant along with your Distribution of Thesis memo who will then distribute your thesis to:

- Your Supervisory Committee
- Your internal examiner
- Your external examiner (will receive thesis 4 weeks in advance of your defence date)
- The chair of the defence (The Graduate Program Chair)

4. Approval Pages (2 days in advance of your defence date)

Submit to the Graduate Secretary, 5 printed copies of your Approval Page.

5. After a Successful Defence:

- Submitting to the Library: Check for deadlines!
  http://www.lib.sfu.ca/researchhelp/writing/thesesregulations/deadlines.pdf
- If you cannot submit your thesis by this date, you then have until the Friday before the first day of classes of the following semester to submit your thesis. This will cost you a late submission penalty.
- Your Supervisory Committee will have signed your 5 Approval Pages. These pages will be submitted along with your copies of your thesis.
- Please provide a copy of your Approval Page for the Graduate Secretary.
  - Please download the latest "The Last Steps" from the SFU Thesis Office. This will be a step-by-step guide to help you complete all the necessary tasks and forms before your thesis can be accepted. Please check off all that is relevant to you and your study field.
    http://www.lib.sfu.ca/researchhelp/writing/thesesformatting/LastSteps.pdf
  - You will need to register your submission in advance with the Library Thesis Office on¬line. All steps are found on the "The Last Steps" guide.

- If there are revisions of your thesis required by your examining committee, you must have your Senior Supervisor sign a Memorandum of Revision of Thesis (if applicable) written out to the Assistant for Theses Library that states that you certify all required revisions and corrections have been made.
- Please provide a signed copy of the Memorandum of Revision of Thesis (if applicable) to the Graduate Program Assistant; the original will go with your copies of your thesis to the Library.
- After your supervisor has signed off on your revisions, you must print 5 copies of your thesis (single-sided). Two copies stay at the library, three copies are returned to the Department – one copy for you, one for your Senior Supervisor, and one for the department.
- You may request one additional bound copy for yourself at a cost of $16. (Total amount of copies allowed is (6): 2 for library, 1 for department library, 1 for your supervisor, maximum 2 copies for you. http://www.lib.sfu.ca/researchhelp/writing/thesesregulations/moretheses.pdf
- Please check the "The Last Steps" in order to understand all the complete documents needed for your submission. You must create a Document Folder containing the following forms to include with your thesis submission:
- Print 3 copies of your Thesis On-line Registration Email (1st copy for your document folder, 2nd copy for your receipt must bring both copies to the Library for stamp of receiving) and 3rd copy to the Graduate Secretary).
- 1 copy of the Memorandum of Revisions (if applicable) written out to the Library signed by the Graduate Program Chair.
    - Approval Pages signed.
    - Title Page (Ensure the title is the same as on the signed Approval Page).
    - 1 copy of Declaration of Partial Copyright Licence.
    - 1 copy of the signed Partial Copyright Licence.
    - 1 copy of the signed Theses Non-Exclusive License.
    - Additional forms which may include:

a) Postponement of Publication Request Form

b) Institutional Repository Withhold Request Form – to request exemption for digitization of a thesis

c) PCL with Exemption Details Form – if the Dean of Graduate Studies grants exemption. This is an alternate version of the Partial Copyright License, which replaces the standard version of PCL. For official Forms and Regulations: http://www.lib.sfu.ca/researchhelp/writing/regulations.htm

- Place each copy of your thesis in a separate folder; replace 3 of the approval pages with the signed ones.
- Submit all copies of thesis to library (7th floor) with all necessary forms.

Ensure that you have applied for graduation for the on-line system. For further assistance with thesis format and submission questions, contact Penny Simpson, Assistant for Theses, email thesis_assistant@sfu.ca. Tel: 778.782-4747

Overview List of Forms

- Pre-Approval for Thesis Defence Form
- Approval of Examining Committee for PhD Form
- Change of Supervisory Committee Form (if applicable)
- Distribution of Thesis Form
- Approval Page (5 copies)
- Memorandum of Revision of Thesis (if applicable)
- Your Thesis (5 - 6 copies)
- Thesis On-line Registration Email
- Title Page
- Declaration of Partial Copyright Licence

- Partial Copyright Licence
- Theses Non-Exclusive License
- Postponement of Publication Request Form (if applicable)
- Institutional Repository Withhold Request Form (if applicable)
- PCL with Exemption Details Form (if applicable)

APPENDIX 5: LIBRARY REPORT INDICATING ADDITIONAL LIBRARY COST

SFU SIMON FRASER UNIVERSITY LIBRARY

Library Course Assessments

The Library participates in the course approval process for new courses at both the undergraduate and graduate levels. By Senate motion (S.93-11) "no new course should be approved by Senate until funding has been committed for necessary library materials." A Library review should be conducted after new course proposals have been approved by the department or school curriculum committee, before being considered by the Faculty curriculum committee. New courses will not be approved at the Senate Committee on Undergraduate Studies (SCUS) or Senate Graduate Studies Committee (SGSC) until a Library review has been completed. Even if the department states that no new library resources are required, a report from the Library is required to confirm this view.

To submit course proposals for review by the Library, forward the following materials to Gwen Bird, Associate University Librarian, Collections Services:

- course proposal forms
- complete course outline
- reading list created for the course, if any
- date of Faculty curriculum committee meeting (or other deadline for library report)

An assessment will be done to evaluate whether the Library's holdings and present collection development activities are adequate to support the new course. If no new library resources are required, the course will be added to the appropriate list below indicating the library is adequately resourced to support the course.

If additional library resources are required, a full report will be created and linked below, and the associated costs will be identified. The costs may be one-time, to fill gaps in holdings, or ongoing, for example, to start new journal subscriptions, or sustain book collecting in areas not now included in the Library's collection scope. If costs are attached, the department or school is asked to transfer the required funds to the Library's materials budget. Questions about the process can be directed to Gwen Bird.

No Additional Library Resources Required

Unless otherwise indicated, these courses require no additional library resources based on a course location of SFU Burnaby. In many cases, if the courses were to be offered at SFU Surrey or Vancouver or as off-campus courses, additional Library costs might be involved. Please contact Gwen Bird for details.

Centre for Education on Research and Policy

Centre for Research on International Education

Centre for Research on Sexual Violence

Centre for the Study of Gender, Social Inequities and Mental Health

Centre for the Study of Public Opinion and Political Representations

Centre for Workplace Health and Safety

Vancouver Institute for Visual Analytics

B.Sc. in Biomedical Physiology (School of Kinesiology)

BISC 413, 830, 831, 832, 833, 834

BUS 427

CHEM 391

CMNS 357, 820

CMPT 166, 375, 626, 628, 627, 781, 828, 895, 896

CRIM 812,820, 864, 865

DEVS 201, 401, 801

EASC 601, 602

EDUC 403, 438, 454, 810, 943, 944

ENGL 432, 433

ENV 100, 200, 300, 400, 450, 650

EVSC 100, 205, 399, 499

First Nations Language Centre

FNST 333, 376, 462

FPA 285, 313 (Woodwards), 462, 485

FREN 217, 226, 245, 275, 331, 332, 333, 334, 340, 341, 343, 344, 352, 407, 417, 420, 440, 441, 442, 444, 852

GEOG 104, 318

GERO 410

Graduate Diploma in Public Health Practice

GSPP 817, 818, 819, 820, 821, 822, 823, 824, 827, 828, 829

GSWS 100, 431, 432, 433

HIST 311, 323, 330, 463, 476, 872 (assessed as 893)

HSCI 349, 407, 408, 412, 479, 493, 494, 726, 727, 845, 843, 851, 888, 887, 902, 903, 904, 905

IAT 103,167, 375

Institute for Environmental Learning

Institute for Values in Policy and Science,

IS 309, 319, 329, 802

Jack Austin Centre for Asia Pacific Business Studies

LBST 308, 330

MACM 203, 204, 294

MATH 441/741

MBB 242, 461, 566, 821, 822, 823, 861, 862, 863

PHIL 327

POL 311, 338, , 450, 452

PSYC 391

PUB 401

REM321/ENV321

APPENDIX 6: SUPPORT FOR GRADUATE STUDENTS

FHS is committed to financial support for graduate student and has identified the following resources for PhD students:

- **SFU Special Entrance Scholarships** and **SFU University Fellowships** may be available through the Dean of Graduate Studies office.
- **Research Traineeships.** Traineeships are available from national and provincial agencies, for example MSHRF, the BC Cancer Agency, the BC Centre for Excellence in HIV/AIDS, CIHR, SSHRC, and NSERC.
- **Research Assistantships.** The increasing research productivity of the Faculty has already created a significant demand for graduate research assistants. As is often the case, PhD students will choose to work on the research grant of their supervisor.
- **Faculty Fellowships.** The Faculty of Health Sciences is finding resources to support students who may not be able to support themselves. These may take the form of full fellowships or half-fellowships to match other sources of funding, and they may include summer fellowships for practicum/project semesters that may be especially costly.
- **TA and TM support** as is typical of other graduate programs at SFU. The large and growing undergraduate programs in FHS, and our MPH program, will demand increased TA and TM support.
- **Sessional Instruction**. We have identified several lower division courses and electives that could be taught by advanced PhD students.
- **Scholarships, career support, and traineeships local to international students** may be available independently of SFU or the Faculty of Health Sciences: many visa students will have applied for and received support from their employer or their own local, regional or national health agencies. Some may be on paid or unpaid study-leave from careers in health, or have scholarships from universities of granting agencies as a result of excellent performance in their undergraduate studies.

In addition to the sources listed above, it is anticipated that PhD students accepted for admission will be able to apply to discipline-specific resources for funds to complete the program.

APPENDIX 7: NEW COURSE PROPOSALS

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date Feb 23, 2009

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: Health Sciences *(max. 4 chars)* **Catalog Number:** HSCI -902

Course Title: Interdisciplinary Seminar in the Health Sciences *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Interdisciplinary Seminar *(max. 25 char.)*

Course Description for Calendar: ***(append a course outline as a separate document)***

Epistemological and philosophical groundings for research inquiry and the ways in which different approaches manifest themselves in developing research questions and choosing methods for research in health sciences. Issues related to measurement, inference, experimental and quasi-experimental research designs, interpretive and ethnographic methods of data collection will be examined.

Units: 3

Available Course Components: ***(select all that apply)***

☑ Lecture ☑ Seminar ☐ Laboratory ☐ Practicum

Prerequisites: *(if any)* Admission to the MSc, MPH (thesis), PhD program in Health Sciences, or consent

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10-15 The term course will first be offered: Fall 2009

Frequency of course offering: Annually

Grading Basis: ☑ Graded ☐ Satisfactory/Unsatisfactory ☐ In Progress/Complete

Justification:

Required core course for all PhD students in the Faculty of Health Sciences. It will provide an introduction to interdisciplinarity, the logic and philosophy of scientific inquiry in the health sciences.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

Number of additional faculty members required in order to offer this course: none

Additional space required in order to offer this course: ***(append details)*** none

Additional specialized equipment required in order to offer this course: ***(append details)***

none

Additional Library resources required: ***(append details)*** Annually $ ~~pending~~ approved One-time $ _____

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

COURSE OUTLINE

HSCI 902-3 Interdisciplinary Seminar in the Health Sciences

An advanced seminar which examines the epistemological and philosophical groundings for research inquiry and the ways in which different approaches manifest themselves in developing research questions and choosing methods for research in health sciences. Issues related to measurement, causal inference, experimental and quasi-experimental research designs, interpretive and ethnographic methods of data collection will be examined. The primary learning objectives for the course cover a range of disciplinary perspectives, and are as follows:

1. Develop an understanding of and appreciation for the process of conducting health science research
2. Learn to critically analyze research.
3. Practice communicating research frameworks and findings.

Requirements:

Students will:

- prepare two in-class presentations;
- submit two written assignments relating to the presentations; and
- take a final take-home exam.

Outline of Topics:

Part I: The Logic and Structure of Scientific Reasoning
Part II: Research Design
Part III: Conversing with and Contributing to the Existing Literature
Part IV: Student Presentations

Readings selected from these texts:

Browne & Keeley (2003) *Asking the Right Questions: A Guide to Critical Thinking, 7th edition.*
Campbell & Stanley (1963) *Experimental and Quasi-Experimental Designs for Research*
King, Keohane, & Verba (1994) *Designing Social Inquiry: Scientific Inference in Qualitative Research*
Kuhn (1962) *The Structure of Scientific Revolutions*
Elwood (2008) *Critical Appraisal of Epidemiological Studies and Clinical Trials.*
Popper (1968) *The Logic of Scientific Discovery.*
Plus selections from the current peer-reviewed journal literature.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date _____

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: Health Sciences *(max. 4 chars)* **Catalog Number:** HSCI 903-1

Course Title: Interdisciplinary Research Colloquium1 *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Research Colloquium1 *(max. 25 char.)*

Course Description for Calendar: *(append a course outline as a separate document)*

Recent research articles, book chapters, or students' research from a range of health sciences disciplines will be presented and discussed, with an emphasis on critical analysis.

Units: 1

Available Course Components: *(select all that apply)*

☐Lecture ☑Seminar ☐Laboratory ☐Practicum

Prerequisites: *(if any)* Admission to the MPH (thesis), MSc or PhD, or permission of the instructor

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10-20 The term course will first be offered: Spring 2010

Frequency of course offering: annually

Grading Basis: ☐Graded ☑Satisfactory/Unsatisfactory ☐In Progress/Complete

Justification:

This colloquium is designed to facilitate interdisciplinary discussion among graduate students in the Faculty of Health Sciences, and to promote their interest in interdisciplinary research.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

All tenure track faculty are capable of teaching this course.

Number of additional faculty members required in order to offer this course: none

Additional space required in order to offer this course: *(append details)* none

Additional specialized equipment required in order to offer this course: *(append details)*

none

Additional Library resources required: *(append details)* Annually $ under review One-time $ _____

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

COURSE OUTLINE

HSCI 903-1 Interdisciplinary Research Colloquiuml

This colloquium is designed to facilitate interdisciplinary discussion and to promote the development of research interests of graduate students in the Faculty of Health Sciences. Recent research articles, book chapters, or students' research will be presented and discussed with an emphasis on critical analysis.

The presentations by students will be organized by the Instructor. Each student will be required to submit a written critical summary of the presentation as well as reading material; these will be handed out to the class prior to the student's presentation.

Grading will be based on the presentation, critical summary and class participation. Students will be graded Satisfactory/Unsatisfactory.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date _____

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: Health Sciences *(max. 4 chars)* **Catalog Number:** HSCI 904-1

Course Title: Interdisciplinary Research Colloquium2 *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Research Colloquium2 *(max. 25 char.)*

Course Description for Calendar: *(append a course outline as a separate document)*

Recent research articles, book chapters, or students' research from a range of health sciences disciplines will be presented and discussed, with an emphasis on critical analysis.

Units: 1

Available Course Components: *(select all that apply)*

☐ Lecture ☑ Seminar ☐ Laboratory ☐ Practicum

Prerequisites: *(if any)* Admission to the MPH (thesis), MSc or PhD, or permission of the instructor

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10-20 The term course will first be offered: Spring 2010

Frequency of course offering: annually

Grading Basis: ☐ Graded ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete

Justification:

This colloquium is designed to facilitate interdisciplinary discussion among graduate students in the Faculty of Health Sciences, and to promote their interest in interdisciplinary research.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

All tenure track faculty are capable of teaching this course.

Number of additional faculty members required in order to offer this course: none

Additional space required in order to offer this course: *(append details)* none

Additional specialized equipment required in order to offer this course: *(append details)*

none

Additional Library resources required: *(append details)* Annually $ under review One-time $ _____

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

COURSE OUTLINE

HSCI 904-1 Interdisciplinary Research Colloquium2

This colloquium is designed to facilitate interdisciplinary discussion and to promote the development of research interests of graduate students in the Faculty of Health Sciences. Recent research articles, book chapters, or students' research will be presented and discussed with an emphasis on critical analysis.

The presentations by students will be organized by the Instructor. Each student will be required to submit a written critical summary of the presentation as well as reading material; these will be handed out to the class prior to the student's presentation.

Grading will be based on the presentation, critical summary and class participation. Students will be graded Satisfactory/Unsatisfactory.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Name of Faculty _____ Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date _____

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: Health Sciences *(max. 4 chars)* **Catalog Number:** HSCI 905-1

Course Title: Interdisciplinary Research Colloquium3 *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Research Colloquium3 *(max. 25 char.)*

Course Description for Calendar: ***(append a course outline as a separate document)***

Recent research articles, book chapters, or students' research from a range of health sciences disciplines will be presented and discussed, with an emphasis on critical analysis.

Units: 1

Available Course Components: *(select all that apply)*

☐ Lecture ☑ Seminar ☐ Laboratory ☐ Practicum

Prerequisites: *(if any)* Admission to the MPH (thesis), MSc or PhD, or permission of the instructor

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10-20 The term course will first be offered: Spring 2010

Frequency of course offering: annually

Grading Basis: ☐ Graded ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete

Justification:

This colloquium is designed to facilitate interdisciplinary discussion among graduate students in the Faculty of Health Sciences, and to promote their interest in interdisciplinary research.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

All tenure track faculty are capable of teaching this course.

Number of additional faculty members required in order to offer this course: none

Additional space required in order to offer this course: *(append details)* none

Additional specialized equipment required in order to offer this course: *(append details)*

none

Additional Library resources required: *(append details)* Annually $ under review One-time $ _____

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

COURSE OUTLINE

HSCI 905-1 Interdisciplinary Research Colloquium3

This colloquium is designed to facilitate interdisciplinary discussion and to promote the development of research interests of graduate students in the Faculty of Health Sciences. Recent research articles, book chapters, or students' research will be presented and discussed with an emphasis on critical analysis.

The presentations by students will be organized by the Instructor. Each student will be required to submit a written critical summary of the presentation as well as reading material; these will be handed out to the class prior to the student's presentation.

Grading will be based on the presentation, critical summary and class participation. Students will be graded Satisfactory/Unsatisfactory.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Proposed course number and title: HSCI - 983 Comprehensive Examination and Thesis Proposal

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date 2 Feb 2011

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: HSCI *(max. 4 chars)* **Catalog Number:** 983-6

Course Title: Comprehensive Exam and Thesis Proposal *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Comp Exam & Thesis Proposal *(max. 25 char.)*

Course Description for Calendar: *(append a course outline as a separate document)*

Comprehensive examination and thesis proposal preparation.

Units: 6

Available Course Components: *(select all that apply)*

☐Lecture ☐Seminar ☐Laboratory ☐Practicum

Prerequisites: *(if any)*

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10 The term course will first be offered: FALL 2011

Frequency of course offering: Annually

Grading Basis: ☐Graded ☑Satisfactory/Unsatisfactory ☑In Progress/Complete

Justification:

ntroduction of a new PHD program necessitates these courses.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

N/A

Number of additional faculty members required in order to offer this course: N/A

Additional space required in order to offer this course: *(append details)* None

Additional specialized equipment required in order to offer this course: *(append details)*

None

Additional Library resources required: *(append details)* Annually $ N/A One-time $ N/A

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Proposed course number and title: HSCI - 990 Thesis Research

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date 2 Feb 2011

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: HSCI *(max. 4 chars)* **Catalog Number:** 990-6

Course Title: Thesis Research *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Thesis Research *(max. 25 char.)*

Course Description for Calendar: *(append a course outline as a separate document)*

Doctoral thesis research.

Units: 6

Available Course Components: *(select all that apply)*

☐ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum

Prerequisites: *(if any)*

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10 The term course will first be offered: FALL 2012

Frequency of course offering: Annually

Grading Basis: ☐ Graded ☐ Satisfactory/Unsatisfactory ☑ In Progress/Complete

Justification:

Introduction of a new PHD program necessitates these courses.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

N/A

Number of additional faculty members required in order to offer this course: N/A

Additional space required in order to offer this course: *(append details)* None

Additional specialized equipment required in order to offer this course: *(append details)*

None

Additional Library resources required: *(append details)* Annually $ N/A One-time $ N/A

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

SIMON FRASER UNIVERSITY

NEW GRADUATE COURSE PROPOSAL FORM

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attach). The new course proposal must also be sent to the Library for a report.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Department or School: Faculty of Health Sciences

Proposed course number and title: HSCI - 998 PHD Thesis Preparation and Defence

Other Faculties:

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Name of Faculty N/A Signature _____ Date _____

Departmental approval *(non-departmentalized faculties need not sign)*

Department Graduate Program Committee

Signature _____ Date _____

Department Chair

Signature _____ Date _____

Faculty approval

Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources

Faculty Graduate Program Committee

Signature _____ Date 2 Feb 2011

SGSC approval

Signature _____ Date _____

SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

NEW GRADUATE COURSE PROPOSAL FORM

Subject: HSCI *(max. 4 chars)* **Catalog Number:** 998-6

Course Title: Thesis Preparation and Defence *(max. 80 char.)*

Short Title *(appears on transcripts etc.)* Thesis Prep and Defence *(max. 25 char.)*

Course Description for Calendar: *(append a course outline as a separate document)*

Preparation and defence of the doctoral thesis.

Units: 6

Available Course Components: *(select all that apply)*

☐ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum

Prerequisites: *(if any)*

Campus at which course will be offered: Burnaby

Estimated Enrolment: 10 The term course will first be offered: FALL 2012

Frequency of course offering: Annually

Grading Basis: ☐ Graded ☑ Satisfactory/Unsatisfactory ☑ In Progress/Complete

Justification:

ntroduction of a new PHD program necessitates these courses.

Resources:

Faculty member(s) who will normally teach this course:
(append information about their competency to teach the course)

N/A

Number of additional faculty members required in order to offer this course: N/A

Additional space required in order to offer this course: *(append details)* None

Additional specialized equipment required in order to offer this course: *(append details)*

None

Additional Library resources required: *(append details)* Annually $ N/A One-time $ N/A

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Upon approval of the course proposal, the Dean of Graduate Studies office will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

APPENDIX 8: FACULTY BIOGRAPHICAL SKETCHES

Ryan Allen

Assistant Professor

Biography:

After earning his B.S. degree in Physics from Denison University, Dr. Allen attended the University of Washington where he earned his M.S. in Environmental Engineering and his Ph.D. in Environmental and Occupational Health Sciences. His doctoral research investigated personal exposure to air pollution in the Seattle area, focusing specifically on the penetration of outdoor air pollution into indoor residential environments and the contributions of outdoor- and indoor-generated air pollution to personal exposure. After completing his Ph.D., Dr. Allen remained at the University of Washington as a post-doctoral fellow. During this time he continued to research air pollution exposure as part of the Multi-Ethnic Study of Atherosclerosis and Air Pollution. This ongoing study is investigating the role of air pollution from traffic and other sources on the progression of subclinical cardiovascular disease in 6 U.S. cities.

BS, Physics
Dennison University

MS, Environmental Engineering
University of Washington

PhD, Environmental & Occupational Health Sciences
University of Washington

Postdoctoral Studies
University of Washington

Research Interests:

Air pollution exposure assessment: indoor and outdoor exposures, air pollution, health effects, development of methods to reduce exposure misclassification in large epidemiological studies

Teaching Interests:

Environmental health, community air pollution, environmental exposure assessment/analysis

Publications and Activities

Funding Assessing the Impact of Wood Stove Interventions on Air Quality and Respiratory Health in British Columbia
Repeat Home Visits & Alternative Sampling Techniques in the Mini-CHILD Study ("Mini-CHILD II")

Tim Beischlag

Associate Professor

Biography:

Dr. Beischlag received his PhD from the University of Toronto in 1996. There he cloned and studied the transcriptional regulation of dopamine receptor genes. Following his PhD, Dr. Beischlag's post-doctoral research began at the University of California/Los Angeles where he studied and characterized the molecular determinants of aryl hydrocarbon receptor-mediated gene transcription. He continued this work at the University of California/San Diego. In 2004, Dr. Beischlag joined the Center for Molecular Toxicology and Carcinogenesis at Pennsylvania State University as an assistant research professor. Dr. Beischlag joined the Faculty of Health Sciences in 2007.

Dr. Beischlag is actively seeking M.Sc. and Ph.D. level graduate students for his lab. Interested candidates should apply directly to Dr. Beischlag at: tvb@sfu.ca

More information about the Beischlag Lab.

BS, Honors
Pharmacology
University of Toronto

MSc, Pharmacology
University of Toronto

PhD, Department of
Pharmacology
University of Toronto

Postdoctoral Research
University of
California/Los Angeles

Research Interests:

Research in my laboratory is focused on the molecular determinants of biological signaling pathways involved in chemical carcinogenesis and related toxicities. In particular, we are interested in how dioxins, poly-chlorinated biphenyls (PCB's), and related compounds activate the aryl hydrocarbon or dioxin receptor (AHR) and how this system interacts with other signaling systems. The AHR mediates most, if not all of the toxic effects of these ubiquitous environmental pollutants. Upon activation, AHR binds DNA and initiates the transcription of a battery of target genes including those that encode for xenobiotic metabolizing enzymes. In addition, the AHR interacts with other transcription factors, including nuclear hormone receptors, to modulate and/or disrupt their activity. It is our goal to elucidate the molecular events underlying AHR-mediated toxicities as well as normal AHR physiology.

Publications and Activities

Funding Molecular determinants of bHLH-PAS transcription factor function
The role of the AH receptor in estrogen-sensitive breast cancer

Nicole Berry

Assistant Professor

Biography:

Dr. Berry received her training at the University of Michigan, where she got her M.A. and Ph.D. in the Department of Anthropology and earned a graduate certificate from the joint program with Psychology. Before coming to Simon Fraser, Dr. Berry was a Kellogg Community Health Scholar at the School of Public Health at the University of North Carolina at Chapel Hill.

BA, International Studies University of South Carolina

MA, Anthropology University of Michigan – Ann Arbor

PhD, Anthropology University of Michigan – Ann Arbor

Postdoctoral studies in community-based participatory research, University of North Carolina – Chapel Hill

Research Interests:

Dr. Berry is committed to understanding how to foment changes that have a positive impact on health. Her research focuses on the study of social change through an examination of reproductive health in a globalizing world. Her post-doctoral training in community-based participatory research buttressed a methodological dimension of her thematic interests. Her approach to health promotion involves exploring collaborative models of research with disenfranchised population.

Her doctoral research was based on a two-year ethnographic study in Sololá, Guatemala evaluating attempts by local, national and international health workers to improve emergency obstetric care in the district hospital. She explored this interventions at all levels—from the historical environment that catalyzed expert support around emergency obstetric care, to the assumptions about maternal mortality and pregnant women embedded in the intervention. She investigated why the intervention failed to decrease alarmingly high rates of maternal mortality among local Mayan women. Her field study provides significant insight into why, after 20 years, the international community continues to make little headway in decreasing high rates of maternal mortality in developing countries, and points to alternative approaches to improve the success rates of interventions both in emergency obstetrics and Safe Motherhood. Dr. Berry is currently working on a book manuscript based on her dissertation data.

Her post-doctoral project examines how the global process of migration can impact family relationships and, in turn, how family dynamics can affect adolescent reproductive health behaviour and outcomes. Proyecto PADRES (PARENTS' Project) engaged mothers from the newly established Latino community in Durham, NC in a community-based participatory research process to investigate why so many Latino adolescents drop out of school and abandon their families before 18 years of age. The research data was used to develop an educational curriculum for parents of Latino teens and preteens. The curriculum is based on empowerment education techniques and covers six different topics—from communication to discipline to letting go of counterproductive beliefs—to help promote what community-members consider healthy, functioning families.

In the future, Dr. Berry would like to take her community-based research skills back to Guatemala to engage indigenous communities in finding solutions to the problem of high maternal mortality rates.

Teaching Interests:

Teaching Interests: Dr. Berry currently teaches Health, Gender and Development. Her other areas of interest include Global Health, Reproductive Health, Maternal and Child Health, Theory in Health Promotion, Empowerment and Participatory Methods.

Publications and Activities

Funding An empirical account of empowerment in global health promotion

Mark Brockman

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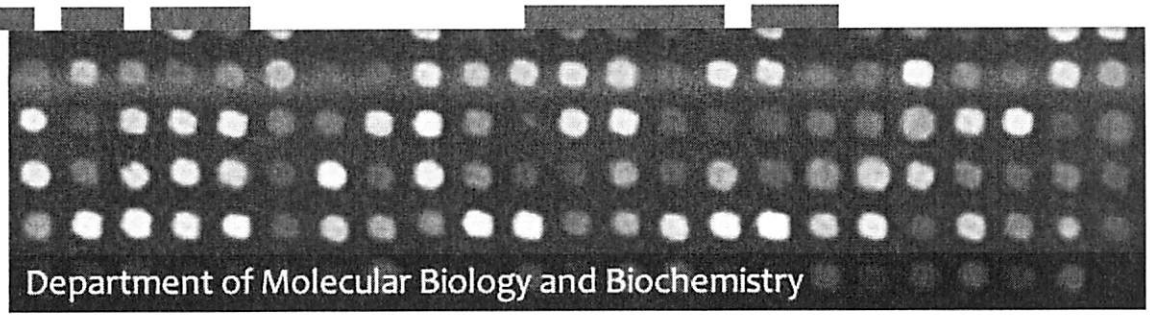

Mark A. Brockman, Associate Professor

B.A., Beloit College
Ph.D., Harvard University

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Office: SSB 7153
Email: mark_brockman@sfu.ca


Calendar of events


Publications from our department


Funding, Awards and Distinctions


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Research Interest

The research in our laboratory aims to use molecular approaches to investigate key questions at the interface of virology, pathogenesis, and the human cellular immune response to human immunodeficiency virus (HIV) infection. Current studies focus on understanding the impact of viral immune escape mutations on cytotoxic T lymphocyte (CTL) recognition and on HIV protein function, measuring the ability of T cell receptors (TCR) to recognize and kill HIV-infected cells, and assessing the relevance of viral tropism and cellular compartments on disease progression.

We have developed recombination strategies to generate large panels of viral variants that encode patient-derived HIV sequences. Replication capacity of these variants is being measured to define codon-specific associations in the viral Gag and Pol genes with fitness and to identify potential relationships with immune selection pressure. Similar work assesses the impact of immune escape on function of viral accessory proteins, such as Nef and Vif. The host CTL response to HIV is determined in large part by interactions between TCR and MHC class I/viral peptide complexes. We are cloning and expressing full-length TCR from virus-specific CTL in order to examine the activity of TCR variants in greater detail. Finally, changes in viral tropism and related cell death may contribute to disease progression and AIDS. We are using virion immunocapture strategies to examine viral compartmentalization in plasma in order to determine the cellular sources of HIV in infected individuals over time.

Recent Publications

- Brockman MA, Kwon DS, Tighe DP, Pavlik DF, Rosato PC, Sela J, Porichis F, Legall S, Waring MT, Moss K, Jessen H, Pereyra F, Kavanagh DG, Walker BD, and Kaufmann DE. 2009. IL-10 is upregulated in multiple cell types during viremic HIV infection and reversibly inhibits virus-specific T cells. *Blood* 114:346-56.
- Chen H, Piechocka-Trocha A, Miura T, Brockman MA, Julg BD, Baker BM, Rothchild AC, Block BL, Schneidewind A, Koibuchi T, Pereyra F, Allen TM, Walker BD. 2009. Differential neutralization of HIV replication in autologous CD4 T cells by HIV-specific CTL. *Journal of Virology* 83:3138-49.
- Miura T, Brockman MA, Brumme ZL, Brumme CJ, Pereyra F, Trocha A, Block BL, Schneidewind A, Allen TM, Heckerman D, and Walker BD. 2009. HLA-associated alterations in replication capacity of chimeric NL4-3 viruses carrying gag-protease from elite controllers of human immunodeficiency virus type 1. *Journal of Virology* 83:140-9.
- Brockman MA, Schneidewind A, Lahaie M, Schmidt A, Miura T, Desouza I, Ryvkin F, Derdeyn CA, Allen S, Hunter E, Mulenga J, Goepfert PA, Walker BD, and Allen TM. 2007. Escape and compensation from early HLA-B57-mediated cytotoxic T-lymphocyte pressure on human immunodeficiency virus type 1 Gag alter capsid interactions with cyclophilin A. *Journal of Virology* 81:12608-18.
- Brockman MA, Tanzi GO, Walker BD, and Allen TM. 2006. Use of a novel GFP reporter cell line to examine replication capacity of CXCR4- and CCR5-tropic HIV-1 by flow cytometry. *Journal of Virological Methods* 131:134-42.

Zabrina Brumme

Assistant Professor

Biography:

Dr. Zabrina Brumme received her Ph.D. in Experimental Medicine in 2006 from the University of British Columbia. She then went on to complete a post-doctoral fellowship at the Ragon Institute of MGH, MIT and Harvard University (formerly known as the Partners AIDS Research Center), in Boston, Massachusetts. She joined SFU FHS as Assistant Professor, Molecular Epidemiology of Infectious Diseases, in September 2009.

Dr. Brumme's current research integrates molecular biology, epidemiology and computational approaches to study HIV evolution in response to selection pressures imposed by the human cellular immune response. One of the greatest challenges to HIV vaccine design is the virus' capacity to evade immune recognition through rapid mutation, a process called "immune escape". Through the analysis of population-based cohorts of HIV-infected individuals in Canada and worldwide, Dr. Brumme has helped to create "maps" of the HIV genome that systematically identify specific sites and pathways of immune escape in viral proteins. Dr. Brumme is also interested in studying how human immune selection pressures have shaped HIV evolution over the course of the epidemic, and the implications of this on vaccine design. Most recently, Dr. Brumme's work has focused on assessing the consequences of immune escape mutations to HIV replication and viral protein function.

Dr. Brumme has published a career total of 46 peer-reviewed manuscripts in the field of HIV/AIDS molecular epidemiology. She currently holds a CIHR New Investigator award.

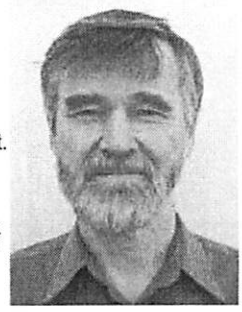
BSc,
Microbiology/Immunology
University of British Columbia

PhD, Experimental Medicine
University of British Columbia

Publications and Activities

Funding Effect of immune-mediated alterations on the replication capacity of recombinant viruses expressing the Pol gene from HIV-1 Elite Controllers
Impact of HLA-driven immune escape on HIV replicative capacity

John Calvert



Associate Professor

Biography:

Dr. Calvert is a political scientist with a specialization in public policy. After completing his BA and MA at the University of Western Ontario, he enrolled at the London School of Economics, where he obtained his PhD in the Government Department. His teaching and research interests are in the areas of Canadian public policy and health, the impact of international trade agreements on health policy, privatization and workers' occupational health and safety. He has published a number of books and articles on Canadian and international public policy and economic issues. Prior to coming to Simon Fraser University, Dr. Calvert worked for a number of years in the BC government as a policy advisor in the trade policy area and in the Ministries of Labour, Employment and Investment and the Crown Corporations Secretariat.

Research Interests:

Dr. Calvert is currently working on a project examining the effectiveness of workplace health and safety committees in reducing the incidence of occupational accidents in the construction industry. Another of his research interests is how international trade agreements are re-shaping domestic health policy in the countries which are signatories to them and, particularly, the GATS and TRIPS agreements. The implications of applying trade law to health issues is an area of increasing interest to students of public policy, as well as economists and political scientists and an important subject for multi-disciplinary research.

Teaching Interests:

Dr Calvert focuses on the ongoing debate about the future of Canada's public health care system, domestic and international pharmaceutical policy, labour relations in the Canadian health sector and the implications of trade agreements on health policy. He is particularly interested in encouraging students to examine some of the major public policy issues that are now shaping our health care system.

BA
University of Western Ontario

MA
University of Western Ontario

PhD
London School of Economics

Publications and Activities

Funding Work in a Warming World

Kitty Corbett

Professor

Director, Undergraduate Programs

Biography:

Dr. Corbett is a medical anthropologist whose research has emphasized the application of behavioural and social science to public health communication, participatory community-based health promotion with diverse and vulnerable populations, and quality improvement within healthcare. She enjoys working on teams that take on major public health problems. Her approach is very much multi-methodological, reflecting a multi-disciplinary, social ecological perspective.

After a position from 1986 to 1991 as a research scientist with Kaiser Permanente Division of Research in Oakland, California, Dr. Corbett moved to the University of Colorado at Denver and Health Sciences Center (UCHSC), where she was a professor in both the Health and Behavioral Sciences Program and the Anthropology Department. She joined Simon Fraser University in 2005.

AB, Anthropology
Stanford University

MPH, Behavioral Sciences
University of California, Berkeley

MA, Anthropology
University of California, Berkeley

PhD, Medical Anthropology
University of California, Berkeley & San Francisco

Research Interests:

Dr. Corbett's areas of expertise include behavioural and organizational change, health communication, health promotion, intervention and evaluation research, and quality improvement. She is an advocate for participatory research with and high quality service to diverse communities and underserved populations. Topical areas of special interest include the prevention and control of tobacco use, STIs and HIV/AIDS, and antibiotic resistance. She has been a Fulbright Scholar at Mexico's National Institute of Public Health (2006) and at the Graduate Institute of Public Health at Taiwan National University (1997-8). She has also worked in Peru, Guatemala, Taiwan, Russia, and Mongolia. In North America she has had a leadership role on various large scale projects including: NCI's multi-site, randomized Community Intervention Trial for Smoking Cessation (COMMIT); US CDC's National Network for STD/HIV Prevention Training Centers (NNPTC); and the Spanish language piece of US CDC's Get Smart antibiotics media campaign. She has conducted STI/HIV needs assessments for rural Colorado, the whole state, and the region. She directed the design and intervention team for the Minimizing Antibiotic Use in Colorado (MARC) Project (2001-2005), a media-based intervention employing social marketing and the Diffusion of Innovation model. She worked on a four-state project to improve pneumonia care in Veterans Administration Nursing Homes. She and colleagues at Mexico's National Institute of Public Health are currently building a research program addressing the appropriate use of prescription medicines.

Teaching Interests:

Dr. Corbett's teaching has emphasized theory, methods, and anthropologically informed perspectives in health promotion, disease prevention, health communication, quality in care of underserved populations, and other areas of public and population health. She is especially interested in teaching about theory and methods of change, as well as training students in research design, methodology, and evaluation.

Publications and Activities

Funding Improving use of perioperative beta blockers with a multideminsional QI program

Susan Erikson

Assistant Professor

Biography:

Dr. Erikson is a medical anthropologist who has worked in Africa, Europe, Central Asia, and North America. During a first career in international development, she worked in hospitals, rural clinics and schools in Sierra Leone providing primary health and education services. Dr. Erikson has worked for or with many US government departments and agencies, including the US Congress, US Departments of State and Agriculture, and the US Agency for International Development. As an academic, Dr. Erikson combines her practical experience with a critical study of relations of power that make good health more likely. Dr. Erikson is the founding director of Global Health Affairs at the Korbel School of International Studies at the University of Denver. She joined Simon Fraser in 2007.

BA, English and Education
Boston College

MA, Anthropology
University of Colorado-Boulder

PhD, Anthropology
University of Colorado-Boulder

Research Interests:

Global health in international affairs and women's reproductive health are Dr. Erikson's thematic areas of expertise. She conducts ethnographic research on global health, women's reproductive health, relationships between knowledge practices and power structures, governmentality, and globalization.

Dr. Erikson's research has been funded by the US National Science Foundation (NSF), the Wenner-Gren Foundation for Anthropological Research, the American Association of University Women (AAUW), the Institute for International Education (IIE), Deutscher Akademischer Austauschdienst (DAAD), and others.

Dr. Erikson is currently concluding a 10-year research project in Germany, and has just recently begun a research project in Sierra Leone. In both research projects, her aim is to contribute not only primary ethnographic research data and analysis on the gendered effects of global health and international affairs agendas, but also to the theoretical and methodological approaches to global ethnography.

Teaching Interests:

Cultivating global health leadership, global health in international affairs, global political economy of health, global reproductive health politics.

Publications and Activities

Benedikt Fischer

Director of CARMHA

Professor

CIHR/PHAC Research Chair, MSFHR Senior Scholar Career Investigator

Biography:

Benedikt Fischer, PhD, obtained his doctorate in Criminology at the University of Toronto (1998). Subsequent to his doctorate, he was a Research Scientist and Section Co-Head at the Centre for Addiction and Mental Health (CAMH), Toronto, and held faculty appointments in the Department of Public Health Sciences and at the Centre of Criminology, University of Toronto. Following a faculty appointment at the University of Victoria (2006 – 2008), Dr. Fischer joined the Centre for Applied Research in Addictions and Mental Health (CARMHA) and the Faculty of Health Sciences as Professor in September 2008. He currently holds a CIHR/PHAC Research Chair in Applied Public Health and is a MSFHR Senior Scholar Career Investigator. He is furthermore an Affiliate Scientist with the BC Centre for Disease Control (BCCDC) and a Senior Scientist with CAMH. Dr. Fischer is a member of the Institute Advisory Board of the CIHR Institute for Neurosciences, Mental Health and Addiction (INHMA), as well as a member of the Science Advisory Board of the Mental Health Commission of Canada.

B.A., Interdisciplinary Social Sciences Konstanz University, Germany

M.A., Interdisciplinary Social Sciences Konstanz University, Germany

Ph.D. Criminology University of Toronto

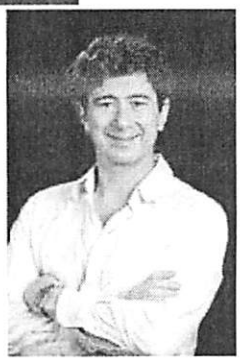
Research Interests:

Dr. Fischer's main fields of research interests include: psychoactive substance use; marginalized/vulnerable populations; infectious disease (primarily Hepatitis C Virus); crime and criminal justice; public/population health; social determinants of health, with a strong interest in policy/program development. His research commonly integrates multiple methods and disciplines, e.g. involves both quantitative and qualitative methods, and/or integrates expertise from the basic, clinical or social sciences to aid problem focused research enquiries. His current main research activities include: - the development of a public health framework for cannabis use control; - a research program on the epidemiology, morbidity/mortality and drug diversion related to non-medical use of prescription opioids in different populations; Hepatitis C Virus (HCV) incidence, prevention and treatment models for drug using populations; - the social epidemiology of and interventions for crack use; brief interventions and treatment for high-risk substance use. Dr. Fischer currently holds research funding for the above listed and other research areas from CIHR, Health Canada, the BC Ministry of Health, the Vancouver Island Health Authority, and other funders. He is also a co-investigator in several CIHR-funded Strategic Training Initiatives in Health Research (STIHR) programs focusing on the above areas of research.

Publications and Activities

Funding CIHR Applied Public Health Chair - Infectious diseases, substance use, marginalized populations and public health
CIHR Team - Non medical prescription opioid use in Canada: Epidemiology, consequences and interventions
Cannabis control in Canada - developing a policy evaluation framework

Elliot Goldner



Professor

Biography:

Dr. Elliot Goldner received an Honours B.Sc. degree in neurophysiology at the University of Toronto, an M.D. degree at the University of Calgary and an M.H.Sc. degree in epidemiology at the University of British Columbia where he also completed specialty training and full qualifications in Psychiatry. He began his career working to help individuals with Eating Disorders, such as anorexia and bulimia nervosa, and helped to establish a province-wide network of treatment services. Dr. Goldner was appointed the Director of British Columbia's Provincial Eating Disorder Programs and instituted a clinical research program to advance the outcomes of treatment interventions. After working to improve the design and quality of treatment services for people with Eating Disorders in British Columbia, and in other Canadian provinces and other countries, Dr. Goldner expanded his efforts to address the full spectrum of mental health and addiction problems and developed a research unit designed to provide research support to governments in their efforts to advance the quality of mental health and addiction services.

Before joining the Faculty of Health Sciences at Simon Fraser University, Dr. Goldner was on faculty at the University of British Columbia's Faculty of Medicine for 20 years, where he was a very active teacher and researcher. He was the Director of Undergraduate Education for the Department of Psychiatry and he founded and headed the Division of Mental Health Policy & Services and the Mental Health Evaluation & Community Consultation Unit (MHECCU). Dr. Goldner directs a national Research Training Program, entitled 'Research in Addiction & Mental Health Policy & Services' that has been funded by the Canadian Institutes of Health Research in order to train scientists to conduct research to advance the healthcare system's approach to mental illness and addiction. Dr. Goldner has received various awards for his scholarly work and he has served on various Boards of Directors. Currently he is a Director on the Board of the Centre for Addiction Research, at the University of Victoria, and is also serves on the Board of the Coast Foundation Society, a non-profit society that provides services to people with severe mental illnesses.

BSc, Neurophysiology
McGill University

MD, Psychiatry
University of Calgary

MHSc, Health Care and Epidemiology
University of British Columbia

Research Interests:

Dr. Goldner's research activities are focused toward the advancement of mental health and addiction services at the population level. He has worked closely with government ministries, particularly with the Ministry of Health in British Columbia, to provide research information that can support evidence-based decision making and assist in the development of an improved system of service delivery. Dr. Goldner has led a project that utilizes province-wide data to measure and improve the quality of service delivery in British Columbia. He has also used national and international data to address research questions related to mental health and addiction services and policy.

Teaching Interests:

Dr. Goldner's teaching activities have addressed a wide range of topics related to mental health and addiction, ranging from clinical and epidemiological issues to population and public health concerns. He is interested in helping students to integrate information from a wide variety of disciplines that can advance the quality and outcomes of interventions in Canada and other nations.

Publications and Activities

Funding Stategic training program - Mental health and addictions
Development of a mental health commission document
Anti-Depressant Skills at Work Workbook
Mental health and addiction policy and services research
Mental health & addiction services policy investigative team – Mental health and addictions
Scientific Advisory Committee/CIHR Conference

Laurie Goldsmith

Assistant Professor

Biography:

Laurie J. Goldsmith is a health services and health policy researcher. She has a PhD in Health Policy and Administration from the University of North Carolina at Chapel Hill, a MSc in Health Research Methodology from McMaster University, and a BA&Sc from McMaster University. Dr. Goldsmith has conducted health services and health policy research for over 14 years in Canada and the United States, working with health system decision makers at the federal, provincial, state, and local levels. Her recent positions have included Research Fellow at the Center for Health Economics and Policy Analysis at McMaster University and Research Associate at the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill.

BA & Sc
McMaster University

MSc, Health Research Methodology
McMaster University

PhD, Health Policy & Administration
University of North Carolina – Chapel Hill

Research Interests:

Dr. Goldsmith's ultimate research objective is to contribute to eliminating disparities in health, particularly disparities resulting from economic and geographic disadvantage. Most of her work has been interdisciplinary and collaborative, as she believes that understanding and involving a variety of perspectives about health care system design will best improve the health of individuals and populations. She employs a diversity of methods in her research (e.g., grounded theory, cost-effectiveness analysis, case study, factor analysis), with an emphasis on qualitative methods. Dr. Goldsmith's research interests include: access to health care, medical underservice, rural health, comparative health care systems, the politics of health care delivery, and the use of qualitative methods in health policy and health services research.

Teaching Interests:

Dr. Goldsmith's teaching interests include: health policy and politics, health policy analysis, access to health care, comparative health care systems, and qualitative methods.

Publications and Activities

Funding An in-depth explortion of organizational and delivery features of community health centres in BC
Centre for Research on Gender and Social Disparities in Mental Health and Addictions

Charlie Goldsmith

Professor

Maureen and Milan Ilich/Merck Chair in Statistics for Arthirtis and Musculoskeletal Diseases

Biography:

Charlie received his BSc and MSc degrees in Statistics from the University of Manitoba in Winnipeg. After teaching at Carleton University in Ottawa for two years, he received his PhD in Experimental Design with a minor in Mathematical Statistics at North Carolina State University in Raleigh NC. He returned to Canada when McMaster started its Medical School and has been there for his entire career. Until August 31, 2010, he was an Emeritus Professor of Biostatistics in the Department of Clinical Epidemiology and Biostatistics at McMaster University. As of September 1, 2010 he is the Maureen and Milan Ilich/Merck Chair in Statistics for Arthritis and Musculoskeletal Diseases. He is also a Professor in the Faculty of Health Sciences at Simon Fraser University. Charlie has been involved in a variety of studies related to musculoskeletal and surgical conditions, most recently the Cervical Overview Group which conducts Cochrane reviews of therapy for patients with neck pain and the Cochrane Collaboration at McMaster University. He is member of several editorial boards of health related journals and has interests in quality improvement, experimental design, study design and analysis. He has a keen interest in mentoring newer faculty members in their careers.

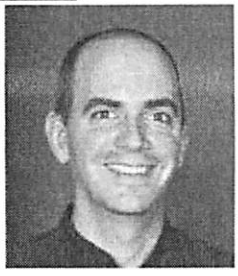
B.Sc.
Statistics/Mathematics
University of Manitoba

M.Sc.
Statistics/Mathematics
University of Manitoba

Ph.D. Experimental
Statistics/Mathematical
Statistics
North Carolina State
University, Raleigh

Publications and Activities

Bob Hogg



Professor

Biography:

Robert Hogg has established a national and international reputation in population health research with emphasis on HIV/AIDS, antiretroviral therapy, and marginalized populations. He has published extensively and received previous support from the National Health Research Development Program (1995 to 2000), Canadian Institutes of Health (2001 to 2002), and Michael Smith Foundation for Health Research (2001 to 2006). At the University of British Columbia he held the Michael O'Shaughnessy Chair in Population Health. He currently is an adjunct Professor in the Department of International Health and Cross-Cultural Medicine at the University of California, San Diego and the Director of the HIV/AIDS Drug Treatment Program at the BC Centre for Excellence in HIV/AIDS.

MA Anthropology
University of Victoria

Ph.D Demography
Australian National University

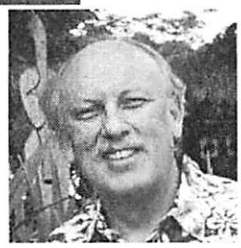
Research Interests:

- The health status of persons with HIV/AIDS
- Current treatment and management practices for persons with HIV/AIDS
- The health status of marginalized populations
- The health status of indigenous peoples

Publications and Activities

Funding Effect of HAART expansion on community levels of HIV viral load and HIV risk behaviours among MSM in British Columbia
North American AIDS cohort collaboration research and design (subgrant)
Canadian Cohort Collaboration (CANOC) – CIHR Emerging Team on HIV/AIDS

Craig Janes



Professor

Associate Dean, Academic

Biography:

Dr. Janes is interested in globalization and health, in particular the impact of liberal strategies of economic and cultural development on maternal and child health, reproductive health, and access to health care. He has worked on the problem of the globalization of market-based health reform policy since the early 1990s, first in southwestern China (Tibet), and most recently in Mongolia. He has demonstrated that the dominant model for health reform – involving privatization and changes to the scope of primary health care – produces substantial vertical and horizontal inequities in health care access, and exposes the vulnerable poor to further impoverishment when faced with catastrophic illness. Most recently Dr. Janes has begun working on a project intended to develop and apply equity-focused health impact assessment methodologies in development settings.

MA Cultural Anthropology
University of Colorado

PhD Medical Anthropology
University of California Berkeley & San Francisco

Postdoctoral Fellowship
University of California, Berkeley

Research Interests:

His current work examines the impact of Mongolia's socioeconomic and political transition, in the context of increasing environmental hazards linked to climate change, on rural households. Employing epidemiologic, spatial, and qualitative ethnographic methods, the study examines the social, economic, and spatial dimensions of vulnerability among Mongolia's herding population, and the impact of vulnerability on household health and well-being. Recently he has extended this work to examine and mitigate the impacts of mining development on rural populations, and is currently working at the policy level to bring attention to this issue.

Dr. Janes is also Chair of the Board of the Canadian Coalition for Global Health Research, and directs the BC Forum of the Coalition.

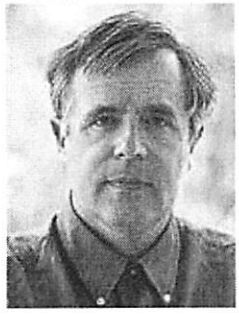
Teaching Interests:

In addition to his administrative duties, Dr. Janes teaches in the global health program.

Publications and Activities

Funding Developing collaborative partnerships to support environmental health research and knowledge translation
Assessing the health impacts of mining in Mongolia: strengthening the public health system response
Development and Implementation of a Health Equity Impact Assessment Methodology in the Mongolian Mining Sector

Michel Joffres



Professor

Biography:

Dr. Joffres is involved in a broad spectrum of research encompassing clinical as well as public health spheres. He employs epidemiological methods to develop primary prevention projects in regards to chronic and infectious diseases, hypertension, diabetes, and record linkage studies. Research includes community based prevention programs, large-scale clinical trials, policy development and has recently developed a focus in mental health stemming from collaborations with the Centre for Emotions and Health at Dalhousie University. In addition, recent projects focus on environmental health and analysis of the Canadian Heart Health Surveys.

Research Interests:

Dr. Joffres is concerned with primary prevention, population health, hypertension and cardiovascular disease epidemiology, as well as studying the link between emotions and health.

Teaching Interests:

Dr. Joffres is interested in engaging students to think critically about public health issues. Specifically, he looks to teach epidemiology and research methods.

Publications and Activities

BSc, Mathematics
Lycée Gabriel Fauré

MD
Universite de Toulouse

MSPH, Epidemiology
University of Hawaii

PhD,Biomedical Sciences
University of Hawaii

Angela Kaida

Assistant Professor

Biography:

Dr. Angela Kaida is a global health epidemiologist interested in the linkages between HIV and sexual and reproductive health. She received her Ph.D. in 2010 from the School of Population and Public Health at the University of British Columbia (UBC). She then completed a brief post-doctoral fellowship jointly at the Women's Health Research Institute at BC Women's Hospital and the Department of Obstetrics and Gynaecology at UBC. In addition to her academic training, Dr. Kaida has substantial experience as a public health practitioner, having worked with the International Development Research Centre (IDRC), the Alberta Ministry of Health and Wellness, and the Public Health Division of the Capital Health Authority. Dr. Kaida joined the Faculty of Health Sciences as an Assistant Professor in September 2010.

Ph.D. School of Polulation and Public Health
University of British Columbia

M.Sc. in Public Helath Sciences (Epidemiology)
University of Alberta

B.Sc. (Honours), Biology, specializing in Reproductive Physioloy
University of Waterloo

Research Interests:

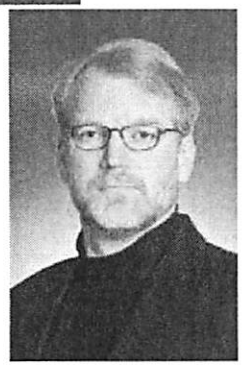
Dr. Kaida's research interests pertain to understanding the impact of expanding access to HIV prevention and treatment services on reproductive intentions, behaviours, and outcomes of HIV-affected couples in high HIV prevalence settings. Antiretroviral treatment (ART) dramatically reduces the risks of sexual and perinatal HIV transmission, thereby changing the landscape of reproduction for HIV-affected couples. Recent successes with microbicides and the potential of antiretroviral pre-exposure prophylaxis (PrEP) may offer additional protection for HIV-affected couples wishing to conceive. In collaboration with Ugandan and American investigators, Dr. Kaida is investigating the prevalence and predictors of fertility desire and pregnancy among HIV-positive women and men on ART who report sero-discordant partners. This study constitutes a critical step towards designing bio-behavioural reproductive counselling interventions to reduce sexual HIV transmission in the context of desired conception. In collaboration with South African investigators, Dr. Kaida is investigating the impact of HIV prevention and treatment services of maternal and adolescent health outcomes and HIV transmission in Soweto. Dr. Kaida is also engaged in research aimed at describing the reproductive trends and needs of HIV-positive women in Canada and the interplay between pregnancy, antiretroviral adherence, and HIV disease progression.

Teaching Interests:

HIV and Sexual and Reproductive Health in high HIV prevalence settings; Applied epidemiological methods in global health research.

Publications and Activities

Bruce Lanphear



Professor

M.P.H.
Tulane School of Public Health & Tropical Medicine

M.D.
University of Missouri at Kansas City

Biography:

- Testimony, Vermont State Legislature, "The Lingering Legacy of Lead Toxicity," Montpelier, Vermont, February 1, 2007.
- Invited Member, Council of Fellows of the Collegium Ramazzini.
- Appointed to the Julius B. Richmond Center of Excellence External Scientific Advisory Committee, Richmond Center for Excellence in Tobacco Research, American Academy of Pediatrics.
- Member, National Children's Study Steering Committee.

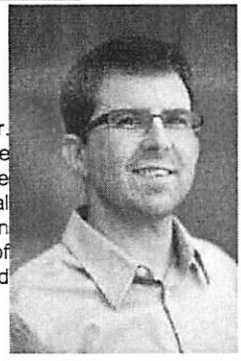
Research Interests:

Dr. Lanphear is currently principal investigator for a study examining fetal and early childhood exposures to prevalent environmental neurotoxins including lead, pesticides, mercury, alcohol, PCB's and environmental tobacco smoke. A component of the study is the investigation of the contribution of residential hazards and residential injuries to children's health. This project recently received funding to follow the original birth cohort, until the children are five years of age. This will allow follow-up for determining the efficacy of lead hazard controls on children's blood lead levels and their risk for learning and behavioral problems. Dr. Lanphear has extensive experience conducting community-based trials, including lead poisoning prevention, epidemiology of asthma, prevention of exposureto tobacco smoke and measurement of lead and allergens in housing.

- Children's environmental health.
- Environmental neurotoxins, including lead, mercury, pesticides and environmental tobacco smoke.
- Asthma prevention.
- Gene-environment interactions

Publications and Activities

Mark Lechner



Senior Lecturer

Biography:

Dr. Mark S. Lechner is a molecular biologist with a research background in human cancer and developmental biology. Dr. Lechner received his B.S. in Microbiology from the University of Notre Dame and conducted his Ph.D. dissertation at the University of Chicago on how certain human viruses such as HPV lead to cancer. His subsequent research efforts were aimed at understanding the mechanisms that control early embryonic development and how genetic errors or environmental factors alter that process and lead to disease. He has special interest in the field of epigenetics, where the interaction between genes and the environment takes place. In 2001, Dr. Lechner was appointed as faculty in the Department of Bioscience & Biotechnology at Drexel University in Philadelphia as an Assistant Professor where he led teaching and research efforts until he joined the Faculty of Health Science at SFU in 2008.

B.S. Microbiology
University of Notre Dame

Ph.D. Molecular Genetics and Cell Biology
University of Chicago

Research Interests:

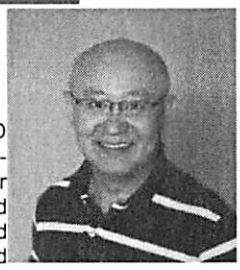
I am interested in the manner in which genes are turned into human traits or phenotypes. Extrinsic or environmental signals are important determinants in the expression of a phenotype and these inputs can lead to traits – desirable or undesirable – that may be transient or permanent, some even lasting through generations. To understand how this control is achieved, I have studied chromatin proteins that govern epigenetic regulation, which is the first step in going from genotype to phenotype. This has led to studies of the well-characterized HP1 family of proteins and to new genes such as *NIPBL*, which when mutated leads to a congenital disorder known as Cornelia de Lange Syndrome (CdLS). CdLS is a multisystem disorder that affects nearly 1 in 10,000 children with a spectrum of physical and mental defects that vary widely in severity. Interestingly, disorders related to CdLS may be caused by similar genes and a paradigm for complex physical-mental disorders stemming from chromatin and epigenetic malfunction is emerging. What is still unclear is why such disorders are so variable in severity (expressivity) in the presence of the same mutation. This clearly indicates a multifactorial response that is likely a combination of genetic and environmental effects that have yet to be discovered. My interests also include the role of selfish DNA in evolution and using bioinformatics to understand input/output from the human genome.

Teaching Interests:

I have numerous teaching interests that center around the cause of human disease. These include the fields of genetics, cell biology, biochemistry, developmental biology and cancer biology. I also maintain an interest in my B.S./Ph.D. background in microbiology and virology. As an Assistant Professor at Drexel University I enjoyed teaching a range of courses at the undergraduate and graduate level. These courses included Advanced Cell Biology, Recombinant DNA Laboratory, Bioinformatics and Genetics. All of these courses included laboratory components that I conceived and developed. Answering questions and solving problems in the laboratory is a particular passion of mine and I consider it a home away from home. My general teaching philosophy is to equip students with the skills to find the right answers and ask even better questions.

Publications and Activities

Frank Lee



Assistant Professor

Biography:

Dr. Frank Lee is an Assistant Professor in the Faculty of Health Sciences at Simon Fraser University. He received his PhD from the University of Toronto in 2002, where he characterized an interaction between the dopamine transporter and a-synuclein, a protein implicated in the pathogenesis of Parkinson's disease. In addition, his interest in the molecular pathophysiology of schizophrenia led to studies that characterized a direct interaction between the dopamine D1 receptor and the glutamate NMDA receptor. Dr. Lee subsequently pursued a post-doctoral fellowship at Children's Hospital Boston/Harvard Medical School contributing to studies that demonstrated the role of dopamine in a-synuclein mediated neurotoxicity and examining the molecular components of APP processing. In 2004, he returned to Toronto to continue his studies investigating the molecular neurobiology of the dopamine system at the Centre for Addiction and Mental Health. Here he led a study examining the cross-talk between the dopamine D2 receptor and the dopamine transporter. Using inhibitory peptides, he demonstrated that disruption of the D2 receptor/dopamine transporter interaction can induce hyperlocomotor activity in affected rodents.

B.Sc. (Pharmacology)
University of Toronto

M.Sc. (Pharmacology)
University of Toronto

Ph.D. (Pharmacology)
University of Toronto

If you are interested in joining the Lee laboratory either as a graduate student, student assistant or research assistant, please contact Dr. Lee

directly.

More information about the Lee Lab.

Research Interests:

Dopamine signalling has clear implications to a variety of diseases including drug addiction, schizophrenia and Parkinson's disease. What is unclear is exactly how components of the dopamine system are involved in the pathophysiology of these diseases. Key components of the dopamine system include dopamine receptors that propagate dopaminergic signalling and the dopamine transporter, which regulates synaptic dopamine levels. My interests lie in identification of mechanisms that regulate the activity of dopamine receptors and transporters. One mechanism by which dopaminergic proteins can be regulated is through protein-protein interactions. Our laboratory has interests in identifying and elucidating the mechanisms that govern dopaminergic protein-protein interactions and examining the role of these interactions in the molecular pathophysiology of diseases that involve the dopamine system.

Publications and Activities

Funding Modulation of the DAT/DJ-1 interaction by oxidative stress
Regulation of the dopamine transporter by microtubule proteins

Lorraine Halinka Malcoe

Associate Professor

Biography:

Lorraine Halinka Malcoe came to SFU from the Department of Family and Community Medicine, University of New Mexico, where she was an Associate Professor and Associate Director of their Masters in Public Health Program. She is a social epidemiologist with longstanding research interests in gender, race, and class inequalities in health. She conducts epidemiologic observational research as well as participatory, community-level interventions. For the past decade, she has employed mixed-method approaches to improve understanding of the social causes and consequences of violence against women from diverse racial, cultural, and socioeconomic groups.

Research Interests:

Dr. Malcoe's research has three foci:

- Understanding social determinants of intimate partner violence (IPV) against women
- Understanding and reducing health inequalities that negatively impact indigenous populations
- Design and evaluation of participatory, community-level interventions to improve population health

The aims of her research are to explore theory, methods, and measures for understanding the intersecting influences of gender, race, class, and colonisation on population health outcomes. She is collaborating with others in the SFU Faculty of Health Sciences and Institute for Critical Studies in Gender and Health to understand Canadian approaches to these lines of inquiry.

Teaching Interests:

Dr. Malcoe aims to teach learners how to formulate and approach public health problems using sound scientific methods, while critically examining the theoretical and methodologic assumptions of various epistemological approaches. She is currently working with other faculty and staff in the FHS to develop a graduate program emphasis in Social Inequalities and Health. She is also facilitating a discussion group on Colonisation, Racism and Population Health which is exploring postcolonial and feminist intersectional theories and modes of analysis for studying gendered effects of colonisation and racism on population health.

Publications and Activities

Funding Centre for Research on Gender and Social Disparities in Mental Health and Addictions

AB, Biology
San Diego State University

MPH, Epidemiology and Biostatistics
University of California, Berkeley

PhD, Epidemiology and Biostatistics
University of California, Berkeley

Lawrence McCandless

Assistant Professor

Biography:

Lawrence McCandless is a biostatistician whose research involves developing Bayesian data analysis techniques for epidemiological studies. He completed his graduate studies in Statistics in 2007 at the University of British Columbia, under the supervision of Paul Gustafson. The following year, he pursued one year of postdoctoral study in the Department of Epidemiology and Public Health at Imperial College London. He was employed on the BIAS project (www.bias-project.org.uk) and supervised by the Bayesian statisticians Sylvia Richardson and Nicky Best.

For further information please click here.

MSc, Statistics
University of British Columbia

Ph.D., Statistics
University of British Columbia

Postdoctoral Research
Imperial College London

Research Interests:

Lawrence's research interests include applied Bayesian statistics, causal inference, epidemiological methods, sensitivity analysis and Monte Carlo methods. In collaboration with researchers from Imperial College London, he is developing Bayesian analysis techniques for the quantification of epidemiological biases. One application area is the analysis of routinely collected health data for pharmacoepidemiology. Examples include hospital discharge records, pharmacy claims data and death certificates. These data have the advantage that they are inexpensive to obtain, yield large sample sizes from entire populations, and they allow the study of rare health outcomes. But the difficulty is that they are not designed for research purposes. Observational studies of the effects of drugs are often plagued with biases from measurement error, confounding and non-random selection. New innovations in computing and numerical methods offer opportunities for Bayesian modelling of epidemiological biases. We can model complex data structures such as clustering, hierarchies and latent variables. Understanding the performance and best use of these methodologies presents new challenges to statistical science.

Teaching Interests: Biostatistics, epidemiological methods, Bayesian statistics.

Publications and Activities

Funding Bayesian statistical technology for analysis of observational data

Cari Miller

Assistant Professor

Biography:

Dr. Cari Miller joined the *Faculty of Health Sciences* in September, 2008. Since completing a BA in political science from Carleton University in 1999, Cari completed an interdisciplinary MSc in 2002 and a PhD in 2006 from the University of British Columbia. She has over 23 peer reviewed publications in international journals and has received funding support from the Canadian Institutes for Health Research and the Michael Smith Foundation for Health Research. Currently, her research is focused on HIV and Hepatitis C transmission, treatment and access to health care among young Aboriginal people. Cari has worked at the BC Centre for Excellence in HIV/AIDS from 2000 – 2006 with the Vancouver Injection Drug Users Study (VIDUS), the Drug Treatment Program and the At Risk Youth Study (ARYS). She has also worked in the community with at risk youth.

BA (Polictial Science)
Carleton University

M.Sc (Interdisciplinary Sciences)
University of British Columbia

Ph.D (Interdisciplinary Sciences)
University of British Columbia

Research Interests:

Cari's research interests include HIV and Hepatitis C transmission, prevention and treatment, at risk youth, addiction, violence and gender, Aboriginal people, interdisciplinary health research and translational research that informs the public health policy agenda.

Teaching Interests: Cari's teaching interests include interdisciplinary research methods, health and research among vulnerable populations and HIV/AIDS.

Publications and Activities

Funding Supporting a coordinated response to HIV prevention among adolescents in South Africa

Marina Morrow

Associate Professor

Biography:

Dr. Morrow's PhD is in Community Psychology from the Ontario Institute for Studies in Education/University of Toronto. Dr. Morrow is currently a Michael Smith Foundation for Health Research Scholar. Since the completion of her PhD she has taught in three Canadian universities, most recently at the University of British Columbia in the Women's Studies Program. Before coming to SFU, Dr. Morrow worked as a Research Associate with the BC Centre of Excellence for Women's Health (BCCEWH) at BC Women's Hospital where she was head of a research program on women, mental health and health policy. Dr. Morrow maintains an affiliation with the BCCEWH and is also a Research Associate with the Canadian Centre for Policy Alternatives.

Research Interests:

Dr. Morrow's research interests are in critical health policy with foci on the following four themes: 1) Mental health reform, service provision and access to health services, 2) Mental health and social inequity, 3) Mental health and citizen engagement and, 4) Globalization, neoliberal reforms, gender and health. The goals of her research are:

- To better understand the social, political and institutional processes through which health and mental health policies and practices are developed and how social and health inequities are sustained or attenuated for different populations.
- To develop interdisciplinary and inter-sectoral research approaches to mental health services and policy research through unique research involvement models.
- To contribute to the development of theoretical frameworks and new models for mental health policy and program development, with the goal of improving mental health care and mental health outcomes for diverse populations.

Dr. Morrow strongly supports public scholarship and collaborative research partnerships with community-based organizations, health care practitioners, advocates and policy decision makers and her research has been published in a variety of academic journals and policy and research reports. Her most recently published article is "Mental Health Reform, Economic Globalization and the Practice of Citizenship" in the Canadian Journal of Community Mental Health.

Dr. Morrow has a number of research projects underway, the most recent of which is a three-year study funded by the Social Sciences and Humanities Research Council and the Michael Smith Foundation for Health Research, examining the experiences of men and women being relocated from Riverview Psychiatric Hospital to smaller facilities throughout BC and the impact on their families, care providers and the larger community.

Teaching Interests:

Dr. Morrow's teaching interests include; health and social inequities, the social determinants of health, health and globalization, gender, racialization, health and the body, historical conceptions of mental health and mental illness and critical engagement with qualitative research methodology in the sciences and social sciences.

Publications and Activities

Funding Centre for Research on Gender and Social Disparities in Mental Health and Addictions

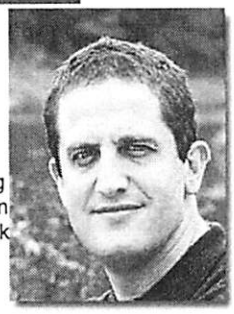
BA, Psychology
University of British Columbia

MA, Community Psychology
OISE/University of Toronto

PhD, Community Psychology
OISE/University of Toronto

Postdoctoral studies
Centre for Research in Women's Studies and Gender Relations, UBC and BC Centre of Excellence for Women's Health

Pablo Nepomnaschy



Assistant Professor

Biography:

I joined the Faculty of Health Sciences in 2008. I obtained my first degree in Biology in my native country, Argentina, from the University of Patagonia. For my doctoral studies I moved to the USA, where I obtained a Ph.D. in Anthropology (Biological) and Natural Resources and Environment (Ecology) from The University of Michigan. At the same University, I received training from the Reproductive Sciences Program and was a Pre-doctoral Fellow at the Institute for Social Research. Additionally, I am an alumnus from the LIFE Program ("Life Course: Evolutionary and Ontogenetic Dynamics)" from the International Max Planck Research School (Berlin, Germany). I received post-doctoral training in the Epidemiology Branch of the National Institute of Environmental Health Sciences (NIH-USA).

Licenciado, Biology
Universidad Nacional de la Patagonia S.J.B., Argentina

MA, Anthropology
University of Michigan – Ann Arbor

PhD, Anthropology and School of Natural Resources and Environment
University of Michigan – Ann Arbor

Post-doctoral Fellow, Epidemiology Branch
National Institute of Environmental Health Sciences, NIH, USA

Click here to view Pablo's full CV.

Research Interests:

My academic interests center on the effects of stress—broadly defined as any challenge that activates the hypothalamic-pituitary-adrenal axis —on growth, development and health throughout the human life course. I attempt to study each one of these subjects from a variety of angles, so that the emerging picture is as complete as possible. To achieve this goal, I draw on my interdisciplinary background in physiology, ecology, anthropology and epidemiology and collaborate with colleagues from a broad range of complementary fields.

Currently, my investigations are focused on assessing the effects that stress has on female reproduction, and early pregnancy. One of my projects examines the effects that environmental, health and social stressors exert on reproductive function in a group of Mayan women in the highlands of Guatemala. This society lives under subsistence conditions with intervals of restricted food supply, associated threats of infectious diseases and other seasonal, psychological, and environmental stressors. The first set of results suggests that stress, even when not acute, can seriously affect women's reproductive function. Specifically, increased cortisol levels appear to be associated with deleterious effects on ovulatory function and an increase in the risk of miscarriage. We will now evaluate the generalizability of these original findings by testing our hypothesis on urine samples from a population of women from an industrialized nation. In a related project, we are evaluating the effects that endocrine disruptors other than stress, including bisphenol A and phthalates, may have on early pregnancy and on women's reproductive axis.

I am currently designing a project that will explore the effects that stress may have on the time elapsed between births or inter-birth intervals (IBI) and the hormonal characteristics of the transition between amenorrhea (absence of menstrual cycles after parturition, related to breastfeeding) and resumption of eumenorrhea (regular menstrual cycles). Inter-birth intervals are, in turn, an important determinant of maternal and child health. Thus, our results will be particularly relevant to issues related to the health of the most vulnerable women, including those with the lowest degree of education, poor access to health care, and who are less likely to use modern contraceptives.

Teaching Interests:

Human biology, Human Ecology and Health, Human Reproduction, Human Life History: Health and Disease across the Lifespan

Publications and Activities

Funding Interplay between women's stress and reproductive axes: The dynamic transition from post-postpartum infertility to ovarian cyclicity

Takako Niikura

Assistant Professor

Biography:

Dr. Takako Niikura joined the Faculty of Health Sciences at Simon Fraser University as an Assistant Professor in 2009. Dr. Niikura finished the Veterinary School at Hokkaido University in Japan, took an industrial job for a few years, and then, started her research career in basic science at NERC Institute of Virology and Environmental Microbiology (currently Centre for Ecology & Hydrology, Oxford, UK). She then move to the U.S. and worked at Thomas Jefferson University School of Medicine (Philadelphia, PA) and Michigan State University Department of Biochemistry (East Lansing, MI) as a research associate. In 1997, Dr. Niikura moved back to Japan and started projects in neurodegenerative disorders at Keio University School of Medicine (Tokyo). Dr. Niikura, with her team, studied mechanisms of neuronal death underlying Alzheimer's disease pathogenesis using in vitro system and discovered a novel 24-residue peptide, Humanin (HN). In 2007, Dr Niikura took an assistant professor position at Georgetown University School of Medicine (Washington, DC) and was involved in translational research of Alzheimer's disease including the efficacy testing of Humanin.

B.S.
Hokkaido University,
Faculty of Veterinary Medicine

DVM/M.S.
Hokkaido University,
Graduate School of Veterinary Medicine

Ph.D.
The University of Tokyo,
Graduate School of Pharmaceutical Sciences

Research Interests:

Research in my laboratory is focused on molecular mechanisms of the age-related neurodegenerative disorders, particularly Alzheimer's disease (AD) and Amyotrophic lateral sclerosis (ALS).

AD is the most common form of dementia. More than 95% of AD cases are sporadic and the cause(s) of sporadic AD are still unknown except that aging is a risk factor. It is assumed that age-related physiological changes contribute to the initiation and progression of AD. Currently approved drugs for AD are symptomatic; they enhance cognitive function and improve quality of daily life. However, they do not stop the disease progression. To reduce the AD-related impact both on the patients and the societies, additional therapeutic options are desired.
I have been working on a neuroprotective factor, Humanin (HN), as a therapeutic candidate for AD. HN, a 24-residue peptide, is a multi-functional factor with neuroprotective activity against AD-related cytotoxicities. HN suppresses neuronal death caused by all AD-related insults so far tested in vitro including cytotoxic amyloid beta. A highly potent HN derivative ameliorated amnesia in AD mouse models. The action mechanism of HN at the molecular level is currently under investigation.

In addition to investigation related to AD, I have extended my research interest to ALS, a motor neuron disorder. Superoxide dismutase 1 (SOD1) and ALS2 are responsible genes for familial ALS. Using these mutant genes as model, I have been investigating molecular mechanisms of motoneuronal death underlying ALS.

Publications and Activities

Funding Physiological functions of endogenous humanin

Masa Niikura

Masahiro Niikura

BSc
Hokkaido University

DVM/MS
Hokkaido University

PhD
Hokkaido University

Associate Professor

Biography:

Dr. Niikura is a virologist with a veterinary background. He completed formal veterinary education at the Veterinary School, Hokkaido University in Japan and earned his PhD at the same institution by working on the antigenicity of viral proteins of Marek's disease virus (MDV) and Newcastle disease virus, both cause serious diseases in poultry. After earning his degrees, he engaged in various aspects of virus research in numbers of academic and governmental institutions, including The University of Tokyo, Japan (1991-1992), NERC Institute of Virology and Environmental Microbiology, Oxford, U.K. (1992-1993), Thomas Jefferson University, Philadelphia, PA (1993-1995), USDA-ARS Avian Disease and Oncology Laboratory, East Lansing, MI (1995-1997, 2001-2002), National Institute of Infectious Diseases, Tokyo, Japan (1997-2001) and Michigan State University, East Lansing, MI (2002-2007). During this period, he worked on MDV, HIV, filoviruses, hantavirus and hepatitis E virus. Most recently, his research was focused on the pathogenesis and evolution of MDV using infectious bacterial artificial chromosome (BAC) clones he generated. He joined Simon Fraser University in 2007.

Research Interests:

Dr. Niikura's research interest is to develop a molecular understanding of viruses-host interactions. He is currently interested in two systems, Marek's disease virus (MDV) and hepatitis E virus-like particles (HEV-VLP) in vaccine research.

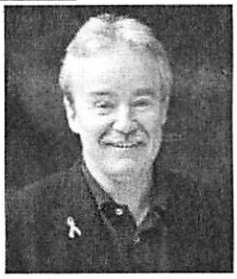
MDV is an avian herpesvirus and interesting for several reasons. From the agricultural perspective, MDV remains a ubiquitous threat to the global poultry industry. As virulent MDV co-exists with vaccine virus in the host, MDV strains with "increased virulence" appear in the host. These highly virulent MDV strains cause more vaccine breaks and acute illness. From the scientific aspect, MDV is the only known alphaherpesvirus that causes tumors in naturally infected animals. Live vaccines can prevent this tumor but not the infection. One of the major challenges in MDV research is its unique strict cell-association. This virus does not produce cell-free progeny virus either in vitro or in vivo. He is tackling this problem by using BAC-cloned MDV in combination with recombination technologies called recombineering. Solving this problem should improve MDV vaccine and shed light on herpesvirus replication mechanisms from a unique angle.

Another system that Dr. Niikura is currently interested in is hepatitis E virus (HEV)-like particles that stimulate mucosal immunity by oral administration. HEV is a non-enveloped virus, which spreads via fecal-oral transmission. The viral particle of HEV consists of only one self-assembling protein encoded by a viral gene, ORF2. By expressing chimeric ORF2 protein in a baculovirus expression system, he and colleagues have demonstrated that this virus-like particle (VLP) can stimulate mucosal and systemic immunity by oral administration. As many viral and bacterial infections initiate through mucosal surface as exemplified by influenza virus and E. coli O157, it is now widely recognized that mucosal immunity is one of the keys for successful immunization. One major advantage of this HEV-VLP over other VLPs is that this VLP can encapsulate DNA vaccines by controlling calcium ion concentration. This characteristic greatly enhances the potential use of this HEV-VLP by extending the size limitation of presenting antigenic proteins. He is interested in exploring the potential of this system as mucosal vaccine vehicles.

Publications and Activities

Funding Identification, characterization, and validation of genetic mutations incurred during in vitro attenuation of Marek's disease virus
Marek's Disease - Replication dynamics, pathogenesis, and vaccine effect

John O'Neil



Professor

Dean

Biography:

Dr. John O'Neil has been Dean of the Faculty of Health Sciences at SFU since September 1, 2007. Previously he was Director of the Manitoba First Nations Centre for Aboriginal Health Research and Professor and Head of the Department of Community Health Sciences in the University of Manitoba's Faculty of Medicine.

Research Interests:

Dr. O'Neil's work has been primarily in the area of Aboriginal health. He has published more than 120 papers and reports on a variety of aboriginal health issues, including self-government and health system development, cultural understandings of environmental health risks, and social determinants of health disparities. Dr. O'Neil's work in this area was recognized by his appointment as a CIHR Senior Investigator and as the founding Chair of the Advisory Board for the Institute for Aboriginal People's Health at the Canadian Institutes for Health Research from 2000 to 2006. He also served as the research advisor to the health policy team for the Royal Commission on Aboriginal Peoples in 1995/96 and he is currently appointed to the Advisory Board of the National Collaborating Centre on Aboriginal Health at the Public Health Agency of Canada. He has worked as well on global Indigenous health issues in circumpolar regions, Australia and Latin America.

More recently Dr. O'Neil has become involved in HIV/AIDS prevention in low- and middle-income countries. He is currently the principal investigator on several HIV/AIDS training grants designed to build local public health capacity in China and India in the area of HIV/AIDS prevention. He has published several papers and reports on the cultural context of HIV/AIDS prevention in India.

BA
University of Saskatchewan

MA
University of Saskatchewan

PhD Medical Anthropology
University of California, San Francisco/Berkeley

Teaching Interests:

Dr. O'Neil has advised more than 40 graduate students at the Master's and Doctoral levels. His teaching interests are in the area of critical public health, global Indigenous health development, and participatory approaches to health research.

Publications and Activities

Funding Capacity building and training of AVAHAN partners: Mysore and Mandya Learning site for community-led structural intervention programming
Building capacity to respond to HIV/AIDS in China
Access issues for Aboriginal people seeking primary care services in an urban centre

Karen Palmer

Lecturer - Instructor

Lecturer and Practicum Coordinator

Biography:

Karen Palmer holds two graduate degrees in Public Health (MPH with a focus on International Health and MS with a focus on Health Policy and Planning) and a Graduate Certificate in Urban and Regional Planning, all from the University of Hawaii (Manoa). Originally from Canada, Karen divided her time during 1984-2006 between Canada, the US, and Switzerland, joining the Faculty of Health Sciences at Simon Fraser University in 2008. As someone who has lived with one foot on either side of the Canada-U.S. border for more two decades, and who has also recently lived in Europe, she brings a unique understanding of the practice of public health, of health care delivery systems, and of international health policies.

Her MS thesis focused on the associations between rapid social change, prenatal care and, ultimately, birth outcomes in the indigenous people of Saipan, located in the Commonwealth of the Northern Mariana Islands.

Her MPH graduate work focused on a (then) new initiative of the World Health Organization, the Healthy Cities Project, which continues to promote comprehensive and systematic policy and planning with a special emphasis on health inequalities and urban poverty, the needs of vulnerable groups, participatory governance, and the social, economic, and environmental determinants of health.

MS
University of Hawaii (Manoa), School of Public Health

MPH
University of Hawaii (Manoa), School of Public Health

Research Interests:

For the past 20 years Karen has been involved in the practice of public health, mostly in health policy research and development and health planning, bridging theory and practice in a variety of public health settings.

In the late 80s, she served as a clinic assistant and educator with the Marimed Foundation's multi-national health care team aboard a 156-foot triple masted top-sail schooner, *Tole Mour* (meaning "gift of life and health"), a self-contained health services ship that delivered primary care to the people of the Marshall Islands, the most remote coral atolls in the world, located in the heart of the Pacific Basin.

She lived in Hawaii from 1985-1995 where she worked as a Senior Health Planner for the Hawaii State Department of Health in the Office of Policy, Planning, and Program Development, focusing on Primary Care and Rural Health in the Hawaiian Islands. She later served as a consultant to the Child and Adolescent Mental Health Division at a time when Hawaii was under a "consent decree" to correct deficiencies in their children's mental health programs, as well as a consulting to other organizations including the Hawaii Nurses Association, the American Nurses Association, Hawaii Child and Family Service, and Utah State University, among others.

Karen worked for nearly three years at the World Health Organization (WHO) in Geneva, Switzerland, as a technical officer within both the Communicable Disease and the Non-Communicable Disease Branches. During that time she compiled and analyzed the strategic planning data for, and co-authored, the *Global Tuberculosis Control Report* for the years 2002, 2003, and 2004. She was a WHO liaison to representatives from the 22 high-burden countries — those countries that account for 80% of the global burden of TB — for planning related to global TB control. She also coordinated a study of human resources for health as they pertain to global TB control, and authored a strategic plan for scaling up the STEPwise approach to global non-communicable disease risk factor surveillance. She was at WHO when the SARS outbreak first occurred, and experienced first-hand the evolution of the global community's response to this new threat. She continues to follow with close interest the epidemiology of the budding global epidemics and pandemics.

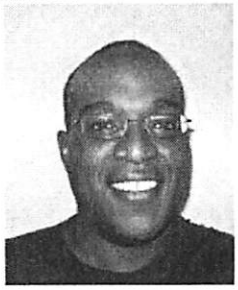
Her passion for more than two decades has been comparative international health care systems and health care systems reform, with a particular interest in comparative US/Canada health care policies. She serves as a board advisor to, and former board member of, Physicians for a National Health Program (PNHP), a progressive advocacy group dedicated to leading the U.S. toward a universal, publicly-funded, single-payer, national health program. Since returning to Canada in 2006, she has served on the advisory board of Canadian Doctors for Medicare (CDM), working with them in their efforts to preserve, protect, and enhance Canada's publicly-funded Medicare system. In 2007, she was appointed Research Associate with the Canadian Centre for Policy Alternatives (British Columbia Office) where she collaborates with other researchers from BC, Canada, and the US on health care policy and health care systems research.

Teaching Interests:

Public health practice, comparative health care policy.

Publications and Activities

Ralph Pantophlet



Assistant Professor

CIHR New Investigator

Biography:

Dr. Pantophlet is an Assistant Professor in the Faculty of Health Sciences and an Associate Faculty member of the Department of Molecular Biology and Biochemistry. Dr. Pantophlet joined the Faculty of Health Sciences in 2008 and heads the Laboratory of Infectious Diseases Immunology.

Dr. Pantophlet received his B.Sc. degree in medical microbiology from the Hogeschool Rotterdam & Omstreken (The Netherlands) (1995) and his Ph.D. degree from the University of Leiden (The Netherlands) (1999) for his work on the immunochemical properties of Acinetobacter lipopolysaccharides (performed at the Research Center Borstel, Germany). He moved to The Scripps Research Institute in California (2000) for postdoctoral research on anti-HIV antibodies and vaccine design under the mentorship of Dr. Dennis Burton. Dr. Pantophlet returned to the Research Center Borstel for a brief postdoctoral period (2002) and then rejoined the Burton laboratory as a senior postdoctoral fellow to focus on HIV vaccine design (2003).

B.Sc.
Polytechnic Faculty, High School of Rotterdam & Surroundings, The Netherlands

Ph.D.
University of Leiden, The Netherlands/Research Center Borstel, Germany

Research Interests:

Research work in Dr. Pantophlet's laboratory is focused on investigating antibody responses to HIV and other viruses of biomedical interest, particularly in the context of host-virus interactions and anti-viral antibody responses. Knowledge gained from studying the interactions of antibodies with viruses will be applied to the 'rational' design of immunogens that may be developed into modern pre-clinical vaccine candidates and, ultimately, new and better vaccines. Techniques based on various scientific disciplines, including molecular biology, virology, biochemistry, and immunochemistry, are strongly applied in the laboratory.

For more information visit the Pantophlet Lab website.

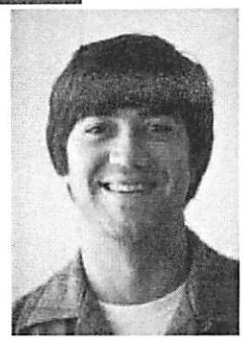
Teaching Interests:

Dr. Pantophlet's teaching interests include humoral immunology (B-cells, antibodies), antiviral antibody responses, and HIV/AIDS.

Publications and Activities

Funding Exploring antibody recognition of the V3 region on HIV-1 to guide vaccine design
Sugar-coated designer immunogens to elicit HIV-1 neutralizing antibodies
Immunogen design to elicit broadly neutralizing antibodies to influenza

Gratien Prefontaine



Assistant Professor

Associate Member, Department of Molecular Biology and Biochemistry and Department of Biological Sciences

Biography:

Dr. Prefontaine received his undergraduate, masters and PhD at the University of Ottawa. There, at the Loeb Health Research Institute, he characterized determinants for a protein-protein interaction between homeodomain-containing developmental regulators and nuclear/steroid receptors. He demonstrated this interaction together with cooperative DNA binding events resulted in synergistic gene activation. This gene expression strategy used by the mouse mammary tumor virus contributes to the super-activation of proto-oncogenes.

During his postdoctoral research at the University of California, San Diego, Gratien created a visual gene expression system using fluorescent proteins. He learned how to manipulate bacterial artificial chromosomes (BACs) replacing the target gene with one encoding for a red fluorescent protein to make mouse transgenes. BACs are currently the quickest and most reliable way of creating this type of expression system without disturbing the endogenous gene. By manipulating these huge chunks of genomic DNA, he showed one of the biological roles of "junk DNA", a short interspersed nuclear element (SINE) B2, is to insulate chromatin territories to ensure proper gene expression. There, he also did pioneering work showing the chromatin modifying protein, lysine-specific demethylase (LSD1) plays a role in gene activation events using its enzymatic activity to erase repressive methylation marks on histones.

B.Sc. (Biochemistry, Honours)
University of Ottawa

M.Sc. (Biochemistry)
University of Ottawa

Ph.D. (Biochemistry)
University of Ottawa

Research Interests:

The long-term objective of his research is to understand the fundamental transcriptional mechanisms involved in determining cell-type specific gene expression programs and dynamic gene control. This research will provide basic understanding of the key signaling systems that initiate, maintain and disrupt normal gene expression contributing to basic knowledge of cellular gene expression strategies. In the post-genomic era, Gratien will focus his energies in understanding epigenetics or heritable modifications of chromatin including DNA methylation and small chemical modifications on proteins.

Online access to M.Sc. and Ph.D. Thesis

Publications and Activities

Jamie Scott

Professor

Tier 1 Canada Research Chair in Molecular Immunity

Biography:

Dr. Scott is a Professor with a Joint Appointment between the Faculty of Health Sciences and the Department of Molecular Biology and Biochemistry.

Dr. Scott received her PhD for work on the germline immunoglobulin V genes. She attended medical school with the goal of becoming an academic biomedical researcher. Her postdoctoral research included projects to analyze the spectra of mutational hot-spots (W.G. Thilly), the development of the first phage-displayed peptide libraries and their use in analyzing antibody specificity (G.P. Smith) and in developing peptide mimics of a discontinuous protein epitope (E.D. Getzoff & J.A. Tainer). She began working at SFU in 1993 as an Assistant Professor in the Dept. of Chemistry and Member of the Institute of Molecular Biology & Biochemistry at SFU. (The Institute became a Department in SFU's Faculty of Science in 2001.) Dr. Scott was promoted to Associate Professor in 1998 and to Professor in 2002. In 2004, Dr. Scott began a joint appointment in the newly-formed Faculty of Health Sciences, as one of its founding faculty members. That year, she was awarded a Canada Research Chair in Molecular Immunity.

Research Interests:

As a molecular immunologist and physician, Dr. Scott is interested in the peptide recognition profile of antibody responses, particularly those elicited by natural infection and vaccination, and their application in the development of vaccines. One of her research goals is to create a protective vaccine that will elicit broadly-neutralizing antibodies against HIV-1.

Dr Scott's work focuses on the molecular basis for antigen recognition by antibodies using peptides as probes of these interactions. With peptide libraries, she has investigated the molecular basis of peptide mimicry, and the ability of select peptides to induce antibody responses that recognize a target antigen. She is applying this approach to better understand the antibody response during HIV-1 infection, and to design vaccines that will target the production of neutralizing antibodies against conserved sites on HIV-1.

Publications and Activities

Funding Immunogenicity of the membrane-proximal region of HIV-1gp41

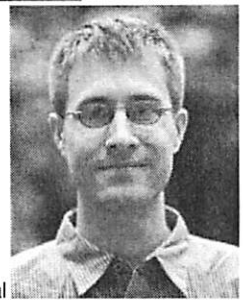
AB, Biological Sciences
Occidental College, Los Angeles

MD
Saint Louis University of Medicine, Missouri

PhD, Biological Sciences
University of Missouri-Columbia

Postdoctoral experience in genetic toxicology, Massachusetts Institute of Technology; Biological Sciences, University of Missouri-Columbia; and Molecular Biology, The Scripps Research Institute

Jeremy Snyder



Assistant Professor

Biography:

See Jeremy Snyder's website:

http://blogs.sfu.ca/people/jeremycsnyder/

Research Interests:

Dr. Snyder's research interests focus on our moral obligations toward vulnerable populations. He is currently engaged in writing projects concerning ethical obligations in the areas of health worker migration, price gouging in the provision of medical services, exploitation in pharmaceutical testing, and markets in human organs. Dr. Snyder's doctoral dissertation developed an account of one form of exploitation that explains moral concerns about benefiting from vulnerable populations such as low-wage workers. In the future, he intends to develop this project into a book that describes different forms of exploitation faced particularly by the global poor.

BA, Philosophy
The George Washington University

PhD, Philosophy
Georgetown University

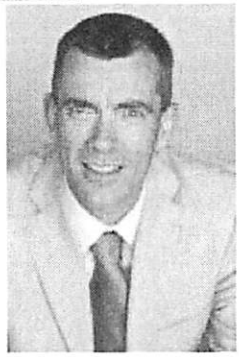
Teaching Interests:

Dr. Snyder has teaching interests in public health ethics, particularly at the intersection between public health, global poverty, and resource inequality. In the past he has taught on a range of topics in applied ethics, focusing on ethical obligations stemming from poverty, increased economic integration, and power asymmetries.

Publications and Activities

Funding An ethics approach to Canadians' decision-making in medical tourism

Julian Somers



Associate Professor

Biography:

Dr. Somers completed his doctorate at the University of Washington, working in the Addictive Behaviours Research Centre. He has collaborated extensively with branches of government on initiatives involving substance use and mental health. Dr. Somers has led Provincial and multi-jurisdictional programs in the areas of telehealth, primary healthcare reform, homelessness, and the corrections system. His previous positions include Director of the UBC Psychology Clinic, President of the BC Psychological Association, and inaugural Director of SFU's Centre for Applied Research in Mental Health and Addiction.

Dr. Somers' current research addresses the role of evidence in public policy and the reform of services to improve health outcomes. He is the Lead Investigator for the At Home Study in Vancouver, and directs a program of research addressing interactions between justice, health, and social services in British Columbia.

BA, Psychology
Simon Fraser University

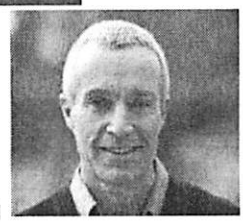
MSc, Clinical Psychology
University of Washington

PhD, Clinical Psychology
University of Washington

Publications and Activities

Funding Transitional and supportive housing:outcome measurement
Mental health and addiction policy and services research
Longitudinal comparison of housing and supports

Malcolm Steinberg



Assistant Professor

Biography: Dr. Steinberg received his MD and post graduate diploma in Occupational Health from the University of the Witwatersrand, South Africa and his MSc in Epidemiology from the London School of Hygiene and Tropical Medicine. Dr. Steinberg has extensive experience in research programme management, health strategy, policy and programme development and evaluation, chronic disease management, public health consulting in Sub-Saharan Africa and South East Asia, and public health teaching. Dr. Steinberg has managed two national health programmes in South Africa (Occupational Health Epidemiology Unit of the National Centre for Occupational Health and the National HIV/AIDS Programme of the Medical Research Council). He also co-founded and led an occupational health NGO to support health and safety programs for the emerging black trade union movement in South Africa and later set up and led an independent health consulting company specialising in HIV/AIDS until it was acquired by Abt Associates. Dr Steinberg moved to Vancouver in 2004 and is currently a Physician Epidemiologist with the Division of STI/HIV Prevention and Control at the BC Centre for Disease Control with a cross appointment in the Health Sciences Faculty at SFU. He is currently involved with two research projects. He is leading a 5-year CIHR study to investigate acute HIV infection in gay men and is a co-principal investigator in a study in Uganda to investigate HPV self collection as a screening approach for cervical cancer.

Publications and Activities

Kate Tairyan

Senior Lecturer

Biography:

Dr. Tairyan obtained her medical degree in preventive medicine from the State Medical University in Armenia and a diploma in health management from the Armenia's National Institute of Health. She received the Ed Muskie graduate fellowship award to obtain a Master of Public Health degree with a concentration on global health leadership from Emory University. Her public health expertise and work experience includes several positions at the Ministry of Health of Armenia and collaborations with international experts on health policy development and poverty reduction issues at national and local levels. In 2006 Dr. Tairyan joined Health Sciences Online (www.HSO.info) as content director and moved to work at the University of British Columbia as a postdoctoral fellow. At UBC Kate is also a member of National Core for Neuroethics and is spearheading a project to evaluate investigator needs for integrating ethics into neuroscience using imaging as the model.

As a sessional instructor in the Faculty of Health Sciences Dr. Tairyan has taught in our undergraduate and graduate programs since 2008.

Research Interests:

Dr. Tairyan's research interests are focused on online distribution of health sciences information and education for health professionals around the world; the global dissemination of high quality public health education using computer-assisted technologies and local mentorship. She also works on research projects focusing on ethics issues and knowledge translation in neuroscience/neuroethics.

Teaching Interests:

Dr. Tairyan's teaching interests in public health and preventive medicine are broad: global health and health determinants, global health challenges and opportunities, health workforce development and online learning, public health program design, implementation, management and evaluation, social marketing and behaviour change models.

Publications and Activities

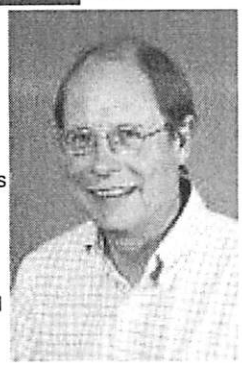
MD (Honors)- Preventive Medicine
Yerevan State Medical University, Armenia

Master of Public Health - Global Health Leadership
Emory University, Rollins School of Public Health, Atlanta, GA

Post-doctoral studies
University of British Columbia. School of Populaiton and Public Health

Post-doctoral studies
University of British Columbia, Department of Neurology

Tim Takaro



Associate Professor

Associate Dean, Research

Biography:

Dr. Takaro is a physician-scientist from the University of Washington, Occupational and Environmental Medicine Program. His work is directed primarily toward determining if linkages exist between occupational or environmental exposures and disease and finding public health based preventive solutions where such hazards exist. Research interests are in gene-environment interactions in immunologically-based lung disease and fibrosis, indoor-air hazards, surveillance and field use of biomarkers for medical surveillance and risk assessment with mixed exposures. His practice includes nuclear weapons workers with beryllium and other pulmonary exposures, and children and adults with asthma and other chemically related illness. Additional interests include health effects of climate change, impacts of globalization on occupational and environmental health, biological effects of low-level radiation and mutagenic effects of pesticides.

BS, Biology
Yale College

MD/MPH, Epidemiology
University of North Carolina – Chapel Hill

MSc, Toxicology
University of Washington

Research Interests:

Dr. Takaro's primary research areas focus on disease susceptibility factors in environmental and occupational health, particularly inflammatory lung conditions, including asthma, chronic beryllium disease and asbestosis. His approach as a researcher and physician has been to try to link laboratory biomarker innovations with public health practice including community-based interventions.

Teaching Interests:

Dr. Takaro teaches environmental and occupational health including population variability in susceptibility to environmental hazards, health effects of environmental change, mixed exposures, medical surveillance for occupational and environmental illness and globalization and occupational and environmental health.

Publications and Activities

Funding Assessment of beryllium disease risk in pre-selected BC industries
Water Quality and Quantity and Human Health: Risk in a Changing Climate in British Columbia
Preparing BC for Climate Migration: An Uncertain Climate for Migration and Settlement
Repeat Home Visits & Alternative Sampling Techniques in the Mini-CHILD Study ("Mini-CHILD II")
An assessment of long-term residential pollution exposures among Canadian children

Rochelle Tucker

Assistant Professor

Biography:

After starting an undergraduate program in Science, Dr. Tucker ended up with a BA in Psychology and Sociology (where she focused on health psychology and medical sociology), from McGill University. She then went on to a practically oriented Master of Health Science in Health Promotion from the University of Toronto. Following her Masters, she worked at the Children and Women's Health Centre of British Columbia on a number of initiatives, including the establishment of the BC Centre of Excellence for Women's Health. After numerous colleagues and mentors convinced her to pursue a career in research, she moved to Boston to do doctoral work at the Harvard School of Public Health. While living in Boston, she worked at the Harvard Eating Disorders Centre on a large eating disorders prevention project. From January 2001-June 2005 she was the Project Director for the BC Youth Survey on Smoking and Health I and II, two large cross-sectional surveys focused on tobacco dependence among adolescents. After receiving a CBIE/CIDA Award for Canadians, Dr. Tucker spent four months volunteering with a small NGO (Apne Aap) that addresses issues related to child sex-trafficking in Kolkata, India in 2003-2004.

BA, Social Psychology
McGill University

MHSc, Health Promotion
University of Toronto

DSc, Social Epidemiology
Harvard University

Research Interests:

Dr. Tucker's research is focused on understanding gender, ethnic and socio-economic disparities in adolescent mental health, and the relationships between mental health and other health issues (i.e. tobacco dependency, nutrition, and obesity, and physical activity) in adolescence. Part of her research is directed towards addressing methodological and theoretical issues associated with these areas of inquiry. Her dissertation research was focused on weight-focused behaviours and depressive symptoms among adolescents in British Columbia and she is continuing research in this area. Dr. Tucker is also interested in the design and program evaluation of youth-led and school-based initiatives aimed at preventing mental disorders and promoting adolescent health. The goals of this research are to promote healthy adolescent development, identify areas amenable to change and inform the development of programs and policies to reduce disparities in health among adolescents.

Teaching Interests:

Dr. Tucker's research interests include research methodology, mental health and adolescent development.

Publications and Activities

Funding Listening to adolescent experiences of eating, dieting, and other weight-focused behaviours: a voice centred analysis
Kolkata girls health project

Nienke van Houten

Ph.D. Molecular Immunolgy and Vaccine Design
Simon Fraser University

B.Sc. (honours) Biology
University of Waterloo

Lecturer

Biography:

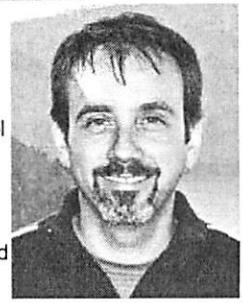
Dr. van Houten received an Honors BSc from University of Waterloo specializing in microbiology. She undertook PhD studies at the Department of Molecular Biology and Biochemistry at Simon Fraser University in molecular immunology and vaccine design. Her research focused on developing strategies for producing epitope-targeting vaccines and explored the use of engineered filamentous phage as vaccine carriers. After completing her PhD, Dr. van Houten conducted postdoctoral research in the Faculty of Health Sciences (FHS), during which she investigated the use of Hepatitis E virus-like particles as carriers for mucosal vaccines using reovirus and influenza infection models. She joined FHS as a Lecturer in August 2010.

Teaching Interests:

I am passionate about understanding the function of the human body especially in the context of immunology and infectious disease. Thus, I have a broad range of teaching interests encompassing basic biology, physiology, microbiology, virology, immunology and host/pathogen interaction.

Publications and Activities

Scott Venners



Assistant Professor

Biography:

After completing his bachelor's degree, Scott joined the United States Peace Corps and taught physics in a public high school in Liberia, West Africa. Later, he moved to Taiwan for five years where he taught English, mathematics and computer science. He then obtained a Master's of Public Health from Tulane University in the Department of International Health and Development with a concentration in quantitative epidemiology and biostatistics. Scott received fellowship support to pursue his Ph.D. from the Tulane/Xavier Center for Bioenvironmental Research and collaborated with the Harvard School of Public Health for his dissertation research, which utilized quantitative epidemiological methods to investigate the effects of indoor and outdoor air pollution in China on respiratory health and rates of daily mortality.

Scott did post-doctoral research for four years at the Harvard School of Public Health. His research utilized molecular epidemiological methods to study environmental endocrine disruptors and human reproduction. During these four years, he was the executive director of a large, prospective study that was funded by the US National Institute of Environmental Health Sciences to investigate the effects of pesticide exposures on fertility and pregnancies of young couples living in agricultural communities in China. While a post-doc, Scott won a four-year K01 grant from the US National Institutes of Environmental Health Sciences to investigate genetic susceptibilities to the effects of pesticides in the Chinese cohort (gene-environment interactions). In 2005, Scott was appointed as Research Assistant Professor in the Center for Population Genetics in the Division of Epidemiology and Biostatistics at the University of Illinois at Chicago, School of Public Health. He joined the Simon Fraser Faculty of Health Sciences as an Assistant Professor in 2008.

BS
Purdue University,
Electrical Engineering

MPH
Tulane University School of Public Health and Tropical Medicine

PhD
Tulane University,
Environmental Epidemiology

Postdoctoral Research
Harvard School of Public Health

Research Interests:

Scott is interested in the application of biomonitoring and molecular epidemiology in environmental population and public health policy research. Biomonitoring is the assessment of human exposures to environmental chemicals by measuring them (or their breakdown products) directly in human specimens such as blood or urine. Molecular epidemiology involves using quantitative methods to establish exposure-response relationships between biomonitoring results and health or disease in human populations.

Beyond this, he wants to combine both social-level and genetic factors into research on how environmental chemicals affect human health. Social-level and genetic factors are similar in that they can both directly influence health as well as modify the susceptibility of individuals and populations to negative influences, including exposures to chemicals.

Within the above framework, Scott is particularly interested in common, low-level chemical exposures in the general population and their influences on the reproductive system. An important class of chemicals within this context includes hormonally active agents, sometimes referred to as endocrine disruptors, to which people can be exposed ubiquitously at low levels through food, water and consumer products.

Finally, Scott is interested in studying low-level exposures to chemicals in the womb and early childhood and their effects on development and later health and disease. Early life is a period when humans might be particularly susceptible to chemical exposures, which could perturb developmental processes leading to persistent changes that influence health and disease later in life.

Publications and Activities

Funding Passive smoke during pregnancy and within-city disparities in intrauterine growth restriction? Linking molecular markers with population data in support of evidence-based policy.
Study of exposure to a lawn herbicide among children and adults in the general public

Charlotte Waddell

Associate Professor

Director, Children's Health Policy Centre

Biography:

A child psychiatrist with longstanding interests in health policy and population and public health, Charlotte was born in Korea and raised in Manitoba, England, Ontario and BC. She completed a BSc in biology at UBC in 1978, followed by an MSc in human nutrition at UBC in 1981. She conducted her master's thesis research in Brazil, studying the effects of malnutrition on children of migrant farm workers. Charlotte then joined Health Canada's First Nations and Inuit Health Service, consulting with aboriginal communities and organizations across BC on public health nutrition programs, then on training programs to support First Nations to assume autonomy for their health and healthcare. In 1988, Charlotte went on to McMaster University where she obtained her MD. After residencies in family medicine (CCFP) and psychiatry (FRCPC), she completed a research fellowship in children's mental health policy with McMaster's Offord Centre for Child Studies and Centre for Health Economics and Policy Analysis. She joined the Offord Centre as Assistant Professor in 1998. In 2000, Charlotte then returned to BC to develop a children's mental health policy research program at UBC, supported in part by a unique long-term research-policy partnership with the BC government. This research program continues to grow at the Children's Health Policy Centre in the Faculty of Health Sciences at SFU, where Charlotte was appointed Associate Professor in 2006.
For more information please see www.childhealthpolicy.sfu.ca.

Research Interests:

Charlotte's research addresses mental health disparities, starting in childhood, by improving the connections between research and policy. She both studies the policy process and conducts research to inform policy-making: addressing the determinants of health; preventing problems in children at risk; promoting effective services; and monitoring our collective progress towards improving the mental health of all children. Charlotte's work was recently acknowledged with a Canada Research Chair in children's health policy.

Teaching Interests: Committed to problem-based learning, Charlotte teaches in health policy and children's mental health in the Faculty of Health Sciences. She also continues to provide clinical care to children involved with the child protection and youth justice systems. In her capacity as a child psychiatrist, she has frequently advocated for disadvantaged children with public policy organizations and the courts. It is working with these children that ultimately informs and inspires Charlotte's research and teaching in health policy and children's mental health.

Publications and Activities

Funding Policy pathways to better outcomes for children with autism
Evidence-informed policy and practice in children's mental health
Monitoring indicators and evaluating the impact of public policy investments for children

BSc, Biology
University of British Columbia

MSc, Human Nutrition
University of British Columbia

MD
McMaster University

CCFP
Family Medicine,
McMaster University

FRCPC
Child Psychiatry,
McMaster University

Postdoctoral fellowship in children's mental health policy, Offord Centre for Child Studies and the Centre for Health Economics and Policy Analysis, McMaster University

Canada Research Chair in Children's Health Policy

Denise Zabkiewicz

Assistant Professor

Biography:

Dr. Zabkiewicz is a social epidemiologist from the University of California at Berkeley. Having been mentored by leaders in psychiatric and social epidemiology, medical sociology, social welfare, and health economics, she has acquired a strong orientation and appreciation towards the broader context in which health problems are embedded. Her interests focus more generally on how social, economic, and policy related factors are intertwined within the broad structural environment and how they interact to influence individual health and the factors that contribute to the onset or continuity of poor health.

Research Interests:

More specifically, her research has examined issues of employment and mental health within the context of US welfare reform policy and a rapidly changing labor market. This research was motivated by her long time collaboration on the Welfare Client Longitudinal Study where she developed a passionate interest in reducing socio-economic inequalities and the mental health problems that are often over-represented among disadvantaged populations.

Teaching Interests:

Dr. Zabkiewicz is fully versed in longitudinal survey fieldwork, sampling, questionnaire development, interviewing and tracking. She is also knowledgeable in the areas of event history analyses and methods utilizing repeated measures. Her teaching interests include epidemiologic methods, quantitative analyses, epidemiology from a historical perspective and measurement issues surrounding psychiatric and alcohol problems.

B.Sc (Environmental/Occupational Health) California State University, Northridge

M.P.H. (International Health) Emory University, Atlanta Georgia

Ph.D. (Epidemiology) University of California, Berkeley

Publications and Activities

Funding Longitudinal comparison of housing and supports

Leilei Zeng

Assistant Professor

Research Interests:

Dr. Zeng's research has focused on statistical methods for longitudinal data analysis. The sub-areas of her interests include incomplete data, multi-state models, multivariate/clustered data, estimating function theory, model misspecification.

Longitudinal studies are becoming increasingly popular in many areas of research. A common feature of this kind of study is missing data. It is necessary to characterize and accommodate missing data in the modeling process. In most of the recent literature on this subject, methods have been proposed that require the development of models for the mechanism leading to incomplete data.

Misspecification of models for the missing data process has bias and efficiency implications. Dr. Zeng investigates the impact of misspecification of the missing data model on inferences regarding regression parameters (including treatment effects) on the response of interest when using weighted estimating function methods. Transitional models have been used to model covariate effects on transition probabilities in longitudinal binary data when one wants to examine how responses change over time.

When interest lies in tracking how two processes change together, she has developed multivariate methods for the study of transition rates when dealing with multiple longitudinal multi-state responses. The unique aspect of this approach is that it enables one to understand how two multi-state processes change together over time. Unique challenges arise when data is incomplete. She is now working on extending this methodology to deal with incomplete samples. The multivariate transition models she proposes may also be adapted for settings where multi-state processes are associated due to clustering, as for example, in longitudinal studies of families, school-based intervention studies.

Dr. Zeng also develops design criteria for studies under this setting and explored the efficiency gain when taking the clustering into account. Dr. Zeng has applied this research to the field of Optometry.

BSc, Statistics
Nankai University

MSc, Biostatistics
University of Waterloo

PhD, Biostatistics
University of Waterloo

Teaching Interests:

Dr. Zeng is interested in teaching introductory biostatistics, topics in biostatistics and generalized linear models.

Publications and Activities

Funding New Methodology for the Analysis of Correlated Data Arising from Longitudinal Studies