

SIMON FRASER UNIVERSITY
Senate Committee on University Priorities
Memorandum

TO: Senate

FROM: John Waterhouse
Chair, SCUP
Vice President, Academic

RE: Centre for Forensic Research
(SCUP 07-26)

DATE: June 19, 2007

At its May 30, 2007 meeting SCUP reviewed and approved the proposal for the creation of the Centre for Forensic Research. This Centre will be a Schedule A Centre within the Faculty of Arts and Social Sciences.

Motion

That Senate approve and recommend to the Board of Governors the creation of the Centre for Forensic Research as a Schedule A Centre within the Faculty of Arts and Social Sciences.

encl.

c: M. Skinner, D. Burley

SIMON FRASER UNIVERSITY
MEMORANDUM
OFFICE OF VICE-PRESIDENT, RESEARCH

TO: Sarah Dench, Secretary
Senate Committee on University
Planning (SCUP)

FROM: B. Mario Pinto
Vice-President, Research

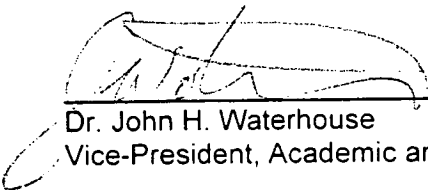
RE: Centre for Forensic Research

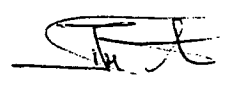
DATE: May 9, 2007

Attached is a proposal from Dr. Mark Skinner, Department of Archaeology for the establishment of the Centre for Forensic Research as a Schedule A Centre.

The Governing Committee for Centres and Institutes recommends that the Centre be granted approval by SCUP. Once approved by SCUP, the proposal is to be forwarded to Senate, followed by submission to the Board of Governors.

Governing Committee:


Dr. John H. Waterhouse
Vice-President, Academic and Provost


Dr. B. Mario Pinto
Vice-President, Research

Attachment

C: M. Skinner, Department of Archaeology
D. Burley, Chair, Department of Archaeology
J. T. Pierce, Dean, FASS

SIMON FRASER UNIVERSITY
Office of the Dean, Faculty of Arts and Social Sciences
MEMORANDUM

To: John Waterhouse
VP Academic

From: John T. Pierce
Dean, FASS

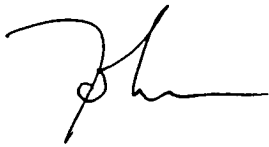
Subject: Proposal: Centre for
Forensic Research

Date: April 19, 2007

John, attached is a proposal for the creation of a Centre for Forensic Research (Schedule A) to occupy the new facilities in the ASSC1 building.

The Centre is a timely and ambitious undertaking that will strengthen Forensic research and training at SFU by bringing together leading edge researchers in a state-of-the-art facility. While the core of the research team will be comprised of members from Archaeology and Criminology, there will be important links to members of Bioscience and microbiology, as well as the professional police community. Moreover, the Centre will have strong links to other research centres within FASS including ICURS, the Criminology Research Centre, the Mental Health, Law & Policy Institute and the Centre for Restorative Justice.

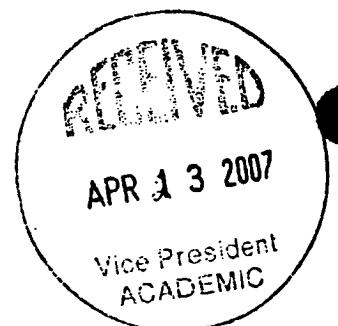
Lastly, the proposed Centre is an acknowledged component of the University's Strategic Research Plan. I consider this initiative to be one of the most important vehicles to promote interdisciplinary research within both FASS and the larger University.



JTP/rt

Attachment

Cc: M. Skinner, Dept. of Archaeology
D. Burley, Chair, Dept. of Archaeology
R. Gordon, Director, School of Criminology



SIMON FRASER UNIVERSITY



DEPARTMENT OF ARCHAEOLOGY

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March 29, 2007

John Pierce
Dean

Dear Sir:

Re: Centre for Forensic Research (Proposal)

Please find enclosed our Proposal for a Centre for Forensic Research and a Proposed Constitution.
Thank you.

Yours sincerely,

A handwritten signature in dark ink, appearing to be 'Mark Skinner'.

Mark Skinner, PhD, D-ABFA
Full Professor of Biological Anthropology

cc. file

Centre for Forensic Research *CONSTITUTION*

1. Statement of Purpose

The objective of the Centre is to provide a centre for research and training to integrate students and scholars locally and internationally to develop new applications of forensic science to solving crimes, identifying victims, exonerating the innocent and convicting the guilty.

2. Governance

2a. The Centre for Forensic Research shall be governed in accordance with University policies including R.40.01, CENTRES AND INSTITUTES. If this document and University policy differ on any issue, University policy shall prevail.

2b. The Centre for Forensic Research is a Schedule A Centre (R40.01, page 2) and comes under the direct authority of the Dean of Arts and Social Sciences. The Dean shall be the Administrative Officer responsible for the governance and budgetary accounts of the Centre.

2c. The Centre for Forensic Research is housed in ASSC1 within the Department of Archaeology and the School of Criminology.

3. Appointment of Director(s)

The Director(s) of the Centre shall be appointed by the Dean of Arts and Social Sciences with advice from the Centre for Forensic Research Steering Committee. Term of office for the Director(s) shall normally be for three years.

4. Internal Governing Procedure

4a. The Centre shall be governed by a Steering Committee consisting of: the Director(s) of the Centre for Forensic Research; three forensically-active SFU faculty members drawn from Archaeology, Criminology and Science; the Chair of the Department of Archaeology; the Director of the School of Criminology; and a representative from the Dean's Office. Lab Manager: Ex officio.

4b. Named members will be appointed by recommendation to the Dean of Arts and Social Sciences from the Director(s). Appointments shall be for a three year term.

4c. The Steering Committee shall be chaired by the Director(s) of the Centre. Meetings will normally take place once a term.

4d. There shall be an Advisory Group consisting of interested persons, from the local and international communities, such as forensic scientists of renown, the Office of the Chief Coroner, RCMP, other Police, bio-ethicists, and members of the Legal Profession. Meetings will normally take place once a year.

5. Associate Members of the Centre for Forensic Research

The Centre may include interested Associates, from both within and outside the University Community, including individuals linked to the Centre through projects and other activities which the Centre sponsors and supports. Associate member status is proposed by the Director(s) and approved by the Steering Committee.

Proposal: Centre for Forensic Research (CFR)

Accompanying this proposal is a Draft Constitution

Prologue

Simon Fraser University has been a leader in the field of forensic science since the 1970's and was one of the first universities in North America to offer forensic entomology, forensic anthropology, and forensic archaeology as a service to police and coroners provincially and nationally. Arising from the challenges of casework, we have found it necessary to conceive and conduct research to assist in the determination of identity, elapsed time since death and circumstances surrounding death. Individual forensic science practitioners at SFU are at the forefront of research in these areas. We are now proposing a Centre for Forensic Research (CFR), uniting the research initiatives of several forensic scientists from Simon Fraser University, which will have a physical home within the new ASSC1 building. The Centre bridges the Departments of Archaeology and Biosciences plus the School of Criminology. In structure and function, the CFR will be the only such facility with concentrated research expertise in Canada and the first of its kind in the world.

SFU's goal is to be the most research-intensive comprehensive university in Canada. This requires administrative vision and support services to sustain strong individual researchers and multidisciplinary research teams, as well as collaborative research initiatives. The proposed Centre for Forensic Research exemplifies this type of initiative, which is designed to enhance and expand existing research capacity.

The benefits to SFU are clear: research excellence that is demonstrably useful to all members of society in their everyday lives.

Objectives for a Centre for Forensic Research

Forensic science is the application of science to those criminal and civil laws that are enforced by police agencies in a criminal justice system. Our material for study includes physical evidence from bodies and scenes, as well as contextual evidence from the environment; ranges in scale from microscopic to global; and is accessed through scientific methods and instruments. The information that forensic scientists provides helps law enforcement agencies to focus their investigations, identify victims and suspects, eliminate non-suspects and help secure convictions. The challenge of identifying victims, perpetrators and perpetrator behaviors can be met by innovative research techniques.

Our fundamental objective is to create an international destination for forensic researchers at all levels that will promote ongoing progress in answering society's needs for stability despite criminal behavior leading to death. The proposed Centre is a timely research initiative with the mandate to focus on the development of new methodologies and techniques. Police laboratories must, perforce, use tried and true methods in order to satisfy legal requirements; therefore they find it difficult to conduct needful research.

Given our close collaboration with death investigative and police agencies we can assist with developing new responses to their needs. Our own considerable casework often suggests new research challenges to which we can respond.

Another objective of the CFR is to attract and train senior graduate and post-doctoral students in a range of forensic disciplines. The CFR will not only train the best and brightest of these students in specific disciplines such as biological anthropology, DNA, botany and entomology, but will also allow students to research areas that cross all these disciplines in a unique academic environment. We anticipate not only increased and expanded traditional graduate training but also a cohort-based graduate program in forensic studies which would include not only the sciences themselves but a much richer environment that will include law and international human rights. With worldwide attention being drawn to large-scale human atrocities, it is clear that there are many highly experienced international scientists who have not had the opportunity for such advanced training in their own countries. The formation of the Centre will allow us to bring to SFU such scientists who will not only benefit from the research and training at SFU, but will also greatly enhance the learning experience of domestic students who will learn from these experienced field workers.

A third objective is to promote casework sharing electronically, not only for case resolution and professional advancement nationally, but to nurture new insights on how such cases can be resolved in the future. Our current experience with a cohort of graduate students, drawn from a wide geographic and pedagogical range, who share new cases, shows how wonderfully stimulating and innervating such a shared intellectual exercise can be. An extension of the strategy of case sharing practiced here will be to share cases globally via the WEB and digital imagery with forensic scientists anywhere. This will meet the historical problem of uneven standards of practice and the slow pace with which many forensic researchers can build up their expertise.

A fourth objective is to attract funds to promote the introduction into Canada of forensic techniques being developed elsewhere. The creation of the CFR will provide a means and focus to attract paid casework and funded research. A large problem for us at present is that remuneration for routine casework cannot cover the costs of an innovative, but very useful technique being developed elsewhere in the world that we would like to use. We need to develop such methods locally so that we can provide the best of forensic science methods to our communities; there is currently no centre in Canada that is tackling this problem.

Strategic Research Plan at Simon Fraser University

The Strategic Research Plan for SFU specifically highlights the Centre for Forensic Research (CFR), which has links with all five thematic areas of the SRP. Within the Communication, Computation, and Technology theme, the CFR fits into the three sub-themes of Collaboration and Visualization, Emerging Digital Technologies and Imaging Science as noted above.

The CFR ties in with the two sub-themes of Safety, Security, Criminal Behaviour, and Forensic Studies, and Communities and Urban Sustainability. The CFR will build upon SFU's already significant strength in the analysis of criminal behaviour and forensic studies: the Institute for Canadian Urban Research Studies (ICURS) is one of three main centres for environmental criminology, and is moving in the direction of computational security and safety. In addition, further strength in the analysis of criminal behaviour and forensic studies exists at SFU within the Criminology Research Centre, studying youth crime, violence against women, and mental disorders, with related topics explored by the Mental Health Law and Policy Institute and SFU's Centre for Restorative Justice. The CFR will forge links with these SFU Centres.

In the third thematic area, Economic Organization, Public Policy, and the Global Community, the CFR will inform public policy on domestic issues such as urban planning and crime prevention; it is also expected to influence global policy as it pertains to the investigation, analysis, and eventual legal prosecution of international human rights violations and crimes against humanity. Researchers are concerned with policy development, the rule of law and accountability, including the School of Criminology's work on the justice system, and with the legal profession. The CFR's involvement with the RCMP and forensic casework will provide additional stimuli and understanding for forensic research, law, police procedures, and criminal investigations.

The proposed CFR also fits into the fourth SRP thematic area on the Environment. Illegal poaching and trafficking in animal parts is considered by the World Wildlife Fund to be the second most profitable criminal activity in the world (after drug dealing). Forensic DNA analysis, entomology, and anthropology are vital for investigating and eventually prosecuting poaching cases. For example, techniques developed at the CFR DNA lab will be readily applicable for accurate identification of protected species from modified animal products. Palynology has also been used to identify past environmental change, such as earthquakes and landslides, thus helping to understand the past and predict future events. Forensically, such paleo-environmental investigations have been used in court to support First Nations oral histories and associated land claims issues. Research at the CFR on critical identification of pollen and spores will benefit such environmental studies, as well as generate new identification protocols for forensic research. Fifth, the research to be carried out by the CFR fits clearly within the SRP's health theme. The health and safety of society is of paramount concern in the proposed research activities of the Centre. Coordinating research with the coroner's office, for example, plays an important role in the prevention of future deaths by understanding how specific deaths under investigation occurred. Similarly, research into human tracking contributes to the Population and Health sub-theme, since pollutants will be used as markers in human and animal proxy tissues for tracking. Lastly, on the theme of health, the VENUS project— a major CFI funded project — on oceanography will be crucial for study of the marine environment and crucial to the CFR in terms of research on drowning and marine body disposal.

Faculty and Associate Faculty Involvement with the Centre

Principal Investigators

Dr. Gail Anderson, Associate Professor and Assoc. Director, Criminology
Dr. Lynne Bell, Associate Professor, Criminology
Dr. William Davidson, Professor, Molecular Biology and Biochemistry
Dr. Rolf Mathewes, Professor, Biology and Associate Dean of Science
Amy Mundorff, Doctoral Candidate, Archaeology
Dr. Mark Skinner, Professor, Archaeology,
Dr. Dongya Yang, Assistant Professor, Archaeology

Associated Investigators

Dr. Owen Beattie, Professor, University of Alberta,
Dr. Ron Fournay, Section Head, Biology, RCMP
Dr. Bill Haglund, Physicians for Human Rights, Seattle, WA.
Dr. Dean Hildebrand, Director, Forensic Sciences Program at BCIT
Dr. Richard Lazenby, Professor, Anthropology, UNBC
Dr. Verena Tunnicliffe, FRSC, Professor and Tier I CRC Dept Biology, UVIC

Expenses related to Simon Fraser University

Income:

Research contracts will be sought from the Attorney General Department, the RCMP (nationally and locally), Coroner's Office, Municipal and City Police. Case-related research will be funded by individual law firms. In addition, routine case work is funded by the Office of the Chief Coroner and generates revenue for small equipment and small supplies. The usual funding sources (NSERC, SSHRC, MRC) have been and will be approached for funding. These sources will provide funding for equipment, materials and technical assistance.

Costs

Personnel

Staff positions include:

- a) one technical lab manager position
- b) one clerical support position
- c) one full-time technician. Ultimately, two will be required to deal with instruments which are located in the CFR building in ASSC1.

These staff will provide core administrative and operational requirements for the infrastructure for the CFR. A senior full-time manager is required to administer the day-to-day operations of the Centre including administration of the operating and equipment budget, development of operating protocols and procedures and supervision of the technical staff. Two technical staff members are required to maintain existing and anticipated major equipment items including the scanning electron microscope, radiography lab equipment, mass spectrometers, DNA lab equipment and equipment installed in the autopsy laboratory. The technical staff will also advise and assist

researchers in the use of the equipment, schedule and perform preventive maintenance, and outfit and stock materials and supplies for the labs.

Supplies

The materials and supplies budget involves costs associated with maintaining the major and minor laboratory instruments in an operational state for the researchers in the Centre. The technical staff will maintain a store of parts and supplies for the equipment including electrical switches, illuminator bulbs, fuses, high vacuum system parts, lubricants and oils, gases, and tools and equipment for working on the equipment. There will also be expenses for maintenance operations conducted in the CL2 Autopsy including sterilization chemicals, personnel safety equipment and disposal of contaminated waste generated while servicing and maintaining the laboratory equipment.

Maintenance and Repairs

The CFR will house a number of complicated and sensitive laboratory instruments and equipment including existing and anticipated equipment including the scanning electron microscope, mass spectrometers, radiography equipment, gene sequencers and a number of precision balances and microscope. Funds are required to cover the expenses incurred for the regular maintenance and servicing of the equipment and repair costs in the event of equipment malfunction, after the extended warranties and service contracts have expired. As the equipment and instruments in the Centre age it is anticipated that major repairs will occur with more frequency, making it necessary to allow for an annual incremental increase in the repair budget.

Infrastructure Requirements:

The CFR has a physical home in the new ASSC1 building. Fundamentally it includes the following spaces, most of which have built-in equipment (sources to obtain additional equipment are being sought).

Faculty of Arts and Social Sciences Space

Administrative Offices: Director, General, Lab Manager, Graduate (2), Meeting	
<u>Archaeology Space</u>	<u>Criminology Space</u>
Radiography Lab	Isotope Lab
Optical Microscopy	Prep Lab
SEM Labs	Entomology
Laser Scanner	Student Lab
Forensic Anthropology	Incubator Lab
Autopsy	Evidence Storage
Osteology	Breeding Room
Evidence	Dry Lab
Walk in cooler, change rooms	Crime Lab
autoclave	
Forensic DNA	
Specimen Prep Lab	
Extraction Lab	
PCR setup Lab	

Summary

The Administration at Simon Fraser University has already committed considerable resources, in terms of logistical, equipment and structural needs, to forensic studies by individual scholars. We are proposing a Centre for Forensic Research to enhance collaborative research among forensic scientists from Biosciences, Archaeology and Criminology and to create a centre of training and research to attract the best up and coming forensic students as well as established scholars to come to SFU. We will provide an enhanced degree of response to case work and draw upon these challenges to guide our research plans so as to best benefit local and non-local communities.



SIMON FRASER UNIVERSITY
LIBRARY

Library Assessment for the Centre for Forensic Research May 4, 2007

This is the Library's report on the proposed Centre for Forensic Research.

The SFU Library supports the establishment of this Centre as outlined in the proposal. The SFU Library is actively collecting monographs in the area of forensic research. Our journal holdings may need to be updated in order to adequately support this centre.

The SFU library provides access to the following journals that will be useful in supporting the research needs of this Centre:

- American journal of forensic medicine and pathology
- British journal of forensic practice
- Digital investigation
- Forensic science international
- Forensic science review
- International journal of legal medicine
- Journal of forensic sciences
- Journal of the forensic science society
- Regulatory toxicology and pharmacology : RTP
- Science & justice

Suggested titles to acquire:

- American journal of forensic psychiatry **\$101**
- Forensic science abstracts **\$2,163**
- Journal of forensic identification **\$202**
- Journal of investigative medicine **\$368**
- Medicine, science, and the law **\$155**
- Wound ballistics review **\$57**

Cost of above titles: \$2,996

The above titles are suggestions only. The library would base subscriptions on recommendations of faculty associated with this Centre.

Monographs

The SFU library is currently actively collecting in the area of forensic sciences. No further monograph resources required.

Cost if any additional subscriptions are required by centre faculty: \$2,996

Maintained by: Megan Crouch [mcrouch@sfu.ca]
Content last modified: 2007-05-07 [YYYY-MM-DD]

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