



## **Senate Committee on Academic Development**

Report to Senate – Meeting of April 23, 2009

### **Proposal to introduce a new program in Cancer Research in the existing Bachelor of Science in Life Sciences Research Stream in the Faculty of Arts and Science**

#### **Introduction**

The proposal to introduce a new program in Cancer Research in the existing Bachelor of Science in Life Sciences Research Stream in the Faculty of Arts and Science was reviewed by the Senate Committee on Academic Development (SCAD) at its meeting April 1, 2009. S. Davey, Associate Professor and Research Scientist in the Department of Pathology and Molecular Medicine and Associate Professor of Oncology and Pathology the Department of Biochemistry, attended the SCAD meeting to speak to the proposal and answer questions from members of SCAD. Members of SCAD were also provided with the Program Approval Submission Form, which outlines the major components of the proposal. A copy of the proposal is attached to this report.

#### **Analysis and Discussion**

The following should be noted:

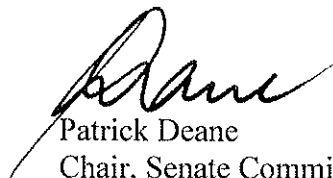
- the proposed program is a stream that is designed to focus on a cancer-oriented research educational stream for undergraduate students;
- this proposed program will give students experience in transdisciplinary research and laboratory experience, as well as have them participate in a companion seminar course;
- enrolment will be limited to 18 students; they will be enrolled in the Life Sciences Research Stream and enter into the Cancer Research stream at the end of third year;
- graduates of this program will pursue graduate work or professional programs and students will benefit from multidisciplinary training and high levels of biomedical science training.

#### **Conclusions/Recommendation**

Recommendation:

On academic grounds, SCAD recommends that Senate approve the establishment of the new program in Cancer Research in the existing Bachelor of Science in Life Sciences Research Stream in the Faculty of Arts and Science to commence in September 2009.

Respectfully submitted,



Patrick Deane  
Chair, Senate Committee on Academic Development

**Committee Members:**

**Members**

C. Baker  
J. Coates  
P. Deane (Chair)  
M. Hoidas  
M. Lombardi  
D. McKeown  
K. O'Brien (Secretary)  
P. Oosthuizen  
M. Roberts  
D. Stockley  
M. Whitehead



## **Senate Budget Review Committee**

Report to Senate – April 9, 2009

### **Proposal to establish a Cancer Research Stream in the Life Sciences Program.**

#### **Introduction**

On April 9, 2009, the Senate Budget Review Committee (SBRC) met to discuss the Proposal to establish a Cancer Research Stream in the Life Sciences Program.

#### **Analysis and Discussion**

All but two of the core and option courses in the proposed Cancer Stream are currently offered. The new courses offered in 4th year are a seminar based course (CANC 497) and a research project course (CANC 499). S. Davey (Department of Pathology & Molecular Medicine, Biochemistry and Oncology) assured the committee that the number of students in the program would be limited to the number of faculty members involved in cancer research at Queen's University available to supervise students in the program. The small TA budget will come from funds within the Life Sciences program.

#### **Conclusions/Recommendation**

Members of the committee saw no major resource implications with the proposed program and voted unanimously to recommend to Senate that they approve the Proposal to Establish a Cancer Research Stream in the Life Sciences Program.

Respectfully submitted,

J. Medves,  
Chair, Senate Budget Review Committee

Committee Members:

H. Averno

K. Brock

F. Davis

D. Hallett

J. Helland

D. Janiec

M. Koichopolos

M. Lombardi

J. Medves (Chair)

G. Willmott

I. Young



Queen's  
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# Memo

TO Patrick Deane, Chair, SCAD  
Jennifer Medves, Chair SBRC  
FROM Georgina Moore, Secretary of the Senate  
DATE March 11, 2009  
SUBJECT Proposed New Program in Life Sciences – Cancer Research Stream

The attached proposal has been submitted to the Senate by the Faculty of Arts and Science and is referred to SCAD and Budget Review for approval. The proposed new program in **Cancer Research** will be built on the existing Bachelor of Science in Life Sciences Research Stream and was approved by the Faculty of Arts and Science Faculty Board on February 13, 2009.

Please review the proposal and report back to Senate with your committee's recommendation. Professor Scott Davey, Department of Pathology and Molecular Medicine, Biochemistry, Oncology (ext. 36923, email [sd13@queensu.ca](mailto:sd13@queensu.ca)), should be contacted if you have any questions or if you would like him to attend a committee meeting. Please contact him directly.

Thank you for your attention to this matter.

Georgina Moore  
Secretary of the Senate

copy: K. O'Brien, Secretary, SCAD + copy of Proposal  
B. Cooke, Secretary, SBRC + copy of Proposal  
A. MacLean, Dean, Faculty of Arts and Science  
S. Davey, Department of Pathology and Molecular Medicine, Biochemistry, Oncology

Senate Referral File  
ATT:

Senate Committee on Academic Development  
and  
Senate Budget Review Committee

LISC  
SSP-CANC

approved  
09.01.27

web  
summary  
09.02.06

Program Approval Submission 2008-09

This form is to be used when seeking approval for all new or substantially revised programs of study leading to a degree, diploma or certificate

FACULTY/SCHOOL: FACULTY OF ARTS AND SCIENCE \_\_\_\_\_

PROPOSED NEW PROGRAM: CANCER RESEARCH STREAM (LISC SSP - CANC) \_\_\_\_\_

PROPOSED IMPLEMENTATION DATE: SEPTEMBER 2009 \_\_\_\_\_


DATE OF FACULTY BOARD APPROVAL: 13 February 2009 \_\_\_\_\_

SUBMISSION CONTACT

NAME: Scott DAVEY \_\_\_\_\_

TELEPHONE: x36923 \_\_\_\_\_

EMAIL: sd13@queensu.ca \_\_\_\_\_

SIGNATURE OF THE DEAN:  DATE: Dec 3/08 \_\_\_\_\_

Please note that program proposals must receive the approval of Faculty Board prior to being submitted to the Senate Office for referral to the Senate Committee on Academic Development (SCAD) and the Senate Budget Review Committee (SBRC), which will then make their recommendations to Senate.

The criteria requested in PART A should be regarded as the minimum criteria for the assessment of academic programs. Any unit planning a new program should show how not only the criteria listed below but also, where appropriate, those required by the Undergraduate Program Review Audit Committee and those of the Ministry of Training, Colleges & Universities have been taken into account. For further information, please refer to the Senate Policy "Policies and Procedures for Establishing New Undergraduate Programs" (<http://www.queensu.ca/secretariat/senate/policies/newprog/index.html>)

4/09  
09-01-13



BB  
08.12.05

## PART A

### 1. OBJECTIVES:

Please summarize the rationale for introducing this program. The program should be consistent with the Queen's mission, the academic plans of the unit including its teaching and research strengths, the relation of the unit with other academic units and the standards, educational goals and learning objectives of the degree. Explain how this program will achieve the expected academic quality. Please identify the Faculty, School or Department, which will be administratively responsible for the academic aspects of this program such as supervision of graduate students, curriculum development and the Internal Academic Review Process.

The Cancer Research Institute at Queen's University was completed in April 2003. The open concept building was designed to accommodate three major cancer research groups already located at the University and to provide space for new cancer research initiatives. Research in the Institute extends from population studies of cancer etiology, through tumor biology and clinical trials, to outcomes and health services research. The Institute is committed to fostering transdisciplinary investigation of areas of cancer control that lie at the interface between fundamental, clinical and population research.

The three divisions of the Institute are presently populated by approximately 250 faculty, graduate and post-doctoral trainees and support staff. Opportunities for graduate and post-doctoral training are offered in partnership with several departments at the University, including: Biochemistry, Community Health and Epidemiology, Microbiology and Immunology, Oncology, Pathology and Molecular Medicine, and Pharmacology and Toxicology and the School for Public Policy. The Institute also operates a post-graduate training program in transdisciplinary cancer research, supported by the Canadian Institutes of Health Research and the Cancer Research Society, that is tailored to meet the needs of graduate and post-doctoral trainees from a wide range of disciplines.

This submission is designed to make use of this existing research strength at Queen's to allow a select group of senior undergraduate students to experience a cancer-oriented research intensive educational stream. The rationale for creating this program include: (1) to provide background preparation for students intending to pursue graduate-level cancer research; (2) to increase the ability of the University to offer undergraduate-level exposure to transdisciplinary research problems. While the central theme of the "Cancer Stream" is to begin the training of cancer researchers, the nature of cancer research means that students will have the opportunity to receive upper-year training any field encompassed by the Life Sciences program, and potentially a number beyond.

### 2. ADMISSION REQUIREMENTS:

The admission requirements (preparation and achievement) should be appropriate for the learning objectives of the program and the institution to ensure the appropriate quality of student applicants. In no case should admission requirements be lower than the published minimum standards for the University. Indicators of student demand including applications, registrations, projected enrolment levels, and of the quality of students must be considered. Where admission is competitive, actual admission requirements may be higher than the published minimum standards. Information about anticipated enrolments should also be included.

Students will be enrolled in the Life Sciences (SSP) Research Stream, and will branch into the CANC stream at the end of 3rd year. The minimum requirement for admission will be (1) a cumulative average in core courses of 70%; and (2) acceptance into a CANC program member's laboratory for a 499 project. Students not meeting criteria (1) may be accepted at the discretion of the CANC undergraduate chair.

Enrollment will be limited to 18 students, and admittance to the program will be competitive; fulfillment of the minimum requirements will not ensure admission to the program.

**3. CURRICULUM:**

Provide a detailed overview of the proposed program, along with the proposed *Calendar* description. Details such as course requirements (core, supporting, recommended, optional courses), prerequisites, problems students may encounter and new courses being proposed for the program should be included. The structure and curriculum of the program should be appropriate for its learning objectives.

Year 1:	1	LISC Core	BIOL 102* & 103*	Cells / Organisms
	1	LISC Core	CHEM 112	Chem
	1	LISC Core	MATH 121 or 122	Calculus
	1	LISC Core	PHYS 107	Phys for Biol / Other / Phys
	1	Elective/Option		
Year 2:	1	LISC Core	ANAT 215* & 216*	Principles of human morphology I / II
	0.5	LISC Core	BIOL 205*	Molecular and Mendelian Genetics
	1	LISC Core	CHEM 281* & 282*	Organic Chem
	0.5	LISC Core	MBIO 218*	Gene structure and function
	0.5	LISC Core	MICR 221*	Basic Microbiology
	1	LISC Core	PHGY 212	Physiology for LISC
	0.5	LISC Core	STAT 263* (or Equiv.)	Intro to Stats
Year 3:	1	LISC Core	BCHM 310	General Biochem
	0.5	LISC Core	MICR 360* or etc	Microbial Pathogenesis / Immunology
	0.5	LISC Core	PHAR 340*	Principles of General Pharm I
	3.0	Elective/Option	Other	
Year 4:	0.5	LISC Core	PHAR 450*	Principles of General Pharm II
	0.5	<b>CANC Core</b>	<b>CANC 440*</b>	Cancer Biology and Therapeutics
	0.5	<b>CANC Core</b>	<b>CANC 497*</b>	Current Topics in Cancer Bio and Genet
	1.5	<b>CANC Core</b>	<b>CANC 499</b>	Research Project in Cancer Biology
	2.5	Elective/Option	Other	

**Cancer Stream Option Courses:** (2.0 Credits Required; 1.0 at the 400 level)

A wide variety of option courses that are appropriate for the CANC stream are already in existence in the LISC program and beyond. The following courses would be considered acceptable to fulfill the "Option" requirements:

BCHM 410*	Protein Structure and Function
BCHM 411*	Advanced Molecular Biology
BCHM 432*	Molecular Basis of Cellular Function
BIOL 330*	Cell Biology
BIOL 331*	Analytical Genomics
BIOL 430*	Molecular Genetics of Development
BIOL 441*	Molecular Genetics
CHEM 311*	Mechanistic Organic Chemistry



CISC 333*	Introduction to Data Mining
EPID 301*	Principles of Epidemiology
MICR 360*	Immunology
MICR 436*	Microbial Genetics
MICR 450*	Molecular Virology
MICR 451*	Viral Pathogenesis
MICR 461*	Advanced Immunology
PATH 310*	Pathology and Molecular Medicine
PATH 425*	Human Genetics
PHAR 416*	Xenobiotic Disposition and Toxicology
PHGY 350*	Pathophysiology
PSYC 332*	Health Psychology

PLEASE NOTE that many of these courses have limited enrollments, exclusions, or prerequisites that are not part of the core LISC program. Students are responsible for ensuring that their individual program of study will allow them to complete the necessary number of option courses. Entry into the CANC stream does not automatically qualify students for inclusion into any of these options courses.

**Electives:** (4.0 Courses)

The remaining courses to complete the degree may be chosen freely, provided the prerequisites have been met.

**4. TEACHING:**

Briefly explain how the intended mode of delivery (including, where applicable, distance or on-line delivery) and standards of instruction for this program are appropriate to meet the program's learning objectives.

All of the core and option courses in the proposed CANC Stream are currently offered with the exception of CANC 497\* and CANC 499. CANC 499 is the 4<sup>th</sup> year project course, which will be created identical to those currently offered within the traditional department structure of the LISC program. CANC 497\* is a seminar-based course to be run concurrently with CANC 499. Most of the faculty involved in cancer research at Queen's University have extensive supervisory experience at the undergraduate, graduate and postdoctoral fellow levels and offer exceptional expertise in the training of undergraduate students who will be enrolled in the CANC 499 Project Course. Active cancer researchers among the faculty will be afforded the opportunity to supervise students in the CANC 499 program. Those faculty members who do not have student supervision experience will be asked to co-supervise with a faculty member who does have experience.

**5. EVALUATION OF STUDENT PROGRESS:**

Briefly explain the intended method of evaluation of student progress and how it is appropriate for this program.

Students will be evaluated in each course they enroll in and will get an appropriate grade for their transcript. A CANC Life Sciences counselor will be appointed from within the CRI-CBG faculty. This individual will be available to address any academic concerns arising from the CANC concentration. The CANC Life Sciences counselor will also work under the direction and guidance of the Associate Dean of Life Sciences and Biochemistry located in Botterell Hall.

**6. EQUITY:**

This program's planning, development and implementation should be consistent with the equity goals of the University and must avoid direct, indirect and systemic discrimination.

The Life Sciences program and the Cancer Research Institute are committed to ensuring fair treatment of all students without regard to sex, age, sexuality, ethnicity, race or disability.

**7. HUMAN RESOURCES:**

Please demonstrate that the number, quality and academic expertise of the faculty in the area of the proposed program are sufficient to meet the demands of the program. Where appropriate, the availability of support staff, teaching and laboratory assistants should be indicated. (Additional details should be provided on the Resource Implications Checklist in **PART B** of this form).

As indicated previously, all but two of the cancer core and option courses proposed for the CANC stream are existing courses. We will have a maximum enrollment of 18, but anticipate that the actual number of students in the stream will be lower than this, limited by the availability of projects in the CANC 499 course. The CANC stream students will be a part of the 220 students enrolled in the Life Science Program, and most of these would likely have already have been enrolled in the LISC Research Stream.

The Cancer Research Institute Division of Cancer Biology and Genetics currently has sufficient administrative staff to handle CANC stream related administration. To ensure a smooth initiation of the program, Dr. Scott DAVEY will assume the duties of Academic Counselor as well as coordinator for CANC 499 and 497 over the near future, and will work with members of the CRI-CBG Faculty and the LISC office to determine admission into the program. The Life Sciences undergraduate program office will continue to be responsible for admitting, advising, and assessing degree eligibility for all students in the LISC program, including those in the CANC stream. No new administrative support staff will be required.

Primary responsibility for development and initiation of this program rests with the members of the Cancer Research Institute, Division of Cancer Biology (Drs. Susan Cole, Scott Davey, Roger Deeley, Bruce Elliott, Peter Greer, David Lebrun, Chris Mueller, Lois Mulligan, Chris Nicol, Martin Petkovich, and Jeremy Squire), but may expand to include any Member or Associate of the Cancer Research Institute as demand and scope of the program grow.

**8. PHYSICAL AND INFORMATION RESOURCES:**

Please provide a summary of available or required program-specific resources, such as: classroom requirements, laboratories, information technology services and facilities, and library facilities and information resources (including unique and special collections). (Additional details should be provided on the Resource Implications Checklist in **PART B** of this form).

*Library:* Excellent library resources and facilities currently exist on Queen's campus and are available for undergraduate students. These facilities include the Bracken, Stauffer and Douglas libraries. Given that the students in the CANC stream will be existing LISC students, we do not anticipate any significant change in the load imposed on the Library facilities.

*Laboratory Facilities:* Teaching Laboratory facilities will only be required for those core courses which are currently offered within the Life Sciences program. No additional courses will be offered requiring teaching laboratory facilities. Individual research labs will be made available to those students who enroll in CANC 499 Research Project. Each supervisor is provided with appropriate research space for experimental procedures and data analysis. Each individual supervisor's laboratory consists of appropriate space and equipment to conduct all research. Appropriate computer workstations will be made available for those CANC 499 students who require it. In addition to

individual laboratories of each supervisor, there is now a proliferation of core facilities that are shared by groups of researchers. These core facilities are developed to be shared among teams of researchers. These core facilities offer unique opportunities for students to participate in multidisciplinary studies in cancer research.

*Computer Facilities:* Generally, the supervisor will provide appropriate computing facilities for their CANC 499 students with the necessary software, hardware and Internet connections. These computer facilities are available in both the research laboratories and the data analysis laboratories for student benefit. It is deemed the responsibility of the supervisor to provide these appropriate facilities.

*Space:* Administrative space is provided in Botterell Hall for the administration of the CANC courses through the Cancer Research Institute's Division of Cancer Biology and Genetics. The individual investigators also provide ample working space for each undergraduate student within their laboratories who is enrolled in CANC 499. Each supervisor at Queen's University is afforded their own private office space, which can be used for consultation with undergraduate students, in addition to private phone lines. Undergraduate students enrolled in CANC 499 will have access to phones and faxes in their supervisors' laboratory or department.

#### 9. FINANCIAL RESOURCES:

There should be evidence of sufficient resources to introduce and maintain the program for a reasonable period of time. This should include consideration of any additional funds from internal sources and from government or other external sources as well as possible financial impact of the programs on other programs, within and outside the unit. (Additional details should be provided on the Resource Implications Checklist in **PART B** of this form).

There are minimal financial implications for the proposed LISC Stream in Cancer Research. As explained previously, all courses being offered currently exist. All of the core and optional CANC courses currently being offered have sufficient faculty expertise to teach these courses. Any additional courses proposed in the future will be determined based on the expertise of existing faculty at Queen's. CANC courses offered will have designated spaces for qualified students wishing to enroll in these courses but who are not in the CANC program.

The only financial requirement for maintaining the stream will be the necessity of obtaining a line of funding for the Administrative Teaching Assistant for the CANC 497\* and CANC 499 courses. This individual will be a senior graduate student within CBG who will assist with organization and implementation of the CANC 499 course. The first year of funding for this position will be assumed by CBG, with two further years of support funded by the Life Sciences Office (see memo from Ken Rose). However, the long-term future of the CANC stream will depend on maintaining stable funding for this position, as CBG does not currently have access to a "departmental" allocation suitable for this funding. Based on comparable position in other LISC 499 courses, we estimate this cost to be \$2,000 annually.

#### 10. SOCIETAL CONTEXT (STUDENT DEMAND, SOCIETAL NEED, DUPLICATION):

Please provide a summary of how this program is expected to meet student demand and societal need. Evidence of student demand could include: projected enrollment levels, application statistics, origin of student demand (domestic and international), and duration of projected demand. Evidence of review and comment by appropriate student organizations should be provided. Please explain how the program will fulfill a societal need in specifically identified fields (academic, public and /or private sector) and consider the probable availability of positions on graduation, the likelihood of attracting out of province or international students and the equity implications of the program. In the case of a professional program, discuss its congruence with the regulatory requirements of the profession. Please cite similar programs offered by other institutions and provide evidence of additional societal need and/or student demand as well as indicate innovative and distinguished aspects of the program.

The proposed CANC stream represents a small change in the courses provided within the LISC program, but is a significant change in how undergraduate education is conducted within the program. Like the NSCI and CRSS streams, the CANC approach will allow undergraduate students to integrate a variety of courses into a program that takes a disease-based but trans-disciplinary approach. Given the overall idea of a generalized Life Sciences Curriculum, these research streams represent the logical end point of this approach.

The undergraduate CANC stream relies upon existing strength at Queen's, in the form of both research and training through the graduate and post Ph.D. levels. It will also allow early and comprehensive integration of teaching and research in cancer-related areas, which is expected to benefit both the students and faculty. This further strengthening of Cancer Research at Queen's is also in line with the University's Strategic Plan.

Research and professional activities increasingly work across traditional disciplinary boundaries, and the "stream" approach will cater to this demand. While we do not have a clear projection of enrollment in the CANC stream, the new CANC 440\* course has 23 students enrolled, and over 30 on the waiting list. Thus, we expect to have a large amount of interest in the CANC stream.

**11. LEARNING AND PROGRAM OUTCOMES:**

While the aim of a university education is to produce educated individuals who possess good judgment and the capacity for critical thought, it is also important to consider specific indicators of learning and program outcomes, such as a graduation rate, length of studies, job placement, external scholarships, awards of graduating students, results of professional certification or licensing examinations, etc. Please discuss the anticipated outcomes of this program.

It is our goal to produce graduates of the SSP LISC – CANC program that will continue their education by pursuing either graduate work or professional programs. Canada has pinned its future economic well being on the development of a knowledge-based economy. This model will require individuals with high levels of training in biomedical sciences who will be capable of joining private industry. Graduates from this undergraduate program will be ideally suited to further their education in these areas because of the multidisciplinary training that they will receive. These students will have a thorough understanding of entire systems as well as cellular and molecular processes that are the targets of therapeutic interventions.

It is anticipated that a high percentage of the students enrolled in this stream will go on to pursue graduate work, while others are expected to pursue professional programs. Since this program will seek to admit students with outstanding academic backgrounds, it is anticipated that a high percentage of these graduates will be eligible and successful in their pursuits for postgraduate studies.

**12. OTHER ISSUES:**

Please describe any additional special considerations with respect to this program.

The CANC stream represents a continuation of the re-structuring of the LISC program to allow for students to train in disease-specific but multi-disciplinary research streams, that are not typically accessible within the University's formal departmental structure.

## PART B - RESOURCE IMPLICATIONS

### 1. SUMMARY OF RESOURCES REQUIRED

*If you are unsure of the resource implications for any of the following, please consult with someone in the affected department or unit.*

Please summarize the *additional* resources needed to implement the program:

- a) FACULTY \_\_\_\_\_ None \_\_\_\_\_  
(number of half courses)
- b) STAFF \_\_\_\_\_ None \_\_\_\_\_  
(number or fraction of FTEs)
- c) TEACHING ASSISTANTS \_\_1 (CANC 497\*/499, see\_9, above),  
approx \$2000\_\_  
(number of student-courses)

#### d) PHYSICAL FACILITIES:

Please describe the space resource implications of the proposal in terms of the following (include both size (in terms of # of students) and frequency (number of hours per week required))

1. Classrooms \_\_1 seminar room, 2h/wk for new course CANC 497\*\_\_
2. Laboratories \_\_\_\_\_ N/A \_\_\_\_\_
3. Offices \_\_\_\_\_ N/A \_\_\_\_\_

*For number d) 3 above, please reallocation or reconfiguration of space is required. If so, appropriate approval must be appended.*

#### e) INFORMATION FACILITIES

Please indicate the ITS resource implications for the proposal in terms of requirement for

1. Hardware \_\_\_\_\_ N/A \_\_\_\_\_
2. Software / Internet \_\_\_\_\_ N/A \_\_\_\_\_
3. Audio-Visual \_\_\_\_\_ N/A \_\_\_\_\_
4. Telecommunications \_\_\_\_\_ N/A \_\_\_\_\_

f) LIBRARY SERVICES

Please indicate which of following new library resources will be needed:

- journals
- print monographs
- audio visual material
- historical documents
- electronic databases
- statistical / geospatial data

Indicate the likelihood of the program having an impact on Library staffing?

None

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g) UNIVERSITY REGISTRAR

Please indicate the resource implications for the proposal in terms of requirement for

1. Scholarships / Bursaries \_\_\_\_\_ N/A \_\_\_\_\_
2. Registration / SIS Programming \_\_\_\_\_ N/A \_\_\_\_\_
3. Timetable \_\_\_\_\_ N/A \_\_\_\_\_
4. Admission (Graduate / Undergraduate) \_\_\_\_\_ N/A \_\_\_\_\_
5. Convocation \_\_\_\_\_ N/A \_\_\_\_\_

h) OTHER UNIVERSITY SERVICES

Please indicate the resource implications for the proposal in terms of requirement for

1. Financial Services \_\_\_\_\_ N/A \_\_\_\_\_
2. Human Resources \_\_\_\_\_ N/A \_\_\_\_\_
3. Advancement \_\_\_\_\_ N/A \_\_\_\_\_
4. Student Services \_\_\_\_\_ N/A \_\_\_\_\_
5. Residences \_\_\_\_\_ N/A \_\_\_\_\_
6. Other \_\_\_\_\_ N/A \_\_\_\_\_

**2. NEW EXPENDITURES**

What **new** funds will be needed for each of the following? One-time \$ are monies that will only be required once for startup. Base \$ are funds that will continue to be needed year after year. Please attach some backup to show how the numbers were calculated.

e.g. Staff - Base \$60,000 (1.5 FTE @ \$40,000))

	ONE TIME \$	BASE BUDGET \$
FACULTY		
STAFF		
TEACHING ASSISTANTS		\$2,000
STUDENT ASSISTANCE (Grad)		
OTHER NON-SALARY		
<b>TOTAL</b>	N/A	\$2,000

**3. FUNDING SOURCES**

Please show the source of the **additional and/or re-allocated funds** needed for the proposal. What amount will be re-allocated from within the department's budget, from within the faculty's budget, from within the University's budget and how much will come from tuition or other sources. One-time \$ are monies that will only be required once for startup. Base \$ are funds that will continue to be needed year after year. The total costs in section 2 (Cost Breakdown) must match the total costs in section 3 (funding sources)

	ONE TIME \$	BASE BUDGET \$
DEPARTMENT BUDGET		
FACULTY BUDGET		\$2,000
UNIVERSITY BUDGET		
TUITION REVENUE		
OTHER SOURCES		
<b>TOTAL</b>		\$2,000

If other sources are used, please list the sources and indicate if the funds have been applied for and if they have been secured.

\_\_\_\_\_ The \$2,000 TA budget allocation will be made through CRI/CBG in year 1,  
 \_\_\_\_\_ and through the Life Sciences office in Years 2 & 3. Past that,  
 \_\_\_\_\_ the funding will have to be found during anticipated ongoing re-structuring  
 \_\_\_\_\_ of the LISC program. \_\_\_\_\_

all

**QUEEN'S UNIVERSITY AT KINGSTON**

***Life Sciences Office***  
***Botterell Hall, Room 111***

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**To:** Dr. John Pierce, Associate Dean (Studies), Arts and Science

**From:** Ken Rose, Associate Dean, Life Sciences and Biochemistry

**Date:** November 13, 2008


**Re:** Financial Support for Cancer Stream

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The BCHM/LISC Curriculum Committee at the November 12, 2008 meeting reviewed and approved the Cancer Research Stream proposal. In addition, the committee also approved the proposed CANC 497\* and CANC 499 courses.

The CBG will fund the first year of the CANC 497\*/499 Teaching Assistant position. The Life Science office has agreed to financially support these courses for a minimum of three years.

Sincerely,



P. Ken Rose  
Associate Dean, Life Sciences and Biochemistry  
(613-533-6527)





## **Program Approval Submission – Life Sciences-Drug Development and Human Toxicology Research Stream**

### **Part B: Library Comments on Resource Implications and Physical Facilities**

The Bracken Health Sciences Library (BHSL), housed on two levels in Botterell Hall at Queen's University, supports the education and research endeavors of the faculty, undergraduate and graduate students in the Faculty of Health Sciences, including the Schools of Medicine, Nursing and Rehabilitation Therapy, and the Life Sciences programs. Eight professional librarians (who are members of the Queen's University Faculty Association) and eleven library technicians, as well as part-time casual employees, staff the BHSL.

Queen's University has always had a strong commitment to the excellence of library collections. There is a constant review of the collection and of periodicals, and careful attention is paid to the needs of students and faculty when orders are placed. It is the library's avowed policy to continue the review of the acquisition program to maintain a sound working library for teaching, research and clinical practice.

Due to the interdisciplinary nature of the fields of health and life sciences and the research associated with them, it is virtually impossible as well as unnecessary to divide the BHSL acquisition funds by department. The disciplines served by the BHSL require that information to be current and as a result 90% of the acquisitions budget is allocated to journals and electronic resources.

In collection practices there is a growing emphasis on electronic resources, both e-books (over 1000 titles) and e-journals (6000 in the health and life sciences), as they provide currency of content, and point-of need 24/7 access from any computer with Internet access. Remote access to electronic resources is available through the Queen's Proxy, allowing students, faculty members, and preceptors to access a rich array of resources from home, office or clinic.

The Library provides access to the premier health and life sciences indexing and abstracting databases that are available on a common OVID interface. Bracken Health Sciences librarians have developed curriculum-integrated information literacy programmes to ensure that students and faculty learn how to use these resources efficiently and effectively. Programmes for upper-level students also include instruction on the use of bibliographic management software (e.g., Reference Manager, RefWorks).

Bracken Health Sciences Library has also established a Health Informatics Librarian position. This librarian works closely with faculty and IT Services at Queen's to investigate, develop and foster the integration of library and information technology into the curriculum and research streams at both the individual faculty member, and larger departmental levels.

also allow us to explore in a collegial environment, the option and opportunities for integrating these resources and services into teaching, learning and research.

The total area of 31,500 square feet includes seating capacity for 400-500 library users. In 2005, the BHSL's Main Level was completely renovated to create a state-of-the-art interactive learning facility. Circulating laptops and wireless Internet allows students to choose their preferred seating areas, many of which are designed to encourage collaborative activities. Six group study rooms each hold twelve persons, either at tables or at tablet armchairs on wheels. Students may reserve the group study rooms using a self-serve online room booking system.

Students have access to 86 workstations at BHSL. These include 42 fixed personal computers and laptops, as well as 14 circulating laptops, with Windows XP and full Microsoft Office production software. An additional 12 laptops are available for group learning purposes. Twenty-five thin client express workstations offer web browsing and e-mail as well as file editing and printing. A state-of-the art electronic classroom, the e-lab, which can be booked by faculty, offers a comfortable learning environment with wall-hung plasma screens, a document camera, SmartBoard technology, a sound system and movable furniture. Other amenities at BHSL include printers, copiers, and a self-serve scanning station.

The BHSL Main Level also offers informal study areas, such as computer pods, café style benches and tables, and groupings of leather chairs. On the Lower Level, where the emphasis is on quiet independent study, there is a sunny silent reading lounge and dozens of study carrels.

**Jo-Anne Brady**

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**From:** Jo-Anne Brady [jo-anne.brady@queensu.ca]  
**Sent:** Tuesday, March 03, 2009 12:28 PM  
**To:** 'Sue Blake'  
**Subject:** New LISC Program Streams: CANC and DDHT

Sue

I have reviewed the program submissions and offer the following comments:

- > we do not anticipate rooming problems for either stream; a process will have to be developed for the DDHT stream for ad hoc booking of a videoconferencing facility as required
- > we anticipate a scheduling challenge for MBIO 218\* (a) in general if plans proceed to collapse two sections into a single section and (b) in particular for DDHT where the program outline includes the course in the 3<sup>rd</sup> year, rather than the 2<sup>nd</sup> year to be consistent with all other LISC programs
- > there is some impact on this office with respect to registration – the streams will be set up consistently with the previously established streams (NSCI and CRSS) and students will register in these streams as their 2<sup>nd</sup> concentration which should permit access to all on-line registration and graduation services; testing will be conducted to determine the impact on current on-line processes (e.g., QCARD, A2G)

I have signed the program submission forms and will ensure they are sent to your attention today along with a copy of this e-mail.

Jo-Anne

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