

Queen's University
**Executive Summary of the Review of the Academic Programs in the Collaborative Program
in Cancer Research (CPCR) and the Department of Pathology and Molecular Medicine**

In accordance with Queen's University Quality Assurance Processes (QUQAP), the academic programs in the Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine submitted a self-study on October 1, 2014 to the Faculty of Health Sciences, the School of Graduate Studies and the Office of the Provost and Vice-Principal (Academic) to initiate the cyclical program review of its graduate programs. The approved self-study presented program descriptions, learning outcomes, library report and analyses of data provided by the Office of Institutional Research and Planning and the School of Graduate Studies. Appendices to the self-study contained CVs for each full-time member in the Collaborative Program in Cancer Research (CPCR) and the Department of Pathology and Molecular Medicine Program.

Three arm's-length reviewers (Dr. Jane McGlade, Professor and Senior Scientist and Associate Chief of Research, University of Toronto/Hospital for Sick Children; Dr. Albert Berghuis, Professor and Interim Chair, McGill University; and, Dr. Christopher Moyes, Professor and Head, Department of Biology, Queen's University) examined the materials and conducted a site visit on November 3-4, 2014. The site visit included interviews with the vice-provost (teaching and learning), vice-provost and dean and associate dean graduate studies, vice-provost and dean student affairs, dean, executive vice-dean and associate deans of health sciences and meetings with post-doctoral fellows, residents, students, librarian, cognate heads, staff and faculty.

In their report (November 17, 2014), the review team provided feedback that describes how the Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine's academic programs meet the QUQAP evaluation criteria and are consistent with the university's mission and academic priorities. The review team noted the strength of the faculty complement, many of whom are world-class researchers, having received international recognition for their work in the form of prizes and distinctions. The review team also had high praise for the quality of the students and the structure of the programs which link the basic sciences and the clinical approaches in a way that facilitates knowledge translation.

The review team did report on a number of challenges including: the need to enhance interdisciplinarity and partnerships with oncology, DBMS, epidemiology and other cognate units; and, the need to actively seek other funding partners within government, charities and/or donors in order to mitigate recent loss in funding sources.

Based on all of the above documentation, a *Final Assessment Report* and an *Implementation Plan* were prepared by the vice-provost (teaching and learning) and approved by the provost (March 10, 2015).

The academic programs in the Collaborative Program in Cancer Research and Pathology and Molecular Medicine have been approved to continue and are scheduled for their next review in eight years (2021-2022).

Prepared by the vice-provost (teaching and learning)
March 6, 2015

Final Assessment Report & Implementation Plan for the Cyclical Program Review of the Academic Programs in the Collaborative Program in Cancer Research (CPCR) and the Department of Pathology and Molecular Medicine

In accordance with Queen's University Quality Assurance Processes (QUQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the graduate programs delivered by the Collaborative Program in Cancer Research (CPCR) and the Department of Pathology and Molecular Medicine. This report identifies the significant strengths of the programs, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an implementation plan that identifies who will be responsible for approving the recommendations set out in the final assessment report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations; who will be responsible for acting on those recommendations; and, timelines for acting on and monitoring the implementation of those recommendations.

Summary of the Cyclical Program Review of the Academic Programs in the Collaborative Program in Cancer Research (CPCR) and the Department of Pathology and Molecular Medicine

The Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine submitted a self-study to the Faculty of Health Sciences, the School of Graduate Studies and the Office of the Provost and Vice-Principal (Academic) on October 1, 2014. The self-study presented the program descriptions and learning outcomes, an analytical assessment of the academic programs, and program data including the data collected by the Office of Institutional Research and Planning and the School of Graduate Studies. Appended to the self-study were a number of documents including CVs for each member of the Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine and the library report.

Two arm's-length external reviewers (Dr. Jane McGlade, Professor and Senior Scientist and Associate Chief of Research, University of Toronto/Hospital for Sick Children and Dr. Albert Berghuis, Professor and Interim Chair, McGill University) and one arm's-length internal reviewer (Dr. Christopher Moyes, Professor and Head, Department of Biology, Queen's University) were selected by the vice-provost (teaching and learning) in consultation with the deans of health sciences and graduate studies, from nominations submitted by the

Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine. The review team evaluated the self-study documentation and then conducted a site visit to Queen's on November 3-4, 2014. The site visit included interviews with the vice-provost (teaching and learning), vice-provost and dean and associate dean graduate studies, vice-provost and dean student affairs, dean, executive vice-dean and associate deans of health sciences and meetings with post-doctoral fellows, residents, students, librarian, cognate heads, staff and faculty.

In their report (November 17, 2014), the review team provided feedback that describes how the Collaborative Program in Cancer Research and the Department of Pathology and Molecular Medicine programs meet the QUQAP evaluation criteria and are consistent with the university's mission and academic priorities. The review team noted the strength of the faculty complement, many of whom are world-class researchers, having received international recognition for their work in the form of prizes and distinctions. The review team also had high praise for the quality of the students and the structure of the programs which link the basic sciences and the clinical approaches in a way that facilitates knowledge translation.

The review team did report on a number of challenges, including: the need to enhance interdisciplinarity and partnerships with oncology, DBMS, epidemiology and other cognate units; and, the need to actively seek other funding partners within government, charitable foundations and/or donors in order to mitigate recent loss in funding sources.

The head of the Department of Pathology and Molecular Medicine, after consultation with faculty and staff in the department and the Collaborate Program in Cancer Research, submitted a response to the review team report (December 1, 2014). The dean of graduate studies (December 17, 2014), and the executive vice-dean and associate dean of health sciences (December 18, 2014) also submitted their responses to the provost's office. Specific recommendations were discussed, and clarifications and corrections presented.

Subsequent to receipt of the review team report and the internal responses from the department, the dean of graduate studies, and the executive vice-dean and associate dean of health sciences, the senate cyclical program review committee (SCPRC) dedicated its meeting of January 13, 2015 to this particular discussion.

The SCPRC would like to recognize the following strengths:

- Excellent students who demonstrate important metrics of success in terms of research advancement (including publications) and times to completion;
- Excellent faculty who are highly committed to delivering a high-quality graduate training program and mentoring their students;
- Interdisciplinary opportunities and structures that link basic science and clinical approaches to facilitate knowledge translation.

The SCPRC would like to identify the following opportunities for enhancement. The department is encouraged to explore:

- Opportunities for more interactions involving clinical colleagues in oncology, epidemiology, cardiovascular and hemostasis researchers, etc.;
- Opportunities to find partners within the university, government, charitable foundations, and philanthropic donors to mitigate the effect of the current funding environment and to promote interdisciplinarity;
- The development of the Master of Clinical Laboratory Science program;
- Opportunities to enrich faculty expertise in bioinformatics methodologies.

Summary of the Reviewer's Recommendations with the Department's and Deans' Responses

Interdisciplinarity

The review team remarked that interdisciplinarity was emphasized with respect to the cancer disciplines, but that other sub-disciplines in the department were not benefitting to the full extent (e.g. epidemiology, cardiovascular disease, and hematology). They commented that there appear to be barriers that prevent other units from integrating with the department and that there was room for improvement in this area.

The department agreed with this recommendation and noted that they would explore additional opportunities to increase cooperation between disciplines including cardiovascular and hemostasis researchers as well as epidemiologist and oncologists in other departments. The department's response went on to say that the Oncology department does not have a formal graduate program but that they would investigate additional opportunities for interactions involving clinical colleagues through promoting collaborative translational research projects.

Graduate Student Support

The review team noted that the units face multiple challenges ahead in terms of graduate funding due to the changing Canadian research funding landscape. The review team suggested: redesigning the units as senior faculty resign and retire; increase interdisciplinary research; and, enhanced facilitated communication between basic scientists and clinicians.

The units responded that they were actively pursuing strategies to mitigate the impact of the emerging bleak funding landscape. The Department of Pathology and Molecular Medicine is actively promoting faculty renewal and has had great success through recruitment of junior faculty and clinician scientist. The response went on to say that the ability to recruit clinician scientists has increased and strengthened the interdisciplinary research and training opportunities for graduate students and provides increased opportunities for collaborative research between clinicians and basic scientists.

The executive vice-dean and associate dean of health sciences responded that in order to mitigate the decrease in graduate student funding, the Faculty will continue to provide additional research assistant funding to investigators that can be used for graduate student support.

The vice-provost and dean of the school of graduate studies responded that the SGS would support recruitment efforts and students financially.

Implementation Plan:

Recommendation	Proposed Follow-up	Responsibility for Leading Follow-up	Timeline for Addressing Recommendation
1. To improve the student learning experience, the Department of Pathology and Molecular Medicine and the Collaborative Program in Cancer Research should engage the Centre for Teaching and Learning to assist with integration of degree level expectations and learning outcomes into program development across all programs.	A curriculum mapping of all courses to DLEs, LOs and other indicators of achievement	Head, Department of Pathology and Molecular Medicine and the Director of the Collaborative Graduate Program in Cancer Research	Dean of health sciences' annual report to the provost 2016
2. As they consider new additions to programs, the Department of Pathology and Molecular Medicine and the Collaborative Program in Cancer Research should explore more fully interdisciplinary and institutional	Initiate meeting with relevant Associate Dean (SGS) and Graduate Program Committee (GPC)	Head, Department of Pathology and Molecular Medicine, the Director of the Collaborative Graduate Program in Cancer Research and relevant associate dean in SGS	Dean of health sciences' annual report to the provost 2016

partnerships at Queen's and beyond.			
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The dean of health sciences and the vice-provost and dean, graduate studies, in consultation with the director of the Collaborative Program in Cancer Research and the head of the Department of Pathology and Molecular Medicine shall be responsible for monitoring the implementation plan. The details of progress made will be presented in the deans' annual reports and filed in the Office of the Provost and Vice-Principal (Academic). Monitoring reports will be posted on the university web site.

Final Assessment Report & Implementation Plan

27 March 2015

Approval Date

Vice-Provost (Teaching and Learning)


Signature

Dean, Faculty of Health Sciences


Signature

Vice-Provost and Dean, School of Graduate Studies


Signature

Final status of academic programs in the Department of Pathology and Molecular Medicine Program and Collaborative Program in Cancer Research (CPCR)

Approved to Continue

Date of next program review

2021/2022 Academic year

