

**REPORT OF THE ACADEMIC PLANNING COMMITTEE
TO THE REGULAR February 2013 SENATE**

FOR INFORMATION

Recommendations and Commendations of ACAPLAN following the Graduate Program Review: Ph.D. in Biomolecular Sciences Program Review

The Biomolecular Sciences Ph.D. Program is an interdisciplinary program offered by faculty from several departments at Laurentian University, the Sudbury Regional Cancer Center and the Northern Ontario School of Medicine (NOSM). The program self study was completed in Dec. 2011. The review committee visited Sudbury on May 2 and 3, 2012 where they held meetings with faculty from the Departments of Chemistry and Biochemistry, Biology, Human Kinetics, and Physics; with researchers at Hôpital Régional de Sudbury Regional Hospital (HRSRH)¹; and with faculty from the NOSM. They visited facilities at Laurentian University (Science labs, Animal Care Facility), HRSRH (Cancer Research Labs) and the NOSM Research Labs. Dr. David Hood, Professor and CRC Chair in Cell Physiology at York University chaired the review team. Dr. Grant Pierce, Executive Director of Research at St. Boniface Hospital, Winnipeg served as the second external consultant.

The review committee met with many, but not all of the faculty responsible for teaching and supervision of students in the BMS program. The committee expressed regret that a meeting with Dean Appanna was not possible. The report of the review committee was submitted June 14, 2012, and the program provided a response to this review by Aug. 15, 2012.

The review committee pointed out that the program is one of the largest of its kind in Northern Ontario. It is unique in “its true interdisciplinary nature, based upon its partnerships with multiple institutions and the opportunity for an integrative education across a range of sub-disciplines.” They also noted the dedication of faculty, the collaborative environment and the tangible successes of the program graduates.

In preparing its commendation and recommendations, ACAPLAN has changed past practice and, per the new IQAP Policy, has reformatted its comments so that they are clearly targeted to the group that can actually implement any recommendation.² While ACAPLAN can only expect a report from the program in 18 months on how it dealt with the recommendations directed to it,

¹ Now Heath Sciences North/Horizon Santé-Nord

² From the IQAP Policy Document: “This report normally includes both commendations and recommendations. It identifies significant strengths of the program, it identifies opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that are selected for implementation. The report sets out who will be responsible for implementing the recommendations. ACAPLAN’s report is transmitted to the program, the Dean and those responsible for implementing the changes.”

ACAPLAN hopes that any other group referenced in this assessment will also report within the same time-frame. After review, ACAPLAN will table the reports it has received at Senate.

The Department

Student Issues

1. Commendations

- a. Graduating students have an impressive record of peer-reviewed publications.
- b. Graduating students have been well placed in post-doctoral fellowships and employment in the field.
- c. Average time to completion is 4.3 years, and this considered very good.
- d. Students have received competitive scholarships.

2. Recommendations

- a. Enhance communication between faculty members and students, particularly those housed in different centres (LU, NOSM, HSN). Aim to change the situation in which students “are not aware of what they are potentially missing, and only when told what is offered in other graduate programs do they agree that taking such courses would be very interesting and helpful in their development.”
- b. Seek innovative ways to increase the number of funded students from 2-3 per year to 6-7 per year.
- c. Increase the visibility of the program externally through advertisement via the website and posters and pamphlets.

Program Issues

1. Commendations

- a. The program is consistent with the institutional mission and academic plan.
- b. The program is truly interdisciplinary.
- c. The program benefits by the “credible, well-funded research programs” of faculty.

2. Recommendations

- a. Increase the choice of elective courses for students. Consider additional courses in cardiovascular physiology, metabolism, pathophysiology, immunology and stem cell physiology/biochemistry.
- b. Work to ensure that Level 5 courses offered by other departments (Biology, Chemistry and Biochemistry, and Physics) are cycled regularly to allow BMS students access to a variety these courses.
- c. Consider reorganizing the required courses, including the possibility of amalgamating the two required half courses into one required half course. Expand the scope of the required courses beyond Cell Regulation (CR) and Structure and Function (SF) to include other topics in the discipline such as Cardiovascular or Metabolic Physiology.
- d. Consider adding a “Selected Readings Course” to the curriculum.
- e. Re-energize the seminar course (BMOL6005), to increase its appeal and the level of participation. The seminar course could function as an excellent opportunity for collaboration between different research groups that comprise this interdisciplinary program. Consider the possibility of rotating location of the

- seminar course, as well as that of offering refreshments. Address the issue of parking for those who must travel to attend the seminar.
- f. Re-examine the structure and purpose of the comprehensive examination and consider the benefits of an oral component.
 - g. Seek strategies for formal interaction with faculty at other Northern Ontario institutions (Lakehead, Nipissing).
 - h. Revisit admissions criteria so that all incoming students have satisfactory background preparation.
 - i. Build upon the existing undergraduate Biomedical option in Biology and the Biochemistry Program in the Department of Chemistry and Biochemistry and existing M.Sc. programs in Biology and Chemical Studies to better prepare students for the Ph.D. program in Biomolecular Sciences. Consider redefining streams in these existing programs.

Faculty and Staff Issues

1. Commendations

- a. Many of the core faculty are dedicated to the program and highly motivated.

2. Recommendations

- a. Develop a strategy to improve lines of communication between the Director of the BMS Program, and both the standing committees and the program members.
- b. Committees should be identified, their terms of reference should be known, terms of service should be lengthened from one year to two to three years, and the business of committees should be communicated to the Director, who should pass on reports to program members.
- c. Establish a nominating committee to solicit members to join committees and to ensure balance in membership.
- d. Committee work should be considered seriously and reports of committees should be discussed openly and transparently.
- e. The Steering Committee should re-evaluate Core Faculty membership criteria every three years beginning in early 2013, taking into account the following aspects of participation in the program: student supervision, participation on the Comprehensive exam and Dissertation exam committees, participation in the BMS program management committees, and teaching load within program.

Research Issues

1. Commendations

- a. The interdisciplinary nature of the program is considered innovative and unique.
- b. Aspects of the management of the Animal Care Facility (ACF) pertaining to submission of protocols were considered progressive.
- c. The animal care facility is considered useful for faculty and students, well managed and with reasonable per diem rates.

2. Recommendations

- a. Greater flexibility in moving animals out of the ACF for terminal and acute experiments should be allowed.

- b. Seek increased funding for students (see below) to permit some faculty to expand their research programs.
- c. With the support of the research office, seek an institutional training grant from NSERC or CIHR.

The Library

1. Commendations

- a. Faculty members do not consider the library resources to be deficient.