

Academic Program Review

Department of Biochemistry Response to APR Panel Report Recommendations

Recommendation 1.0: The Faculty of Science should initiate a search process, according to the University's Policies and Procedures for the Appointment of Administrators, such that an external Head with a strong research profile is in place when the term of the current Head ends.

The Department agrees strongly with this recommendation.

Action: The Department urges the Dean of Science to initiate the search process for an external Head immediately in order to fill the position in a timely manner.

Recommendation 2.1: The Department should develop a five year plan of careful new hiring within a vision defined by strategic advantage for excellence in research and teaching of biochemistry and nutrition/metabolism, around a constrained number of research themes as noted above.

The Department agrees that planning for the future growth and development of the department is essential to ensure that the department continues to move forward. We have already initiated a process through the development of a departmental vision statement that highlighted specific areas of scholarship that should be developed in the department. We have also identified three faculty positions that are essential to meet our needs within this vision statement. Searches for two of these are underway.

Action: The Department will continue efforts to plan for the future by striking an ad hoc committee composed of faculty members spanning the research areas in the department to review our hiring and to plan our road ahead for the next five years. This planning exercise might best be conducted in consultation with the new Head when he/she is recruited.

Recommendation 3.1: The Department should develop and support a plan for implementing the recommendations of the Undergraduate Program Committee for the ongoing upgrading of the curriculum, in a timely fashion.

The Department is keenly aware that its programs need to be updated to make them more relevant, cohesive, and consistent with biochemistry departments at other Institutions across the country. The Department also appreciates the considerable amount of time and effort over the past few years that the undergraduate studies committee has devoted to the study and development of several models. While it has proven difficult to unanimously identify one preferred option within the department, the Review committee's support for two of the options submitted to them by the committee will help us to focus our efforts anew.

Action: In the coming year, the undergraduate studies committee will present their recommendations to the department for implementation beginning in 2011-2012.

Recommendation 3.2: The Department should develop a plan for the dissemination of career information to students considering applying for and currently in their academic programs.

It is very clear to the Department that this is an area of considerable concern to our students and we agree with this recommendation.

Action: Representatives from the undergraduate and graduate studies committees will form a subcommittee to discuss possible ways to implement this recommendation within the department and to identify the most appropriate individuals to disseminate career information.

It must be clearly understood, though, that generating, maintaining, and upgrading such an information service for our students is not a trivial task both in terms of time and effort. We do not have an individual on staff at present for these duties, nor could we do this with our present complement of staff. The duties could, however, form part of the mandate of the Manager of Academic Programs whose appointment is crucial for ongoing success with implementation of this recommendation. In view of the importance of Academic Program Manager position to this and other aspects of delivering timely advice and information to our undergraduates, the Department requests the Dean to commit to filling it.

In addition, the Department will facilitate contact between the Science Career Development Coordinator in the Centre for Career Development and the Biochemistry Society to arrange Career information meetings with students in our programs.

Recommendation 3.3: The Department should develop a plan for the integration of communication skills (written and oral) merged into undergraduate course content, throughout all years of the program.

The department agrees that our students both want and should receive more education, training and experience in developing good communication skills within our programmes. However, the

department believes that this is very difficult to do effectively due to our generally large class sizes (at all levels).

Action: The undergraduate studies committee will consider how to introduce more communication-based training into all levels of our programs as part of their ongoing review and they will bring proposals to the department. In addition, the undergraduate studies committee will develop a set of suitable guidelines for written papers and for oral presentations in biochemistry courses at different academic levels with a view to ensuring uniformity of standards and consistency in expectations.

Recommendation 3.4: The Department should develop a plan for the ongoing improvement of quality of laboratory experiences throughout the programs.

The Department agrees that a good quality laboratory experience is an essential component of a biochemical education and that we should seek to provide one to our students. This very goal is the motivation for a recommendation from the undergraduate studies committee that we introduce two dedicated laboratory courses in place of the laboratory sections associated with existing courses. The committee believes that this is the best way to improve the laboratory experience of our students for two reasons. First, this is the only practical way that our students can obtain a more complete laboratory experience including not only more theory and in-depth experiments, but also the practical skills of preparing solutions and familiarization with basic instruments (e.g. pH meters) while at the same time receiving a commensurate academic credit for their efforts. Second, the committee's research has shown that this is a model adopted by biochemistry and nutrition programs across the country and we should offer a similar or better experience.

The Department notes that research carried out by Honours students in individual research laboratories constitutes a significant part of their laboratory experience. This experience is currently provided *gratis* by faculty members from their research operating funds.

Action: The undergraduate studies committee will draft a detailed proposal on laboratory education in our programs for consideration by the department for implementation beginning in 2011-2012.

The Dean will ask the Vice-Presidents to return a reasonable proportion of tuition funds received for honours research courses to the faculty supervisors.

Recommendation 3.5: The Department should develop the number and diversity of courses within senior undergraduate content areas of nutrition and biochemistry, with specific attention to making strategic use of new faculty appointments in the Department of Biochemistry, in the Faculty of Medicine and by cooperation with other institutions

The Department agrees with the first part of this recommendation.

As part of the ongoing review of our undergraduate curriculum, informational gaps in our offerings have been identified by the undergraduate studies committee and the introduction of new courses to fill those gaps has been proposed. A new course in Nutrigenetics & Nutrigenomics was taught as a special topics course in 2008-09 and a proposal to regularize the offering will be presented to the department in Fall 2009. While the Department does not have authority to assign teaching to faculty from other units, we would welcome proposals to share new courses in this way.

Action: The Undergraduate Studies Committee will seek proposals for new course offerings from the faculty and present them to the department for consideration. Once they have their research operations underway, our new hires will be encouraged to introduce upper level courses in an area of their expertise or interest.

In addition, while this recommendation addresses primarily senior level courses, the department acknowledges the importance of second year courses as the foundation of more advanced and commits itself to maintaining high quality instruction at all levels.

Recommendation 3.6: The Faculty of Science should institute a review of Joint Honors programs.

The Department agrees that the joint honours programs should be reviewed and we agree that such review is best undertaken at the level of the Faculty so that workable criteria for Joint Honours programs can be established and implemented uniformly across the Faculty.

Action: The Head will write to the Associate Dean asking for a review of the regulations governing joint honours programs.

Recommendation 4.1: Under the direction of the Graduate Advisory Committee, the Department should harmonize its graduate policies and procedures under a single graduate program in Biochemistry, while considering the creation of a specialization stream in Nutritional Sciences, to be so designated on the diploma. As recommended in earlier reviews, the Food Science program should be discontinued; a specialization stream in Biochemistry/Food Science could be considered until such time as students are no longer accepted into this program.

There are differing views within the department on this Recommendation and we believe that it needs to be discussed further within the department later in the semester.

Action: The Department will discuss the elements of this recommendation (harmonization of graduate policies and procedures, and the introduction of specialization streams) in conjunction with Recommendations 4.3 and 4.4 during the 2010-2011 Academic year.

Recommendation 4.2: The Department should work towards decreasing the time to completion of the M.Sc. degree to two years as the norm. Instituting more frequent (bi-annual) supervisory committee meetings would help accomplish this. At the same time, the Faculty of Medicine should be encouraged to alter its admission policies to avoid acceptance of graduate students that have only finished one year in the M.Sc. program, so that students can complete their degree.

The department agrees with this recommendation.

Action: The Department office will keep track of supervisory committee meetings and will adopt a requirement that such meetings to be held twice per year, including the first meeting within the first two months from the start of a program. In addition, faculty in the Department commit themselves to holding these supervisory committee meetings.

Recommendation 4.3: The Department should consider options to increase the selection and rigour of its graduate course offerings, for example through shared courses with other departments, more focused shorter courses, or recognition of short courses/workshops provided at other universities.

Recommendation 4.4: The Department should initiate a mandatory “skills-based course” for all first year graduate students that would include instruction in scientific writing, poster and seminar presentation. This should include participation by multiple faculty members and be provided with a small budget, perhaps to invite an external speaker and/or culminate in an annual symposium with student presentations.

The department agrees to consider these two recommendations.

Action: The Graduate Studies Committee will continue to develop a suitable new rota of courses to be offered within the Department’s programs and will present their recommendations to the Department in 2009-2010. They will review existing courses to ensure that they include components that involve oral presentation, scientific writing and literature review as an alternative mechanism to the introduction of a skills based course. They will consider whether upper level undergraduate courses could be considered for graduate credit and present a policy for course content and assessment under those circumstances. The Graduate Studies Committee will also examine the feasibility of initiating a “skills-based course” for graduate students in our programs.

Recommendation 4.5: The Department should attempt to re-invigorate its Departmental seminar series through enhanced faculty and student participation. In addition, graduate students should be encouraged to initiate new journal club(s) in emerging thematic areas, or in areas of common interest with researchers in other units such as Biology, Chemistry and the Faculty of Medicine.

The department agrees with this recommendation

Action: The Department will continue the seminar series and include external speakers each year. Graduate students are already required to attend seminars but the Graduate Studies Committee will develop an expanded involvement of the students in the seminar series to generate more active involvement by the department as a whole. The Faculty commit to increasing their participation in the departmental seminar programs including the presentation of new advances in the literature and retrospective reviews of important discoveries.

Recommendation 4.6: To improve interactions and communications among graduate students, the Department is encouraged to identify and renovate an adequate room for activities such as graduate students meetings, social events and journal clubs.

The Department agrees that an adequately-sized common room for our graduate students is a priority and endorses this recommendation. The Department also recognizes that there are no suitable rooms available within our existing space allocation.

Action: The Head will seek suitable space for an adequately-sized common room for our graduate students from the Dean.

Recommendation 4.7: The Department is urged to form an ad-hoc website committee with faculty and student representation, with the goal of improving and updating factual content, providing current events information, enhancing visual appeal, and supporting recruitment efforts.

The Department agrees that a website that provides accurate factual content and up-to-date current event information, that has visual appeal, and that supports student recruitment efforts is desirable. The Department believes that maintenance of website content would be best addressed by a website coordinator (*cf* Recommendation 5.1) who would be proactive in ensuring the currency of our website information.

The Department has little control over the visual appeal of the website which is a function of the Sitebuilder software which is used to build and maintain the website. Sitebuilder allows the department to delegate the building and maintenance of different web pages to different individuals. For example, at present, each faculty member has the responsibility as well as the

ability to maintain their own research web pages. At the same time, Sitebuilder permits the Department to oversee the site and to maintain site security. The benefits of using Sitebuilder outweigh any deficiencies in visual appeal.

Action: The Head will appoint a website coordinator (*cf* recommendation 5.1). The Department will examine our website to identify content that should be added, edited, updated and/or removed. We will also examine the organization of the website to see if improvements in the layout can be made to improve the ease of finding important information. The faculty will also be urged to update their research web pages.

Recommendation 5.1: The Program Manager position should include responsibility for updating and maintaining an informative and helpful Departmental website.

We agree with this recommendation in principle. Currently, the site is maintained collectively by Craig Skinner, Anne Sinnott and Dr. Mulligan but it is not a primary concern of any of them so updates tend to be done in bulk instead of as they occur; we accumulate a list of updates or changes and then make some time to implement them. An individual whose primary responsibilities include maintaining and updating the departmental web site is a good idea. It would provide for timely updating and maintaining of the web site.

However, the Program Manager position is intended to deal with primarily academic matters. While it would be appropriate for the Program Manager to play an active role in creating and maintaining undergraduate-specific content, it would not necessarily be appropriate to assign responsibility for the entire website to this position. On the other hand, appointment of a Program Manager would enable website duties to be undertaken by other staff members.

Action: The Head will review the duties of staff whose jobs most closely interact with the web page, to identify who will be appointed as web page coordinator. In view of the importance of Academic Program Manager position (*cf* Recommendation 3.2), the Head will ask the Dean to commit to filling it.

Recommendation 5.2: The Life Sciences Store should be directly administered from the Dean of Science's office and consideration should be given to streamlining procedures or to recruiting an additional staff member.

The Department, in consultation with the Life Sciences Stores Staff, does not agree that the Life Science Stores should be administered directly from the Dean of Science Office.

In the five years since the combined Life Science Stores was established, we believe that they have functioned smoothly and have served all three departments equally. By having the stores located within a user department, they are administered by users who understand their issues;

they receive IT and administrative support from the user departments at a level that the Dean's office would not likely have the staff to support; and they are better placed to communicate the purchasing and safety oversight required of biochemistry purchases. We do not believe that there is any benefit in having Life Sciences Stores administered directly from the Dean's Office.

The gradual erosion of staff complement in the Department of Biochemistry has placed additional administrative-related duties on faculty. Adding purchasing duties will only increase their workload which is already busy with research and teaching. At a time when the University has committed itself to increasing its graduate student enrolment and its level of research funding, this is counterproductive. In addition, Stores staff play an increasingly important and demanding role in managing Safety aspects of specialized purchases and transport in the three departments.

Action: The Life Science Stores should remain administered within the Biochemistry Department and an additional staff member should be recruited. The Dean's office, when called to make decisions affecting stores operations, should consult more actively with Life Science Stores staff.

Recommendation 6.1: A Space and Infrastructure Committee should be formed to optimize space allocation and to promote equipment grant applications.

The department agrees in principle with this recommendation.

A committee to promote research, in general, and equipment grant applications, in particular, would be of benefit to the department. The allocation of space, however, has implications relating to the Collective Agreement for which a committee would not have decision-making authority.

Action: The Department suggests that a Head's Advisory Committee be established to advise the Head on issues relating to research infrastructure, to recommend and direct equipment grant applications, and to give advice when needed on issues relating to space allocation.

Recommendation 6.2: Deficiencies in presently available space be addressed by the Faculty of Science in a timely manner. In the design of new Biochemistry space, attention should be given to spatial consolidation of all elements of the Department.

The Department agrees with this recommendation.

Action: The Head will write to the President urging him to give top priority to securing a new building for biochemical research within the Faculty of Science, and asking that all elements of the Department be consolidated within that new space.