Response to Graduate Program Review Recommendations Department of Immunology 20 December 2004

The written review dated November 30, 2004, was distributed to faculty and students for their considerations and comments. A draft response was discussed at a meeting of the faculty, with student representation, on December 17, 2004. This written response was prepared following the meeting.

The reviewers identified seven "issues that require action." These issues and our responses are as follows:

1) An increase in the number of graduate student positions is highly desirable, given the high quality of the Program and the growth of the faculty.

We agree that an increase in the number of graduate students who enter the program is desirable, provided that the quality of entering students is maintained or enhanced. The principal factor limiting our ability to meet this goal is the pool of qualified applicants applying. This is a matter that faculty and students have discussed on a number of occasions, and since the review we have taken the following steps to try and augment the applicant pool: a) We have sent information about our program to biology department heads at small colleges and Canadian universities that we had not previously contacted; b) We obtained the names of influential and visible faculty members at the colleges and universities from which our current and past graduate students have come, and sent them information about our program along with a personal note of introduction from the relevant student; c) we added additional information about former students, including comments from some students about the program and its impact on their careers, to our web site. It is too soon to judge the impact of these measures.

Our matriculation to offer/ratio is similar to other graduate programs at the University of Washington but is not as high as we would like. In the past two years we also have modified our recruitment visit and interview process to make the visit more attractive and exciting to students.

2) Efforts need to be continued to enroll minority students.

Although the numbers of minority applicants has increased, and we have had some success in recruitment of minority students, none of the three to whom we extended offers last year matriculated. For this upcoming year, we intend to take advantage of the Office of Minority Affairs and the GO-MAP program to more effectively recruit minority students who are invited for interviews and offered positions, respectively. For the latter, we will invite the minority students to whom we extend offers to attend the University GO-MAP program in early April with the cost supported by the department. GO-MAP seeks to enhance recruitment of minority students in all health-related graduate and professional programs at an interactive weekend.

3) At least during their first year, students need to receive better feedback about their progress; a more formal evaluation/communication process may be required to address this problem.

Currently, students receive written feedback after each quarter's laboratory rotation. In addition, students are currently encouraged to meet with the graduate advisor at the beginning of the first year, and as often as needed thereafter during the first two years. In response to the review committee's recommendation, the faculty have decided to meet and collectively review at the end of the spring quarter of each year, the progress of each first year student – including their course work and laboratory rotations meet. Choice of thesis advisors will also be discussed and approved at this meeting. Following the meeting, the graduate advisor will meet with each student and provide to them a verbal and written assessment of their progress to date and recommendations for the upcoming year. The qualifying examination provides a capstone to the second year of our graduate program, and is discussed under point 5 below.

4) The quality of required conjoint courses needs to be carefully re-evaluated.

This is a general issue for all of the graduate programs in biomedical sciences. While we currently have a good range of topics and options for students in the conjoint courses, they are not designed to provide a cohesive curriculum and their focus, quality of teaching and degree of difficulty is heterogeneous. It has not yet been possible for the programs to reach a consensus on how to restructure the conjoint curriculum. There is also no consensus regarding whether this set of courses should provide some uniform foundation of knowledge, and, if so, which knowledge should be included. We will continue to engage in the process and try to counsel our students regarding which courses are likely to be most useful to them.

5) The general exam should be taken no later than the end of the second year.

We do not agree with this recommendation. Our graduate program milestones differ in one important way from many other graduate programs in biomedical sciences. Most such programs, including those at the UW, have no formal qualifying examination that students must complete to proceed to the general examination. For these programs, the general examination consists of a formal presentation and defense of the experimental plan for their thesis project, which reflects the student's thinking but invariably also reflects, often in a dominant way, the thinking of the thesis advisor. To gain some understanding of the student's own ability to define a research topic and experimental plan, these programs typically incorporate an alternative proposal into their general examination. However, it almost invariably receives only cursory attention. Our faculty decided more than ten years ago that the alternative proposal was inadequate as an educational and testing vehicle for our students. Instead, our students take a formal and rigorous qualifying examination in the final (summer) quarter of their second year. Considerable effort is devoted by the faculty in preparing the students to take this examination, and in turn substantial effort and preparation is required by students to succeed. As noted in the program review, our students now consider the qualifying

examination to be an important aspect of their training for a career in research. It is simply not feasible for students to take the general examination in the second year as well.

One student's written comment on the review committee's report summarizes this well:

"For most students in the department, the end of the second year coincides with taking the qualifying exam and students generally put a great deal of effort into preparing their proposals. While some of the other graduate programs at the UW may have students take their qualifying and general exams concurrently (e.g., MCB), it is my understanding from fellow MSTP students that there is very little emphasis placed on the qualifying or alternate proposal. Other programs which have their students take the general exam at the end of the second year do not require an alternate proposal at all (e.g., neurobiology).

My concern is that given the current level of emphasis placed on the qualifying exam, having students take both in roughly the same time frame would be an inordinate burden on the students and would result in a decrease in the quality of both."

Our students are required to form their thesis committees and begin preparations for the general examination in the fall quarter of their third year – the quarter immediately following completion of the qualifying examination – and to complete their general examination within 15 months after the qualifying examination. The faculty still believe this is the most appropriate approach for our students. In so doing, even though our students take an additional rigorous examination not taken by other biomedical science graduate programs, they complete the general examination not later than the first quarter of their fourth year – within 3 months of the deadline for completion of the general examination set, for example, by the Molecular and Cellular Biology (MCB) Program.

6) Attention should be paid to ensure that a reasonable proportion of the students do their thesis research in the laboratories of junior faculty.

Since the review, the evidence of a bias against junior faculty laboratories by our students has essentially vanished. For example, in the past two years, three students have joined the laboratory of one of our junior faculty members, and many of the first year students are also planning on rotating through this laboratory. We have also begun "pizza with the faculty sessions" in the fall quarter, where groups of 3 interested faculty, and all junior faculty, present an overview of their research program and opportunities for first year graduate students. This year only immunology graduate students were invited, but we plan to extend this to include MCB students in the future. The faculty of the department will continue to provide career mentoring to junior faculty, including advice on how to interest students in their programs.

7) Given that faculty positions may become available in the near future, the Department needs to articulate a clear vision of future directions.

The scholarly interests of the faculty are diverse, which we value. We feel that our recruitment efforts should not be restricted to one or a few areas of interest, but rather

should be focused on identifying individuals whose past record of achievement and vision for the future indicates that they can define important biological questions, pursue them by novel and effective approaches. Moreover, they must communicate effectively, and should have an infectious enthusiasm for science that will engage students and make them valued colleagues.