

Report of the Review Committee for the Department of Immunology Graduate Program (August 16, 2004)

I. Committee

Review Committee membership:

Rafi Ahmed, Emory University Vaccine Research Center

James Allison, Department of Molecular and Cell Biology, University of California, Berkeley (present address, Division of Cancer Immunology, Sloan-Kettering Institute)

Sam Miller, Department of Medicine, University of Washington

Debbie Nickerson, Department of Genome Sciences, University of Washington

Nelson Fausto, Department of Pathology (Chair of the Committee)

II. Review Process

The Committee received a set of documents from the department that included the report of the previous review of the Program dated May 6, 1996, and all documents pertinent to the previous review. For the present review, the Committee received the departmental self-study, which was updated in January 2004, complete documentation about the organization of the Department, and information on all areas relevant to the review, including data on teaching assignments, research funding, organization of the curriculum, student evaluations, and appointment and promotions criteria. The original charge to the Committee was presented by John Slattery, Associate Dean for Academic Programs, in May 2003. For various reasons the review of the Program was postponed several times, and finally took place on February 25-26, 2004. During the first day of the visit, the Committee first met in executive session to discuss special concerns and to review the schedule of interviews. The Committee made it known that students and faculty who wished to meet with the Committee to discuss specific issues would be welcome to do so. The Committee met with Dr Christopher Wilson, Chair of the Department and with the following groups: Admissions Committee, Qualifying Exam Committee, first and second year graduate students, advanced graduate students, and assistant professors. Separate meetings were held with Dr Alexander Rudensky (Graduate Coordinator), and Dr Mark Bix, Assistant Professor. During the second day, the Committee met with research faculty and acting instructors, adjunct and affiliated

faculty, and core tenured faculty. In addition, the Committee met separately with Dr Chen Dong, Assistant Professor in the Department. At the end of the review, the Committee met in executive session to outline its findings and recommendations. The executive session was followed by an exit interview, attended by Dr Christopher Wilson (Chair of the Department), Acting Provost David Thorud, Associate Dean Albert Berger (School of Medicine), Associate Dean Gail Dubrow (Graduate School) and David Canfield-Budde, Assistant to the Dean of the Graduate School.

III. Department Organization and Achievements

The Department of Immunology was established in 1986. Dr Roger Perlmutter, the first chair of the Department, was appointed in 1989 and left the University in 1997. Dr Michael Bevan served as Acting Chair from 1997 to 1999, when Dr Wilson was appointed as chair. The PhD Program in Immunology was approved by the Graduate School in 1991. The Department has 11 faculty with primary or joint appointments and 16 adjunct or affiliated faculty. Despite its young age and a relatively small complement of primary faculty, the Department and the Graduate Program have achieved national prominence. The faculty are very productive and well-funded, and function in a cohesive manner in research and teaching activities. Research conducted in the department is of the highest caliber, covering a broad spectrum from basic science to translational research. In the past year, the total extramural funding for the core faculty was approximately \$8.7 million dollars in direct costs. Two faculty, Drs Michael Bevan and Alexander Rudenski are Howard Hughes Medical Institute Investigators, and receive salary support from that prestigious institution. The Department maintains active interactions with other units of the Medical School, and provides an environment that is intellectually rich and forward looking.

The Department of Immunology is widely recognized as one of the leading departments in the country, certainly ranking in the top 5. Several of the senior faculty are recognized as the world leaders in their areas of interest. Of particular note are the high level of collegiality among the primary faculty, and the involvement of highly accomplished affiliate and adjunct faculty. There is an obvious and unanimous enthusiasm for the department among all of the faculty, regardless of the type of appointment. A critical mass has been achieved, but there is need for continued support

for this strong department in terms of additional FTEs and research infrastructure. The Chair has provided strong and fair leadership that is appreciated by the faculty. Overall, the department has a bright and promising future. The Committee was enthusiastic about the two junior faculty who joined the department recently.

IV. Graduate Program

The Graduate Program is a major strength of the Department. It is very well run, attracts excellent students, and competes effectively with other outstanding programs in the country. Seventy five students have entered the program since its inception, and 29 are in training at the present time. Thirty three students received their Ph.D. and 9 were awarded M.S. degrees. More than 90% of students who completed the program are employed in post-doctoral or more permanent positions in universities and industry. The publication record of the students is generally outstanding. There were 78 applicants for admission in the 2003/2004 academic year and 65 applications for 2004/2005. In 2003/2004 offers were made to 16 candidates with 7 acceptances (6 students enrolled and one deferred admission for one year).

Overall, it was the unanimous view of the committee that this is a highly successful graduate program. It is clear that the number of outstanding faculty mentors continues to grow, but the student pool has not increased proportionally. Given the recent and projected increase in the number of faculty, the number of graduate student positions should be increased. It was the Committee view that this problem needs to be resolved. A strong rationale for the increase in the number of students is that there are very few immunology programs of this caliber nationally.

Although the number of students applying to the Graduate Program has declined recently, the UW program has been quite successful in identifying excellent candidates. Every major aspect of the Program was considered to be of the highest quality, including students, faculty and funding resources. Thirty-four students are currently enrolled in the program and proceed through a typical program that includes laboratory rotations, suggested coursework, a qualifying exam, thesis research and a thesis defense. Interviews with the students revealed genuine satisfaction with the program. The upper-level students (those who have passed the qualifying exam) stated that previous concerns about the qualifying exam have been rectified. The students uniformly felt they were

well prepared and appropriately mentored through the qualifying process. Both less advanced and upper level students raised issues about the inconsistent quality of conjoint courses, although, importantly, both groups of students had high praise for courses sponsored by the Department. The quality and nature of conjoint courses taken by the students requires careful evaluation, to correct existing problems. One problem identified in questioning junior students, relates to the amount of feedback they receive about their progress. Some of the students felt that information about their performance was not effectively communicated to them and suggested the adoption of more formalized review of first-year students. In examining the steps needed for advancement in the Program, the members of the Committee indicated that the general exam needs to occur earlier during training. The Committee strongly recommends that the general exam occur by the end of second year. The change in the scheduling of the general exam may mitigate the problems regarding performance feedback raised by some of the students.

One area of concern, which was pointed out in the departmental self-study is the skewed distribution of graduate students, with relatively few students selecting to work with junior faculty. Part of the problem may have been the result of perceived difficulties regarding two junior faculty. However, because the faculty pool has grown proportionally more than the student body, younger faculty do not always have an opportunity to attract new students. Thus, the Committee suggestion to increase the size of the student body is considered key to generating new opportunities for all of the training faculty. During this year, there appears to be a better distribution of students among faculty of various ranks, but the situation merits continuous monitoring. As with other Graduate Programs in the School of Medicine, there is poor representation of minority students. Nevertheless, both the number of minority candidates, and of minority students offered admission into the Program have increased. This is a clear improvement from the situation described in the 1996 review of the Program, and the faculty should be commended for their efforts in this area. During the past year, all graduate programs in the School of Medicine joined efforts towards the recruitment of minority students, and prepared a brochure aimed at potential candidates from underrepresented minorities. The Committee hopes that these efforts will eventually result in increased enrollment of minority students in the Immunology Graduate Program. Attractive features of the Graduate Programs at the School of

Medicine is their closer interaction through single admission forms, and newly created opportunities for students to sample courses in other programs. These options would broaden the student's background and strengthen their training in immunology.

V. Summary and Recommendations

The Committee unanimously and enthusiastically recommends that the Immunology Graduate Program should be continued, with a subsequent review to take place in 10 years.

Since its inception in 1991, the Immunology Graduate Program has achieved a stellar reputation, and is one of the strongest in the country. Despite the relatively small ratio between core and adjunct/affiliate faculty, the members of the Department function in a cohesive mode. They are involved in high-caliber research and actively participate in teaching of undergraduate, graduate and medical students. The Chair of the department has provided excellent leadership in guiding the Department and is highly respected by faculty and students. The Department offers an intellectually stimulating environment for the training of graduate student and sets a very high expectation of student performance. The Committee was impressed by the quality and motivation of the students, and noted their general enthusiasm about the Program.

Issues that require action include the following:

- 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.
- 2- Efforts need to be continued to enroll minority students.
- 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.
- 4- The quality of required conjoint courses needs to be carefully re-evaluated.
- 5- The general exam should be taken no later than the end of the second year.
- 6- Attention should be paid to ensure that a reasonable proportion of the students do their thesis research in the laboratories of junior faculty.

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