

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195-7360

Department of Genetics
Box 357360
Dept. Phone: (206) 543-1657
byers@genetics.washington.edu

Breck Byers, Ph.D.
Professor and Chair
Phone: (206) 543-9068
FAX: (206) 543-0754

October 11, 2000

Prof. Marsha L. Landolt, Dean
The Graduate School
Box 351240

Dear Dean Landolt:

We appreciate the opportunity to comment in writing to the review of the degree programs of the Department of Genetics. Since the review was quite accurate and insightful in identifying the challenges we face, our enclosed written response is limited largely to providing an update on relevant issues and outlining efforts in progress to address these challenges. We look forward to the chance to discuss these matters with the Graduate School Council on November 2.

Sincerely,



Breck Byers, Ph.D.
Professor and Chair

**DEPARTMENTAL RESPONSE:
REPORT OF THE DEPARTMENT OF GENETICS PROGRAM REVIEW COMMITTEE.
Breck Byers, Chair of Genetics**

We find that the report of the Department of Genetics Review Committee characterizes the status of the Department and its degree programs with accuracy and insight. We strongly agree: (1) that our past record is one of extraordinary strength, (2) that maintaining such strength will require the recruitment of more young faculty, (3) that such hiring demands new and larger facilities, and (4) that we ought to hire a new chair from outside the Department in order to rebuild to the level of excellence originally developed by our founders. As stated, it is indeed the case that members of the faculty have consistently displayed scientific excellence, commitment to the needs of our students, and remarkable loyalty to the Department. Comments on specific criticisms and proposals are detailed below:

A New Chair:

A review of the current chair (conducted in parallel with this program review) identified three possible candidates who are members of the Department and who were favorably viewed by other faculty for appointment to the chair. Unfortunately, none of them appeared likely to accept an offer of the position. Accordingly, the Dean then asked me to remain in office while this need was being studied. I dispute the report's characterization of the Department as insular, but strongly agree that an outside search is highly desirable. Whether an interim chair should be appointed in the meantime (as proposed on page 2) is, of course, a decision to be made by the College.

Salaries:

The report correctly states that lagging faculty salaries have put the Department at severe risk of compromising the excellence of its faculty. In fact, the loyalty of our faculty has compounded this problem because there have been few, if any, attempts to seek alternative positions elsewhere. Shortly after this report was submitted, unrelated circumstances led to marked improvements in faculty remuneration: the promotion package for a remarkably strong faculty member came to the attention of the College and the Administration took notice of the need to retain a female faculty member who had received an unsolicited competing offer. Consequently, the Department gained additional salary resources from the Administration reserves in the latest salary adjustments, enabling us to improve pay for other mid-career faculty members whose salaries had been most severely impacted by compression. Furthermore, because two faculty salaries currently are reimbursed to us by private sources (Professor Hartwell's for his service as President of the Hutchinson Cancer Center and Professor Field's for his appointment to the Howard Hughes Institute), we have been able to redirect percentage increases from these positions to those deserving faculty whose salaries are provided by the state budget. Therefore, although our salary overall structure remains quite unfavorable relative to peer institutions, this situation has improved somewhat since the time of the review.

In addition, it should be noted that many faculty members teach considerably more than the stated 45 hours per year. Our typical 5-credit undergraduate courses usually meet 4 times per week with the professor, who may also provide 15 hours of instruction in the graduate core series as well as additional hours in specialized graduate courses.

New Faculty Hiring and Space:

It is clear that little can be done to increase the size of the faculty or improve on the limited amount of research space available to each current faculty member until Life Sciences-1 (recently renamed the Biosciences Building) is funded. Provisional plans for Life Sciences-1 have specified a major role for this building in supporting the needs of the Department. Furthermore, our greatly increased commitment to undergraduate education has, I believe, positioned us well to be assigned a significant number of new faculty slots within the expanded space in LS-1, whenever it might be built.

In the current absence of new construction, refurbishing our present space in the J-Wing must be a high priority. We have proposed to the College that we seek to borrow temporary space in the School of Medicine to house current faculty members (especially those holding joint appointments in Medicine) while a systematic remodeling of their labs is begun. The extent of remodeling would certainly be limited by the level of funding that we might identify for this purpose. We have attempted to persuade the College that a realistic search for an outside chair of appropriate scientific stature may well depend on our having mounted an effective initiative toward renewal of the current building. Some of our endowment resources could be channeled to this purpose, but it certainly would also require commitment of other funds by the University.

At present, new faculty hiring is more severely limited by space constraints than by salary considerations. Consistent with the report, hiring a competitive young scientist to the Department demands the provision of at least 1200 square feet of research space. The recent retirement of one faculty member and an upcoming reduction by another senior faculty member to 50% will result in the acquisition of sufficient space to hire a new assistant professor and that search is underway.

The Graduate Program:

It is indeed the case that impending faculty retirements have currently resulted in a narrower choice of potential thesis labs for incoming graduate students than is desirable; the opportunity to hire new faculty will redress this situation. Our funding remains strong, and we continue to receive at least 5-fold more applications than the number to whom we wish to extend offers of admission and stipend funding, so we expect that any reduction in admissions due to a transient reduction in available labs will correct itself with additional hirings.

We certainly agree that there has been an increase nationally in graduate applicants opting for programs that provide a broader choice of faculty labs for thesis research. Our continued success in the current mold relies in part on the fact that many entering students (especially those from smaller schools of excellence) prefer the cohesiveness of our program and choose to enter here in spite of offers to other prominent graduate programs. Nevertheless, we have long recognized the attractiveness to students of broad-scale admissions programs and have made numerous changes in our original procedures to welcome into our labs and courses a greater variety of students, including those in the Molecular and Cellular Biology Degree Program. As an example, we are currently changing the way we list our graduate course offerings, so that they will correspond with the emerging pattern of 5-week courses that provide 1.5 units of graded graduate credit.

In contrast to what is implied in the report, we have previously provided support from the Genetics Training Grant for graduate students entering our labs through the MCB Program and

have acted to maintain mechanisms for that practice in the future. Some MCB students have balked at entering into our training program because of the stringency of its requirements. One such requirement -- a written general examination preceding the oral qualifying examination -- has recently been abandoned for all students and is being replaced by an interactive writing project that we hope will facilitate mastery of material relevant to the proposed thesis project. Besides enhancing the attractiveness of our program to MCB students, this change was also motivated by our feeling that the former written general examination was deterring some of our current students from grappling intellectually with their thesis topics as early in their graduate careers as they should, as emphasizing a more standardized training format may have delayed the emergence of individual initiative for creative achievement. We hope, in fact, that this change will ameliorate two other matters that were justifiably criticized in the report -- a longer than desirable time-to-degree record and a deficiency in pre-graduation publication. We are also trying out a new system for assessing graduate student progress and for providing critical feedback to the students in the first year, with the goal that students may become fully committed to publication and thesis completion in a more timely fashion.

Undergraduate Instruction:

The report correctly states that we have tripled our level of undergraduate instruction over the past 10 years and that some of this increase has necessarily relied on the use of non-tenure-track faculty. This practice distresses our tenured faculty, but the pressing need imposed by the popularity of our field cannot otherwise be met until the University provides adequate facilities for the Department. Adding a laboratory course or another section of 100-level Biology would have to be done at the expense of some other teaching we now do and could not currently be justified. Correcting a minor error the report, the Department provides 3 of the 8 assignments in BIOL 201, as Bonny Brewer voluntarily teaches a full quarter annually, which is twice the commitment of other individual faculty teaching in the Biology core series.

The Future:

There is, of course, a great deal more breadth of coverage that a department of sufficient size might, and should, pursue in its teaching and graduate training. As noted, the practice of genetics has become so pervasive in the biological sciences that the principles might be taught by many faculty outside the Department (including any member of the review committee). Identifying a new focus for the Department -- while maintaining broad representation of its various sub-disciplines -- is a major challenge. We are currently conducting a search for a new faculty member working in computational genetics, having identified this general area for many reasons, including the fact that so little new research space is available. More importantly, although the general procedures and biochemical aspects of genetics are common currency in the biological sciences, mastery of the computational aspects demands commitment to a literature that is not as widely appreciated and mastered. Furthermore, the genome projects bring an enormous wealth of new information that should yield tremendous insights to those who delve into it from a genetic perspective. Given the unusual strengths in this area within the Department and the University, we have chosen to commit at least this one position to building on this strength and ensuring that this regional excellence is carried forward. As suggested in the report, we are likely to find a significant interest among current geneticists in the analysis of natural variation, especially in the human population where data is rapidly accumulating. Profs.

Felsenstein and Olson are particularly well equipped to assess the conceptual framework in this area.

In light of space limitations, adding new areas of emphasis could be accomplished only by making additional adjunct appointments. We have reviewed a few candidates for adjunct faculty status over the past couple of years, but have not yet made any further appointments. These efforts have been constrained in part by our desire to appoint only those individuals who, however talented they may be, can be expected to participate actively and effectively in the crucial intellectual interchange that characterizes the Department.

The possibility of establishing stronger links to Molecular Biotechnology is certainly worth our continued consideration, as we have numerous strong scientific ties with those working in this area. Currently, the School of Medicine is pursuing its search for a chair of that department, and members of the search committee are well aware of the potential for resolving the needs and opportunities of both departments in concert.

October 11, 2000