

## **Department of Microbiology Response to Review Committee Report**

**January 26, 2010**

We would like to express our sincere appreciation to the Review Committee for all of their hard work and thoughtful suggestions for improvements to the program. We are pleased that the reviewers recognized the "world class" excellence of the faculty and high quality of both our undergraduate and graduate student programs. We agree that our graduate students are "dynamic and smart" and we are pleased to hear that they chose the Department of Microbiology at the UW because of the good relations among the students and strong interactions between students and faculty. The Committee noted our successes in garnering grant funding and the future continues to look promising in this regard, with our current year's NIH funding exceeding \$26M. We look forward to the completion of the J-wing remodel which is on schedule for occupancy in mid-2011.

In response to the recommendations of the Review Committee, we have held a series of faculty meetings to discuss how to best address the suggestions made by the Committee. In some cases, we were already aware of the issues raised by the Committee and progress was being made towards implementing the required changes. These efforts will continue. In other areas, the report of the Review Committee has invigorated us to look closely at what we are doing and to make substantive changes to improve the program.

The specific responses to the recommendations of the Committee are detailed below.

### **Review of Undergraduate and Graduate Curricula**

#### Recommendation of Review Committee:

"A systematic review, involving all faculty members, of undergraduate course offerings is needed with open discussion of what is desirable and who will teach."

Response: The faculty wholeheartedly embraces the need to undertake a thorough review of the undergraduate and graduate curricula. The review of the undergraduate program is already underway, to be followed by a review of the graduate courses. The entire faculty first met to discuss the general approach for the undergraduate program review. At that meeting it was decided to gather additional information and data prior to further discussions. At the second meeting, Dr. Jimmie Lara presented the statistics that he had compiled regarding course enrollments by major (both lecture and laboratory), including numerical data going back to 1995. Information was also collected regarding programs that require Microbiology courses as prerequisites or as an elective for a major. In preparation for a full discussion, all faculty members were provided with a copy of the Program Guide for Undergraduate Microbiology Majors and syllabi for the undergraduate courses taught by the Department. The Curriculum Recommendations for Microbiology Majors published by the American Society for Microbiology and information regarding course requirements at peer institutions were also provided. At the third faculty meeting, Dr. John Leigh, Chair of the Undergraduate Curriculum and Advising Committee, led a discussion focusing on new topics to be included in the course offerings and on whether there was a need to reorganize or eliminate existing courses or add new courses. At that very productive meeting, it was agreed that Dr. Leigh would convene a meeting of the Undergraduate Committee to continue this discussion and report back to the faculty with a focused list of suggested changes to the curriculum. At a future faculty meeting or perhaps at a special retreat, the entire faculty will review and modify the recommendations to implement a revised undergraduate program for the 2010-2011 academic year.

## **Graduate Program—Revised Journal Club Format**

### Recommendation of Review Committee:

"Journal Club: Ensure that faculty are present for each meeting. Help students select articles of general appeal. Make a regular weekly schedule."

Response: The faculty met and discussed at length the need to revitalize and revamp the Journal Club. It was generally felt that while second year and possibly third year graduate students benefit from presenting papers in a traditional journal club format, a research progress report would be more appropriate for some third year students and students in their fourth year and beyond. Accordingly, the format for the Thursday meetings has been changed and renamed "Journal Club and Research Presentations". Each meeting features two 20-25 minute talks as described below. To round out the program, the presentations by the graduate students are interspersed with research talks by postdocs and journal club presentations by faculty members. A few of the Thursday times during the year will be used for meetings of select groups of the graduate students with the Graduate Policy and Advising Committee (Drs. Carrie Harwood and Beth Traxler) for coaching regarding the topic exam (second year students) or the general exam (third year students). At the end of each quarter the same time slot will be used for rotation talks by first year students. This new scheme incorporates a series of weekly educational experiences for our graduate students into the same time period, enables our postdocs to be more visible in the Department, and is promoting better attendance by all.

The faculty responsible for organizing the Thursday meetings and setting the schedule has been changed. In the current year, Drs. Beth Traxler, Matt Parsek, and Carrie Harwood are serving as the organizing committee. The organizers are available to help students choose a paper for their journal club and are also responsible for identifying two to three faculty members to provide written critiques to the each student.

In the past few years, it has been difficult to consistently obtain a suitable classroom for the journal club presentations and typically a different room is provided each quarter. This arrangement disrupts continuity and adversely impacts attendance. Attempts will be made to work with Classroom Services to obtain a suitable venue for the meetings that remains the same throughout the year, but owing to the methods used to assign classrooms on campus, this is likely to remain problematic.

## **Bioethics Course**

### Quote from Review Committee report:

"Students, especially those supported on training grants, are required to take a bioethics course. It became clear that a number of these courses is offered by medical school departments and that there was some "reinvention of the wheel." It is recommended that leadership investigate the consolidation of these courses into a single well-organized course that would suit the needs of all students."

### Recommendation of Review Committee:

"Consider joining forces with other departments teaching ethics courses."

Response: Students supported on NIH training grants are required to complete a short course related to the ethical conduct of research. The only requirement for this course is that it cover certain broad topics. For several years, the Department of Bioethics and Humanities in the School of Medicine has offered a five-lecture course on bioethics, and this course is required for students on most of the training grants in the School. The faculty in the Department of Microbiology have two concerns with this arrangement. First, students in the Department not supported by training grants are not receiving valuable bioethics training. Second, the subject

matter covered in the general course does not always meet the specific needs of Microbiology graduate students.

During these discussions, we became aware that the Department of Biochemistry had previously raised similar concerns and in response had developed its own bioethics course, consisting of seven, one-hour weekly lectures given by Biochemistry faculty. In line with the recommendation of the Committee, the Department of Microbiology has opted to join the Department of Biochemistry and Drs. Joseph Mougous and Beth Traxler from the Microbiology Department will each contribute one lecture to the course. To provide maximum flexibility to our Microbiology graduate students, they can take either this course or the course offered by the Bioethics and Humanities Department.

Dr. Ferric Fang, who is the Director of the UW Interdisciplinary Training Grant in Bacterial Pathogenesis, has indicated that either of the bioethics courses will fulfill the NIH ethics training requirement for his training grant.

### **Addition of More State-Supported TA/RA positions**

#### Recommendation of Review Committee:

"Add more state supported TA/RA positions to increase entering graduate class size and better match the large number of labs able to accept and pay for students after their first year."

Response: The current State budget crisis has resulted in a substantial loss in Department support for TAs and RAs and we do not anticipate an increase in State-funded TA/RA slots at least until the fiscal crisis has abated. Any increase in the number of TAs would not only benefit the graduate program, but would also address the critical need for TAs in laboratory courses, particularly at the 300-level. As the number of pre-health science majors has increased, the demand for these courses has increased, with over 75% of the students enrolled in the lower level microbiology courses falling into this category. For TA/RA support, we are dependent almost solely on the resources provided by our primary faculty members as part of the Department's tax and salary recapture policies. As a partial solution to this problem, we are exploring the possibility of supporting additional TA/RA positions by recapturing funds from affiliated faculty who are involved in graduate student training or from their departments or institutions. The Department enthusiastically endorses this recommendation of the Review Committee and will continue to press for additional resources to support this need in meetings with the Dean, the Provost and others in the University administration.

### **Better Integration of Postdoctoral Fellows**

#### Recommendation of Review Committee:

"Integrating postdoctoral fellows into the community is a challenge, but doing so will help build the strength of the entire department. Establishing a culture whereby postdoctoral fellows are given both the responsibilities (e.g., inviting and hosting seminar speakers) and benefits (e.g., computer support) normally attributed to faculty would empower them, ease their burdens, and help train them to meet future expectations."

Response: Efforts are underway to better integrate the postdoctoral fellows into the activities of the Department, some of which were initiated prior to the review. A focal point for the research activities of the Department has been our annual retreat held in the autumn at an off-campus site prior to the beginning of the school year. Over the years, attendance by the postdocs has been variable. Through the efforts of Dr. Lalita Ramakrishnan and the encouragement of the

Chair, 21 out of a total of 38 postdocs signed up to attend our most recent retreat. Four (out of a total of 14) posters were presented by the postdocs and the poster award this year was given to a postdoc.

Following the suggestion from the postdocs a year ago, a plan is now in place to allow to postdocs to host a seminar speaker each year. This initiative was enabled by a generous endowment established last year by Gene and Martha Nester. In addition, extra efforts will be made to ensure that postdocs are included in meetings with seminar speakers or invited to join the graduate students when departmental seminar speakers are taken out for informal discussions after the seminar.

The two postdocs interviewed by the Review Committee expressed concerns about security, department support for grant applications, and the availability of IT support. To address security issues, Sheryl Vick, the Microbiology Administrator, organized a "Crime Prevention Workshop" on July 31, 2009 for all members of the Microbiology Department led by UW Campus Police officer Arnie Belton. Officer Belton presented personal safety tips, provided a discussion of what to notice about suspicious persons and behaviors, and also described campus resources available to UW employees. This workshop was well attended and will be repeated periodically. A similar workshop was held at the Rosen Building on May 20, 2008. When the Chair met with the postdocs on October 14, 2009, he emphasized that the fiscal staff in the Department is fully committed to provide timely grant application support for the fellows. The postdocs have also been reassured that every attempt will be made to provide support for their computer-related needs. Efforts are underway to improve IT support for the Department across-the-board by expanding the staff dedicated to this important function. In addition, a link will be added to the departmental web site that provides information on funding sources for postdocs.

Finally, to address the need for a place to foster informal interactions between students, postdocs, and faculty, the move to the J-wing in 2011 will provide new comfortable multipurpose spaces for informal discussions. This will be a significant improvement over the spaces currently available for these activities in the Department.

## **Gender Issues**

### Recommendations of Review Committee:

"Promoting gender equality should be an important objective of the department. Three strategies could facilitate achieving this goal.

- Value the expertise within the department. For example, encourage contact and commitment from female colleagues at the FHCRC, perhaps by hosting a weekly faculty chalk talk series that all faculty would attend. The FHCRC investigators themselves suggested this mechanism for encouraging collegiality.
- Focus faculty recruitment toward achieving a more even sex ratio within the department by identifying top women candidates among the applicants and giving them priority during the interview process.
- Use every opportunity to promote women faculty, by nominating them for awards from UW, from societies related to their scientific specialty fields, and from international boards that evaluate research or teaching."

"Restart the faculty research presentations including departmental members at the Rosen campus and the FHCRC."

Response: We recognize that achieving a better gender balance in our faculty is an important goal and, as in the past, it remains our highest priority to recruit women and underrepresented

minorities to the faculty. To meet this goal, it is essential to have a departmental culture that is attractive to, and supportive of both female and underrepresented minority faculty members. As part of this process, we have initiated a mentoring program for junior faculty with assigned primary senior faculty mentors and oversight by a Mentoring Committee chaired by Dr. Brad Cookson. An extensive discussion of additional actions to achieve gender and ethnic diversity took place at the Jan. 7, 2010 faculty meeting and the following specific actions are planned. Current female and minority faculty members will be surveyed to identify important gender- or diversity-related issues in the department, including mentoring, academic timelines, promotion criteria, and support for parenting responsibilities, and to solicit suggestions for change. We will obtain comparative data and suggestions from other nationally-ranked microbiology departments. We will establish a temporary department committee to carry out these surveys, analyze the results, and provide recommendations to the faculty for changes we can make to improve our efforts in this area. Finally, at the outset of each recruitment, we will target the advertising for the position to ensure that qualified female and minority faculty candidates are identified and interviewed as appropriate.

While there is clearly room for improvement, it should be mentioned that we have experienced two setbacks in our recent endeavors to promote gender equity in the Department. First, Dr. Carleen Collins, who was recruited in 2002 as a full Professor, was a highly respected colleague who played a key role in our teaching and research programs. Her untimely death in 2008 was devastating and left a void that will be difficult to fill. Second, in the virology search carried out in 2007-2008, our top candidate was Dr. Vera Tarakanova. Unfortunately, she accepted another position elsewhere before any serious discussions had begun.

As suggested by the Review Committee, efforts will continue to promote women faculty members, both within and outside the institution. Discussions are underway regarding additional ways to improve interactions with the offsite faculty, including the possibility of resuming the departmental research presentations.

#### Corrections:

We acknowledge the valid criticisms made by the Review Committee, but the section of the report on "Gender Issues" also contains some misleading or erroneous statements. Below we wish to simply set the record straight with regard to several factual details.

The report states:

"Although Helen Whiteley is accorded high honors, unfavorable negotiations with the Dean over tenure-track lines meant that three outstanding women scientists, Drs. Overbaugh, Galloway, and Linial, moved to the FHCRC."

Correction: It should first be noted that Dr. Helen Whiteley passed away in 1990 and Dr. Julie Overbaugh relocated to the FHCRC more than 10 years ago, hence these events are not highly relevant to the present Department. However, neither Dr. Denise Galloway nor Dr. Maxine Linial held faculty positions in the Department prior to arriving at the FHCRC. Since then, both were recruited to Research Faculty Positions in the Department and have served on numerous faculty search committees as well as serving as mentors for multiple Microbiology graduate students.

The report states:

"Lack of support has occurred more recently: a new hire, Dr. Ramakrishnan, was left to fend for herself in raising funds to build a fish facility needed for her high-profile work examining *Mycobacterium* infection in the zebrafish host."

Response: During the time that Dr. James Champoux was Interim Chair, Dr. Lalita Ramakrishnan requested \$90K from the Department to purchase equipment to expand her

zebrafish facility. Unfortunately, the Department has never had the resources to provide a faculty member with this level of financial support for their research, and thus this should not be considered a gender-related issue. Equipment such as this must be purchased from grant funds or covered from faculty startup packages. The Department is pleased that Dr. Ramakrishnan was resourceful and able to raise the necessary funds from a Keck Foundation grant and a private source.

The report states:

"During this time, several male Research Assistant Professors were offered tenure-track positions: Drs. Bumgarner, Mittler, and Sokurenko."

Correction: Dr. Evgeni Sokurenko was offered a tenure line as part of a successful retention effort, but neither Dr. Roger Bumgarner nor Dr. John Mittler were ever offered tenure track positions and they remain WOT for reasons of funding.

### **Teaching in the Department**

#### Quotes from Review Committee Report:

"Two-class system: The 2000 report expressed concern about negative attitudes towards teaching, that teaching was distributed extremely unevenly, and that the need of the faculty to pay part of their salaries (B component) from grants seemed to give financial incentives to emphasize research dollars over teaching. Although the Chair is sincerely promoting the value of teaching and is engaging more faculty in teaching, all of the problems mentioned in 2000 remain severe today. Several faculty are highly dedicated and enthusiastic about their classes, yet there remains pervasive and explicit antagonism, angst, and mistrust about issues of teaching among many."

In addition, the Committee expressed concern that the retirement of Dr. James Staley and the upcoming retirements of Drs. Gene Nester and Jimmie Lara would so deplete the teaching ranks that the Senior Lecturers would have to be pressed into teaching 400 level courses.

"The simplest solution to this bottleneck is to be sure that undergraduate teaching is delegated equitably among the faculty."

#### Recommendation of Review Committee:

"Ensure faculty participation in undergraduate program through faculty understanding of the total department teaching mission."

Response: An example of one of the benefits of discussing the Undergraduate Curriculum as a faculty was that several individuals expressed an interest in participating in a new "special topics" course. The faculty has tremendous expertise to offer in specialized areas that are not currently covered in depth in our core courses. Offering a topics course with rotating topics not only better serves our undergraduates, but provides an excellent way to increase faculty involvement in the teaching mission of the Department.

The perception among some faculty members that a two-class system in relation to teaching still exists and that "all of the problems mentioned in 2000 remain severe today" is very unfortunate. Since real progress has been made in this regard, this perception reflects a need for more transparency and increased communication with respect to our teaching program. In response to this need, the Chair will initiate a faculty-wide discussion to clearly explain and solicit input concerning teaching expectations and how teaching is valued in relation to merit reviews and the promotion process.

With respect to our progress in this area, it is helpful to summarize the recent changes to the teaching distributions. The three most recent hires are, or will be, teaching undergraduate courses. Dr. Matthew Parsek is co-teaching Microm 410 with Drs. Jimmie Lara and Beth Traxler, and will be taking on an increasing load in this course over the next couple of years. Dr. Joseph Mougous taught half of Microm 301 in Autumn Quarter 2009 and will continue teaching 301 in the future. Dr. Jason Smith has just joined the faculty and, beginning next year, will be teaching in an undergraduate course yet to be determined. In addition, beginning in the current academic year, several senior faculty members who previously had relatively light teaching loads have agreed to increase their teaching contributions substantially. As noted in the report, in Winter Quarter 2010, Dr. James Mullins will be teaching Biol 200, and Dr. Michael Katze will resume teaching the graduate virology course Microm 540. In Autumn Quarter 2009, Dr. Lalitha Ramakrishnan co-taught the graduate course in bacterial pathogenesis (Microm 553) and in Spring Quarter, Dr. E. Peter Greenberg will join Dr. John Leigh in the teaching of Microm 412. In addition to his regular teaching in the HuBio 534 course for medical students, in both Spring and Autumn Quarter of 2009, Dr. Evgeni Sokurenko co-taught with Dr. James Staley (Professor Emeritus) Conj 557, Microbial Evolution and Ecology. Finally, in Winter Quarter 2010, Drs. Carrie Harwood and John Leigh have initiated a new conjoint course called "Fundamentals of Prokaryotic Biology" (Conj 558).

Although the Review Committee focused on the need for instructors in the undergraduate courses, the changes described above address the need to maintain quality instruction at the graduate level as well. The net result of these changes is substantial progress towards a much more even distribution of the Department teaching responsibilities across the faculty in a way that will ensure a relatively smooth transition as senior faculty retire.

In addition, a departmental document describing the "Logistics of Teaching" has recently been prepared that will help faculty prepare for teaching an undergraduate course for the first time. The manual covers topics ranging from practical advice on how to choose a lecture format to instructions for ordering course evaluations.

The Review Committee reiterated the point made in the 2000 review about the desirability of staffing the classes for the majors with instructors from the rank of Assistant Professors and above, and it remains our intention to do so. One temporary exception was precipitated by the abrupt withdrawal of Dr. Colin Manoil (Department of Genome Sciences) from his teaching role in Microm 411 for three years. In the interim, Dr. Kendall Gray, one of the Senior Lecturers who is responsible for the laboratory portion of 411, will be giving half of the lectures in this course. With his prior teaching experience and research background when he was an Assistant Professor at the University of South Florida from 1994 to 2000, we are confident that he will do an excellent job.

## **Department Seminar Series**

### Recommendation of Review Committee:

"Design a seminar series with significant speakers covering balanced topics and develop a culture where faculty attend departmental seminars and both graduate and post-doc presentations."

Response: After a lengthy discussion at a faculty meeting, it was decided that seminar attendance can be improved if invited speakers are reminded of the importance of providing an adequate background to help engage a mixed audience of bacteriologists and virologists. It was also decided that the present system for inviting speakers should remain in place for the current year. At the end of the year, the Seminar Committee (chaired by Dr. Ferric Fang) will evaluate the series for balance and rigor and make recommendations regarding any need for changes in the future.

## **Department Collegiality, Morale, Direction, and Governance**

### Quote from Review Committee Report:

"Despite the many overall strengths outlined above, it was clear from the descriptions given by all of the faculty members who met with the review committee that there was much room for improvement regarding the functioning of the Department. Individual investigators generally described themselves as being very satisfied with the workings of their own research laboratories and noted that the University of Washington and the greater Seattle area were wonderful locations in which to pursue their career goals. The attractiveness of great scientific colleagues and an extremely stimulating scientific environment were often cited as key reasons for their satisfaction. Yet, when it came to individuals describing their sense of belonging to a departmental unit, there was a high degree of dissatisfaction."

The committee also noted that both faculty and the department leadership have an equal responsibility to improve morale and generate a collegial and stimulating atmosphere.

### Recommendations of Review Committee:

"These issues can be solved only by developing a sense of collegiality and team membership among all faculty and by an open, transparent consideration of the total teaching picture and teaching assignments in a large group meeting, as discussed elsewhere in this report."

"Develop the new curriculum as a joint effort to create a sense of a team working together."

"Develop a response to this report in the same manner."

"Empower faculty committees to have responsibility and impact."

"Make attendance at faculty meetings semi-compulsory."

"Initiate new program projects and training grants with full administrative support from department and school. This combined effort will greatly help reduce the "culture of scarcity" and transform it to a "culture of 'yes we can'". The established senior faculty, with their clear vision of the field's future, can help catalyze this transformation as visionary leaders."

Response: Progress is being made along each of these lines. As mentioned above, the curriculum reviews are underway and being discussed by the entire faculty. Several faculty meetings have been devoted to a discussion of the issues raised in the report of the Review Committee. Based on these discussions, an initial draft of the response to the report was prepared by the Chair for comment and review, and discussed at a faculty meeting on January 7, 2010. Following the meeting, the suggestions of several faculty members were incorporated into the document and submitted to the faculty for another round of review before preparation of the final document.

Essentially all of the working committees in the Department were reconstituted based on faculty members volunteering for service. These faculty committees have been empowered to have responsibility and impact. For example, an ad hoc committee was formed in September 2009 to review our department policies regarding research faculty appointments. This seven-person committee completed its work in mid-November. The process for creating a new set of guidelines involved multiple drafts with dozens of email communications. Initial substantive differences of opinion were resolved through discussion, negotiation, and compromise to achieve consensus. The final guidelines were reviewed and adopted by the faculty on Nov. 19,

2009. This experience provides a model for the continuing development of shared governance within the department.

Rather than take a coercive stance regarding faculty meetings, it was generally felt that attendance would be encouraged as long as the meetings are relevant and productive. The Chair will therefore make every effort to streamline faculty meetings and use them as focused working sessions involving substantive issues in the Department. Towards this end, the Chair now sends out announcements and agendas in advance of the meeting. The meetings times were changed from the second Thursday of the month to the third Thursday to avoid an ongoing scheduling conflict for one faculty member. The yearly faculty meeting schedule will be sent out each autumn and faculty will be asked to RSVP in advance of each meeting.

Additional efforts directed specifically at creating a greater shared vision for the Department are required. A one-day faculty retreat will be organized to focus on administrative issues and to create a consensus with regard to the Department's mission, philosophy, and goals. We anticipate holding the first such retreat by mid-2010 and annually thereafter.

Efforts continue by the Chair to improve on transparency at all levels, but especially with regard to departmental finances, teaching, space, appointments, and promotions. The faculty will be expected to assume more responsibility for the affairs of the Department as the Chair increasingly relies upon the working committees.

The Microbiology Department is grateful to the Review Committee for their thorough analysis and thoughtful recommendations. We are determined to respond in constructive and substantive ways that will allow us to achieve our full potential in our educational, research and service missions.