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To: Mary E. Lidstrom, Interim Provost and Executive Vice President
Douglas J. Wadden, Executive Vice Provost for Academic Affairs and Planning

From: Marla Salmon, Dean, School of Nursing

RE: Review of the Interdisciplinary Molecular and Cellular Biology PhD Program

This memo outlines the recommendations from the review of the Interdisciplinary Molecular and Cellular Biology (MCB) PhD Program. Because this program is administratively housed in the Graduate School, Dean Baldasty has asked me to serve as proxy for him throughout this review, including sending you these final recommendations from the review committee report and Graduate School Council discussion.

The MCB program is a large interdisciplinary PhD program administratively housed in the Graduate School and jointly administered by the UW (through the Graduate School and School of Medicine) and the Fred Hutchinson Cancer Research Center (FHCRC). It was formally established as a degree program in 1994 and was last reviewed in 1999. The MCB program involves ten basic science departments at UW and five basic science divisions at FHCRC, as well as faculty at the Institute for Systems Biology (ISB) and Seattle Biomedical Research Institute (SBRI). As of mid 2010, there were a total of 250 MCB-affiliated faculty with an enrollment of 160 students. Detailed comments on the program can be found in the documents that were part of the following formal review proceedings:

- Charge meeting between review committee and administrators (May 20, 2010)
- MCB self-study (October, 2010)
- Site visit (December 6-7, 2010)
- Review committee report (January 6, 2011)
- MCB response to the review committee report (February 8, 2011)
- Graduate and Professional Student Senate Report (February 25, 2011)
- Graduate School Council consideration of review (April 7, 2011)

The review committee consisted of:

Yongmin Kim, Professor, UW Bioengineering and Electrical Engineering (Committee Chair)
Helen Sherk, Professor, UW Biological Structure
William M. Sugden, Professor, Department of Oncology, University of Wisconsin-Madison
Daniel S. Kessler, Associate Professor, Department of Cell and Developmental Biology, University of Pennsylvania

A subcommittee of the Graduate School Council presented findings and recommendations to the full Council at its meeting on April 7, 2011. After discussion, Council recommended continuing status for the PhD program, with the next review to be scheduled for the 2020-2021 academic year. Specific comments and recommendations regarding the school and its degree programs include the following:

Program Strengths

- MCB program is a very strong, nationally ranked program with a large and highly competitive applicant pool. The program accepts ~24 students/year out of an applicant pool that averages 340 per year (last 5 years). More than 90% of matriculated students complete the program, which is especially impressive given its broad scope.
- Outstanding leadership and administration from the program co-directors, Dr. Raible (UW) and Dr. Emerman (FHCRC), who are well supported by excellent administrative staff.
- Well funded program, through a mixture of Graduate School and FHCRC funds (for staff support and administration) and non-MCB funds that support students beyond their first year (research grants, training grants, and fellowships). MCB funds support all students during their first year in the form of RAs.
- Classes and student research projects are individualized based on the student's interests and research focus. This provides a large amount of flexibility and diversity in terms of training.
- The majority of MCB graduates (>60%) move on to successful careers in academia or industry; others pursue science-related jobs in patent law or journalism.
- Good relationship with the Seattle scientific and educational community, which include partnerships with local biotech companies (summer externships) and high schools, through various partnerships with high school teachers and students.

Challenges & Risks

- Curriculum: Since the program does not have a "home" department, it is dependent on other departments and programs to provide the necessary core and elective courses. Thus, the MCB program lacks course offerings in certain areas (e.g. only one neuroscience course, and none in biostatistics) and certain courses are seen as low quality. There is an uneven spread of course offerings across the academic calendar. Other issues include a reluctance of faculty to teach in MCB courses, in part because many departments do not count these courses towards their teaching effort.

- Co-director succession: The MCB program needs to consider who will succeed the very engaged and dedicated co-directors. The co-directors are critical for the success of this interdisciplinary program and should be a "high priority of those outside the program who are responsible for its success" (review committee report).
- Administrative structure: The program has a minimal committee structure, with the major burden carried by the co-directors and their staff, the large Steering Committee, and two committees that deal with admissions.
- Program Cohesion (Sense of Community): Students indicated that after years 1-2 in the program, they did not necessary feel a sense of community with the MCB program.

Areas of Concurrence and/or Disagreement

There was broad concurrence between the review committee report and the MCB response. Noteworthy points include the following.

- New Committees: The MCB leadership agrees with the review committee that a new Curriculum Committee of active MCB teaching faculty should be established, with overlapping 5 years terms. Similarly, they agree that an Executive Committee to guide the program is needed, including representation from the five areas of interest and from the student body.
- Curriculum requirements for public speaking and scientific writing will be added, with students having options to take relevant courses in various departments as appropriate. The MCB co-directors recognize the need for increased training in Biostatistics, and hope to work the SOM and SPH to adapt existing courses that would meet the needs of MCB students.
- Faculty participation: Because the faculty of the MCB program is so large, specific requirements for faculty participation are needed, as well as continually updated faculty profiles and annual records of participation.

Graduate School Council Recommendations

- Based on the review committee evaluation that this "exceptionally successful program should continue in its current form," we recommend that the program be granted continuing status with the next review in 10 years.
- Co-director Succession: Expand the leadership structure, including the new committees noted above, to reduce the burden on the two co-directors and facilitate a succession process while maintaining the high quality of the MCB program.
- Administrative Structure: Implement the new Curriculum Committee and change the existing Steering Committee into an abbreviated Oversight Committee, as described in the review committee report. Work with the Graduate School, School of Medicine Dean's Office, and departmental leadership to identify ways to insure that MCB faculty receive credit from their home departments for teaching MCB courses and participating in the program.
- The program has an impressive record of student ethnic diversity and should continue efforts to maintain and build ethnic and gender diversity.
- The UW School of Medicine provides a significant material commitment to the program by providing space to MCB. In addition, the School is encouraged to restore previous funding for RA positions and course support in order to allow this outstanding program to grow modestly, including additional international students.

- Fund raising efforts coordinated by the School of Medicine, Graduate School, and FHCRC that target the private sector (individual donors, biotech companies) would also assist the MCB program in continuing to thrive. The Graduate School is in the initial stages of launching an advancement effort on behalf of the program.

I concur with the Council's comments and recommendations.

cc: Gerald Baldasty, Dean, The Graduate School
James S. Antony, Associate Vice Provost and Associate Dean for Academic Affairs, The Graduate School
John T. Slattery, Vice Dean for Research & Graduate Education, School of Medicine
David Raible, Co-director, Molecular & Cellular Biology Program
Michael Emerman, Co-director, Molecular & Cellular Biology Program
Members of the Molecular & Cellular Biology Review Committee
Members of the Graduate School Council
David Canfield-Budde, Academic Program Specialist, The Graduate School
GPSS President