December 21, 2010

Michael Beattie, Ph.D.
Chair, Graduate Council

Patricia Calarco, Ph.D.
Dean, Graduate Division

Re: External Review of the Biological and Medical Informatics Graduate Program

Thank you for the opportunity to respond to the recommendations made in the Report of the External Review Committee for the Graduate Program in Biological and Medical Informatics (BMI). The report was very useful to our program and we have already implemented, to at least some extent, all of the Committee’s recommendations. In the July 16, 2010 cover letter from Graduate Council, we were asked to review each recommendation and respond point-by-point to the Council. As noted by the Council, the BMI program consists of two tracks, a Computational Biology and Bioinformatics track and a Clinical and Translational Informatics track. My letter only addresses the CB&B track. I believe you have already received a letter from Russ Cucina addressing the Committee’s recommendations for the CTI track.

Recommendation 1: The core curriculum would benefit from a statistics course.

We have approval for a new course in Statistics. BMI 207, taught by Prof. Jun Song, will start this winter as a 1.5 unit course and is mandatory for students in all three tracks of our integrated Program in Quantitative Biology (iPQB – CB&B, Biophysics and Systems Biology) curriculum.

Recommendation 2: Be less conservative in the admissions process.

Unfortunately, the financial realities of graduate program education at UCSF are that there are no institutional “insurance” funds currently available, and thus no way to fund students if we were to have more applicants accept our admission offer than we have training grant slots available. The reality of this situation has become especially apparent in recent years because The Regents have raised tuition by 38% over the past two years, to a level where, when the student stipend is included in overall costs, the annual cost of a graduate student is now approximately equal to that of a postdoc. It is thus not fiscally prudent to be less conservative in our admissions process. The situation is also made more fluid by the ongoing, but still incomplete effort to develop a new Integrated Funding Model (IFM) for graduate education at UCSF. Nevertheless, we hope to admit a joint class of 16-18 students in Fall 2011. In the future, perhaps the IFM will help with any temporary funding shortfalls we may encounter if we happen
to get an unexpectedly large class size one year. For the foreseeable future, however, we do not want to exceed an average class size of 18 students as this dilutes the success we have had with our Boot Camp and Team Challenge activities.

**Recommendation 3: Secure and develop space for the twice-yearly Team Challenge exercises.**

Space has been secured in Genentech Hall, room 227 (library release space), to house a teaching lab for, among other activities, the Team Challenge exercises. Preliminary funding was acquired, an architectural plan developed, construction cost estimate obtained, and funds pledged from QB3. All that remains is to obtain funds to match those from QB3 and then to move forward with the remodeling. The UCSF Development Office has been apprised of our needs and preliminary steps are being taken to identify potential donors who are interested in fostering graduate student education. We are confident that this project will reach fruition within the next year or so.

**Recommendation 4: Acknowledge the critical logistical role played by the Program Coordinator, Julia Molla.**

We indeed recognize how critical a role Julia plays in our program and to indicate this in a very real way we reclassified her position from Analyst III to Analyst IV, effective October 1, 2010, with a commensurate increase in salary.

**Recommendation 5: Improve organized professional career development.**

CB&B takes part in the Graduate Student Internships for Career Exploration (GSICE) program that provides 3-month internships in industry. Several of our students have done summer internships at Genentech, when appropriate and with the concurrence of their advisor. Our students also participate in the 11-week Idea to IPO lecture series (or.ucsf.edu/cbe/2500-DSY.html) held each winter quarter at Mission Bay. In direct response to the Review Committee’s recommendation, on November 1, 2010, we organized an industry roundtable session at our annual Asilomar graduate program research retreat and had representatives from the biotechnology and pharmaceutical industry discuss what it’s like to do research in industry. Taken together, we believe we are providing good opportunities for our students to learn what a career in industry is all about, whether it is in a large biotech company or a small start up. An area that we need to better formally address, however, is providing information to students on what to expect when pursuing an academic career. Presently CB&B (and all UCSF graduate programs, for that matter) depend on the student’s research advisor to provide mentoring in this area, an approach that is ad hoc and thus can clearly be improved upon. We are exploring ways to work with other graduate programs on campus to improve this area of career development.

**Recommendation 6: Reach out to other faculty to create a larger network of opportunities for collaborative research and training.**

We have recently formed an umbrella program, the Quantitative Biosciences Consortium (QBC – qbc.ucsf.edu), whose purpose is to facilitate curriculum development, encourage cross-training through collaborative research opportunities and faculty co-mentorship, and provide a focus for recruiting the best new faculty and students in the quantitative biosciences. The QBC program is still in its infancy, but we envision this as one approach to reaching out to other UCSF faculty. We have also had several discussions with Neil Risch, Director of the Institute for Human
Genetics (IHG), on adding a computational genetics track to the CB&B program. And we have successfully encouraged faculty from the IHG to join our graduate program (e.g., Mark Seielstad and Jeff Wall). Ultimately, it are individual faculty that must be open to new collaborative research opportunities for our students. To this end, we are please to see the campus develop the “UCSF Profiles” web site (profiles.ucsf.edu) as one means for faculty to network with one another based on their research expertise.

Recommendation 7: Continue efforts aimed at the recruitment of female students and under-represented minority students.

We continue to struggle to bring qualified URM and female applicants to the program. In our efforts to increase these student populations we continue to do outreach at minority science conferences such as ABRCMS and SACNAS, as well as work on building relationships with faculty at the CSU campuses.

Recommendation 8: Network IT support is perceived as sub-par and should be addressed.

The campus has recently hired a new Chief Information Officer, Elazar Harel, PhD, JD, and the Chancellor has instituted an IT Operational Excellence program aimed at improving the quality and effectiveness of IT systems on campus. We believe these recent events will result in improved IT support for both the campus and CB&B. Outside of these activities, it is beyond the scope of our graduate program to provide direct IT support to faculty or students.

Thank you for this opportunity to provide our input to the Graduate Council.

Sincerely,

Thomas Ferrin, Ph.D.
Director, BMI Graduate Program