



May 31, 2023

To: Shelly Sakiyama-Elbert, Vice Dean for Research and Graduate Education, School of Medicine

From: Joy Williamson-Lott, Dean

Kima Cargill, Associate Dean for Academic Affairs

RE: Review of the Department of Biochemistry (2021-2022)

This memorandum outlines the Graduate School's final recommendations from the Department of Biochemistry academic program review. Detailed comments on the review can be found in the documents that were part of the following formal review proceedings:

- Charge meeting between review committee and administrators (September 28, 2021)
- Self-Study (March 22, 2022)
- Site visit (May 2-3, 2022)
- Review committee report (September 2, 2022)
- Department of Biochemistry response to the report (December 10, 2022)
- Graduate School Council consideration of review (February 2, 2023)

The review committee consisted of:

- **David Raible**, Virginia Merrill Bloedel Chair in Basic Hearing Sciences; Professor, Department of Otolaryngology-HNS Professor, Department of Biological Structure (**Committee Chair**)
- **Bob Waterston**, Professor, UW Department of Genome Sciences
- **John Wallingford**, Mr. and Mrs. Robert P. Doherty, Jr. Regents Chair in Molecular Biology; William and Gwyn Shive Endowed Professor, Department of Molecular Biosciences, College of Natural Sciences, University of Texas at Austin

The Department of Biochemistry offers the following degree programs:

- Master of Science (Biochemistry)
- Doctor of Philosophy (Biochemistry)

Shelly Sakiyama-Elbert, Vice Dean for Research and Graduate Education in the School of Medicine and Trisha Davis, Professor and Chair of the Department of Biochemistry attended a Graduate School Council meeting to discuss outcomes from the review. The Council reviewed all documents from the review prior to the meeting. A summary of the review documents and the Graduate School Council discussion are attached to this memo.

#### Graduate School Council Recommendations

The Graduate School Council commends the Department of Biochemistry on the strength of its programs, faculty, and students. After discussion, the Council recommended the following:

- Full academic program review in 10 years (2031-2032)

We concur with the Council's recommendations.

cc: Mark Richards, Provost and Executive Vice President  
Patricia Moy, Associate Vice Provost for Academic and Student Affairs, Office of the Provost  
Trisha Davis, Professor and Chair, Department of Biochemistry  
Review Committee Members  
GPSS President

## **Attachment**

### **Summary prepared by the Graduate School Director of Academic Program Review**

**Unit Name:** Department of Biochemistry

**Site visit date:** May 2-3, 2022

#### **Degrees/Certificates included in the review:**

- Ph.D. in Biochemistry
- M.S. in Biochemistry

Note: Bachelor's degrees (B.A. and B.S.) in Biochemistry are conferred by the Department of Chemistry in the College of Arts and Sciences through collaboration with the Department of Biochemistry. Therefore, this review is focused on the Biochemistry graduate program. The review considers only the aspects of the undergraduate program that relate to the graduate program, such as the graduate teaching clerkship.

**Overall Review Committee Recommendation:** Continuing status for all degree programs with a subsequent review in 10 years.

#### **Program Strengths (as described in Review Committee Report)**

##### Departmental Strengths

- Overall, the Department is highly successful in accomplishing its teaching, research and service objectives.
- Strong leadership from the department chair.
- Recruitment of new faculty over the past 10 years is a particularly notable success, increasing number of women and underrepresented faculty. These faculty are successfully being promoted with tenure, which reflects the positive guidance from the chair of the department's Appointments and Promotions Committee.
- In terms of research activity, the Department is succeeding on all metrics, including funding, publication and scholarly impact. Also very effective in commercialization of scientific discovery.
- Notable throughout the review was the environment of collegiality, including for example camaraderie amongst junior faculty and appreciation of staff.

##### Institute for Protein Design (IPD)

- IPD is a powerhouse and a world leader; success has allowed for substantial philanthropy, negotiating space in the Molecular Engineering and Sciences (MoES) building, and securing institutional commitment to create new space on west campus.

#### Graduate Program

- Graduate students are remarkably successful and morale/cohesiveness is a strength. Highlights include a lightly formalized peer-mentoring program, a student seminar series, and an excellent staff member.

#### Diversity, Equity and Inclusion (DEI) committee

- Recent successes include progress on graduate student parental leave policy and voicing concerns for support for family and access to childcare.

#### **Challenges & Risks (as described in Review Committee Report)**

##### Institute for Protein Design:

- Sustained success of the IPD will be challenging; institutional commitment to the west campus site is still three years off. IPD is currently housed in Upper Campus and any attempt at a solution, even for minor issues, ends up as a battle between the two campuses.
- Beyond the space issue, there will be ongoing challenges to maintaining the IPD as an integral part of the Department; for example different applicant profiles, cultures, and facilities. Funds flow could become an issue.

##### Graduate Program:

- Students in the Department mentioned a desire for more opportunities to explore non-academic careers. Students also complained that certain training opportunities were delivered unevenly.
- Formal faculty oversight of the graduate program. There are only two faculty members formally tasked with overseeing the entire program, and the review committee felt that this number should be higher.
- Excellent staff member who is an exceptional resource to students, but students felt access to her was limited. Additional staff help is needed.

##### DEI Committee:

- Committee members did not feel that the work of the committee was valued at the level of other committee work. Put another way, many felt their work on DEI was “tacked on” to other work they are already expected to do.
- The Committee and its work should be formalized. For example, the mechanisms for appointment to the committee, appointment of the committee Chair, turnover of members, etc. should be clearly specified. Moreover, the Committee should have its own annual budget as well as a formal, annual budgeting process.
- The committee also recommends that the Department involve trainees in their DEI work.
- While the Department’s DEI recruitment efforts are substantial, more focus on efforts to recruit from underserved institutions could be improved.

##### Institutional Commitment

- Lack of support for undergraduate teaching efforts – the department teaches 10 undergraduate classes per year, instructing 800 students per quarter for the undergraduate Biochemistry major, but

since the major is housed in Dept of Chemistry, no Activity-Based-Budgeting funds are directed toward Dept of Biochemistry. Biochemistry must support these efforts out of its own funds.

Furthermore, graduate student teaching assistants are unpaid positions so students are supported by other sources, such as grant funding. This contrasts greatly with TAs who are in graduate programs on upper campus including those in Chemistry or Biology who TA similar undergraduate courses.

- Another area of concern is adequate laboratory space for expansion of highly successful research programs; assignment of space within School of Medicine should be flexible to accommodate outstanding research.
- A final area of concern is commitment of resources towards the sustained growth and recruitment of faculty. The department has clearly been successful in recent past, there are additional faculty retirements looming with no clear source of funding for recruitment packages.

**Areas of concurrence (as described in Unit Response)**

The Department of Biochemistry largely agreed with and accepted the committee's recommendations. Responses are summarized here.

**Institute for Protein Design**

- The Director of the IPD and Chair of Biochemistry are in discussions about the flow of royalty funds, all of which have been used to hire new faculty.
- Biochemistry is giving all Biochemistry graduate students access to the IPD in Molecular Engineering and Sciences and Nanoengineering and Sciences and have invited them to the IPD monthly happy hours.

**Graduate Program**

- An additional staff member has been hired for the front desk and to help the Associate Graduate Program Director.
- Biochemistry has invited two non-academic scientists to speak in the student seminar series, with more to be invited in the future.
- Biochemistry discussed as a faculty how to improve the TA clerkship. All faculty committed to continuing to use this time to train students in teaching methods.

**DEI Committee**

- The Department Chair discusses committee assignments with all faculty members regularly and initiated more discussions with the DEI committee members and adjusted their assignments as they requested.
- The Department Chair asked the DEI committee to discuss how to formalize appointments.
- The Department Chair provided the DEI committee with a budget.

**Mentoring and Collegiality**

- Biochemistry is developing a list of possible mentors outside of the department, who would not be involved in the tenure decisions.

- The chair of the Advancements and Promotions Committee has initiated an annual meeting with Associate Professors to discuss promotion to Professor.
- Biochemistry has strengthened its faculty onboarding and will follow up after 6 months.
- The Graduate Education committee is revitalizing.
- The Buddy program has been provided funding.
- Faculty lunches have restarted; departmental happy hours have restarted.

#### Institutional Commitment

- The source of funding for future faculty hires is uncertain.
- Biochemistry expressed that it desperately needs funds for its educational mission. Biochemistry does not receive funding to cover TA-ships even though it teaches 800 undergraduates per quarter and 10 courses a year.
- Biochemistry pays advising staff in Chemistry, but does not receive funds to pay its staff who run graduate and undergraduate programs. Biochemistry also pays 3 reader/graders per quarter.
- Biochemistry receives limited funds to provide supplies and equipment for its undergraduate biochemistry lab course.
- Biochemistry educational costs are \$280K per year and it receives \$67K.
- Biochemistry also pays the first nine months of the salary and benefits for graduate students (~\$250K) from other departmental resources.

#### **Areas of Disagreement (as described in Unit Response)**

The Department of Biochemistry corrected some perceived misunderstandings, summarized here.

##### Institute for Protein Design

- Biochemistry already had a plan in place for the flow of indirect costs and has now formalized it into a Memorandum of Understanding (MOU).

##### Graduate Program

- The review committee misunderstood how Biochemistry staffs its graduate program. (There already are 4 faculty members on the Graduate Education committee.) However, Biochemistry has implemented methods to make sure the graduate students know who is on the Graduate Education Committee.

##### DEI Committee

- Graduate trainees are already part of the DEI committee and are elected to one year terms by their peers. Postdocs volunteer for the DEI committee.

#### **Discussion with the Graduate School Council on February 2, 2023**

The Graduate School Council discussion of this review included the following key topics:

- *Undergraduate teaching*: The Council noted that this was identified as a challenge facing the department in the 2008-09 program review as well. Distribution of Activity-Based Budgeting (ABB) funds to departments is a decision made at the school/college level. Vice Dean Sakiyama-Elbert assumed the vice dean role after the site visit but acknowledged that the School of

Medicine is aware of this challenge.

- *Non-academic career paths*: The Council acknowledged the Department of Biochemistry's work in helping students considering careers outside of academia. The department has had initial success as it pilots these initiatives.
- *Formalizing the work of the DEI Committee*: The Council acknowledged the ongoing work of formalizing DEI committee work and asked for an update. The Department of Biochemistry is formalizing the process for various personnel to get onto the committee, although it has not been determined that having an official voting process is necessary.