

# Biochemistry and Molecular Biology Graduate Student Retention and Inclusion Grants Pilot Program

## Initiative overview:

The BCMB department currently has 68 graduate students enrolled. On average, 60-70 students are enrolled each semester in the PhD program with 40-50 of those students having passed their qualifying exam and having entered candidacy. The average size of the incoming class of BCMB PhD students is 10-16 students from diverse cultural and economic backgrounds. Over the years, the attrition rate per class has been between 40-50%. Prior to the start of the COVID-19 pandemic, college students already faced numerous hurdles to their success including a lack of belonging within their respective academic communities, which negatively affects student mental health and student success especially if we are to maintain the diverse student population that has been recruited (Lederer et al. 2020). Now is the time to provide them with support and engagement as the need is there. The BCMB department with the BCMB Graduate Student Association (BGSA) intends to create a pilot program designed to enhance student belonging, inclusion, and retention. This pilot program will involve whole-group team-building activities as well as a peer-mentoring network that focuses on providing pre-candidacy students with resources as they prepare for their qualifying exams and providing post-candidacy students with the engagement that was lacking during the height of the pandemic.

## Program description:

Our program will have three aspects with one focusing on **creating a greater sense of community** as a whole group and the other two aspects focusing on **peer mentoring relationships** and **creating mentoring maps**. This program was designed, and will be implemented by the BGSA, with appropriate oversight from the Department Head and the Graduate Coordinator.

### • **Creating a greater sense of community:**

Each month the program will provide two different opportunities for students to engage with each other. The first will be a half-day UGA recreational sports challenge course. During the course 10 participants will work as a team to finish the physical challenges, and the course facilitator will provide opportunities to reflect on how the lessons from the activity can be applied to outside the course. This would provide regular opportunities for BCMB graduate students to engage with each other as small teams and work on team building skills. Furthermore, this will provide an opportunity for mentors and mentees to engage in an activity outside of their program and build a more lasting relationship. In being cognizant of our diverse student population, we also want to provide a second opportunity for students who cannot or do not wish to engage in the recreational sports challenge course. Once a month we will also provide a “game night” to bring all students together to engage with each other. Students are welcome to participate in both the challenge course and game night, and faculty are also encouraged to join in either activity based on their availability.

### • **Peer mentoring relationships:**

We will also develop a peer-mentoring network aimed at aiding pre-candidacy students for academic support and aimed at providing post-candidacy students with opportunities to develop mentoring skills. We chose to divide the students based on passing the qualifying exam because this hurdle can provide acute stress to students around the time of the exam, and peer-mentoring can help alleviate stress on the short-term scale as students face a common challenge within their program (Kachaturoff et al. 2020). Mentoring can provide positive impacts on students, and these impacts not only affect the career support students perceive, but they also extend to the psychosocial support they perceive (Tuma et al. 2021). Given that these new students are transitioning into graduate school life, and they will also face the hurdle of passing their qualifying exams within the next two years, the support from more senior students will provide both career and psychosocial support. Furthermore, as students pass their qualifying exam, this program will provide them with an opportunity to be mentors

to future students, and it will allow them to develop needed mentoring skills that can be lacking from graduate programs. However, this type of relationship and support is currently up to the individual students to form and foster, but this program aims to make it a part of standard practice within the department.

We will first survey interested students and match them with pre-candidacy students based on experiences and research interests. We would aim to pair students with similar experiences, so that these more experienced students can provide a role model for the pre-candidacy students. In this initial matching process, we will also gauge student commitment to the program by asking mentors to commit 1-4 hours a month to engaging with their mentee. During these hours, students will work on issues that the mentee faces (e.g., their written qualifying exam, classwork, research problems).

Mentors will first be given one hour of training by Dr. Erin Dolan, an expert in mentoring in STEM and a member of the BCMB faculty. After the mentoring relationship has begun, Dr. Dolan will also lead a monthly discussion with the mentors focused on making the most of the mentoring relationship and any challenges the mentors may be facing. This training, along with the mentoring opportunities each month, will allow the post-candidacy students to develop and enhance their mentoring skills, which is an essential skill for future careers. Mentors will also be given a copy of “Dare to Lead: Brave Work. Tough Conversations. Whole Hearts.” by Dr. Brené Brown. This book is ideal for preparing the mentors as exemplified by the following quote: **“Daring leaders work to make sure people can be themselves and feel a sense of belonging.”** Mentors will be invited to read a chapter a month and meet to discuss its implications for their mentoring.

- **Mentoring maps:** After the new student orientation for BCMB students in the spring, we will have all BCMB students work on a mentoring map (Montgomery 2017). This mentoring map will identify mentors for students as well as what resources the mentors can provide. With numerous responsibilities as a graduate student, it can be difficult to quickly find appropriate resources for when a problem arises. Starting with the mentoring map early in their graduate career will help the student identify what resources within the department are available as well as key persons (e.g., graduate coordinator, ombudsperson), so as problems arise the student has a roadmap to finding appropriate resources to solve the problem. Each year, all of the students will revisit their mentoring map and update it. As the students continue in the program, they will be able to revise and enhance their mentoring map as they identify more mentors and eventually become mentors themselves.

**Estimated costs and justification:**

Item	Justification	Cost per item	Number of items	Total cost
UGA recreational sports challenge course	This will provide students who are capable and willing to participate, this will strengthen community within the department and help build the mentor-mentee relationship	\$15-25 per person	10-people, Monthly (June 2022-June 2023)	\$3,000
Board games	These games will provide an alternative to the challenge course as an opportunity to bring all the BCMB students together.	\$15-\$30 per board game	10 games	\$300
Leadership books	This book will be used to help develop the mentors into responsive and caring leaders for the mentees with which they engage.	\$15-\$20 per book	31 books, one for each mentor	\$620
				\$3,920

**Program assessment measures:**

We will use surveys to measure students’ sense of belonging and inclusion from before the program is in place and throughout the implementation of the program. We will modify the assessment from Stachl & Barabger to measure students’ sense of belonging within the graduate community (2020). This established and peer-reviewed survey uses phrases and visuals to gauge the students' sense of belonging across a variety of aspects of graduate student life from confidence in their abilities to willingness to access help. Furthermore, we will gauge student outcomes after each time mentors and mentees meet. The survey will ask the mentor and mentee to describe what they worked on, what ideas they came up with, what resources the BCMB department or BGSA can provide to further aid the student, and the overall satisfaction with the mentor-mentee relationship.

**Conclusion:**

Our current retention rate is between 50-60% per cohort. The aim of this program is to enhance the retention rates and sense of community among the BCMB graduate students as new students face the first major hurdle towards completion of their degree and provide needed engagement for older students as we transition out of pandemic life. We intend for this program to become a part of standard practice within the department as we, the BGSA, have support of the department head, graduate coordinator, key faculty, and the graduate affairs committee for the department, and we envision this program’s implementation will not only increase the perception of belonging within the community but will also lead to greater retention within the program.

**Works Cited**

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