GRS Community Reviews:
Graduate Engineering Research Scholars (GERS) Community

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Executive summary

The Graduate Engineering Research Scholars (GERS) program was the first of the Graduate Scholars Programs (GRS) at UW-Madison, and as such, was the template for the programs that followed. The model used in GERS, which was adapted from the successful program at Rice University, has largely remained intact since its initial development and has been copied and implemented throughout UW-Madison and at other institutions. The primary conclusion of the current review of the program is that the GERS model works and is effective at its primary goal, to increase the numbers of underrepresented minority (URM) students earning PhDs in engineering. The GERS program has retention and completion rates that exceed those for majority domestic students (see completion data provided by the Graduate School) and that greatly exceed those for minority students not in GERS. This success is despite the evidence from Graduate School exit survey data that the experience of minority students is worse than the experience of majority students both in the College of Engineering (COE) and across the graduate school at UW-Madison. These impressive results speak to the ability of the GERS program to provide a community for students where they feel comfortable, have a voice, and become leaders.

The review committee found that the program is overall well run and managed. There is an expectation, included in the offer letter signed by the students, that students receiving advanced opportunity fellowship (AOF) funds through GERS participate in the GERS program. This expectation is similar to the expectations for other research funding, such as traineeships. Many students are very involved with the program, and GERS has developed ways for students to take on leadership roles that help run various aspects of the program. Faculty engagement in the program remains high, and a large number of faculty have served as advisors for GERS students. Faculty are essential to the program as they serve as advisors, but they also provide financial support for GERS students for the majority of their degree program, allowing more URM students to receive AOF funding. Due to the growth of GERS, it has had a widespread impact on the climate in the COE by diversifying research groups and highlighting the contributions and experiences of URM students. Even with that impact URM students report a worse climate (based on exit survey data) than their peers, indicating the continued need for the community support provided by GERS.

Our recommendations for areas where the GERS program can continue to grow and increase its impact further are focused on changes to the faculty committee, developing more connections for recruiting from URM serving institutions, and further connecting faculty and staff with GERS activities. The committee also recommends that the COE devote additional resources to GERS to further growth of the program. Lastly, the committee recommends that the Graduate School improve communication and collaboration with the GERS program.

Introduction

This report provides a review of the activities and operation of the Graduate Engineering Research Scholars (GERS) program, which is one of the eight Graduate Research Scholars (GRS) communities at UW-Madison. The review was performed by Professor Susan E. Babcock (Materials Science and Engineering), Assistant Professor Christy Remucal (Civil and Environmental Engineering), and Associate Professor David A. Rothamer (Mechanical Engineering), who chaired the committee. The review was performed over the < 2-month period
between February 5th, 2018 (the kickoff meeting date) and March 23rd (the last day the committee met before report submission). During this relatively brief period, the committee conducted interviews with two groups of current GERS students, two groups of faculty who have advised students, the founding GERS director, Professor Douglas Henderson, the current GERS director, Professor Greg Nellis, and the GERS graduate student services coordinator, Kelly Burton.

The committee also reviewed the documentation provided by the Graduate School in detail. This documentation consisted of several different types of information:

- the self-study by the GERS program
- time to degree data (graduates from fall 2012 to spring 2017)
- completion rates (cohorts entering 2008 to 2011)
- GERS program profile from October of 2017
- exit survey reports for all GRS students, all Graduate School students, and COE GERS students from 2012-2017.

The Graduate School also provided a list of questions at the kickoff meeting for the review process (given in Appendix A). The results from the interviews, the documentation, and the authors’ own experiences with the GERS program were used to address those questions in this report.

The details of the report are divided into four sections based on natural division of the questions to address provided by the Graduate School (Appendix A): 1. Activities, 2. Participation and student outcomes, 3. Management, resources, and faculty involvement, and 4. Recommendations. The executive summary provides an overview of the findings from the review.

1. Activities

1.1 Type and frequency of activities

During the interview process, we verified that GERS offers the wide range of activities described in Self-Study Report Section F – Community Building. These activities include small group (cohort) activities, large group meetings with guest speakers, and smaller group meetings on special topics. There are typically two meetings each month: a small group meeting and a large or small group topical meeting. The topical meetings cover a variety of themes, including different career paths (e.g., academia, national labs, consulting, and startups), topics related to succeeding in graduate school (e.g., how to write a research paper or an NSF Graduate Research Fellowship application), or lunches with GERS faculty that are designed so the students can identify faculty mentors who are not their advisors. Former alumni also come back to give presentations. The current students appreciate that the GERS network is large enough to afford exposure to people who have pursued different career paths. The current GERS students also network with alumni through the Facebook group, which is moderated by the graduate student services coordinator.

GERS students are required to participate in four meetings per semester. In addition, a new student-led policy requires that all GERS students participate in one outreach event per year. Students who elect to be more involved may participate in 1 – 2 additional committee meetings each month. These expectations are clearly communicated to both the student and their faculty mentor in their offer letter. Most students report that they benefit substantially from the activities and that the frequency is about right. However, a small number of current and former students commented that they participate because they are obligated to (i.e., they are concerned about losing
funding if they do not). Not surprisingly, the student-led outreach requirements have resulted in some disagreement among the GERS students regarding individual participant’s obligations to community building and outreach and whether uneven participation within the GERS community is acceptable. An interesting strength of the program is that these conversations appear to be driven by the students. The faculty that were interviewed note that they are aware of their advisees’ participation in GERS meetings. They also agreed across the board that this participation does not negatively impact their research progress. The review committee observed that the required level of participation is similar to the requirements of other traineeships and is not overly burdensome.

GERS students may choose to participate in recruiting efforts through the Opportunities in Engineering Conference (OPPS) and Summer Undergraduate Research Experience (SURE). OPPS is a 3 – 4-day conference that is held once per year (late October / early November) for undergraduate juniors and seniors. GERS students help plan the event and participate in the opening banquet. SURE is a summer REU program that is held every summer. GERS students help plan and participate in activities to help the undergraduates get to know Madison (e.g., picnic days and biking trips). Some GERS students are also involved in mentoring the REU students as they complete their research or give seminars during the summer.

In addition, GERS students are involved in outreach events to local communities, such as Nuestro Mundo’s Science Night, Science Days activities at elementary schools, and writing “GERS biographies” for middle school students. Most of the students with whom we met were deeply committed to cultivating inclusion, principally through a range of outreach activities. This commitment for many appeared to result from passion rather than a sense of obligation or a program requirement. The faculty advisors acknowledged that GERS students are disproportionately called upon to do outreach and understand that it comes with the territory. They note that the students’ outreach activities do not interfere with their degree progress and in fact enhance the climate within their groups by inspiring other students in their labs to get involved in outreach.

Finally, the students started a peer mentor group in the past year, in which more senior GERS students mentor first-year students. The formal structure helps with vertical integration across cohorts and is important since the program has grown in recent years.

Overall, there is a good balance between participation in GERS-related activities while focusing on research. The students are encouraged to put their research first and are allowed to choose which extra activities they participate in based on their interests and other commitments.

1.2 Range of activities offered

The activities described in Section 1.1 cover a wide range of topics, with many focusing on professional topics relevant to the graduate student experience (e.g., communicating with your advisor) or career paths (e.g., working in a start-up or national laboratory, as well as the expected topics on careers in academia). While a major goal of GERS is to increase the number of URM faculty in the professoriate, the students and the review committee appreciate that many of the activities explore other potential career opportunities. Some large group meetings also focus on topics related to URM students (e.g., dealing with racism on campus). Additional activities are primarily social in nature and are aimed solely at building community. There are also numerous opportunities to engage in outreach at the K-12 and undergraduate levels. Finally, GERS students
have opportunities to network with alumni in formal (e.g., when alumni visit to give seminars) or informal (e.g., through social media) settings.

The current students note that the program coordinator is receptive to tailoring programming around their current interests and needs. This flexibility, coupled with the students’ ability to choose which activities to attend, allows GERS students to participate in the activities that best suit their interests. Despite the breadth of topics, there are suggestions for other topics for meetings including more science-related seminars and joint meetings with other GRS programs.

1.3 Alignment with other college efforts and priorities

GERS activities align well with the College of Engineering’s activities related to enhancing diversity. The College has three major student-focused diversity initiatives: (1) the Engineering Summer Program (ESP), which is a 6-week program for underrepresented high school juniors and seniors, (2) the Leaders in Engineering Excellence and Diversity (LEED) Scholars Program, a competitive undergraduate scholarship program for underrepresented students in engineering, and (3) the Graduate Engineering Research Scholars Program. The GERS program, as well as SURE and OPPS, directly complement the ESP and LEED programs at the graduate level. The Diversity Affairs Office offers support for underrepresented students throughout the college and runs the ESP and LEED programs. The College supports diversity at all levels, including recruiting and retaining underrepresented undergraduate students, recruiting and retaining underrepresented graduate students, and improving the diversity of the faculty and staff.

The GERS program is focused on recruiting and retaining URM students at the graduate student level. GERS serves as a major recruitment mechanism for URM students through the SURE and OPPS programs and by providing AOF funding to students. The majority of domestic targeted URM students at the PhD level participate in GERS. For example, of the 41 domestic targeted minority students graduating with PhDs between Fall 2012 and Summer 2017, 32 were AOF recipients, while only 9 did not receive AOF funding. The GERS program is also critical for retaining URM students in the College of Engineering. The program is strategically designed to retain students by getting students involved in research right away and by getting faculty financially invested in the students. The programmatic activities are further designed to improve retention by developing a strong community and by providing support for students in the GERS program throughout their time at UW-Madison.

An overarching theme from meetings with two different groups of students is the critical sense of community that GERS provides for a very large fraction of the participants. It was striking how frequently the conversations concerning various aspects of the students’ experiences returned to community as the key advantage of GERS participation. A number of students individually noted that they either would not have come to Wisconsin, or would not have finished their degree programs at the UW-Madison were it not for participation in GERS.

The faculty mentors stress that the two years of AOF support for PhD students, and the flexible timing of that support, enables them to offer 5-year funding commitments to GERS students that are competitive with other institutions. The funding flexibility also allows the faculty to take more risk and recruit students at times where they may not usually take on a student, providing more opportunities for GERS students to obtain positions with their desired research advisor.
The GERS program is also advancing the College’s commitment to increase the number of female graduate students. According to the Fall 2012 – Summer 2017 exit surveys, only 23.5% of the graduate students across the College were female. In contrast, the GERS population was 41.9% female over the same time period. While GERS student recruitment does not specifically target gender, it is worth noting that the program also improves the gender balance in the College of Engineering.

2. Participation by students and student outcomes

2.1 Robustness of participation and experiences of different groups

The Graduate School provided data indicate that GERS students participate at about the same rate in each of the College of Engineering graduate programs, constituting ~5% of the graduate student population in each. Participation is considerably lower (~1%) in two departments with substantial graduate student populations, Electrical and Computer Engineering (ECE) and Industrial and Systems Engineering (IE). However, GERS students pursuing ECE degree programs with whom we spoke reported a strongly positive and supportive environment within their research groups and within the department. A noteworthy national trend is that in recent years the ECE disciplines also attract relatively small percentages of female students. A local trend that the GERS program may want to explore is the drop in participation by students in IE. The data indicate robust participation in 2012, but decreasing participation since then.

The committee compared responses on the Doctoral Exit Survey Reports for two populations, “all Graduate School” and “AOF Recipients in Engineering GRS (GERS)”. In general, the GERS responses tended to be slightly more heavily weighted in the second most favorable category and slightly less heavily in the most favorable category than the grad school wide responses. However, these differences were small, as was the number (32) of GERS students having completed the survey. The generally small differences noted may reflect the generally less favorable experiences with campus climate that they report.

Specific areas in which the GERS students’ responses differed from the grad school include:

- GERS students’ career plans were more likely to have changed during the course of their studies at UW-Madison.
- They were less likely to have had TA experience (32% vs. 73%), and more likely to have RA support. They rate their financial, information technology, and workspace support substantially more highly than the grad school average.
- They graduated with a larger number of research publications in general.
- A noteworthy number of students commented that GERS was the deciding factor in their decision to come to UW-Madison. The positive impact of GERS on diversity within the college also was noted explicitly by a group of faculty advisors with whom we met.
- They report receiving substantially greater career advice from alumni. In fact, the connections fostered between current students and the growing alumni base is a noteworthy strength of the program that appears to have substantial payoff in placement as well as career advice.
Of concern:
- They were less satisfied with the climate at UW-Madison and much less likely to strongly agree that UW-Madison is a welcoming and inclusive place for students of color. They rate their student live experience less positively.
- They report less assistance from their doctoral programs for finding employment.
- Fewer receive a written assessment of their academic progress annually.

We note that formal and informal interaction between students and their faculty advisors is common in the College of Engineering. Annual written evaluation has only recently been introduced and is not uniformly implemented across the College of Engineering.

The GERS students responded at a higher rate in the second most favorable category and a lower rate in the most favorable response across many of the questions that pertain to placement and professional training. Given that a goal of the program is the increase participation in professorial roles, the GERS leadership might consider pursuing a careful review of these sections of the surveys with the aim of identifying targets of opportunity.

2.2 Retention and time-to-degree

After an independent review of the time-to-degree data provided by the Graduate School, we reach, independently, the same general conclusions reported in the Self-Study. Degree completion and time to degree metrics are slightly more positive across the board for GERS participants relative to non-targeted domestic students and significantly more positive than for targeted minorities who do not participate in GERS. International students, on the contrary, finish the degree programs somewhat more quickly and have slightly higher completion rates.

Specifically:
- AOF supported PhD students vs. non-AOF supported targeted domestic minorities:
  - have PhD completion rates of ~60% vs. ~43%,
  - leave with MS degrees at rates of ~ 31% vs. 36%,
  - and don’t complete their plans at rates of 9% vs. 21%, respectively,
indicating that GERS participation has a considerable positive impact on degree outcomes for targeted minority students, especially with regard to completion of an academic plan.
- AOF supported students vs. domestic non-targeted students:
  - have PhD completion rates of ~60% vs. ~57%,
  - leave with MS degrees at same rate of ~ 31%,
  - and don't complete their academic plan at rates of 9% vs. 12%, respectively,
again indicating that GERS participation has a positive impact.

Furthermore:
- AOF supported MS students vs non-AOF supported targeted domestic minorities:
  - have MS completion rates of ~97% vs. ~80%,
  - and don't complete their plans at rates of 3% vs. 22% (according to the grad school data), respectively,

and
- AOF supported MS students vs. non-targeted domestic students:
o have MS completion rates of ~97% vs. ~89%,

and don't complete their plans at rates of 3% vs. 12% (according to the grad school data), respectively,

again indicating that GERS participation has a considerable positive impact on degree outcomes for targeted minority students who pursue an MS degree program.

It is also clear that from the Self-Study that the GERS leadership team has kept careful records of enrollment and time-to-degree data for its students. It also has interrogated the grad school data in detail. It is clear that tracking and analysis of time to degree, retention, and plan completion are viewed by the GERS program leaders as critically important measures of program impact.

3. Management, resources, and faculty involvement

3.1 Overall management structure for the GERS program

The management structure for the GERS program is based on three pieces: a dedicated graduate student services coordinator (GSSC) for GERS, a faculty director, and a faculty committee. These three pieces form a structure that enables the day-to-day operation of the program while also providing a means for oversight and long-term planning. The GSSC and director are the primary personnel who oversee the program and manage its day-to-day operation. The faculty committee provides guidance and feedback on the program operation and helps establish policies and procedures.

From the interviews and student exit surveys, it is apparent that the most influential person in the program’s day-to-day operation is the graduate student services coordinator (Kelly Burton). The role of the graduate student services coordinator is to serve as the point of contact for all graduate students in the GERS program and for student recruitment. The GSSC manages the day-to-day operation of the program. The GSSC also helps students by identifying campus resources or external speakers that can aid in students’ professional development. Additionally, the GSSC organizes activities and meetings for GERS students with the goal of building community.

The GSSC also oversees organization of recruitment, the fall recruitment conference (OPPS), and the summer research experience (SURE) program. The GSSC interacts with departments and individual faculty during the recruitment process to help match students with advisors and to find the best fit for students. This process is a collaboration between the GERS coordinator and the departments.

The GERS faculty director oversees the management of the program including strategic planning and assessment. The director oversees the process of reviewing nominations and awarding GERS fellowships. The director meets one-on-one with all students when they enter the program. Additionally, the director attends at least one meeting during the year and does one-on-one exit interviews with students when they graduate. The director works with the GSSC to develop and implement policies and interacts with faculty who are advising GERS students. The faculty director also helps with program reporting and interfaces with the Graduate School.

The GERS faculty committee is composed of one faculty member from each department in the College of Engineering. The faculty committee reviews all nominations for GERS with three faculty members of the committee reviewing each nomination. The three-person sub-committee is
composed of the faculty director, the representative from the student’s department, and one other faculty member. The faculty committee also provides direction for GERS initiatives and is involved with developing new recruiting initiatives, policies, and procedures. Appointments to the committee are made by chairs of the departments within the College of Engineering. Currently there are no term limits for appointments. Some departments regularly rotate faculty on the committee, whereas others have faculty representatives stay on the committee for longer periods of time. The faculty committee also serves the role of educating a larger number of faculty on the operation of the GERS program, its main goals and objectives, and its challenges. This ensures that a number of faculty are well qualified to take over the role of faculty director when needed. The faculty committee involvement appears to be slightly decreased in recent years. The review committee feels that it would be beneficial to reinvigorate the committee’s involvement, especially in strategic planning, given the increasing student participation and disproportionate resources.

Through the review process, it was apparent that the program is generally well managed and that the current GSSC is very involved with the students in the program on a daily basis. The GSSC does an extraordinary job managing the day-to-day operation of the program and working with faculty to recruit students. The current faculty director is also very involved with the program and believes strongly in the goals of the program. The current director and GSSC appear to work well together.

3.2 Staffing and resource allocation

The College of Engineering supports the administration of the GERS program by providing personnel for the program including: 1 full-time GSSC, part of the time of 1 senior accountant to help manage GERS financials, part of the time of 1 financial specialist, and 10 hours of student assistant time per week. In addition to the personnel resources, the College provides funding for 5 SURE students each summer and covers the costs associated with the OPPS recruiting conference each fall. The College also provides funds for supplies for outreach activities and for meetings with GERS students. The resources discussed here are documented in the self-study and were verified during interviews with the GSSC and faculty director.

Additional resources are provided to GERS by College of Engineering research centers and by external foundations. These funds cover the costs of 10 additional student participants for the SURE program. Three of these are funded through the Materials Research Science and Engineering Center (MRSEC) and seven through a 3M foundation grant.

Although significant resources are provided to the program, due to the large growth in the program over time, the review committee feels that there is a need to increase the available resources for the program to continue to grow and for the program to continue to evolve and improve. Specifically, the GCCS’s clerical duties have increased over time, supplanting time that would otherwise be spent on program development and interactions with participants.

3.3 Faculty and staff involvement and impact on culture and climate

Faculty and staff involvement in the program is essential to the program’s success. One of the unique aspects of the GERS program relative to other minority serving fellowships is that RA support provided by faculty is required for students to receive AOF funds. This faculty buy-in
ensures that faculty are invested in the success of GERS students and their research. The importance of this was expressed strongly by the faculty and the faculty director during interviews.

A total of 123 different faculty have served as faculty advisors for GERS students since the year 2000. There are typically on the order of 180 faculty in the College of Engineering, indicating that a large fraction of faculty have served as advisors to GERS students. This has helped GERS broadly impact the climate and culture within the College of Engineering. Faculty participate in a number of important ways: as advisors for students who participate in the SURE undergraduate summer research program; in recruiting efforts through involvement in the OPPS conference; in meetings with GERS students; and by providing seminars on topics related to student professional development, among others.

One of the faculty members interviewed, who has advised several GERS students, has been a faculty member in the College since before the GERS program was started in 1999. The faculty member mentioned that without GERS diversity in the College of Engineering would be significantly worse. This comment was based on their experience prior to the existence of GERS in the College of Engineering. This was combined with a feeling that the improved diversity had a significant impact on improving the climate in the College. Other faculty expressed similar sentiments that GERS not only provides a community for underrepresented minority students, but that GERS students bring an important element of diversity to their research groups that provides benefits for all students in their education and experiences. Additionally, through the influence of GERS other students get more involved in the local community by becoming involved in outreach activities that the GERS students bring to their attention.

Staff are involved in the program directly, for example as the GSSC for GERS, but more broadly staff support the program by interacting with students on a daily basis and supporting the students in functions needed to support students’ research. Because all GERS students perform research as part of their degree, they interact with a large cross section of staff throughout the departments in the College of Engineering.

3.4 Funding allocation process

Students are nominated for consideration for AOF fellowship funds by individual faculty members in the College of Engineering who want to advise the student for their degree. Significant effort by the GSSC and the departments to recruit students occurs prior to this important step. The faculty member provides a proposed funding plan to cover three years of support for an MS degree or 5 years of funding support for a PhD degree and signs the GERS advisor agreement stating the advisor agrees to support the student’s participation in GERS related activities throughout the duration of their degree program. Students can receive one year of AOF support for an MS degree, with the other years of support usually coming from a research assistantship (RA). For a PhD, students can receive one year of AOF support in their first two years and an additional year of AOF support after the first two years with the other three years of support typically coming from an RA appointment. Faculty emphasized during interviews that AOF support and flexibility in when it is used allows for guaranteed long term funding plans to be offered to students which individual faculty are otherwise not able to provide.

After a nomination is received from a faculty member, it is reviewed by a committee of three faculty including the faculty director, the faculty representative from the student’s
department, and one other member of the faculty committee. If approved by the committee, an offer letter is sent to the student detailing the support package. After students start their degree program, the GSSC continues to work with faculty to adjust to changes in funding plans to fit the availability of RA funding from faculty, and to ensure that as many students with interested faculty advisors can be supported as is possible with available funds. The faculty interviewed indicated that GERS has enabled offers to students whom faculty could not otherwise commit to support.

The allocation process is very efficient. The review process is quickly completed so as to not impede the recruitment of the students. Faculty were in general very complementary of the current process during faculty interviews. It was especially important to faculty that GERS has always worked with faculty to ensure student support when unexpected research funding changes occurred, allowing faculty to either move up the timing of RA support or to postpone it.

One challenge that has faced GERS and which impacts the ability to plan for the future is the uncertainty in future funding levels from the Graduate School and timing of notification of AOF funding level. This makes the promise of 5-year offers difficult to ensure, whereas late notification of funding for the next year directly impacts the recruitment process for the next academic year.

3.5 Use of data and evaluations to improve GERS

As discussed in the Self-Study in Section B, two of the primary metrics used to evaluate the program are the retention and completion rates for the program. The Self-Study states retention rates of 94% and a completion rate of 92%. The data from the Graduate School is similar as was discussed in Section 2.2. The rates of degree completion for PhD degrees for GERS students exceed those for domestic non-targeted students. This is a key indicator that the GERS program is succeeding in one of its primary goals.

GERS uses surveys of students each spring, along with data on the retention and completion rates of students in the program, to assess and evaluate the program. It was expressed that there is additional data that the program has had some difficulty getting from the Graduate School that the program would like to use in its self-evaluations, such as Doctoral exit survey data for the College of Engineering. In addition, one-on-one exit interviews of students as they complete their degrees by the faculty director provide specific details on students’ experiences in the program. Suggestions from the student survey and from GERS students, faculty, and alumni are brought to the GERS faculty committee and/or the GERS student leadership committee and are reviewed and implemented the following year if the committees believe the changes will improve the program. In the student interviews, it was apparent to the review committee that GERS students have a strong voice in the program and help to evolve the program over time through leadership roles on the programs committees (e.g., leadership, recruiting, mentoring, outreach, and social and fundraising). GERS also assesses the effectiveness of recruitment efforts with pre- and post-survey data for both OPPS and SURE.

4. Recommendations

Throughout the review process, it was seen that the current model for GERS and its basic structure work and have been successful at improving completion rates for underrepresented minority students in the College of Engineering. The GERS model has multiple components that
need to be in place for it to succeed over the long term. The necessary components of that model are: a faculty director, a minimum of one full-time graduate student services coordinator, significant involvement by faculty, a resource commitment by faculty to fund a significant fraction of students’ degree programs, a voice for the students in the program, and the ability to evolve the program overtime. The review committee agrees with the program’s assessment that faculty involvement and faculty oversight of the program are key to the long-term stability of the program. This ensures that the program will continue to have strong support from the faculty as administration changes occur in the College of Engineering and the Graduate School.

The program has been very successful in its current form. However, to further broaden the impact of the program, the following recommendations are offered for consideration.

Recommendations for the GERS director, graduate coordinator, and faculty committee:

- Increase engagement and leveraging of the faculty committee to aid in recruiting efforts and strategic planning
- Consider formation of an executive faculty advisory committee
- Work with College of Engineering partners to establish new recruiting connections with underrepresented minority institutions
- Continue to grow faculty involvement with GERS

Recommendations for the College of Engineering:

- Increase administrative support and resources for GERS
- Consider fixed-term appointments for the director position

Recommendations for the Graduate School:

- Improve communication with GERS particularly with regard to funding allocations
- Allow GERS to set its own stipend rates above a minimum rate
- Improve collaboration with GERS by regular face-to-face meetings

Further discussion of these recommendations follows along with suggestions for how some of these recommendations may be implemented. However, the details of any implementation are up to the GERS program, the College of Engineering, and the Graduate School to decide. The suggestions for implementations provided here by the committee are really just that, suggestions, and are not intended to be necessarily followed as written.

4.1 Comments on the recommendations for the GERS management

4.1.1 Faculty committee and potential formation of an advisory/executive committee

The faculty committee is an important component of the GERS program. Early on in the GERS program the committee was very active in developing the program. More recently, the role of the faculty committee seems to have decreased slightly as the program has become more established. The review committee strongly believes that GERS should strive to keep the faculty committee engaged and to leverage the committee as much as possible to help coordinate recruitment with the departments, to develop new recruiting initiatives, and for professional development activities for students.
Currently, appointments to the faculty committee are made by departments. It would be worthwhile to better understand the criteria that department chairs use when making those appointments. Because a strong connection with the recruiting process in each department is needed, strong representation from faculty who are engaged in departmental student recruitment and admissions is likely needed (e.g., graduate committee chair or director of graduate studies).

Having only these individuals on the committee may reduce the influence of the committee in the College of Engineering slightly as these individuals are often faculty who are earlier in their careers. Therefore, it would make sense to have either a subset of the faculty committee or a separate committee to serve as an advisory/executive committee. This advisory committee would be composed of full professors and other faculty who have a strong interest in furthering the diversity mission within the College of Engineering. The proposed committee would be composed of 4 to 6 individuals and the faculty director and GSSC. The chair of the College of Engineering Equity and Diversity committee might automatically be included as a member of the advisory committee to help coordinate with the Equity and Diversity Committee. Ideally, most of the departments in the College of Engineering would be represented in this smaller advisory committee, but several may not be. This advisory committee would have sufficient status in the College of Engineering to directly petition the College of Engineering administration on GERS related issues when needed.

4.1.2 Development of new recruitment pipelines

Throughout the review it was emphasized by almost all how important pipelines to various universities and colleges are for recruitment of students. The GERS program has established connections to several institutions as mentioned in the Self-Study and continues to pursue those efforts. To expand and improve the success of those efforts, it is suggested that the GERS program call upon the faculty committee, chairs of College of Engineering departments, along with the Equity and Diversity Committee in the College of Engineering.

Establishing connections with institutions serving underrepresented minorities will require further involvement of faculty within the College of Engineering. This could start by inviting faculty from these institutions to present their research at UW-Madison in department seminar series in an effort to make research connections between institutions. Visits by UW-Madison faculty to give research presentations at minority serving institutions would hopefully follow naturally. Where possible, additional collaborations between faculty and inclusion of these institutions should be pursued to establish strong connections. Additional efforts may be possible with some institutions such as establishing programs where undergraduates come to UW-Madison to complete a portion of their curriculum.

4.1.3 Other methods to connect faculty with GERS

Current faculty involvement with GERS is quite strong and natural due to the role of a large number of faculty as advisors for GERS students. To continue to grow this involvement and interaction, we suggest GERS pursue other avenues for faculty involvement and to leverage faculty experience. For example, GERS is often asked to provide letters of support for proposals such as NSF career proposals. GERS could suggest that faculty include GERS in their proposal by developing a programmatic element for GERS or collaborating with GERS to do outreach as part of the proposal. Additionally, leveraging the faculty committee to interact with the GERS students
to share their experience on a regular basis (once or twice a year) would be beneficial to both the faculty and the GERS students.

4.2 Comments on the Recommendations for the College of Engineering

4.2.1 Increased resources for GERS

The resources for the program provided by the College Engineering are substantial and the College has maintained a strong commitment to the GERS program. However, it was apparent in the review process that due to growth of the program overtime (i.e., the program started with an initial cohort of less than 10 students and now there are more than 60 students in the program) that more resources will be required to continue to grow the program moving into the future and to enable the program to evolve by trying new initiatives. In particular, it would be beneficial to provide continuous staff support that could help with making arrangements for monthly meetings, the OPPS conference, and for SURE (such as booking rooms, organizing food, and managing related expenses), along with other administrative tasks. This would help free up time for the GSSC to focus more efforts on recruitment, on professional development programming for the students, and to work on establishing connections with minority serving institutions.

4.2.2 Faculty director

The faculty director has an important role to play in helping to establish strategic connections with underrepresented minority serving institutions. To the committee’s knowledge, currently no support is given to the faculty director with regards to course buyout or summer salary support. To enable the faculty director to pursue these connections, the College might consider providing a month of flexible support that could either be used towards course buyout during the academic year or as one month of summer salary. This will allow the director to devote a greater fraction of their time to work on developing longer term strategic partnerships with other institutions for student recruitment.

It is also suggested that the faculty director be appointed for a fixed duration (~ 4 years) with a maximum of one renewal. This will ensure that new ideas and approaches are pursued.

4.3 Comments on the Recommendations for the Graduate School

4.3.1 Funding allocation stability

The Graduate School plays an important role in the success of the GRS programs. To effectively make long-term commitments to students (3 years for an MS or 5 years for a PhD), it is desirable that the Graduate School make long term commitments to the GRS programs. This could be done by the Graduate School providing some indication of the longer term funding trajectory to GRS programs on a regular basis (annually at the time of funding allocation). The timing of funding allocation letters is also important as the amount of the AOF allocation for the following year directly impacts the recruiting of students for the following fall semester. Ideally the funding allocation letters would be received by January 1st for the following year. This enables the GRS programs to have time to budget and plan for the recruitment process.

4.3.2 Stipend rate

It is the review committee’s understanding that recently the Graduate School implemented a fixed stipend rate for all GRS communities. Stipend rates tend to vary across disciplines and even
across departments in the College of Engineering. Therefore, it is recommended that GRS communities have the flexibility to set their own stipend rates with the Graduate School providing a minimum rate that the stipends cannot be below. This is important to ensure that GERS can offer competitive stipend rates relative to other institutions to ensure that we are not losing students in the recruitment process due to a low stipend rate.

4.3.3 Collaboration

The GERS program is a collaborative effort between the Graduate School and the College of Engineering with the Graduate School allocating AOF funds and the College of Engineering providing the administrative support and leadership to administer those funds. A collaboration implies two-way communication which is most effective with face-to-face meetings. We suggest that the appropriate leadership in the Graduate School meet with the GRS directors and GSSCs twice per a year (once per a semester, or more frequently if desired). These meetings would allow the Graduate School to communicate future funding directions and allow the GRS programs to communicate concerns that they have to the Graduate School leadership. These meetings can also be used to share experiences and best practices between GRS communities and to potentially promote collaboration between communities.

4.3.4 Measuring the impact of GERS

Mutual agreement on the methods used by GERS and the Graduate School might lead to better assessment of the impact of GERS. One area that is of interest is to document students involved with GERS who may not receive AOF funding. In the future, this may become increasingly important, as hopefully more students who are GERS eligible are recruited and involved with GERS but advisors may not choose to utilize the AOF funding or the student may receive enough other fellowship support (e.g., from NSF and other fellowships) that AOF funding is not required.

Appendix A

Specific questions to address provided by the Graduate School:

1. What is the type and frequency of activities?
2. Are activities focused on education, research, community building, and career development?
3. How do activities align with other related school/college efforts/priorities?
4. Is participation by students robust? Do different demographic groups have different experiences?
5. How are retention and time-to-degree for GRS participants compared to similar and other demographic groups?
6. How are data/evaluations used for the community’s improvement?
7. Are faculty and staff engaged? How has GRS led to a change in culture?
8. Is the funding allocation process effective and efficient?
9. Is staffing and resource allocation from school/college sufficient?
10. What recommendations do you have for future directions, programming, restructuring, or changes to funding allocation process?
Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background - people who as students, faculty, and staff serve Wisconsin and the world.

- UW-Madison Institutional Statement on Diversity

Review Committee

Prof. Caitilyn Allen (chair)
Plant Pathology and Microbiology Doctoral Training Program, CALS

Prof. Timothy Bugni
Pharmaceutical Sciences, School of Pharmacy

Prof. Charles Czuprynski
Pathobiological Sciences, School of Veterinary Medicine; Food Research Institute, CALS

Prof. Christina Hull
Biomolecular Chemistry, Medical Microbiology and Immunology, SMPH
Executive Summary: The SciMedGRS Program is mission-critical for UW-Madison. The program is excellent, delivering high-quality support and training that is valued by both students and their advisors. Since its inception in 2008, the number of underrepresented minority (URM) students in UW-Madison life and health sciences graduate programs has increased by 140%. SciMedGRS students have retention and time-to-degree statistics similar to those of other demographic groups nationally. SciMedGRS students have lower attrition rates than a national cohort of URM students in life and health science graduate programs. The effectiveness of the SciMedGRS program results from a combination of:

- deftly administered programming that responds to dynamic group needs;
- a strongly supportive peer community; and
- intensive individualized counseling and advising delivered when required.

However, this successful program is vulnerable because it has insufficient funding for staff and activity. In addition, UW-Madison life and health science graduate programs currently admit more highly qualified minority students than we can support with fellowships and programming. We therefore recommend that:

1. The Graduate School and participating schools/colleges increase the number of fellowships available to eligible incoming graduate students so this excellent program can help more URM students succeed.

2. Allocate additional funding for program activities. Large impacts can result from relatively modest investments here (e.g. for poster printing, food at events, and the occasional outside speaker).

3. Change the program coordinator’s position title to Associate Director to more accurately reflect this person’s actual responsibilities.

4. Allocate funding for at least one additional full-time program support and activities coordinator position.

5. The Faculty Director should have material support or teaching release in recognition of the time required to direct this large and active program. Material support could take the form of unrestricted research/travel funds, summer salary, or a semester of RA or PA support.

6. Given their shared disciplinary focus, the Graduate School should consider expanding the SciMedGRS program to include URM life science students from the College of Letters and Sciences Departments of Botany & Zoology (iBio).
Committee Review Process

The review committee read the Self-Study document and the committee charge from the Graduate School, and conducted open-ended interviews with:

- SciMedGRS Program Faculty Director Professor Sara Patterson and Coordinator Ms Abbey Thompson;
- CALS Academic Affairs Assistant Dean Thomas Browne, who is also a longstanding member of the SciMedGRS Advisory Board;
- A group of 21 SciMedGRS graduate students. These students represented a range of departmental and college affiliations, genders, demographic backgrounds, and seniority in their degree programs (from 1st-year to 6th-year); and,
- A group of six faculty mentors of SciMedGRS students, including three members of the SciMedGRS Advisory Board.

These interviews included factual questions concerning the history, frequency, and nature of the subjects’ involvement with the SciMedGRS Program, as well as more subjective questions about perceived quality and effectiveness of the program and its specific activities. The review committee requested some additional data and analysis, which Ms. Thompson promptly supplied. Following this data-gathering process, the committee met to discuss recommendations and prepare this document. All committee members endorse the contents of this review.

Overall Evaluation of the Strengths and Weaknesses of the SciMedGRS Community

SciMedGRS is a very successful program. It meets its goals of creating a community that measurably enhances student retention and success. The SciMedGRS Program frequently provides specific interventions that keep under-represented minority (URM) students in graduate school. The success of the program is especially notable given the relatively small URM applicant pool in the state and the low percentage of URM students at UW-Madison.

We are aware of various inaccuracies in the available campus data on time-to-degree. However, given those limitations, SciMedGRS participants have times-to-degree indistinguishable from those of UW-Madison doctoral recipients as a whole. With respect to retention, SciMedGRS students are more likely to remain in their degree programs than those of URM students nationally, as determined by the Council of Graduate Schools (CGS). At 71%, the seven-year Ph.D. completion rate for SciMedGRS participants is notably higher than that of URM graduate students as a whole, which is just 44% according to the CGS. Since 2008, 96% of SciMedGRS students earn a graduate degree. Over 90% complete the Ph.D. This 10% attrition rate contrasts favorably with the CGS-reported attrition rate of 31% for URM graduate students in the life and health sciences.

Moreover, this excellent program serves as a model both inside UW-Madison and beyond. On campus, SciMedGRS is a resource for many administrators, faculty and directors involved in recruiting, retaining and mentoring underrepresented students. The
presence of this robust, effective support program for URM students has strengthened proposals to NIH, NSF, and USDA for graduate training grants. Outside the university, SciMed leaders have received inquiries from peer institutions seeking best practices for retaining and supporting URM grad students. The peers include Brown U., Mt Sinai U., Oregon State U., U. Florida, U. Michigan, U. Nevada, U. North Carolina, U. Rochester, U. Washington, New Mexico State U., U. Puerto Rico - Mayagüez, U. Puerto Rico - Rio Piedras, U. Mississippi and U. New Mexico. In addition, funding agencies are aware of the program’s quality. Specifically, Dr. Sally O’Connor, NSF Program Officer in charge of research for undergraduates (REU) funding, has been a significant advocate of the SciMedGRS program.

Program weakness: The review committee is concerned that this valuable and demonstrably effective UW-Madison program is at risk because of insufficient funding for fellowships, staff, and program activities. Lack of sufficient AOF fellowships for qualified applicants creates a two-tiered haves and have-nots inequity among the URM graduate student population. Lack of program funding and insufficient personnel leaves the program vulnerable to staff burnout and departure.

It is the strong opinion of the review committee that the SciMedGRS program should not only continue but should grow to serve a larger proportion of the URM students in life and health science graduate degree programs.

Overview and Evaluation of Program Activities

The total number of SciMedGRS graduate students is around 145. This includes all currently enrolled students who were funded at some point by the program. Typically, students receive full year fellowships for their first year and partial funding for a year after they achieve dissertator status. Some URM students who are not funded by the program nevertheless choose to participate because they value the activities and peer support. The number of these unofficial participants varies but appears to be around five students/year.

The SciMedGRS program is actively involved in the entire arc of the graduate school process from recruiting URM graduate student applicants, orienting first-year students, and supporting continuing students throughout their degree programs. The program activities are varied. They focus on education, research, community building, and career development. In addition, the program collects data, conducts ongoing formative self-evaluation, and shares best practices with other units of similar mission on and off campus. It should be noted that the activities described below are those currently in practice (2016-18); SciMedGRS program activity structures have changed significantly over the years in response to student input and other kinds of formative self-evaluation.

Recruiting. SciMedGRS staff recruit URM applications to UW-Madison graduate programs by means of visits to selective minority-serving undergraduate institutions such as Howard and Morehouse Universities and by representing the university’s graduate programs in the life and health sciences at national conferences that serve minority students, such as SACNAS. The
recently developed Biological Sciences Opportunities (BOPS) weekends have been very successful, with ~40% of BOPS participants accepting admission offers from UW-Madison graduate programs. Student comments indicated that the existence of the SciMedGRS program made many of them more likely to accept admission to UW-Madison graduate programs.

First-year. The program’s incoming class size has been around 25 in the past 5 years. Arriving students receive material support in the form of a small welcome check, but more importantly, they are immediately integrated into a set of required activities designed to integrate them into their cohort, familiarize them with typical expectations for graduate students, and equip them with tools to succeed (e.g., effective time management, achieving work-life balance to reduce stress). All first-year students attend a whole-group monthly seminar typically focused on professional development. In addition, smaller groups meet monthly to discuss assigned readings around specific topics (e.g. overcoming imposter syndrome). These smaller groups are led by SciMedGRS dissertators who volunteer to act as mentors. The program director holds individual meetings with each student at least once a semester. This range of large and small-group activities coupled with one-on-one meetings appears to strike a good balance.

Quantity of programming. In all, first year students are required to attend about three hours’ worth of programming a month, with some additional optional events of a more social or informal nature. The review committee asked both students and faculty mentors if this level of participation was excessive (i.e., does it take much time from students’ course work and lab work or increase their stress level?). The unanimous reply was that it did not. Students saw these activities as a relief from their formal academic obligations and they felt that participating in SciMedGRS programming increased their overall efficacy by improving focus and reducing stress.

There is robust participation in the SciMedGRS program by graduate students and advising faculty are engaged. As mandated, all first-year students participate actively. After that, students self-select according to need and preference, with a substantial proportion remaining active in the group. After the first year, the number of required activities decreases, although a few major professional activities like the research poster sessions remain mandatory. Students said they valued the program’s additional optional programming, which include a wide array of social and practical support activities ranging from teaching each other how to cook typical dishes from their cultures to shopping trips for winter coats. SciMed students engage in diverse community outreach activities targeting URM students. Each year’s cohort meets for a group coffee or meal about once a semester; senior students value their connection to this ongoing peer social support network.

Although some more senior students become less engaged with the program, a substantial number continue to participate in at least a subset of the offered programming. Several senior students described first disengaging, then returning to the SciMedGRS program for support and advice at crisis points in their graduate program. “Abbey was there when I really needed her”; “I wouldn’t still be here if it wasn’t for SciMed”.

As happens in any graduate program, SciMedGRS students occasionally need to change advisors because of professional or personal differences or when an advisor leaves UW-
Madison. In those situations, the SciMedGRS program offers valuable targeted problem solving and transition management. Bridge fellowship funding for such eventualities is critically important.

*High-touch, high-stakes interventions.* One of the program’s most important elements is individual counseling to help participating students manage severe stressors that threaten their success in graduate school. Whether these crisis point problems stem from academic, family, or mental health issues, they are often exacerbated by the isolation and bias experiences particular to URM students. UW-Madison should recognize the time required to deliver and sustain this key safety net for our minority graduate students.

*Do different demographic groups have different experiences in the SciMedGRS program?* No, not in ways that affect key completion outcomes. Students described being differentially affected by demographic-specific experiences such as the Ferguson protests or Hurricane Maria, but they also expressed a strong sense that they were supported through these difficult events by all SciMedGRS students, not just those from their particular background. Multiple students stated, in several different contexts: “SciMed is my family at UW”; “We are a family”; “I know they have my back”.

*The SciMedGRS program has led to a change in culture at UW.* As a result of the SciMed community, more students from diverse backgrounds view UW as a school that will provide a supportive environment for them. The SciMedGRS program has grown substantially since its inception, which has directly increased diversity within the participating schools/colleges. That is leading to a virtuous cycle that is diversifying everyday cultures within research groups, departments, and colleges.

This diversity begins within the program itself, which builds connections within a mixed community of URM graduate students. The program uses a combination of formats including small group, medium group, and large group events that have different community building goals and outcomes. Participating students credit these events and activities directly for the strong sense of community that they feel here at UW. During our discussion with them, the students shared how the SciMedGRS program provided the support that helped them to adjust to the challenges of the UW-Madison environment ranging from lack of diversity, the unfamiliar cold weather, family problems, instances of outright bias, etc. The review committee repeatedly heard that the SciMedGRS community is valuable in part because it provides a safe, strong outside support network that is separate from students’ departments/graduate programs.

Students in years 1 and 2 identified this distinct safe community as a primary reason for deciding to come to UW for graduate school, whereas some of the older students said it was less of a deciding factor. While not quantitative in nature, these discussions suggested that the community building exercises have improved the sense of community and do increase the likelihood that URM recruits will attend UW-Madison for graduate training.

For their parts, advisors appreciate the program’s training opportunities for faculty, which are especially valued by junior faculty and those with limited experience mentoring students of color. Recent interactive faculty workshops on unconscious bias were singled out for praise.
Engagement of faculty as judges in the annual poster sessions helps faculty understand the large scale and high quality of SciMedGRS (“It was only when I served as a poster judge that I realized SciMed is much more than a bundle of scholarships.”)

The activities designed by the SciMed GRS align with related school and college priorities in a number of areas including:

- Increasing diversity at UW (see p. 11 for a reminder of the specific commitments to diversity by the College of Agricultural and Life Sciences, the School of Medicine and Public Health, the School of Pharmacy, and the School of Veterinary Medicine)

- Improving graduate student retention and degree completion; and

- Improving the health of overall community structure and culture within schools.

Increasing diversity at UW at the graduate level requires financial and other forms of support for URM students. The SciMedGRS program has led to a healthy and growing number of successful graduate students. The seven-year retention numbers in the self-study report showed a 71% completion rate, which is significantly higher than the CGS report (44% in STEM disciplines). Retention and completion of degree are important metrics for schools and colleges. As a result of this success, SciMedGRS has become nationally recognized and serves as a model for other GRS programs at UW and programs at other universities.

The SciMedGRS program also improves the culture within schools, colleges, and departments by providing a support network for URM students. That support network helps students achieve balance and remain productive throughout their graduate career. Longer-term data demonstrate that UW SciMedGRS alumni go on to successful careers in industry, NGOs, government agencies, and academia. This is the fundamental goal of graduate education.

**Evaluation of the AOF Allocation Process**

The AOF fellowships distributed by the SciMedGRS program provide invaluable flexibility to students and trainers. Availability of SciMedGRS fellowships affects the complex cost-benefit risk analysis used by faculty members when deciding whether to commit to the long-term relationship of mentoring a Ph.D. student.

The current allocation process evaluates candidates for AOF funding first on their academic credentials (GPA, GRE, research experiences, and letters of reference). The selection process then considers the relative distribution of fellowships across the numerous graduate programs that are part of SciMedGRS. Faculty familiar with the selection process believe that the academic credentials of AOF applicants are very strong. Despite the occasional perception that the quality of students selected for AOF support is lower than that of the general graduate student population, we do not find this to be the case. As is true for UW-Madison life and health sciences graduate programs as a whole, SciMedGRS applicant quality has increased over the
past 10 years. This means that some highly qualified URM graduate student applicants are not offered AOF Fellowships that might persuade them to come to Madison. This is regrettable.

The review committee was asked to consider if it is problematic that the SciMedGRS program does not have graduate program admitting authority. This does not seem to be a problem. Several of the many faculty support letters mention specifically that SciMedGRS interfaces efficiently and constructively with graduate program admissions committees. SciMedGRS is viewed as a valuable partner in the recruiting process.

Some participating graduate programs consistently attract relatively large numbers of qualified AOF candidates. These programs typically receive a greater number of awards, which is appropriate given these programs often have a larger student population. Although some might argue there should be an even greater allocation of AOF fellowships to these strong graduate programs, we believe that for the SciMedGRS program to function effectively it must support students across the spectrum of eligible graduate programs. It is our opinion that distribution of AOF fellowships among graduate programs should be taken into consideration when evaluating which qualified applicants should receive AOF support.

In summary, we believe the AOF selection process is effective and efficient. This is reflected in the 140% increase in URM students in SciMedGRS-affiliated graduate programs since its inception in 2008.

Use of Data and Evaluations for the Community’s Improvement

The SciMed GRS program has a culture of seeking feedback from participants both formally and informally. The data are quantitative (recruitment and retention rates), semi-quantitative (mid-year and end-of-year evaluations by students), and qualitative in nature (continuous verbal feedback to directors from faculty and students), and all types of information are used to improve the community on a continual basis.

Data are used to guide all aspects of the program, including selection of participants, nature and quality of activities and programming, and prioritization of time and resources. Data from participants are weighted heavily, as they should be to create and maintain community. Participants expressed great comfort in sharing both their general and programmatic concerns with Professor Patterson and Ms Thompson. They appear confident that their voices will be heard and responded to in a respectful and constructive manner. As such, the data gathered are high quality and useful.

When responding to student feedback, it is essential that the program assess emerging themes to prioritize areas for improvement. Student written and oral feedback emphasize the values of 1) support and community, 2) network of peers, 3) opportunities for professional development, and 4) personal support. In response to these recurring themes and other feedback, the program has implemented many improvements over the last decade and continues to do so on a regular basis.
Specifically, these input data helped guide:
- selection of seminars and activities on topics of greatest interest/importance to the current cohort of students;
- re-structuring committees and student interactions, such as moving from one-on-one mentoring model to a group peer-mentoring model;
- prioritizing outreach to underserved communities;
- formalizing many activities in response to data about student development and thereby creating a more structured first-year experience.

These ongoing changes were highlighted in the self-study report, and they were reiterated by the students and faculty whom we interviewed.

Overall, a great strength of the program is its ability to respond to data and feedback in a nimble and flexible manner. Professor Patterson and Ms Thompson work hard to understand and address the needs of the current cohort of students. They consider local, campus, and national events and climate to provide support to specific student groups as needed. This flexibility appears to be critical for maintaining and improving the community, and students were particularly laudatory of these ongoing efforts to evaluate climate and needs and respond accordingly.

**Ensuring Continued Effectiveness of the SciMedGRS Community**

*Overview:* The current level of staffing and resource allocation is not sufficient to carry out Community activities.

Since SciMedGRS was founded in 2008, the number of students served as well as the frequency and intensity of activities have increased significantly, but staff support has not. SciMedGRS students receive high-touch, individualized counseling and support during their first year of graduate study and again during the degree process as needed. This is an important reason the program works, but it demands staff time and energy.

*Stability and leadership succession* Although the current leadership of the program is strong and effective, it is time to develop a succession plan, particularly for the Faculty Director position. It would be useful to identify one or more enthusiastic persons whose background, training and commitment to supporting the scientific development of students from under-represented groups would make them an effective leader of the program. It is likely that recruitment of such a person to this position will also require investment of resources to enhance the future of the program and allow the new leader to put their research program at risk and devote significant time and effort to SciMedGRS.
Committee Recommendations

This program is mission-critical and deserves the University’s best possible level of support (see relevant specific mission statements on p. 11).

SciMedGRS cannot currently offer admission to all qualified URM students. The number and quality of URM graduate applicants and URM graduate students at UW has increased significantly since 2008, but we cannot offer financial support to all qualified students. We need to match our success in generating applications from URM students with commensurate fellowship and program support. If possible, the number of AOF fellowships should be increased.

The highest priority should be given to supporting and reinforcing the obviously successful SciMedGRS activities programming and individual student counseling. This program should receive enough resources to expand its support network to include all URM students interested in participating.

The review committee specifically recommends that:

1. The Graduate School and participating schools/colleges increase the number of fellowships available to eligible incoming graduate students so this excellent program can help more URM students succeed.

2. Allocate additional funding for program activities. Large impacts can result from relatively modest investments here (e.g. for poster printing, food at events, and the occasional outside speaker).

3. Change the program coordinator’s position title to Associate Director to more accurately reflect this person’s actual responsibilities.

4. Allocate funding for at least one additional full-time program support and activities coordinator position.

5. The Faculty Director should have material support or teaching release in recognition of the time required to direct this large and active program. Material support could take the form of unrestricted research/travel funds, summer salary, or a semester of RA or PA support.

6. Given their shared disciplinary focus, the Graduate School should consider expanding the SciMedGRS program to include URM life science students from the College of Letters and Sciences Departments of Botany & Zoology (iBio).
Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background - people who as students, faculty, and staff serve Wisconsin and the world.

-UW-Madison main webpage ([https://diversity.wisc.edu](https://diversity.wisc.edu))

*We seek to...* foster a culture of inclusion and respect among our patients, employees, learners, and the communities we serve. Through teaching, discovery and advocacy, we promote equity in access to quality health care.


Throughout all decision-making and day-to-day activities, the school values the importance of diversity in all of its manifestations. *We aim to* foster a climate of diversity and inclusivity that is infused with high ethical standards, professionalism, and compassion.


Diversity and inclusion are core values of the UW-Madison College of Agricultural and Life Sciences. We strive to make our CALS climate the best it can be, and we are committed to offering an excellent learning and work environment for all students, faculty and staff.

-College of Agricultural and Life Sciences (CALS) ([https://cals.wisc.edu/academics/undergraduate-students/diversity-community/](https://cals.wisc.edu/academics/undergraduate-students/diversity-community/))

The University of Wisconsin-Madison School of Pharmacy is dedicated to creating inclusive learning and working environments for all students, staff and faculty... Diversity is the collective mixture of human differences, including but not limited to race, ethnicity, culture, gender, gender identity, sexual orientation, age, social class, physical ability or attributes, religious or ethical values system, national origin, language, political beliefs, perspectives, skills, educational and life experiences.

-School of Pharmacy Diversity Statement ([https://pharmacy.wisc.edu/diversity/](https://pharmacy.wisc.edu/diversity/))