



WISELI's Celebrating Women in Science and Engineering Grant Program: Evaluation Report, 2016-2020

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Introduction

Since 2002, WISELI's Celebrating Women in Science and Engineering Grant Program has been supporting events aimed to advance the participation of women in science and engineering on the University of Wisconsin-Madison campus. The grant program allows funded applicants to invite prominent women scientists to campus for research talks and networking, implement workshops that support women in STEM or host speakers that address women's issues in STEM fields.

The program is funded by contributions from the College of Agricultural & Life Sciences, College of Engineering, College of Letters & Science, the Nelson Institute for Environmental Studies, School of Pharmacy, School of Medicine & Public Health, and School of Veterinary Medicine. According to WISELI's website:

“The program provides funds to departments, centers, or student groups wishing to enhance their own seminar schedules or to create new workshops, symposia, lecture series, or similar events in line with the goals of WISELI: to promote the participation and advancement of women in science and engineering. The maximum award is \$3,000, and the maximum time frame for the award is one academic year. WISELI strongly encourages applicants to seek matching/additional funds from relevant departments, the University Lectures committee, or other campus offices.”¹

The following process has been followed during the grant's implementation:

“WISELI staff members solicit applications for the grant program through the WISELI website, listserv, and e-mail announcements to deans and department chairs in the natural and physical sciences, and through word-of-mouth... Applications are vetted by a team of reviewers and evaluated on the basis of their congruence with WISELI's goals for this program. Recipients are required to submit evaluations of the effectiveness of their speaker in advancing WISELI's goals.”²

Recent updates to the grant process

WISELI has updated their call and Guidelines for Evaluating Celebrating Grant Applications to include a special interest in receiving applications for programs that propose inviting women from underrepresented groups in recent years. The call and evaluation guidelines note the particular interest in:

“applications from departments/organizations that have not previously received funds from this program, applications from STEMM disciplines in which women are underrepresented on the faculty, applications that promote

¹ <https://wiseli.wisc.edu/grants/celebrating/#application-process>

² Kerr, B., Winchell, J., Pribbenow, C. (2010) WISELI's Celebrating Women in Science & Engineering Grant Program: Evaluation Report, 2002-2009.

the participation and advancement of women in academic science and engineering, and applications for programs that propose inviting women from underrepresented groups.”³

WISELI has also updated the evaluation process by having awardees submit their evaluation forms through Qualtrics (see Appendix A for post-event evaluation form). Administrators of the program added a new component to the evaluation of the Celebrating grant program by surveying the invited speakers about potential benefits they received from participating in the program (see Appendix B for survey items). The COVID-19 pandemic impacted five of the seven events planned for 2020. WISELI allowed funded events to be held virtually, postponed, or canceled due to restrictions on travel and gatherings.

Methods

Evaluation questions

The evaluation questions from the 2010 report focused on three main issues: participant reactions, promotion of women in science and engineering, and best practices. Interview questions focused on determining if the grant increased visibility of women, decreased feelings of isolation for women in the department, and to determine if the program had other unintended effects (Kerr 2010).

For the 2016 report, interview and evaluation questions focused on what was the applicant’s motivation for participating in the grant program; why was it important to them? Did the event result in any long-term changes or impacts at an individual or department level? How can the program be improved to enhance the short or long-term impact it has on individuals or departments?⁴

Three evaluation questions guide the 2021 report. First, analyzing the financial data to determine, which departments/schools support the program and which departments/schools benefit from the program? Second, exploring the awardee evaluation feedback to analyze the commonalities and differences of the events in terms of: goals and outcomes, the diversity of types/size/structure of events and academic fields represented, representation of underrepresented women, and suggestions for improvement. Third, using the invited speaker survey data to determine to what extent do the invited speakers benefit from the experience?

Data sources

The following report summarizes data from three sources: financial records, recipient evaluations, and invited speaker surveys. The evaluator reviewed and summarized detailed financial data tracked by program leadership. Award recipients must submit evaluation forms that describe the event, attendance, perceived outcomes, and

³ <https://wiseli.wisc.edu/grants/celebrating/#what-kinds-of-programs-are-funded>

⁴ Fabian, C., Pribbenow, C. (2016) WISELI’s Celebrating Women in Science and Engineering Grant Program: Evaluation Report, 2010-2015.

satisfaction. The evaluator has systematically reviewed and summarized the forms for this report. Two evaluations are missing from 2016. Beginning in November 2019, WISELI started sending a Qualtrics survey to the visiting and local speakers invited to participate using the grant funds. Findings from this survey are included in the report.

Evaluation Findings from 2016-2020

Financial Analysis

Between 2016 and 2020, there were 51 applications submitted to the Celebrating Women in Science and Engineering grant program review committee, and 36 of those applications were selected for funding. The program granted \$41,988 to applicants, and awardees used a total of \$36,928 (Table 1).

Table 1. Counts and financial amounts of applications and awards

| Year | # of Applications | \$ Requested | # Granted | \$ Awarded | # Used | \$ Used |
|--------------|-------------------|------------------|-----------|-----------------|-----------|-----------------|
| 2016-2017 | 17 | 40,795 | 12 | \$10,500 | 11 | \$9,900 |
| 2017-2018 | 12 | 23,793 | 8 | \$10,488 | 6 | \$7,628 |
| 2018-2019 | 15 | 32,575 | 9 | \$10,500 | 9 | \$10,500 |
| 2019-2020 | 7 | 16,397 | 7 | \$10,500 | 7 | \$8,900* |
| Total | 51 | \$113,560 | 36 | \$41,988 | 33 | \$36,928 |

*5 of the 7 events planned for 2019-2020 had cancelled or delayed speakers due to the COVID-19 pandemic.

Throughout 2016-2020 the program was funded by contributions from the College of Agricultural & Life Sciences, College of Engineering, College of Letters & Science, the Nelson Institute for Environmental Studies, School of Pharmacy, School of Medicine & Public Health, and School of Veterinary Medicine (Table 2). Contributions from these schools and colleges amount to the \$10,500 awarded each year.

Table 2. 2016-2020 Donations and Awards

| College | Total Donation for 2016-2020 year period | # Application | # Awarded | Amount Granted |
|--|--|---------------|-----------|----------------|
| College of Engineering | \$8,000 | 12 | 9 | \$13,260 |
| College of Letters & Science | \$8,000 | 13 | 7 | \$7,650 |
| College of Agriculture and Life Sciences | \$10,000 | 7 | 5 | \$5,400 |

| College | Total Donation for 2016-2020 year period | # Application | # Awarded | Amount Granted |
|---|--|---------------|-----------|-----------------|
| School of Medicine and Public Health | \$8,000 | 5 | 5 | \$4,328 |
| Nelson Institute | \$2,000 | 2 | 1 | \$1,200 |
| Veterinary Medicine | \$4,000 | - | - | - |
| Pharmacy | \$2,000 | - | - | - |
| Cross-College Institutes / interdisciplinary student groups & training programs | n/a | 12 | 9 | \$10,150 |
| Total | \$42,000 | 51 | 36 | \$41,988 |

Nine grants were awarded to cross-college institutes or interdisciplinary student groups or interdisciplinary training programs. In the most recent four year period representatives from Vet Med and Pharmacy did not apply for any grant funds. However, Vet Med and Pharmacy representatives may have benefitted from some of the cross-college events (Table 3).

Table 3. Cross-college institutes or interdisciplinary student groups or interdisciplinary training programs.

| Year Awarded | Cross-college groups |
|--------------|--|
| 2016 | Science and Medicine Graduate Research Scholars (SciMed GRS), Black Graduate & Professional Association (BGPSA), Graduate Women in Science (GWIS), UW Postdoctoral Association |
| 2017 | Wisconsin Energy Institute |
| 2018 | Wisconsin Institutes of Discovery (WID), Black Graduate & Professional Association (BGPSA), Microbiology Doctoral Training Program |
| 2019 | Black Graduate & Professional Association (BGPSA), |

Applicants are encouraged to seek additional or matching funds from their department because the Celebrating grant is intended to support and encourage events that promote women in STEM, not be the only funding source for them. Many departments commit to contributing additional funds for specific events. According to information contained in the applications, departments committed to contributing an additional \$43,933 to support 27 of the 36 events.

Analysis of Awardees

Previous reports (Kerr 2010 and Fabian 2016) describe the traditional format of events as, "award recipients typically used the WISELI grant to bring prominent women scientists to the UW-Madison campus. Most speakers gave research

presentations, participated in question and answer sessions, and attended small-group luncheons or dinners." Appendix C contains a table with descriptive characteristics of each event organized by college. The table displays the year of the event, the applicant's role, the group or department the applicant and event are associated with, a description of the speakers and topics, and the amount awarded and used. The table demonstrates that many events followed the traditional format for the 2016-2020 award period but some included unique elements (Appendix C). Some events prioritized opportunities for students to network with the speakers or highlighted scientists whose work intersects with art or novel writing. Several awardees organized less traditional events to create diverse experiences. For example, some events included poster presentations, journal clubs, symposiums on innovative topics, or workshops to build career skills. A few intentionally featured women of color scientists, and one was explicit about the importance of making their event gender-inclusive of nonbinary students.

Goals and outcomes

The overarching goal of the Celebrating Women in Science and Engineering is to promote the advancement of women in STEM. Awardees articulate their own goals for their events. Descriptions of goals fell into three broad and overlapping categories: highlight diversity and increase representation, explore career options, develop skills to succeed in STEM careers, and build a STEM community.

Highlighting the diversity of career paths and scientific fields and increasing the representation of accomplishments of women and minorities in STEM were goals of many events. Increasing representation of successful racially minoritized women scientists in underrepresented STEM fields can help event participants find role models and contribute to their science identity. The Black Graduate & Professional Association used grant funds to conduct a workshop about overcoming stereotype threat and understanding imposter syndrome. Examples of goals from events related to diversity and representation are displayed below.

"The two major goals were to 1. Provide motivation, inspiration, and education for current women and minorities in physics 2. Inform members of the department and similar departments about the intersection of physics and art, as well as ways to support and inspire minorities to pursue and stay in physics."

"We hoped that our program would give students an opportunity to interact with successful and diverse women in science, and I think we achieved that goal. One student specifically mentioned during our panel that she appreciated the opportunity to see a woman of color who is successful in science."

The second most commonly described type of goal is supporting the pursuit of STEM careers. Examples of ways to achieve that goal are introducing students to new scientific career fields and different STEM careers in academia and industry and giving students tools to support their decision-making and ability to find mentors and

overcome challenges. One awardee explained their goal was to invite promising early-career scientists to recruit future faculty. A few other awardees said recruitment of faculty and students was one of their goals. Below are examples from events designed to support student careers in STEM.

“Students left with more knowledge of the field and upcoming research, but also with more knowledge of what to expect and how to prepare for a life as a female engineer. Professors and educators left with a better understanding of what students already know about the field and learned a few initiatives that can be brought back to their institutions to increase the quality and participation of female STEM education. Those in industry left with a better understanding of what initiatives work well with professionals and with more knowledge about the incoming engineers they should expect to recruit over the next few year.”

“Our expected outcomes were to expose students and faculty to a "third way" -- a faculty career at an undergraduate only institution, which we did. We also exposed students and faculty to the possible outcomes of a career focused on teaching, which include greater interdisciplinarity (art+engineering) and teaching innovation. Finally, we hoped the role model of a woman faculty member who is also a novelist would encourage students to pursue their artistic or other passions while also doing engineering.”

The third area of goals represents building community in STEM through internal and external networking. Purposes of increasing awareness of issues related to diversity and gender in STEM are to improve department climate and feelings of belonging locally and nationally. Examples from events designed to build community locally are displayed below.

“We expected this series of events to lay the groundwork for the formation of a strong community of women physicians from various subspecialties in which women are underrepresented. While community-building is an ongoing process, this series has created a strong foundation at UWSMPH.”

“The short-term goal is to continue to improve community across levels as a way to retain women. This goal is fairly difficult to measure. To date, we have received informal feedback from students that they feel positive about the role that WME has in their inclusion.”

Comments in the evaluation forms indicate that many awardees wish to address all of the overlapping issues related to gender, career, and community in STEM. They hope their event is a small step in a positive direction to achieving a goal that is far off and difficult to measure. Below is a quote to demonstrate this theme that is shared in several evaluations:

“Our main goal with the CBE Women’s Leadership & Professional Development Series was to ... highlight the importance of gender equality and cultural diversity. We also hoped that this series was a first step in improving overall department climate to motivate further discussions and administrative involvement towards the diversification of the faculty and graduate student bodies ... Based on the feedback from the students that attended our events, we believe we have succeeded in initiating a positive change in the department’s climate by offering graduate students opportunities that were directly aligned with their professional and personal interests. Additionally, the events fostered a sense of community among graduate students by providing a safe space for conversations about challenging topics. However, we do believe there is still a long way to go ... During the closeout event, we discussed some ways in which these types of events and conversations can be continued in the coming years.”

Best aspects and opportunities for improvement

Awardees had many different ways of describing the best aspects of their events. Many said the research talks were excellent because speakers were enthusiastic or the scientific topic was new and exciting. Participants say these excellent research talks and opportunities for students to interact with the speakers lead to students identifying new role models and considering career paths. It is appreciated when speakers show their personality and enthusiasm during research talks which is engaging for many, especially students. One-on-one time with the speakers was also listed as the best aspect.

Awardees who identified the panel presentations as the best aspect of the event, valued the diversity of the roles and presentation styles of the panelists. A few stated their appreciation for the advice given by panelists about careers and mentoring. Another thing discussed as the best aspect was the speakers’ openness and honesty about their experiences and challenges. Sharing personal experiences leaves an impression on others’ perceptions of diversity in STEM.

The most common response to what awardees would do differently if they could plan the event again is to increase attendance. Some participants say they could improve the reach and timing of their advertising to increase attendance. Participants are interested in growing attendance for particular audiences such as men, specific departments or research centers on and off-campus, or undergraduate students. One person said that students and visiting speakers never mix for informal events like meals in their department. This person is trying to overcome that by getting the students involved and invited to dinners with the speakers because they have seen students and faculty speakers mix much more freely in other departments and believe it is important.

Other responses about what awardees would do differently are varied. A few awardees said they would adjust the length of time of the panels or overall visits. Some said they would put more effort into guiding discussion topics during

roundtables or discussions. A few said they would change the venue to decrease interruptions or improve the acoustics. Two participants say they wish they would have recorded the presentation for future use. One said they would invite more women of color as the distinguished speakers if they do it again. Two participants discussed the gendered nature of the events, for example, "I would have sent out the sign-up sheet for speaking with her. The way that the Grad coordinator sent it out I think dissuaded many people from paying attention. That meant that the only people who signed up were women. Though I'm sure they all had a good time, I think that send a very pointed message about the department to a female speaker."

Invited Speaker Survey

Speakers funded by the grant were invited to complete a survey about their experience with the Celebrating Women in Science and Engineering Grant Program. Ten invited speakers completed the survey between November 2019 and April 2020. Nine of the ten respondents are from an academic institution, and one is from a corporation. Of the respondents, four are full professors, one assistant and one associate professor, one postdoctoral researcher, one research scientist. Two respondents selected "other." Participants were asked their level of agreement with statements inquiring about hospitality and welcoming they might have experienced. The majority of participants strongly agreed to feeling welcomed by their host and hosting department or organization. The majority thought they were treated with respect and appreciated for their scientific contributions. Two participants responded that attendance at their presentations did not meet expectations (Table 4). The issue of attendance not meeting expectations aligns with comments from post-event evaluations where organizers often say they wish they would have increased attendance by promoting the event more or changing other factors.

Table 4. Satisfaction with experience

| | 1 Disagree | 2 | 3 | 4 | 5 Agree | N/A or blank |
|---|---------------|---|---|---|------------|-----------------|
| I felt welcomed by my host | - | - | - | 1 | 9 | - |
| I felt welcomed by the department/organization | - | - | - | 1 | 9 | - |
| I felt welcomed by the campus community | - | - | - | 1 | 6 | 3 |
| I was treated with respect | - | - | - | - | 10 | - |
| I appreciated the opportunity to present at the University of Wisconsin-Madison | - | - | - | 1 | 9 | - |

| | 1 Disagree | 2 | 3 | 4 | 5 Agree | N/A or blank |
|---|---------------|---|---|---|------------|-----------------|
| People showed interest in my research | - | - | - | 1 | 8 | 1 |
| Attendance at my presentation met my expectations | - | 2 | 1 | 2 | 4 | 1 |
| People expressed appreciation for the contributions of my visit | - | - | - | 2 | 8 | - |
| My visit was not over scheduled or overwhelmingly busy | - | - | - | 1 | 9 | - |
| Overall, it was a positive experience | - | - | - | 1 | 8 | 1 |

Respondents were asked to what extent they anticipate benefiting in particular areas as an outcome from their visit and presentation at the University of Wisconsin-Madison. Anticipated benefits ranged broadly. Responses have been disaggregated by role to demonstrate differences between late career and early career or non-academic career respondents (Appendix D). In general, late career respondents were less likely to identify benefits such as “significant addition to CV,” “expand my professional network,” “create opportunities for collaboration,” and “enhance my national reputation.”

The list below is participants’ descriptions of other ways they have benefitted that are not listed in the survey:

- Allows me to practice content in front of an audience and receive feedback on how well it is received and informs changes I can make to make it better. This aids in professional development and my ability to deliver impactful messages in and outside of business.
- As a current graduate student, visiting campus and presenting my research work allowed me to meet faculty members doing research in areas related to mine. Interacting with the faculty members, and asking them questions, allowed me to experience what it would be like to work as a faculty member at UW-Madison.
- Understanding of the tenure track professor application process.
- I had an opportunity to design and deliver a non-science workshop on the Imposter Syndrome which was very useful
- I work at UW so some of the questions on survey are potentially less relevant compared to an outside speaker.

Participants provided varied responses when asked to what extent *overall* do they anticipate career benefits from the opportunity to visit and present their work at the University of Wisconsin-Madison as an invited speaker for the Celebrating Women in

Science in Engineering Grant program. No participants said "not at all," three responded "a little," one responded "a moderate amount," three said "a lot," and one said "a great deal."

Participants described anticipated benefits from networking while at UW such as future research collaborations. Some participants recognize the importance of improving their scientific communication skills as an outcome of their visit. The lists below are participants' descriptions of the most significant way their career will benefit.

- Community, collaborative energy.
- I networked with some really great people doing things that I think could enhance my future research plans.
- Honestly, if nothing else, it was highly beneficial for me to see that I am not alone in my passion for these topics and fuels me to continue pressing on in the space. Sincerely, if I managed to inspire at least one person, that ripple effect will be huge in driving impact and social progress.
- The most significant benefit will likely be having met faculty members with whom I may be able to collaborate in the future.
- Additionally, I learned some things about what people outside my field think are interesting aspects of my research and how to sell myself and my research goals in a clear and concise manner.
- It adds credibility to my name and expertise and probably increases my chances of being chosen to speak in public on the topic again.
- Interacting with students and contributing to their professional development is important for me.

Recipients of the Celebrating Women in Science and Engineering grants are expected to provide opportunities for visiting speakers to address issues of underrepresentation related to women in science and engineering (e.g., issues related to gender or how gender and other aspects of human identity such as race/ethnicity, sexual orientation, and/or disabilities intersect to influence the experiences and advancement of women scientists and engineers). Survey respondents provided insight into their experience with addressing aspects of underrepresentation. All agreed that they did address the issues and appreciated the opportunity to do so (Table 5). No participants said they resented the request to address the issues.

Table 5. Experience addressing issues of underrepresentation

| | 1 Disagree | 2 | 3 | 4 | 5 Agree |
|--|---------------|---|---|---|---------|
| I was able to address issues of underrepresentation relevant to women in science and engineering | - | - | - | 4 | 6 |

| | 1 Disagree | 2 | 3 | 4 | 5 Agree |
|---|---------------|---|---|---|---------|
| I <u>appreciated</u> the opportunity to address issues related to underrepresentation relevant to women in science and engineering | - | - | - | 1 | 9 |
| I <u>resented</u> the request to address issues related to underrepresentation relevant to women in science and engineering during my visit | 9 | 1 | - | - | - |

Respondents were asked to "please tell us more about why you appreciated or resented the opportunity or request to address issues of underrepresentation relevant to women in science and engineering." Their responses are below:

- Inclusivity and Equity are very important to me. They are often unspoken or underappreciated parts of what I do, and I appreciated the explicit callout of these issues and opportunity to speak with women faculty and grad students/postdocs about particularly relevant issues.
- Research has shown that diversity of thought brings about better solutions to the world's problems. This diversity should be in every university to increase the chances of the university/department's success in solving some of the biggest challenges the world faces today.
- It is an issue I care a lot about and it needs to be addressed.
- I'm highly passionate about the topic of Women in STEM. It was my honor to be invited to speak on a topic that will hopefully encourage more participation in the field. I believe more representation is needed so that we can have more women advocating for the topics that are relevant to our gender and sex. Our ideas can't be heard if we aren't in the room to voice them.
- I was given the opportunity to meet with students in the Women in Mechanical Engineering student group, and I greatly enjoyed speaking with them about my path so far in graduate school and engineering. I also felt comfortable speaking with faculty within the department, as well as the department chair, about the relatively low number of women faculty in the department and why that may be.
- Important topic and opportunity to present my work in the topic.

Respondents were allowed to make general comments. Several had positive things to say about their experience:

- It was good to be made aware of some of the different hiring techniques and processes that Madison uses.
- Great participation in the DiversiTEA and lunch, very well run by the hosts.
- I enjoyed my visit immensely and am glad the program exists!
- The department has a GREAT program to increase diversity and students life.

One respondent provided a suggestion for improvement:

- Generally very positive. I would have liked to have seen more follow-up after the event. Results of the survey sent to participants and feedback on possible improvement areas, or feedback that bolsters the current message. I put a great deal of effort in trying to provide a quality and impactful message and other than the verbal "good job" comments during the event, I have no real way to know how people felt about it.

Conclusion

Representatives from the College of Engineering, the College of Letters & Science, and cross-college organizations and interdisciplinary student groups apply for and receive the most funding from the Celebrating Women in Science and Engineering program. The events hosted by cross-college and interdisciplinary organizations may benefit members of schools/colleges that have not directly applied for or received grant funds. Goals and outcomes from the events were varied but included many overlapping topics such as the increased representation of women and racially underrepresented women in STEM, exposure to role models, opportunities for students to interact with faculty, explore career options, and skills for success in STEM. Comments from both awardees and invited speakers indicate attendance does not always meet expectations. Respondents of the invited speaker survey describe their experience at the University of Wisconsin-Madison as a Celebrating Women in Science and Engineering visiting speaker as positive and beneficial for their career.

Appendix A: Required Evaluation Form

Grant Recipient Evaluation Survey

Consent to Participate in Research of WISELI's Celebrating Women in Science and Engineering Grant

The Women in Science & Engineering Leadership Institute (WISELI) partners with the LEAD Center at the Wisconsin Center for Education Research to study their programs. WISELI's mission involves developing and conducting research on interventions that have the goal of increasing the participation of women and minorities in the STEM fields.

When you accepted funds from WISELI's Celebrating Women in Science and Engineering Grant Program, you agreed to complete a survey to evaluate your experience with the grant. **You are also now being asked to provide WISELI researchers with permission to use your survey responses as research** to be used in publishing papers or reports about the Celebrating Women in Science and Engineering Grant Program. **If you chose to not participate in the research study you are still required to complete the survey for evaluation purposes and your responses will not be used in any potential publications.** Using your responses for research is completely voluntary. Information about individual choice to participate or not will be kept in confidence by the study team.

The survey will be confidential, and your identity will not be known to anyone other than members of the study team. We may use direct quotes from your responses, but will not include any identifying information. To reduce the risk of a breach of confidentiality, your responses will be stored on a password-protected server and only members of the study team will have access to it.

Although there are no benefits of participation, participants in similar studies report that they value the opportunity to contribute to research on the effectiveness and impact of programs.

If you have questions about the overall research, individual components, or how the data will be used, please contact Dr. Christine Pribbenow, Director of the LEAD Center, Wisconsin Center for Education Research, cmpribbenow@wisc.edu, (608) 263-4256, or Dr. Eve Fine, Associate Scientist, WISELI, efine@wisc.edu, (608) 263-1196. Questions may also be addressed to WISELI Research Director Jennifer Sheridan, 3065 Mechanical Engineering Building, 1513 University Avenue, Madison, WI 53706, (608) 263-1445. If you have any questions about your rights as a

research subject, please call UW-Madison's Education and Social/Behavioral Science Institutional Review Board (IRB) at (608)263-2320.

- I agree to participate in the research activities** listed above and understand that individual quotes from my responses may be used in publications, but no identifying information will be used. (Continues to survey for research AND evaluation purposes).

- I do not agree** to allow my responses to the survey to be used for research. (Continues to survey for evaluation purposes only).

Page Break

Please complete the form below to provide documentation and feedback about your Celebrating Women in Science and Engineering grant funded event(s).

- Name of grant recipient: (1) _____

- Title of program (2) _____

- Name of speaker/s: (3) _____

- Date of event(s): (4) _____

Check each event held and report the number of attendees if applicable:

Lecture. Number of attendees: (1)

Brown Bag Presentation. Number of attendees: (2)

Dinner. Number of attendees: (3)

Reception. Number of attendees: (4)

Other: please describe event and number of attendees. (5)

Other: please describe event and number of attendees. (6)

Other: please describe event and number of attendees. (7)

Please provide a brief description of the program and all events held. Please include a description of the topics discussed at each event – including: topics relating to under representation of women in science the audience each event attracted (eg. faculty, postdocs, graduate students, etc.) how the speaker(s) interacted with those who attended the event(s):

Please describe your assessment of the reactions/responses of event attendees to the speaker and/or events held.

Q8 Please describe the ways in which the speaker and the events held helped to promote the participation and advancement of women in science and engineering.

Q9 Please describe the goals or outcomes you expected would result from your program and discuss the extent to which you believe they were achieved.

Q10 What were the best aspects of the speaker(s) visit?

Q11 If you had the chance to plan this program again, what would you do differently?

End of Block: Default Question Block

Appendix B: Invited Speaker Survey

Celebrating Grant: Invited Speaker Survey

Q2

Consent form text

Study of the Celebrating Women in Science Grant Consent Form

The Celebrating Women in Science Grant program is administered through the Women in Science and Engineering Leadership Institute (WISELI) at the University of Wisconsin-Madison. They conduct a study of this program annually to identify both direct and indirect outcomes as a consequence of receiving the grant.

You are being asked to respond to a survey as part of this study. It should take approximately 10 minutes to complete. The survey will be entirely confidential, and your identity will not be known to anyone other than the research staff. The researchers may publish papers or reports based on the results of this study, but these materials will present information in aggregate form and will contain no information that would identify specific participants. We may use direct quotes from your responses, but will not include any identifying information. To reduce the risk of a breach of confidentiality, your responses will be stored on a password-protected server and only members of the study team will have access to it.

Participation in this study is completely voluntary and you may stop participating at any time. Information about individual choice to participate or not will be kept in confidence by the researchers. Although there are no benefits of participation, participants may value the opportunity to contribute to research on the effectiveness and impact of the program.

If you have questions about the overall research, individual components, or how the data will be used, please contact Dr. Christine Pribbenow, Director of the LEAD Center, Wisconsin Center for Education Research, cmpribbenow@wisc.edu, (608) 263-4256, or Dr. Eve Fine, Associate Scientist, WISELI, efine@wisc.edu, (608) 263-1196. Questions may also be addressed to WISELI Research Director Jennifer Sheridan, 3065 Mechanical Engineering Building, 1513 University Avenue, Madison, WI 53706, (608) 263-1445. If you have any questions about your rights as a research subject, please call UW-Madison's Education and Social/Behavioral Science Institutional Review Board (IRB) at (608)263-2320.

I agree to participate in the research activities listed above and understand quotes from my responses may be used in publications but no identifying information will be used. (1)

Page Break

Q16

Please tell us about your employment category.

I work for/as:

- An academic institution (1)
 - A national scientific research institute/laboratory (e.g., NSF, NIH, NASA, Fermilab...) (2)
 - A corporation (3)
 - An independent consultant (4)
 - Another entity (please specify): (5)
-

Display This Question:

If Please tell us about your employment category. I work for/as: = An academic institution

Q17

Please tell us about your position at your academic institution.

I am a/an:

- Full professor (1)
 - Associate professor (2)
 - Assistant professor (3)
 - Post-doctoral scholar (4)
 - Research scientist (5)
 - Administrative leader (6)
 - Other position (please specify): (7)
-

Page Break

Q8 To what extent do you agree with the following statements about your experience as an invited speaker as part of the Celebrating Women in Science in Engineering Grant program at the University of Wisconsin-Madison?

| | Strongly disagree (1) | Somewhat disagree (2) | Neither agree nor disagree (3) | Somewhat agree (4) | Strongly agree (5) | N/A (6) |
|---|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| I felt welcomed by my host (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt welcomed by the department/organization (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt welcomed by the campus community (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I was treated with respect (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I appreciated the opportunity to present at the University of Wisconsin-Madison (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People showed interest in my research (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Attendance at my presentation met my expectations (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People expressed appreciation for the contributions of my visit (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My visit was not over scheduled or overwhelmingly busy (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overall, It was a positive experience (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q6 Below is a list of ways invited speakers can potentially benefit.

To what extent do you anticipate the following benefits will apply to outcomes from your visit and presentation at the University of Wisconsin-Madison?

| | Not at all (1) | A little (2) | A moderate amount (3) | A lot (4) | A great deal (5) | N/A (6) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Significant addition to CV (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Expand my professional network (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Create opportunities for collaboration (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Contribute to receiving tenure/promotions (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enhance my national reputation (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q7 Please describe any other ways your career has benefited from the experience if it is not listed above.

Q3 To what extent overall do you anticipate your career will benefit from the opportunity to visit and present your work at the University of Wisconsin-Madison

as an invited speaker for the Celebrating Women in Science in Engineering Grant program?

- Not at all (1)
- A little (2)
- A moderate amount (3)
- A lot (4)
- A great deal (5)

Display This Question:

If To what extent overall do you anticipate your career will benefit from the opportunity to visit a... = A little

Or To what extent overall do you anticipate your career will benefit from the opportunity to visit a... = A moderate amount

Or To what extent overall do you anticipate your career will benefit from the opportunity to visit a... = A lot

Or To what extent overall do you anticipate your career will benefit from the opportunity to visit a... = A great deal

Q4 Please describe the most significant way in which your career will benefit from this experience.

Display This Question:

If To what extent overall do you anticipate your career will benefit from the opportunity to visit a... = Not at all

Q5 Please explain why your visit will not provide any benefits.

Page Break _____

Q9 Recipients of Celebrating Women in Science and Engineering grants are expected to provide opportunities for visiting speakers to address issues of underrepresentation related to women in science and engineering (e.g., issues related to gender or how gender and other aspects of human identity such as race/ethnicity, sexual orientation, and/or disabilities intersect to influence the experiences and advancement of women scientists and engineers). To what extent do you agree with the following statements about addressing aspects of underrepresentation?

| | Strongly disagree (1) | Somewhat disagree (2) | Neither agree nor disagree (3) | Somewhat agree (4) | Strongly agree (5) | N/A (6) |
|---|--------------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| I was able to address issues of underrepresentation relevant to women in science and engineering (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I <u>appreciated</u> the opportunity to address issues related to underrepresentation relevant to women in science and engineering (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I <u>resented</u> the request to address issues related to underrepresentation relevant to women in science and engineering during my visit (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q10 Please tell us more about why you appreciated or resented the opportunity or request to address issues of underrepresentation relevant to women in science and engineering.

Q11 Is there anything you would like to tell us about your experience as a visiting speaker for the Celebrating Women in Science and Engineering Grant program that we have not asked you about yet? Please provide any further or final comments.

End of Block: Default Question Block

Appendix C: Event Descriptions

| Year/Role of Applicant | Sponsoring Dept/Group | # Speakers Funded by Award & Event Type/Topic | Awarded |
|---|--|--|--------------------|
| College of Agriculture and Life Sciences | | | |
| 2016 Postdoctoral Scholar | Animal Science | (1 Speaker) Writing/analysis workshop & dairy science lecture | \$1,200 |
| 2016 Graduate Student | Plant Science Graduate Student Council (PSGSC) | 4 Speaker Seminar Series: Looking to the Future: Research, Experiences, and Perspectives of Early Career Women in the Plant Sciences | \$800 |
| 2017 Faculty | Biochemistry Dept. | (1 Speaker) Life Sciences Career Day (non-academic career scientist/editor) | \$800 |
| 2017 Postdoctoral Scholar | UW-Madison Post Doctoral Assoc and Sci Med GRS | (1 Speaker) Diversity Faculty Panel: Navigating Challenges to Underrepresented Academics (5 speakers career talks) & networking w/ UW female panelists | \$600 |
| 2018 Graduate Student | Crow Institute for the Study of Evolution | (2 Speakers) Diversity in Evolutionary Biology Panel Discussion (science talks and discrimination in STEM panel) | \$2,000 |
| College of Engineering | | | |
| 2016 Faculty | Civil & Environmental Engineering | (1 Speaker) Environmental Engineering/Chemistry Technology Seminar | \$500 |
| 2016 Faculty | Mechanical Engineering | (2 Speakers) Women in Mechanical Engineering (2 events with industry researchers) | \$1,500 |
| 2017 Faculty | Mechanical Engineering | N/A | \$1,660 (\$0 used) |
| 2017 Graduate Student | Chemical and Biological Engineering | (3 Speakers) CBE Women's Leadership and Professional Development Series (workshops & webinars on career & diversity) for grad students | \$2,000 |

| Year/Role of Applicant | Sponsoring Dept/Group | # Speakers Funded by Award & Event Type/Topic | Awarded |
|---------------------------------|---|---|---------|
| 2017 Faculty | Materials Science and Engineering | (1 Speaker) Materials Leadership Lecture (science talk & career talk for grad students) | \$1,200 |
| 2018 Faculty | Mechanical Engineering | (1 industry 2 academic speakers, early/mid/late career) Distinguished Speakers for the Women in Mechanical Engineering Program | \$1,500 |
| 2019 Faculty | Biomedical Engineering/Mechanics Seminar | (1 Speaker) Engineer & Novelist (full prof at undergrad institution, invited a book club, highlight science and art) | \$1,300 |
| 2019 Undergraduate Student | Grainger Engineering Design Innovation Lab: Makerspace | (Multiple speakers) UW-Madison Women in Engineering Conference (lectures, panels, etc. academic & industry) | \$1,800 |
| 2019 Faculty | Mechanical Engineering | (3+ Speakers) External speaker, virtual alumnae panel, potential future faculty | \$1,800 |
| Letters & Science | | | |
| 2016 Faculty and Academic Staff | Earth Science Women's Network | (4 Speakers) ESWN Distinguished Speaker Series science & career talks | \$1,000 |
| 2016 Faculty and Academic Staff | Gender & Women's Studies (GWS) | (2+ Speakers) Feminist Biology Symposium | \$500 |
| 2018 Graduate Student | Physics Gender Minorities and Women in Physics (GMaWIP) and WOWSA | (2+ Speakers) Science & Career talks, networking | \$1,500 |
| 2018 Faculty | Center for Research on Gender & Women | (2+ Speakers) Wisconsin Symposium on Feminist Biology (lectures from Latinx and Israeli scientists) | \$500 |
| 2018 Faculty | Physics, GMaWIP | (3+ Speakers) Bringing Emerging Female Stars in Plasma Science to UW (early & mid-career) Effort to mix students with faculty/ speakers | \$1,000 |

| Year/Role of Applicant | Sponsoring Dept/Group | # Speakers Funded by Award & Event Type/Topic | Awarded |
|---|---|---|-----------------------|
| 2019 Faculty | Geoscience Dept. | (2+ Speakers) Voices of Geowomen: 3 science talks and 3 gender-inclusive DiversiTEA events) | \$2,000 |
| 2019 Graduate Student | Atmospheric & Oceanic Sciences | (1+ Speakers) Early career faculty science & career talks | \$1,150 |
| Nelson Institute | | | |
| 2017 Graduate Student | Wisconsin Ecology | N/A | \$1,200 (\$0 used) |
| School of Medicine and Public Health | | | |
| 2016 Academic Staff | Obstetrics & Gynecology | (1 Speaker) Women's Health Equity Research Lecture & Symposium (w/ scientific poster session) | \$500 |
| 2016 Faculty | Biomolecular Chemistry | N/A | \$600 (\$0 used) |
| 2017 Graduate Student | Cardiovascular Research Center Department of Medical Physics | (1+ Speaker) Reflecting Gender Diversity and Highlighting Issues in Medical Physics through Opportunities for Presentation, Conversation, and Collaboration | \$2,028 |
| 2018 Faculty | Anesthesiology, Surgery, and Radiology | (1+ Speaker) Women in Anesthesia, Surgery & Radiology Seminar Series and Journal Club | \$750 |
| 2019 Graduate Student | Alliance of Women Alzheimer's Researchers | Seminar Series Cancelled due to COVID-19 Pandemic | \$450 |
| Cross-college Groups | | | |
| 2016 Faculty | Sci Med GRS | (3 Speakers) Celebrating Minority Women in STEM 3 events with science talks and focus on networking with minority students | \$1,500 |
| 2016 Graduate Student | BGPSA | (3 Speakers) Empowerment of Black Women in STEM roundtable/workshop | \$1,400 |

| Year/Role of Applicant | Sponsoring Dept/Group | # Speakers Funded by Award & Event Type/Topic | Awarded |
|-------------------------------|--|--|----------------------|
| 2016 Graduate Student | Graduate Women in Science (GWIS) | (3 Speakers) Communication Skills Workshop for Graduate Women in Science career development | \$500 |
| 2016 Postdoctoral Scholar | UW Postdoctoral Association | (1+ Speakers) Women Faculty in Science & Engineering Panel (short career talk panel) and scientific symposium for postdoc presenters | \$500 |
| 2017 Academic Staff | Wisconsin Energy Institute | (5 Speaker Symposium) Policies and practices to engage women in STEM pipeline and careers | \$1,000 |
| 2018 Graduate Student | Wisconsin Institute of Discovery | (4 Speaker Series) OoLALA Research Showcase: Celebrating Women in Origins of Life, Artificial Life and Astrobiology, in person and virtual events and networking with students | \$1,500 |
| 2018 Graduate Student | BGPSA | (2 Speakers) Imposter Syndrome & Negotiation Skills Workshop Series focused on the Professional Advancement and Empowerment of Black Women in STEM | \$750 |
| 2018 Graduate Student | Microbiology Doctoral Training Program | (1 Speaker + panel) Achieving Gender Equality and Promoting Women in Science Career Lecture and Panel featuring women of color scientists | \$1,000 |
| 2019 Graduate Student | BGPSA | Lunch n' Learn with Keisha Lindsay (5 of 6 attendees are black grad student women) subsequent events cancelled due to the COVID-19 Pandemic. | \$2,000 (\$400 used) |

Appendix D: Potential Benefits For Speakers

| Significant addition to CV | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|--|--------------|---|---|---|----------------|--------------|
| Full & Associate Professors (n=5) | 2 | 2 | 1 | - | - | - |
| Assistant professor, Post-doc, research scientist, graduate research assistant, corporate employee (n=5) | - | 1 | 2 | 1 | 1 | - |

| Expand my professional network | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|--|--------------|---|---|---|----------------|--------------|
| Full & Associate Professors (n=5) | - | 3 | 1 | - | 1 | - |
| Assistant professor, Post-doc, research scientist, graduate research assistant, corporate employee (n=5) | - | 1 | - | 1 | 3 | - |

| Create opportunities for collaboration | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|--|--------------|---|---|---|----------------|--------------|
| Full & Associate Professors (n=5) | 1 | 2 | - | - | 1 | 1 |
| Assistant professor, Post-doc, research scientist, graduate research assistant, corporate employee (n=5) | - | - | 1 | 2 | 2 | - |

| Contribute to receiving tenure/promotions | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|---|--------------|---|---|---|----------------|--------------|
| Full & Associate Professors (n=5) | 3 | - | 2 | - | - | - |

| Contribute to receiving tenure/promotions | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|--|---------------------|----------|----------|----------|-----------------------|---------------------|
| Assistant professor, Post-doc, research scientist, graduate research assistant, corporate employee (n=5) | 3 | - | 1 | - | 1 | - |

| Enhance my national reputation | 1 Not at all | 2 | 3 | 4 | 5 A great deal | n/a or blank |
|--|---------------------|----------|----------|----------|-----------------------|---------------------|
| Full & Associate Professors (n=5) | 3 | - | 1 | - | - | 1 |
| Assistant professor, Post-doc, research scientist, graduate research assistant, corporate employee (n=5) | - | 2 | 2 | - | 1 | - |