

COMBATING SEXUAL HARASSMENT IN SCIENCE

HEARING BEFORE THE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY HOUSE OF REPRESENTATIVES

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C O N T E N T S

June 12, 2019

Hearing Charter	Page 2
-----------------------	-----------

Opening Statements

Statement by Representative Eddie Bernice Johnson, Chairwoman, Committee on Science, Space, and Technology, U.S. House of Representatives	8
Written statement	9
Statement by Representative Frank Lucas, Ranking Member, Committee on Science, Space, and Technology, U.S. House of Representatives	10
Written statement	11

Witnesses:

Mr. John Neumann, Managing Director, Science, Technology Assessment, and Analytics, U.S. Government Accountability Office	13
Oral Statement	16
Written Statement	16
Dr. Paula A. Johnson, President, Wellesley College	35
Oral Statement	37
Written Statement	37
Dr. Jean Morrison, University Provost and Chief Academic Officer, Boston University	46
Oral Statement	48
Written Statement	48
Dr. Philip Kass, Vice Provost for Academic Affairs and Professor of Analytic Epidemiology, University of California, Davis	54
Oral Statement	56
Written Statement	56
Discussion	61

Appendix I: Answers to Post-Hearing Questions

Mr. John Neumann, Managing Director, Science, Technology Assessment, and Analytics, U.S. Government Accountability Office	86
Dr. Paula A. Johnson, President, Wellesley College	90
Dr. Philip Kass, Vice Provost for Academic Affairs and Professor of Analytic Epidemiology, University of California, Davis	95

Appendix II: Additional Material for the Record

Statement submitted by Representative Eddie Bernice Johnson, Chairwoman, Committee on Science, Space, and Technology, U.S. House of Representatives	98
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COMBATING SEXUAL HARASSMENT IN SCIENCE

WEDNESDAY, JUNE 12, 2019

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Committee met, pursuant to notice, at 10 a.m., in room 2318 of the Rayburn House Office Building, Hon. Eddie Bernice Johnson [Chairwoman of the Committee] presiding.

**COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES**

HEARING CHARTER

Combating Sexual Harassment in Science

Wednesday, June 12, 2019
10:00 a.m.
2318 Rayburn House Office Building

PURPOSE

On Wednesday, June 12, 2019, the Committee on Science, Space, and Technology will hold a hearing to assess Federal science agency policies and procedures for addressing sexual harassment involving federally-funded STEM researchers and their trainees. The hearing will also explore lessons learned, enduring challenges, and future opportunities for preventing and mitigating the negative impact of sexual harassment in STEM studies and careers. The Committee will also receive testimony on H.R. 36, the *Combating Sexual Harassment in Science Act*.

WITNESSES

Mr. John Neumann, Managing Director; Science, Technology Assessment, and Analytics; U.S. Government Accountability Office

Paula A. Johnson, MD, MPH, President; Wellesley College

Dr. Jean Morrison, University Provost and Chief Academic Officer, Boston University

Dr. Philip Kass, Vice Provost for Academic Affairs; Professor of Analytic Epidemiology; University of California, Davis

KEY QUESTIONS

- What is the impact of sexual harassment on the recruitment, retention, and advancement of women in STEM studies and careers?
- What policies and procedures do Federal science agencies have in place to prevent and mitigate the impact of sexual harassment involving grant personnel and how might they be improved?
- To what degree do Federal science agencies and universities communicate about and coordinate their approaches to addressing sexual harassment involving grant personnel?
- What improvements could be made to the *Combating Sexual Harassment in Science Act*?

BACKGROUND

Scope of the Problem

The Nation at large is grappling with the impact of sexual harassment on the lives and careers of women. In recent years, high-profile accusations against prominent researchers have significantly increased awareness of the problem of sexual harassment in the scientific workplace. Last year, the National Academies of Sciences, Engineering, and Medicine (hereafter, Academies) issued a consensus report *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*¹ which examined the scope of the problem, contributing factors unique to the academic setting, and potential solutions.

Sexual harassment can include unwanted sexual attention, sexual coercion, and gender harassment, which involves behavior that “conveys hostility, objectification, exclusion, or second-class status about members of one gender.”²

According to a 2003 study cited by the Academies report, the academic workplace has the second highest rate of sexual harassment compared with the military, private sector, and government, with 58 percent of faculty and staff experiencing sexual harassment. Results from three different surveys reveal that 20-50 percent of students experience sexual harassment. Research presented in the report shows that women of color are more likely to hear sexist remarks and to feel unsafe at work because of their gender than white women, white men, and men of color.

The Academies outlined factors that contribute to the prevalence of sexual harassment in the sciences, including a *perceived tolerance* for inappropriate behavior; the *male-dominated environment*, particularly in positions of authority, in many science programs and departments; *hierarchical power structures* that concentrate power in a single person who has an outsized impact on a subordinate’s future success; a *culture of symbolic compliance with Title IX and Title VII* wherein institutions prioritize implementing policies that adhere to legal requirements rather than seeking to reduce or eliminate sexual harassment; and *uninformed leadership* unwilling to take bold and aggressive measures.

Dr. Paula Johnson, a panelist at the hearing, co-chaired the report and will present the study committee’s findings and recommendations.

Committee Action

Committee action on sexual harassment in the sciences began with October 26, 2017 letters³ from then-Chairman Smith and then-Ranking Member Johnson to Boston University regarding

¹ “Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine,” National Academies of Sciences, Engineering, and Medicine, 2018, accessed here:

<https://www.nap.edu/catalog/24994/sexual-harassment-of-women-climate-culture-and-consequences-in-academic>

² Ibid.

³ Letters to NSF, NASA, and Boston University regarding Professor harassment allegations, House Committee on Science, Space, and Technology, October 26, 2017, accessed here: <https://science.house.gov/news/letters/letters-to-nsf-nasa-and-boston-university-regarding-professor-harassment-allegations>

Title IX complaints filed against a prominent geology professor, Dr. David Marchant, who allegedly physically and verbally harassed multiple women during field work in Antarctica in the late 1990s.⁴ Dr. Marchant was a recipient of over \$5.4 million in awards from the National Science Foundation (NSF), National Oceanographic and Atmospheric Administration (NOAA), and the National Aeronautics and Space Administration (NASA). At the time of the Committee letter, Dr. Marchant was the Principal Investigator on one NASA grant and four NSF grants, totaling \$1 million. In April 2019, Dr. Marchant was fired from Boston University, following an appeal by Dr. Marchant of the University's November 2017 findings supporting the accusations against him.⁵ In early 2018, the Committee sent several more letters to additional universities and to funding agencies regarding other cases that had been published in the press.

Also in January 2018, in an effort to understand more about how agencies ensure that grant-receiving institutions are complying with Title IX, the Committee requested a GAO analysis of Federal science agencies' policies, resources, and intra- and inter-agency communication regarding reports of sexual harassment among grant recipients.⁶ The report will examine:

- how many investigations of sexual harassment or assault each agency has conducted since 2013 and their outcomes;
- the policies in place at each agency and the degree to which they vary across agencies;
- how agency policies and procedures are communicated to grantee institutions and principal investigators (PIs) as well as students and other researchers supported by Federal grants;
- mechanisms for students or researchers to report sexual harassment directly to a funding agency;
- the resources allocated to addressing sexual harassment and investigating Title IX complaints at each agency;
- policies for agencies to be notified of a finding or allegation of sexual harassment at a grantee institution and processes for communicating such incidents to other funding agencies; and
- recommendations for improvements to current policies and procedures.

The GAO witness, Mr. Neumann, will testify about the preliminary findings of the report, due to be published later this year.

⁴ Meredith Wadman, "Disturbing allegations of sexual harassment in Antarctica leveled at noted scientist," *Science Magazine*, October 6, 2017, accessed here: <https://www.sciencemag.org/news/2017/10/disturbing-allegations-sexual-harassment-antarctica-leveled-noted-scientist>

⁵ Meredith Wadman, "Boston University fires geologist found to have harassed women in Antarctica," *Science Magazine*, April 12, 2019, accessed here: <https://www.sciencemag.org/news/2019/04/boston-university-fires-geologist-who-sexually-harassed-women-antarctica>

⁶ Letter to Comptroller General Dodaro on sexual harassment claims within the scientific community, House Committee on Science, Space, and Technology, January 18, 2018, accessed here: https://science.house.gov/imo/media/doc/1.18.18%20Sexual%20Harassment%20Letter_EBJ_Smith.pdf

On February 27, 2018, the Subcommittee on Research and Technology held a hearing entitled *A Review of Sexual Harassment and Misconduct in Science*.⁷ The Subcommittee received testimony from experts on sexual harassment, a science society representative, and the head of NSF's Office of Diversity and Inclusion, who discussed the agency's change to their grant terms and conditions to require reporting any findings of sexual harassment involving PIs and co-PIs on NSF grants.⁸

H.R. 36 – Combating Sexual Harassment in Science Act

Chairwoman Johnson and Ranking Member Lucas introduced H.R. 36, the *Combating Sexual Harassment in Science Act*, in January 2019.⁹ The bill:

- directs NSF to support research into the causes and consequences of sexual harassment as well as interventions to mitigate the problem;
- directs NSF to convene a working group of statistical agencies for the purpose of developing questions on sexual harassment in STEM to be included on national surveys of students, faculty, and research institutions;
- directs NSF to fund the National Academies to issue a third edition of its report *On Being a Scientist: A Guide to Responsible Conduct in Research* to include content on sexual harassment, including professional standards of conduct, practices for fostering a climate intolerant of sexual harassment, and methods for identifying and addressing incidents of sexual harassment;
- establishes an Interagency Working Group of Federal science agencies to coordinate efforts to reduce the prevalence of sexual harassment involving grant personnel;
- directs the Office of Science and Technology Policy to develop a uniform set of policy guidelines for Federal science agencies; and
- directs NSF to fund the National Academies to conduct a follow-on to their 2018 consensus study to assess the state of research on sexual harassment and evaluate progress made with respect to implementing recommendations in the 2018 report.

A number of provisions in the bill come from recommendations in the 2018 Academies report. The report noted the lack of inter-agency communication regarding reports of sexual harassment involving grant personnel, and it stressed the importance of assessing the campus environment through climate surveys and additional research. Additionally, the bill uses the definition of “sexual harassment” presented in the report.

⁷ “A Review of Sexual Harassment and Misconduct in Science,” Committee on Science, Space, and Technology, February 27, 2018, accessed here: <https://science.house.gov/hearings/a-review-of-sexual-harassment-and-misconduct-in-science>

⁸ Testimony of Rhonda Davis before the Subcommittee on Research and Technology of the Committee on Science, Space, and Technology, February 27, 2018, accessed here: <https://science.house.gov/imo/media/doc/Davis%20Testimony%2C%20Bio.pdf>

⁹ H.R. 36, Combating Sexual Harassment in Science Act of 2019, accessed here: <https://science.house.gov/imo/media/doc/BILLS-116hr36ih.pdf>

Some language in the bill was drawn from NSF's changes to its terms and conditions. The agency announced on September 19, 2018, that it was updating the terms and conditions of awards to require reporting of any administrative action imposed on a PI or co-PI relating to a finding or investigation of sexual harassment. The changes went into effect on October 22, 2018.¹⁰

The bill has been endorsed by over two dozen outside groups, including the Association for Women in Science, The Association for Women in Mathematics, the Society of Women Engineers, and many of the largest scientific societies.¹¹

Scientific Society Action

Scientific societies are not legally required to enforce Title IX compliance, but they have an important role to play in shaping the culture within the scientific community, including promoting integrity, ethics, and responsible conduct. Each scientific discipline has its own scientific society and most scientists are members of at least one scientific society. Societies primarily provide a means for scientists to catch up with collaborators, network, exchange views, and present their latest results at large annual conferences. Scientific societies also publish peer-reviewed journals and bestow prestigious awards on the most pre-eminent scientists in their discipline. In many cases, a scientist's identity is tied more closely to their membership in a scientific society than to their affiliation with a university.

Many scientific societies have established codes of conduct that encompass the ideals and values of their profession. Some societies have recently updated their code of conduct to address the issue of sexual harassment.

- The American Astronomical Society (AAS) held a town hall on harassment in January 2016 and changed its code of conduct to include an anti-harassment policy in November 2016.¹² AAS also offers an online and over-the-phone reporting hotline for violations of its ethics and anti-harassment policies, called *Ethics Point*.¹³ AAS has endorsed H.R. 36.
- In August 2017, the American Geophysical Union (AGU) updated their ethics policy to broaden the definition of scientific and academic misconduct to include sexual harassment.¹⁴ AGU has also launched a *Safe AGU* campaign to provide resources to researchers and students including educational workshops, best practices, and professional advisors. AGU staff trained to respond to reports of sexual harassment can be clearly identified at annual conferences by the large green *Safe AGU* buttons they wear. AGU has endorsed H.R. 36.

¹⁰ "Term and Condition: Sexual Harassment, Other Forms of Harassment, or Sexual Assault," National Science Foundation Office of the Director, accessed here: https://www.nsf.gov/od/odi/term_and_condition.jsp

¹¹ "H.R. 36, The Combating Sexual Harassment in Science Act of 2019," Committee on Science, Space, and Technology, accessed here: <https://science.house.gov/bills/hr-36-the-combating-sexual-harassment-in-science-act-of-2019>

¹² "Anti-Harassment Policy for AAS & Division Meetings & Activities," American Astronomical Society, October 11, 2017, accessed here: <https://aas.org/policies/anti-harassment-policy-aas-division-meetings-activities>

¹³ EthicsPoint, American Astronomical Society, accessed here: <https://secure.ethicspoint.com/domain/media/en/gui/53297/index.html>

¹⁴ "AGU Scientific Integrity and Professional Ethics," American Geophysical Union, August 2017, accessed here: <https://ethics.agu.org/files/2013/03/Scientific-Integrity-and-Professional-Ethics.pdf>

- The American Association for the Advancement of Science (AAAS) is pioneering an effort to foster institutional change at colleges and universities regarding diversity and inclusion issues in STEM. AAAS has launched a program called *SEA Change*, short for STEM Equity Achievement. *SEA Change* uses a rating system to acknowledge and encourage systematic transformation efforts of participating institutions. Based on an assessment managed by AAAS, an institution is awarded a bronze, silver, or gold rating for their efforts to foster an inclusive and safe environment. Two Bronze Award recipients – Boston University and University of California Davis – are represented at this hearing by Dr. Jean Morrison and Dr. Phillip Kass, respectively. AAAS issued a letter of thanks in support of H.R. 36.¹⁵

A group of 106 scientific societies have joined together in a *Societies Consortium on Sexual Harassment in STEMM* with the goal of “providing customizable model policies (with embedded menus of options for flexibility), policy-law guidance, and practical tools to advance professional and ethical conduct, climate and culture in societies’ own operations and STEMM fields broadly, in support of the inclusion of all talent and excellence in the fields.”¹⁶

University Action

The Association of American Universities (AAU), an association of 62 leading research universities, has created a *Strategy for Sexual Harassment and Gender Discrimination Advisory Board*. The Board will identify challenges and share practices for addressing sexual harassment and gender discrimination on campuses. The Board held their first meeting last month and is in the process of scoping its work. Dr. Kass serves on this Board.

Following the publication of the 2018 Academies report on sexual harassment, the Academies launched an *Action Collaborative on Preventing Sexual Harassment in Higher Education*.¹⁷ The Collaborative brings together nearly 50 colleges, universities, and research institutions to discuss how to address sexual harassment in higher education. Its stated goals are to “develop promising practices, share communications strategies and resources, speak with a collective voice, and motivate real action to address and prevent sexual harassment across higher education.” Boston University is a member of the Action Collaborative.

Additionally, the Academies membership recently voted to amend its bylaws to allow the Academies Council to revoke membership from individuals found guilty of sexual harassment and other violations of its new code of conduct.¹⁸

¹⁵ Letter from Rush D. Holt, Chief Executive Officer of AAAS, to Representative Johnson, October 15, 2018, accessed here: <https://www.aaas.org/sites/default/files/2019-06/AAAS%20Letter%20-%20Harassment%20in%20STEM.pdf>

¹⁶ Societies Consortium on Sexual Harassment in STEMM, accessed here: <http://educationcounsel.com/societiesconsortium/>

¹⁷ NAS Action Collaborative on Preventing Sexual Harassment in Higher Education, accessed here: <http://sites.nationalacademies.org/sites/sexualharassmentcollaborative/index.htm>

¹⁸ “NAS Members Approve a Bylaw Amendment to Permit Rescinding Membership,” National Academy of Sciences, June 3, 2019, accessed here: http://www.nasonline.org/news-and-multimedia/news/NAS-bylaws-amendment-approved_060319.html

Chairwoman JOHNSON. The hearing will come to order. And without objection, the Chair is authorized to declare recess at any time.

Good morning, and welcome to today's hearing. We are here today to grapple with a very tough challenge facing the scientific community. Sexual harassment and gender hostility in the sciences is not new. Women have long endured demeaning comments, professional sabotage, unwelcome sexual advances, and other offensive and hostile behavior during the course of their studies and research. Many have had to abandon their careers altogether.

This is a moral issue, one that demands action to ensure women have equal access to their career of choice. It is also an issue of our economic and national security. The public investment in research needs to draw on all of the Nation's talent to return the best possible science for the benefit of society. To reach this goal, we must do more to ensure that all researchers have access to a safe work environment. It does no good to invest in programs to encourage more young girls to pursue STEM (science, technology, engineering, and mathematics) studies if they end up in a research environment that drives them away.

The historical tolerance of sexual harassment in the sciences is deeply rooted in institutional culture. The incentive structure within academia encourages a lack of transparency and accountability. It does less harm to an institution's reputation to allow a bad actor to quietly resign, and often move on to another institution, than to do a full investigation that may result in a potentially embarrassing public finding. Successful researchers also bring in large grants for their institution. The loss of these researchers, and the funding that comes with them, would be a big blow to some institutions.

The incentive to keep quiet is also strong for the victims. It is far easier for a student or an early career researcher to keep quiet about her experience than to face the very real prospect of retaliation from her harasser and the harasser's colleagues.

In science, students' career prospects rely entirely on research advisors. This strong disincentive is illustrated by the shockingly low rate of reporting by sexual harassment victims at universities. According to the landmark 2018 report by the National Academies of Science on this topic, only 6 percent of graduate students and faculty who are sexually harassed formally report their experience to their institution.

There should no longer be any debate about the prevalence of sexual harassment in STEM and its consequences for U.S. leadership in science and innovation. The only discussion now should be about the most effective ways to address it.

As the Science Committee, our responsibility lies in helping to ensure that Federal science agencies are doing their part. I commend the National Science Foundation (NSF) for starting this conversation among agencies and taking the first bold step with their new reporting requirement. I also commend the leadership of the scientific societies and the universities who have been trailblazers in taking concrete action and sending a clear message of zero tolerance.

Where you have led, others have followed. Earlier this year I was joined by my good friend, Ranking Member Lucas, in introducing H.R. 36, the *Combating Sexual Harassment in Science Act*. The bill draws upon recommendations made by the National Academies in their 2018 report. The bill also directs science agencies to follow NSF's lead by requiring their grantee institutions to report incidents of sexual harassment. Finally, the bill directs the Academies to conduct a follow-on study and to include a section on sexual harassment in its guide on responsible conduct research.

I look forward to hearing from our distinguished panelists on what more is needed to make progress on this issue, as well as any potential improvements to H.R. 36 that should be considered as we move forward.

[The prepared statement of Chairwoman Johnson follows:]

Good morning and welcome to today's hearing.

We are here today to grapple with a very tough challenge facing the scientific community. Sexual harassment and gender hostility in the sciences is not new. Women have long endured demeaning comments, professional sabotage, unwelcome sexual advances, and other offensive and hostile behavior during the course of their studies and research. Many have had to abandon their careers altogether.

This is a moral issue - one that demands action to ensure women have equal access to their career of choice. It is also an issue of our economic and national security. The public investment in research needs to draw on **all** of our nation's talent to return the best possible science for the benefit of society. To reach this goal, we must do more to ensure that all researchers have access to a safe work environment. It does no good to invest in programs to encourage more young girls to pursue STEM studies if they end up in a research environment that drives them away.

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The incentive to keep quiet is also strong for the victims. It is far easier for a student or early-career researcher to keep quiet about her experience than to face the very real prospect of retaliation from her harasser and the harasser's colleagues. In science, a student's career prospects rely entirely on her research advisor. This strong disincentive is illustrated by the shockingly low rate of reporting by sexual harassment victims at universities. According to the landmark 2018 report by the National Academies of Science on this topic, only 6 percent of graduate students and faculty who are sexually harassed formally report their experience to their institution.

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I look forward to hearing from our distinguished panelists on what more is needed to make progress on this issue, as well as any potential improvements to H.R. 36 that should be considered as we move forward.

Chairwoman JOHNSON. Before I recognize Mr. Lucas for his opening statement, I'd like to present for the record a statement from the American Society of Microbiology in support of H.R. 36. And without objection, I place the statement in the record.

The Chair now recognizes Mr. Lucas for his statement.

Mr. LUCAS. Thank you, Chairwoman Johnson, for holding today's hearing. And thank you to all of our distinguished panel participants for being here.

This hearing continues our Committee's important, bipartisan work to combat a culture of sexual harassment in science. Sexual harassment and gender discrimination are unacceptable in any situation, period. It's wrong, it's illegal, and it's imperative that we end it.

Sadly, combating sexual harassment and discrimination of women is an ongoing challenge in workplaces and classrooms everywhere. But the science community faces some unique challenges when it comes to these issues—both in terms of how we address harassment and in terms of the broader consequences of this problem.

Individuals affected by sexual harassment and discrimination can suffer long-term harm to their education and careers, as well as to their mental and physical well-being. While we can't lose sight of the individual cost, we must also think about the cost to our society and the economy as a whole.

Engaging more women in STEM studies and careers is essential to America's competitiveness. Women make up half the workforce but account for less than 25 percent of America's STEM workforce. We cannot afford to compete in the 21st-century economy with one hand tied behind our back.

I'm proud to join Chairwoman Johnson on the very first day of the 116th session of Congress in sponsoring H.R. 36, the *Combating Sexual Harassment in Science Act*. This bill has a foundation of more than a year of investigation, analysis, and recommendations to the Science Committee. That work began last year when the Science Committee held the first congressional hearing on this subject. We heard disturbing testimony about the pervasiveness of sexual harassment and gender discrimination in the sciences. Only 23 percent of women who earn STEM degrees stay in STEM careers. When that panel of experts was asked what was driving women out of STEM, every witness said the number one factor was the culture in science.

Since that hearing, a lot of work has been done to examine this problematic culture, determine the extent of the problem and to start identifying solutions. Last year, the Committee investigated how universities and Federal science agencies handle complaints and investigations of sexual harassment. We found inconsistency in how different agencies deal with the complaints. The Committee also found unclear policies and procedures that leave victims unsure of where to turn. And the Committee discovered many institutions are more interested in checking the boxes of compliance than doing the right thing.

Last year, the National Academies of Sciences, Engineering, and Medicine also issued a consensus report: "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences,

Engineering, and Medicine.” This report not only found a high prevalence of sexual harassment in science but outlined a number of contributing factors. These factors include a perceived tolerance for inappropriate behavior, the male-dominated environment in many science departments, power structures that concentrate power in a single person who has an outsized impact on a subordinate’s future success, a culture of symbolic compliance with legal requirements, and uninformed leadership. The report made a number of policy recommendations that we have included in our legislation.

Finally, the Committee commissioned a study from the Government Accountability Office, GAO, to analyze how Federal science agencies are ensuring compliance with sexual harassment and discrimination laws and managing reports of sexual harassment among grant recipients. We will hear the preliminary results of that study today, and I hope that the final report will make recommendations that drive changes within Federal agencies.

I commend the National Science Foundation for already making these changes. Under the leadership of Dr. France Córdova, NSF has made new policies to address sexual harassment and ensure the safety of all grant personnel supported by taxpayer funding. Our legislation proposes that these types of policies should be adopted by all Federal science agencies. No taxpayer dollars should be awarded to a researcher who engages in harassment and inappropriate behavior toward a colleague or a student.

Today’s hearing will raise some difficult questions, many without easy answers. How do we address these issues while also maintaining due process and guaranteeing the rights of the victim and the accused? How do we ensure that in mandating institutional reporting to Federal science agencies that we don’t unintentionally discourage women from reporting harassment in the first place?

I hope our witnesses and the other stakeholders can help us navigate these questions, help us improve H.R. 36 as it moves through the process.

Again, thank you, Chairwoman Johnson, for holding the hearing and working in a bipartisan and collaborative way to move this legislation forward.

And I yield back.

[The prepared statement of Mr. Lucas follows:]

Thank you Chairwoman Johnson for holding today’s hearing. And thank you to our distinguished panel of witnesses for being here.

This hearing continues our Committee’s important, bipartisan work to combat a culture of sexual harassment in science.

Sexual harassment and gender discrimination are unacceptable in any situation. Period. It is wrong, it is illegal, and it is imperative that we end it.

Sadly, combating sexual harassment and discrimination of women is an ongoing challenge in workplaces and classrooms everywhere. But the science community faces some unique challenges when it comes to these issues—both in terms of how we address harassment and in terms of the broader consequences of this problem.

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The Committee also found unclear policies and procedures that leave victims unsure of where to turn.

And the Committee discovered many institutions are more interested in checking the boxes of compliance, rather than doing the right thing.

Last year, the National Academies of Sciences, Engineering, and Medicine also issued a consensus report: "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine."

The report not only found a high prevalence of sexual harassment in science but outlined a number of contributing factors. These factors include a perceived tolerance for inappropriate behavior, the male-dominated environment in many science departments, power structures that concentrate power in a single person who has an outsized impact on a subordinate's future success, a culture of symbolic compliance with legal requirements, and uninformed leadership.

The report made a number of policy recommendations, that we have included in our legislation.

Finally, the Committee commissioned a study from the Government Accountability Office (GAO) to analyze how federal science agencies are ensuring compliance with sexual harassment and discrimination laws and managing reports of sexual harassment among grant recipients. We will hear the preliminary results of that study today, and I hope that the final report will make recommendations that drive changes within federal agencies.

I commend the National Science Foundation for already making changes. Under the leadership of Dr. France Cordova, NSF has set new policies to address sexual harassment and ensure the safety of all grant personnel supported by taxpayer funding. Our legislation proposes that these types of policies should be adopted by all federal science agencies.

No taxpayer dollars should be awarded to a researcher who engages in harassment and inappropriate behavior toward a colleague or a student.

Today's hearing will raise some difficult questions, many without easy answers.

How do we address these issues, while also maintaining due process and guaranteeing the rights of the victim and the accused? How do we ensure that in mandating institutional reporting to federal science agencies, we don't unintentionally discourage women from reporting harassment in the first place?

I hope our witnesses and other stakeholders can help us navigate these questions and help us improve H.R. 36 as it moves through the process. Again, thank you Chairwoman Johnson for holding this hearing and working in a bipartisan and collaborative way to move legislation forward. I yield back.

Chairwoman JOHNSON. Thank you very much, Mr. Lucas.

If there are Members who wish to submit additional opening statements, your statements will be added to the record at this point.

At this time, I'd like to introduce our witnesses. Our first witness, Mr. John Neumann. Mr. Neumann is the Managing Director of GAO's new Science, Technology Assessment, and Analytics team. Since 2013, he has led audits in management and oversight of Federal research and development programs, protection of intellectual properties, and Federal efforts to support innovation.

Mr. Neumann received his B.A. in political science from the State University of New York at Stony Brook and holds an MBA

from American University, as well as a J.D. from Georgetown University.

Our next witness, Dr. Paula Johnson. Dr. Johnson is President of Wellesley College and recently co-chaired the National Academies' report, "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine." Previously, Dr. Johnson was the Grace A. Young Family Professor of Medicine and Women's Health at Harvard Medical School and Professor of Epidemiology at the Harvard T.H. Chan School of Public Health. She received her B.A., M.D., and MPH degrees from Harvard.

After Dr. Johnson, Dr. Jean Morrison. Dr. Morrison is Provost and Chief Academic Officer at Boston University (BU). In this role, she provides the leadership for the University's overall academic, budgetary, and planning processes and oversight of its academic programs, research, global programs, enrollment, and student affairs. She also oversees the academic deans of the University's 17 schools and colleges.

Dr. Morrison received her Ph.D. from the University of Wisconsin at Madison, her M.S. from the University of Georgia, and her B.A. from Colgate University.

Our fourth witness is Dr. Philip Kass. Dr. Kass is Vice Provost for Academic Affairs at the University of California (UC), Davis. Prior to his appointment to this position, he was inaugural Associate Vice Provost for Faculty Equity and Inclusion. He now works on issues of importance to faculty success, including salary equity, enhancing an inclusive and safe academic environment, promoting work-life integration, and establishing a more diverse faculty.

He holds five degrees: Bachelor's, master's, and doctorate in veterinary medicine; master of science and statistics; and a Ph.D. in epidemiology.

As our witnesses should know, you will each have 5 minutes for your spoken testimony. Your written testimony will be included in the record for the hearing. When all of you have completed your spoken testimony, we will begin the questions. Each Member will have 5 minutes to question the panel. We will start with Mr. Neumann.

**TESTIMONY OF JOHN NEUMANN,
MANAGING DIRECTOR, SCIENCE, TECHNOLOGY ASSESSMENT,
AND ANALYTICS, U.S. GAO**

Mr. NEUMANN. Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee, thank you for the opportunity to be here today to discuss our ongoing work on preventing sexual harassment in science, technology, engineering, and mathematics, or STEM, research.

As you know, prominent members of the academic community who receive Federal research funding have been engaged in or accused of sexual harassment. Sexual harassment is not only degrading and illegal, studies show it has a negative effect on the ability of women to engage in research at the same level as men.

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex, including sexual harassment, in education programs and activities receiving Federal financial assist-

ance. Federal agencies provide billions of dollars in research grant funding to U.S. universities each year and are responsible for enforcing Title IX compliance at the universities they fund.

My statement today summarizes preliminary observations from our ongoing review of selected agency efforts to prevent sexual harassment by federally funded research grantees. I will focus on three areas: First, Federal agencies' availability of staff and budget to address sexual harassment complaints at the universities they fund for STEM research; second, Federal agency efforts to establish and communicate policies and procedures for university grantees on preventing sexual harassment; and third, steps Federal agencies have taken to promote information-sharing and collaboration among agencies to prevent sexual harassment.

We concentrated our review on five Federal agencies that together funded about 80 percent of STEM research from fiscal years 2015 to 2017. First, based on preliminary information, we observed that the availability of agency staff and budgets to address sexual harassment varies across the five agencies we looked at. These agencies investigate sexual harassment complaints from individuals at grantee universities through their civil rights or diversity offices, which also handle a wide range of efforts for the entire agency.

While agencies reported having the resources to handle the number of complaints they currently receive, several agencies noted challenges in ensuring adequate staffing levels or funding the expertise needed for the specialized nature of sexual harassment cases. Also, some agencies such as NSF have recently seen an increase in sexual harassment complaints and are considering the level of resources they will need to address them.

Second, based on the information we've gathered to date, the five agencies we're reviewing have established and communicated harassment prevention policies to university grantees, but they've done so to varying degrees. Specifically, three of the five agencies—NASA (National Aeronautics and Space Administration), NIH (National Institutes of Health), and NSF—have detailed policies and have issued multiple forms of guidance to grantees, including grantee policy manuals and best-practices documents. In contrast, the other two agencies—the Department of Energy and USDA (United States Department of Agriculture)—have issued general policy statements that do not specifically address grantees. We also learned that NSF recently modified the terms and conditions of grants to require grantees to report sexual harassment, and NASA is planning to implement the same requirement by the end of this year.

For the third area we are looking at based on our preliminary analysis, all five agencies have taken some steps to promote information-sharing and collaboration to help prevent sexual harassment at the universities they fund for research. Specifically, these agencies participate in the Department of Justice's Title IX STEM working group and discuss strategies for conducting joint compliance reviews at universities to leverage agency resources and also share best practices.

Despite this collaboration, all five agencies reported challenges in obtaining and sharing information on specific sexual harassment

cases. Agencies told us that they rarely learn about instances of sexual harassment from voluntary reporting from universities or other Federal agencies and instead rely on other sources such as news reports. This situation may change at NSF and NASA as they receive information from universities based on changes to their grant terms and conditions to require reporting of sexual harassment findings by grantees.

In closing, I note that we are continuing our ongoing work on this important topic, and we will determine whether additional Federal actions may be needed to prevent and address sexual harassment in federally funded research when we issue our final report later this year.

This concludes my prepared statement. I'm happy to respond to any questions you have.

[The prepared statement of Mr. Neumann follows:]



United States Government Accountability Office

Testimony
Before the Committee on Science,
Space, and Technology, House of
Representatives

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SEXUAL HARASSMENT IN STEM RESEARCH

Preliminary Observations on Policies for University Grantees and Information Sharing among Selected Agencies

Statement of John Neumann, Managing Director,
Science, Technology Assessment, and Analytics

GAO Highlights

Highlights of GAO-19-583T, a testimony before the Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

In fiscal year 2017, U.S. universities were awarded over \$15 billion in federal grant funding for STEM research. Federal agencies are required to enforce Title IX—a law prohibiting discrimination on the basis of sex in education programs receiving federal financial assistance—including at universities they fund. Sexual harassment is not only degrading and illegal, it has a negative effect on the ability of women to engage in research at the same level as men. GAO was asked to review federal efforts to help prevent sexual harassment by STEM research grantees.

This testimony is based on ongoing GAO work and provides preliminary observations on selected agencies: (1) availability of staff and budget to address sexual harassment complaints at universities they fund for STEM research; (2) efforts to establish and communicate policies and procedures for university grantees on preventing sexual harassment; and (3) steps taken to promote information sharing and collaboration among agencies to prevent sexual harassment at universities they fund for STEM research. GAO selected five federal agencies that together funded approximately 80 percent of STEM research from fiscal year 2015 through 2017, the latest data available. GAO reviewed these agencies' relevant regulations and documentation. GAO also interviewed agency officials as part of GAO's ongoing work.

What GAO Recommends

GAO is not making recommendations at this time but will consider making them, as appropriate, as it finalizes its work.

View GAO-19-583T. For more information, contact John Neumann at (202) 512-6868 or neumannj@gao.gov.

June 12, 2019

SEXUAL HARASSMENT IN STEM RESEARCH

Preliminary Observations on Policies for University Grantees and Information Sharing among Selected Agencies

What GAO Found

Based on preliminary information, the availability of agency staff and budget varies across the five selected agencies for efforts to address sexual harassment complaints at universities that use federal funds for Science, Technology, Engineering, and Mathematics (STEM) research. While four of the five agencies received three or fewer sexual harassment complaints from individuals at grantee universities from 2015 through 2019, changes to agency grantee policies or requirements could impact the number of complaints an agency receives and the amount of resources an agency needs to address them.

The five selected agencies have established and communicated sexual harassment prevention policies to university grantees to varying degrees. Agencies vary in how they have:

- **Provided detailed policies to grantees on sexual harassment.** Three agencies—the National Aeronautics and Space Administration (NASA), Health and Human Services (HHS) National Institutes of Health (NIH), and the National Science Foundation (NSF)—have communicated relatively detailed policies on sexual harassment by issuing multiple forms of guidance, such as grantee policy manuals and best practices documents. In contrast, the Department of Energy (DOE) and Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) communicated through more general documents, including policy statements that do not specifically address grantees.
- **Modified grant terms and conditions.** Two agencies are modifying the terms and conditions of grants to require grantees to report sexual harassment. NSF now requires grantees to increase transparency by reporting findings of sexual harassment to NSF, and NASA plans to implement the same requirement.
- **Evaluated effectiveness of grantee policies.** To date, the five agencies have not evaluated the effectiveness of their grantee policies and procedures to prevent sexual harassment, although two agencies are in the process of planning such evaluations.

Based on our preliminary analysis and interviews, all five selected agencies have taken some steps to promote information sharing and collaboration among agencies on the prevention of sexual harassment. But they also noted challenges to these efforts, such as the lack of information on sexual harassment cases. These challenges may increase the risk that universities or agencies are unknowingly funding researchers with a history of past sexual harassment findings. The White House's Office of Science and Technology Policy has taken steps to create an interagency working group by establishing a joint committee in May 2019 under the National Science and Technology Council with NIH, NSF, DOE, and the National Institute of Standards and Technology Directors. The committee plans to address challenges in the research environment, including the lack of uniform federal sexual harassment policies.

Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee:

I am pleased to be here to discuss our ongoing work on preventing sexual harassment in science, technology, engineering, and mathematics (STEM) research.

Prominent members of the academic community who receive federal STEM grant funding have engaged in or been accused of sexual harassment, according to a number of recent media reports. Sexual harassment is not only degrading and illegal, studies show it has a negative effect on the ability of women to engage in research at the same level as men. Title IX of the Education Amendments of 1972 is the primary federal law that prohibits discrimination on the basis of sex, including sexual harassment, in education programs and activities receiving any federal financial assistance.¹ In fiscal year 2017, U.S. universities were awarded over \$15 billion in federal grant funding for STEM research.² Federal agencies are responsible for enforcing Title IX compliance at the universities they fund.³

In 2015, we reported on six federal agencies' grant making to women in STEM research, including Title IX compliance.⁴ We found that the Departments of Defense and Health and Human Services (HHS) were not conducting required Title IX compliance reviews at universities they funded and recommended that the two agencies periodically do so.⁵ We also found that the Department of Justice (DOJ) had no formal information-sharing process for federal agencies to exchange best

¹Pub. L. No. 92-318, tit. IX, § 901, 86 Stat. 235, 373, codified at 20 U.S.C. §§ 1681-1688. Sexual harassment can qualify as discrimination under Title IX if, among other things, the harassment is "so severe, pervasive, and objectively offensive that it can be said to deprive the victims of access to the educational opportunities or benefits provided." *Davis v. Monroe County Board of Education*, 526 U.S. 629 (1999).

²For ease of reporting, we use the term "universities" to refer to all institutions of higher education, and we also use the term "grantees" to refer to recipients of federal assistance, including university grantees.

³20 U.S.C. § 1682.

⁴GAO, *Women in STEM Research: Better Data and Information Sharing Could Improve Oversight of Federal Grant-making and Title IX Compliance*, GAO-16-14 (Washington, D.C.: Dec. 3, 2015).

⁵A Title IX compliance review is an agency's assessment of whether a grantee is complying with the law.

practices on Title IX compliance activities, and we recommended that it establish such a process. In 2016, DOJ established the STEM Title IX working group, which meets quarterly with the six major STEM grant-making federal agencies.⁶

My statement today addresses preliminary observations from our ongoing work and describes: (1) the availability of staff and budget at selected federal agencies to address sexual harassment complaints at universities they fund for STEM research, (2) efforts at these selected federal agencies to establish and communicate policies and procedures for university grantees on preventing sexual harassment, and (3) steps these selected federal agencies have taken to promote information sharing and collaboration among agencies to prevent sexual harassment at universities they fund for STEM research.

For all three objectives, we selected five federal research grant-making agencies—three agencies from cabinet-level departments and two independent agencies—that together funded approximately 80 percent of the federal government's basic and applied extramural research in STEM fields from fiscal year 2015 through 2017.⁷ The five federal agencies are:

- Department of Agriculture, including the National Institute of Food and Agriculture (USDA-NIFA);
- Department of Energy (DOE);
- National Aeronautics and Space Administration (NASA), an independent agency;
- National Institutes of Health (NIH), an agency of HHS; and
- National Science Foundation (NSF), an independent agency.

⁶GAO-16-14. The DOJ Title IX STEM working group was formed in February 2016 to facilitate information sharing across federal STEM grant-making agencies in response to our December 2015 recommendation. The six major STEM grant-making federal agencies are the Department of Defense, Department of Energy, Health and Human Services, National Institutes of Health, National Aeronautics and Space Administration, National Science Foundation, and Department of Agriculture including the National Institute of Food and Agriculture.

⁷For purposes of this testimony, we define independent agencies as those listed on USA.gov. <https://www.usa.gov/independent-agencies> (last visited May 30, 2019). In addition, fiscal year 2017 data are the latest available for the federal government's basic and applied research funding in STEM fields.

As part of our ongoing work, we reviewed relevant laws, regulations, and documentation (e.g. selected federal agencies' policies and procedures on preventing sexual harassment, grant requirements as outlined in terms and conditions, and interagency meeting agendas).⁸ We also reviewed prior GAO work and interviewed officials from selected federal agencies. Our preliminary observations will not be generalizable to all agencies that provide federal STEM grants. We shared the information in this statement with DOE, HHS, NASA, NSF, and USDA, and these agencies provided technical comments that we incorporated, as appropriate. We will complete our ongoing work that will include examining selected agencies' efforts to conduct Title IX compliance reviews and to address sexual harassment complaints. We plan to complete this work by the end of 2019.

We are conducting the work upon which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Selected agencies' funding for university STEM research. The five federal agencies included in our preliminary analysis provide billions of dollars annually for university research in STEM fields, with NIH providing more than the other four agencies combined. Table 1 details the total amount of research funding provided to universities by each agency in fiscal year 2017.

⁸For ease of reporting, we use the term "agencies," even in cases where the agency is relying on a department-implemented policy or process. We are focusing on the core STEM fields—excluding social science and healthcare fields—and on university graduate, postgraduate and full-professor-level research in STEM fields.

Table 1: Fiscal Year 2017 Federal Obligations from Five Agencies for Select Areas of STEM Basic Research Performed at Universities and Colleges (amount in dollars)

Agency	Amount ^a
NIH	\$8.3 billion
NSF	\$3.6 billion
DOE	\$647 million
NASA	\$580 million
USDA	\$289 million
NIFA	\$242 million

Source: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, Fiscal Year 2017.

^aThese funding figures are drawn from the 2017 NSF Survey of Federal Funds for Research and Development and therefore may differ from agency figures reported elsewhere. Fiscal year 2017 figures include only basic research obligations in fields that fall within the scope of our review: computer sciences and mathematics, engineering, environmental sciences, life sciences, physical sciences, and other sciences not elsewhere classified, such as multidisciplinary or interdisciplinary projects that cannot be classified within one of these broad science fields. These may differ from total agency research funding obligations for fiscal year 2017. For example, NSF's total STEM research obligations include funding for additional STEM fields such as psychology and social sciences.

Sexual harassment. As defined in the National Academies of Sciences, Engineering, and Medicine (NASEM) 2018 report, sexual harassment encompasses three types of behavior:⁹

- **Sexual coercion:** Favorable treatment conditioned on sexual activity.
- **Unwanted sexual attention:** Verbal or physical unwelcome sexual advances, which can include assault.
- **Gender harassment:** Sexist hostility and crude behavior.¹⁰

The most common form of sexual harassment is gender harassment, which generally involves hostility, exclusion, or other discrimination based on a person's gender. The 2018 report found that sexual harassment in

⁹Sexual harassment is not a defined term in Title IX. In some circumstances sexual harassment can qualify as discrimination under Title IX if, among other things, the harassment is "so severe, pervasive, and objectively offensive that it can be said to deprive the victims of access to the educational opportunities or benefits provided." *Davis v. Monroe County Board of Education*, 526 U.S. 629 (1999).

¹⁰We adopt this definition for purposes of this testimony. National Academies of Sciences, Engineering, and Medicine. *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. (Washington, DC: The National Academies Press, 2018).

academia is significantly more common among female students in engineering and medical majors than in non-STEM fields. According to the report, at least five factors create the conditions under which sexual harassment is likely to occur in STEM programs and departments in academia:

- Perceived tolerance for sexual harassment
- Environments where men outnumber women and leadership is male dominated
- Environments in which the power structure of an organization is hierarchical with strong dependencies on those at higher levels or in which people are geographically isolated
- Increased focus on symbolic compliance with Title IX
- Uninformed leadership on campus

Title IX of the Education Amendments of 1972. Title IX of the Education Amendments of 1972 is the primary federal law that addresses sex discrimination in all federally funded grant programs at educational institutions.¹¹ Under Title IX, federal agencies that award grants to educational institutions have enforcement responsibilities to ensure such institutions do not discriminate based on sex.¹² Enforcement responsibilities include issuing regulations, conducting periodic compliance reviews of funding recipients, and investigating timely written complaints of sex discrimination against recipients.¹³ DOJ and the

¹¹In 2002, Title IX of the Education Amendments of 1972 was renamed the Patsy Takemoto Mink Equal Opportunity in Education Act, Pub. L. No. 107-255, 116 Stat. 1734 (2002). For purposes of this report, we refer to this Act as Title IX.

¹²20 U.S.C. § 1682.

¹³20 U.S.C. § 1682. Education and HHS's Title IX regulations generally derive from the Department of Health, Education, and Welfare (HEW) Title IX regulations published in 1975 (40 Fed. Reg. 24,137, June 4, 1975). In 1979 the Department of Education was created and HEW was renamed the Department of Health and Human Services. Education's Title IX regulations are now codified at 34 C.F.R. Part 106 and HHS's regulations are codified at 45 C.F.R. Part 86. USDA published regulations in 1979 (44 Fed. Reg. 21,610, April 11, 1979, codified at 7 C.F.R. Part 15a) and DOE published regulations in 1980 (45 Fed. Reg. 40,514, June 13, 1980, codified at 10 C.F.R. Part 1042). A Title IX Final Common Rule was published in 2000 to implement regulations for 21 agencies, including NASA and NSF (65 Fed. Reg. 52,858, Aug. 30, 2000). In 2001, DOE replaced its regulations with the provisions of the Common Rule (66 Fed. Reg. 4630, Jan. 18, 2001). Title IX regulations for all of the agencies in our review are substantially the same. For purposes of this report any reference to a regulatory requirement is applicable to all five agencies we reviewed.

Department of Education have other responsibilities for administering Title IX. DOJ is designated by Executive Order No. 12250 to coordinate Title IX compliance across federal agencies, including information sharing.¹⁴

Federal grant awards and grant life cycle. In general, federal agencies administer grants through a common administrative life cycle: pre-award, award, implementation, and closeout. During the pre-award stage, most of the agencies we reviewed require grantees to submit an “assurance of compliance” form as part of their grant application to attest compliance with anti-discrimination laws, including Title IX.¹⁵ For the award stage, the federal agency awarding the grant enters into an agreement with grantees stipulating the terms and conditions for the use of grant funds. During the implementation stage, among other things, the federal agency manages and oversees the grant, including any Title IX compliance reviews.¹⁶ A Title IX compliance review is an agency’s assessment of whether a grantee is complying with the law. Federal agencies may conduct these reviews onsite at an institution (grantee) or via a desk audit. In the closeout stage, the awarding federal agency and grantee bring the grant to its conclusion, once all the work associated with the grant agreement is complete, the grant end date has arrived, or both.

Among the federal agencies we reviewed, different offices handle various aspects of grant compliance. Generally, each agency’s civil rights or diversity office conducts Title IX compliance reviews, develops policies and procedures for grantees, and investigates allegations and complaints involving university researchers supported by their agency’s federal STEM grants. The office that awards grants generally creates and modifies grant terms and conditions.

¹⁴Exec. Order No. 12250, 45 Fed. Reg. 72995 (Nov. 2, 1980).

¹⁵According to HHS and NIH officials, the department is responsible for requiring the grantee to submit an assurance of compliance form to NIH.

¹⁶According to HHS and NIH officials, NIH does not oversee any Title IX compliance reviews since this is the responsibility of HHS.

Resources to Address Sexual Harassment Complaints Vary

Our preliminary analysis indicates that the selected federal agencies' staff and budget available to address sexual harassment complaints from individuals at grantee universities varies according to the duties and funding for the primary agency offices responsible for addressing the complaints, as well as with the number of complaints received from grantees.

Duties and funding for offices responsible for addressing complaints. Our preliminary analysis shows that all five agencies (DOE, HHS, NASA, NSF, and USDA-NIFA) primarily address sexual harassment complaints through their civil rights or diversity offices. However, these offices are responsible for more than just addressing complaints and preventing sexual harassment at grantee universities; they also oversee a number of civil rights, diversity and inclusion efforts for the entire agency. Moreover, most of these offices also address internal employee sexual harassment complaints and other discrimination issues. For example, HHS officials described how staff in their Office for Civil Rights at headquarters and eight regional offices conduct compliance reviews and investigate all complaints alleging sexual harassment and other forms of discrimination against recipients of HHS federal financial assistance, including recipients of NIH grants. USDA-NIFA said their civil rights and diversity office staff are not always available when sexual harassment issues arise because they have other duties and also cover other discrimination issues. In addition, some agencies noted challenges in ensuring adequate staffing levels. For example, USDA-NIFA officials cited the need to fill vacant positions in their civil rights office, and NSF officials described a need to find staff with expertise in this complicated, specialized area.¹⁷

All five agencies fund their civil rights and diversity offices separately from their STEM research funding, and there is little relationship between the two budgets. For more information on selected agencies' civil rights and

¹⁷NASA, NSF, and USDA-NIFA described actions they are planning to take to address these staffing and workload challenges. For example, NASA is exploring the use of detailees and increased interagency coordination to supplement its resources, in part because the three full-time equivalents it has assigned to handle grantee sexual harassment complaints spend no more than 30 percent of their time on grantee compliance with civil rights (including sexual harassment), according to officials. USDA-NIFA officials also described using detailees to help address staff vacancies, and while they indicated that staffing is sufficient for what is reported and for proactive prevention, they plan to hire staff to fill vacant positions by the end of calendar year 2019. NSF officials said that they have hired two temporary fellows to help while they assess their long-term needs.

diversity office staffing and budgets planned for fiscal year 2019, see table 2.

Table 2: Selected Agencies' Planned Staff and Budget for Civil Rights and Diversity Offices, Fiscal Year 2019

Agency/Name of Civil Rights or Diversity Office	Number of Staff	Budget (annual)
DOE/Office of Economic Impact and Diversity (includes Office of Civil Rights and Diversity) ^a	37	\$10 million
HHS/Office for Civil Rights ^b	155	\$38 million
NASA/ Office of Diversity and Equal Opportunity	16	\$4 million ^c
NSF/Office of Diversity and Inclusion	10	\$1.5 million ^d
USDA/Office of Civil Rights	130	\$28 million

Source: GAO analysis of agency budget information, fiscal year 2019.

^aDOE does not provide details on staff or funding specifically for its Office of Civil Rights and Diversity in its agency budget information. Instead, it provides staff and funding information for the Office of Economic Impact and Diversity, which includes DOE's Office of Civil Rights.

^bHHS's Office for Civil Rights addresses civil rights compliance involving entities that receive federal financial assistance from any of HHS's component agencies, including NIH.

^cNASA's fiscal year 2019 Office of Diversity and Equal Opportunity program budget without staff salaries is \$1.4 million.

^dNSF does not provide details on funding for its Office of Diversity and Inclusion in its agency budget information, but NSF officials told us that their program budget estimate for fiscal year 2019 is \$1.5 million, or \$353,000 without staff salaries.

Number of complaints received. Our preliminary analysis of sexual harassment complaint information indicates that four of the five selected agencies received three or fewer complaints from individuals at grantee universities from fiscal year 2015 through 2019. See table 3.

Table 3: Sexual Harassment Complaints Received by Selected Agencies, Fiscal Years 2015-2019

	Independent Agencies		Cabinet Agencies		
	NASA	NSF	DOE	HHS	USDA-NIFA
Number of Complaints ^a	3	14	2	1	0

Source: GAO analysis of agency information and interviews with agency officials from the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), Health and Human Services (HHS), Department of Energy, and Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA).

^aIn fiscal year 2018 and fiscal year 2019, DOE, NSF, and NASA received the same complaint alleging violation of Title IX—discrimination on the basis of sex—against a university; NSF took the lead on investigating this complaint, according to DOE and NASA officials.

Officials from DOE told us that because they receive so few sexual harassment complaints from individuals at grantee universities, they have enough resources to address those that are reported to their civil rights or diversity offices. In addition, officials from HHS told us that because they receive so few complaints, their civil rights office has used other oversight mechanisms, like Title IX compliance reviews, to examine whether sexual harassment is occurring at universities receiving HHS funds, including funds from NIH. However, as agencies continue to strengthen grantee policies or requirements, it may affect the number of complaints an agency receives from individuals at grantee universities, as well as the amount of resources an agency needs to address them. For example, NSF officials described how the number of sexual harassment complaints they receive has increased since the agency implemented new grant terms and conditions that require university grantees to report any sexual harassment findings involving a Principal Investigator or co-Principal Investigator for NSF-funded research. NSF officials also described an increased number of questions and calls about how to report incidents, requests for training and presentations, and meetings with program officers, awardee representatives and other stakeholders, among other items.

**Agencies Have
Different Sexual
Harassment
Prevention Policies
and Mechanisms for
Communicating Them
to Grantees**

Based on our preliminary review, all five of the selected agencies have established and communicated their own sexual harassment prevention policies to grantees within the last 2 fiscal years, but agency communication mechanisms and the content of these grantee policies vary.

Specifically, our preliminary analysis shows that NASA, NIH, and NSF communicate their policies on sexual harassment in multiple forms, such as grantee policy manuals, best practices documents, and online FAQs. The result is that grantees receive a relatively high level of detail about preventing sexual harassment and mechanisms for reporting complaints. In contrast, Cabinet agencies DOE and USDA-NIFA provide fewer forms of guidance, either through their website or agency director and Secretary-level policy statements and documents, which focus more generally on the broader category of sex discrimination or provide different levels of information on sexual harassment prevention policies for grantees. See table 4 for more information.

Table 4: Mechanisms Used to Communicate Sexual Harassment Prevention Policies

	Independent Agencies			Cabinet Agencies	
	NSF	NASA	NIH ^a	DOE	USDA-NIFA
Director or Secretary-Level Policy Statements^b					
Agency officials' announcements or policy statements on preventing sexual harassment by grantees posted online	✓	✓	✓	In progress	✓
Agency Websites					
Descriptions of agency policies and requirements, best practices, FAQs, definitions, or complaint reporting procedures for grantees to address sexual harassment	✓	✓	✓	✓	—
Agency Documents					
Guidance documents for grantees such as policy manuals or best practices to address sexual harassment	✓	✓	✓	—	—
Grant Terms and Conditions					
Terms and conditions apply to all awards and dictate grantee requirements to report sexual harassment to the agency	✓	In progress	—	—	—
Grantee Assurance of Compliance Form^c					
A general statement of compliance with national laws and policies prohibiting discrimination, including sex discrimination (Title IX)	N/A	✓	✓	✓	✓

Legend:

✓ Used

— Not used

N/A: Not applicable

In Progress: Agency plans to use

Source: GAO analysis of agency policy and procedure documents, websites, and interviews with agency officials from the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), Health and Human Services National Institutes of Health (NIH), Department of Energy, and Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA).

^aNIH is a component of HHS, a cabinet agency.^bDOE and USDA officials told us they have Director or Secretary-level sexual harassment policy statements, but they either focus more broadly on sex discrimination or provide different levels of information. DOE's Secretary-level anti-discrimination policy statement is from 2006 and does not specifically address sexual harassment, but DOE officials said they are in the process of drafting a new Secretarial sexual harassment policy statement that will apply to grantees. NIFA does not have a policy that addresses or provides details on preventing sexual harassment for grantees, while the USDA Secretary-level statement does.^cMost of the selected agencies require grantees to submit an assurance of compliance form as part of their grant application. In general, these forms do not provide detailed definitions of sexual harassment. NSF does not use this form. Instead, NSF outlines Title IX requirements in its grant terms and conditions, and notes that when a grantee signs a proposal, they are providing the required compliance certification.

Regarding the content of the policies, our preliminary analysis shows that DOE, NIH, NSF, and USDA-NIFA updated their definitions of behaviors or actions that qualify as sexual harassment in their grantee policies and procedures, and NASA is in the process of doing so. The definitions are more specific than previous definitions; for example, they include

descriptions of gender harassment, the most common form of sexual harassment.¹⁸ The increased specificity may make clear the behaviors or actions grantees are expected to address in their efforts to prevent sexual harassment. The agencies continue to develop and revise policies and communication mechanisms for grantees.

Also, NSF and NASA have modified, or are taking steps to modify their grant terms and conditions to strengthen requirements for university grantees to report on findings of sexual harassment to the funding agency.¹⁹ Officials from both agencies told us these modifications will help hold grantees accountable for reporting sexual harassment; the NSF Director states on the agency's website that these changes are "intended to provide targeted, serious consequences for harassers" while also providing "tools to make harassment stop without disturbing others' careers and lives." The requirement also supports the NASEM 2018 report recommendation for institutions to be transparent about reporting sexual harassment findings, which is intended to foster a culture and climate that does not tolerate sexual harassment at universities.²⁰ Officials from cabinet agencies DOE, NIH (a component of HHS), and USDA-NIFA stated they would need to go through formal rulemaking processes to alter their grant terms and conditions in a similar manner.

In addition, our preliminary analysis shows that two of the five selected agencies are taking steps to evaluate the effectiveness of their sexual

¹⁸See *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. (Washington, DC: The National Academies Press, 2018).

¹⁹NSF grant terms and conditions now require, for any new award or funding amendment to an existing award, the grantee report findings of sexual harassment, other forms of harassment, or sexual assault against the principle investigator (PI) or co-PI to NSF. See 83 Fed. Reg. 47940 (Sept. 21, 2018). NASA officials also told us they are planning to issue new grant terms and conditions that will require grantees to inform the agency when there has been a finding of harassment against a researcher receiving NASA financial assistance or if that researcher has been placed on administrative leave pending investigation. NASA officials said they anticipate releasing these new terms and conditions for public comment in fiscal year 2019.

²⁰According to the NASEM 2018 report, academic institutions should strive for greater transparency in how they are handling reports of sexual harassment while balancing a need for confidentiality. Specifically, they should issue annual reports that provide information on (1) how many and what type of policy violations have been reported (both informally and formally), (2) how many reports are currently under investigation, and (3) how many have been adjudicated, along with general descriptions of any disciplinary actions taken.

harassment prevention policies and procedures for grantees. NSF officials told us that they are in the process of determining how best to evaluate the effectiveness of the new sexual harassment reporting requirements and how the requirements have affected grantees. Similarly, DOE is in the process of comparing its policies and procedures against other federal agencies', according to officials. To date, the other three agencies have not yet evaluated the effectiveness of their policies, but officials at these agencies told us that they focus on ensuring grantees comply with Title IX regulations as a way to measure the effect of their policies. For example, NASA established a goal to promote compliance and encourage best practices among grantees, and the agency measures progress towards this goal through verifying grantee compliance with Title IX. USDA-NIFA officials are also in the process of creating a tool to provide a comprehensive blueprint for civil rights compliance—including Title IX compliance—and are planning to implement the tool in fiscal year 2020. We will continue to examine and assess the selected agencies' sexual harassment prevention policies for university grantees and steps they are taking to evaluate them in our ongoing work.

Agencies Have Taken Some Steps to Share Information and Collaborate

Based on our preliminary review, all five selected agencies have taken some steps to promote information sharing and collaboration among agencies on Title IX compliance reviews through DOJ's Title IX STEM working group. According to officials, the group discusses strategies for conducting joint Title IX compliance reviews to leverage limited agency resources and share best practices. For example, DOE and NSF have conducted three joint compliance reviews, and NASA and NSF told us that they are in the process of conducting a joint review.²¹ These joint reviews can be helpful, as the selected agencies conduct a small number of compliance reviews (two to four) annually relative to the number of university grantees who must comply with Title IX.

Despite this collaboration, all five selected agencies reported challenges in obtaining and sharing information. For example, all five selected agencies told us they rarely discuss sexual harassment cases at DOJ's Title IX STEM working group meetings unless they are directly related to an ongoing or planned compliance review. In addition, DOE, NASA, NIH,

²¹A joint Title IX compliance review occurs when two agencies conduct a joint assessment of whether a grantee is complying with the law. The grantee that is selected for the joint compliance review receives funding from both agencies.

and NSF stated they rarely learn about instances of sexual harassment from voluntary reporting from universities or other federal agencies and instead must rely on other sources, such as news reports. This situation may change at NSF and NASA, which have taken steps to modify their grant terms and conditions to require reporting of sexual harassment findings by grantees. Challenges in obtaining and sharing information on sexual harassment cases may increase the risk of a situation known as "pass the harasser," in which a researcher with substantiated findings of sexual harassment obtains employment at another university or grants from another funding agency without the university or funding agency being aware of the researcher's history.

Officials from all five selected agencies noted a willingness to participate in an interagency working group to address the culture of sexual harassment in STEM research that moves beyond conducting Title IX compliance reviews. The White House's Office of Science and Technology Policy (OSTP) has taken steps to establish an interagency working group. In May 2019, OSTP established a joint committee under the National Science and Technology Council to address challenges in the research environment.²² OSTP, NIH, NSF, DOE, and the National Institute of Standards and Technology Directors were selected as joint committee chairs to engage with the academic and science community for policymaking insight and to convene interagency efforts. According to DOE officials, the committee will address several priorities, including the development of policies and procedures across the federal government regarding sexual harassment in the research environment. Three of the five selected agencies (NSF, NASA, and DOE) stated OSTP would be the appropriate entity to establish uniform sexual harassment policy guidelines to help provide consistency across the federal government. NSF and NASA officials suggested that DOJ or the Department of Education would be the appropriate agencies to collaborate with OSTP on the ongoing monitoring of sexual harassment policy guidelines.

All five selected agencies reported taking collaborative steps with universities and federal agencies to address the culture and climate for

²²The National Science and Technology Council was established by Executive Order on November 23, 1993. Exec. Order No. 12881, 58 Fed. Reg. 62491 (Nov. 26, 1993). This Cabinet-level Council is the principal means within the Executive Branch to coordinate science and technology policy across the diverse entities that make up the Federal research and development enterprise. The Office of Science and Technology Policy Director serves as the chair of the Council and provides leadership across the National Science and Technology Council.

women in STEM. For example, in 2019, NIH established a working group with university experts to collaborate with other federal agencies to assess the current state of sexual harassment allegation investigation, reporting, remediation, and disciplinary procedures at NIH-funded organizations and advise on oversight, accountability, and reporting measures for grantees, among other things. In addition, all five agencies provided examples of collaborative efforts that would help address the culture of sexual harassment in STEM research. For example, NASA officials told us that it would be helpful to conduct joint meetings with other university grantees across agencies to discuss sexual harassment in science. Lastly, efforts to improve information sharing and collaboration across agencies beyond conducting Title IX compliance reviews are consistent with findings in the 2018 NASEM report, which states, "adherence to legal requirements is necessary but not sufficient to drive the change needed to address sexual harassment."²³ We will continue to examine and assess selected agencies' Title IX reviews and efforts to collaborate and share information in our ongoing work.

In closing, I note that we are continuing our ongoing work on this topic. Sexual harassment is not only degrading to individual researchers, it undermines the quality and fairness of our nation's research enterprise. It is therefore important that federal agencies ensure their grantees effectively prevent and address sexual harassment in STEM research. We look forward to continuing our work to determine whether additional federal actions may be warranted to promote this objective.

Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

²³The 2018 NASEM report notes that "academic institutions and federal agencies should treat the legal obligations for addressing sexual harassment under Title IX law, as a floor, not a ceiling, and work to move beyond basic legal compliance to promote sustainable, holistic, evidence-based policies and practices to address sexual harassment and promote a culture of civility and respect". See National Academies of Sciences, Engineering, and Medicine. *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. (Washington, DC: The National Academies Press, 2018).

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If you or your staff have any questions about this testimony, please contact John Neumann, Managing Director, Science, Technology Assessment, and Analytics, at (202) 512-6888 or NeumannJ@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Key contributors to this testimony include Rob Marek (Assistant Director), Michelle St. Pierre (Assistant Director), Kristy Kennedy (Analyst-In-Charge), Nora Adkins, Caitlin Cusati, Nkenge Gibson, Amanda Postiglione, Janay Sam, and Ben Shouse.

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Biography

John Neumann is a Managing Director in GAO's new Science, Technology Assessment and Analytics (STAA) team. Since 2013 he has led audits in the science and technology area, including the management and oversight of federal research and development programs, protection of intellectual property, and federal efforts to support innovation. Over the course of his career at GAO, Mr. Neumann has managed reviews on a broad range of topics, including recent work looking at agencies scientific integrity policies, federal support for transformational research, and the Manufacturing USA network. Mr. Neumann received his B.A. in Political Science cum laude from the State University of New York at Stony Brook, and holds an M.B.A from American University, as well as a J.D. from Georgetown University.

Chairwoman JOHNSON. Thank you very much, Mr. Neumann. Dr. Paula Johnson.

**TESTIMONY OF DR. PAULA H. JOHNSON,
PRESIDENT, WELLESLEY COLLEGE**

Dr. JOHNSON. Good morning, Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee. Thank you for the opportunity to testify today on this important topic. I'm the President of Wellesley College and a physician, but today, I'm here in my capacity as Co-Chair at the Committee of the National Academies of Sciences, Engineering, and Medicine that authored the report that was released 1 year ago today: "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine."

I've been asked to summarize the findings and recommendations from our report, so let me get straight to the point. After a thorough review of our research, our committee concluded that the cumulative effect of sexual harassment includes a negative impact to the integrity of research and a costly loss of talent in science, engineering, and medicine, which has consequences for advancing the Nation's economic and social well-being and its overall public health. We also noted that rapid and sustained progress in closing the gender gap in science, engineering, and medicine is jeopardized by the persistence of sexual harassment in these fields.

One of the first findings our committee made was that the public is generally aware of two of the three types of sexual harassment: Unwanted sexual attention and sexual coercion. However, the public is often unaware of the third type, which is the most common form of sexual harassment. This type is known as gender harassment and refers to the verbal and nonverbal behaviors that convey hostility, objectification, exclusion, or second-class status about members of one gender.

While we might like to think that gender harassment is less damaging than other types of sexual harassment, the research actually shows that severe or frequent gender harassment can have the same professional and psychological consequences as a single instance of sexual coercion, and it is why our committee recommends that institutional leaders pay increased attention to and enact policies that cover gender harassment.

The research available on academic environments reveal that sexual harassment is common with over 50 percent of women faculty and staff and 20 to 50 percent of women students experiencing sexual harassment. The research also shows that women of color and sexual and gender minorities experience more sexual harassment than their peers. Unfortunately, it appears that women are often bullied or harassed out of career pathways in science, engineering, and medicine. Even when they remain, their ability to contribute and advance in their fields can be limited as a consequence of sexual harassment either from harassment directed at them, the ambient harassment in the environment, or from the retaliation they experience after formally reporting the harassment.

The research shows that sexual harassment undermines women's professional and educational attainment and their mental and physical health. When women experience sexual harassment, they

often report symptoms of depression, anxiety, and posttraumatic stress. They can experience physical effects such as exhaustion and sleep disruption, and they experience reduced productivity and performance and often end up withdrawing from their work in various ways such as stepping down from leadership opportunities, opting out of research projects, and deciding not to attend professional society meetings. It's important to note that these actions are taken to avoid their perpetrator and to escape an abusive situation because it is the only way they know they can get the behavior to stop.

Our committee found that institutions can take concrete steps to reduce and prevent sexual harassment. To do so they need to make systemwide changes to, first, create diverse and inclusive and respectful environments; second, to improve transparency and accountability; third, to diffuse the hierarchical and dependent relationship between trainees and faculty; and fourth, to provide support to those who've experienced sexual harassment regardless of whether or not they've courageously spoken up to report their sexual harassment experiences.

Building from our report, the *Combating Sexual Harassment in Science Act of 2019* addresses many of the recommendations that our committee made to Federal agencies and Congress. For instance, it directs NSF to fund research on topics our committee identified as needing more research. By calling for an updated guide on the responsible conduct of research that specifically includes sexual harassment issues, H.R. 36 reflects our recommendation to consider sexual harassment equally important as research misconduct in terms of its effect on the integrity of research.

The bill also reflects our recommendations that Federal agencies require grantees to report to them when individuals on grants have been found to have violated sexual harassment policies or have been put on administrative leave related to sexual harassment.

In conclusion, as a medical professional, I want to note that our report very clearly shows that sexual harassment in academic science, engineering, and medicine is a public health problem, and we need to treat it as such. Thank you.

[The prepared statement of Dr. Johnson follows:]

SEXUAL HARASSMENT OF WOMEN IN ACADEMIC SCIENCES, ENGINEERING, AND MEDICINE

Statement of

Paula A. Johnson, MD, MPH

President

Wellesley College

and

Co-Chair, Committee on the Impacts of Sexual Harassment in Academia

Committee on Women in Science, Engineering, and Medicine

Division on Policy and Global Affairs

The National Academies of Sciences, Engineering, and Medicine

before the

Committee on Science, Space, and Technology

U.S. House of Representatives

June 12, 2019

Good morning, Madam Chairwoman Johnson, Ranking Member Lucas, and members of the Committee. My name is Paula Johnson. I am President of Wellesley College and served as co-chair of the Committee on the Impacts of Sexual Harassment in Academia of the National Academies of Sciences, Engineering, and Medicine, which was formed in October 2016, and which released its final report on June 12, 2018 – one year ago today. The National Academy of Sciences was chartered by Congress in 1863 to advise the government on matters of science and technology and later expanded to include the National Academies of Engineering and Medicine.

The National Academies have always concerned themselves with addressing some of society's toughest challenges and with matters that affect the integrity of science and the health of the nation. So it was fitting for them to take up the question of how sexual harassment impacts academic fields of science, engineering, and medicine, and therefore impacts the scientists, physicians, engineers, and practitioners that work in these fields and society more broadly. This work, and the outreach efforts conducted since the report was released, has been generously supported by the National Science Foundation, as the lead sponsor, as well as by the National Aeronautics and Space Administration, National Institutes of Health, National Institute of Standards and Technology (NIST), National Oceanic and Atmospheric Administration, the Burroughs Wellcome Fund, the Henry Luce Foundation, the Howard Hughes Medical Institute, and the Alfred P. Sloan Foundation.

I have been asked to summarize the findings and recommendations from our 2018 National Academies report, *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*¹, and in particular to discuss what we found regarding the impact of sexual harassment on the careers of women and on the scientific enterprise. Let me get straight to the point: after a thorough review of research, our committee concluded that the cumulative effect of sexual harassment is significant damage to research integrity and a costly loss of talent in science, engineering, and medicine, which has consequences for advancing the nation's economic and social well-being and its overall public health. We also noted that more rapid and sustained progress in closing the gender gap in science, engineering, and medicine is jeopardized by the persistence of sexual harassment.

One of the first findings our committee made was that sexual harassment entails more behaviors than what the general public typically considers to be sexual harassment. Our committee

¹ For the full report, please see <http://www.nap.edu/sexualharassment>.

found that there are three types of sexually harassing behavior. The public is generally aware of the first two types: sexual coercion (when favorable professional or educational treatment is conditioned on sexual activity) and unwanted sexual attention (verbal or physical unwelcome sexual advances, which can include assault). These are the types of behavior that have the appearance of being come-ons, if you will, and which are more clearly covered in standard sexual harassment policies at organizations. However, the vast majority of sexual harassment takes the form of a “put-down”. Based on more than thirty years of research in workplaces across multiple sectors and in education environments, our committee found that the most common form of sexual harassment is *gender harassment*—this is verbal and nonverbal behaviors that convey hostility, objectification, exclusion, or second-class status about members of one gender—and it is this type that is most likely to create the hostile environment that is recognized as illegal sexual harassment. As one might imagine, or know from personal experience, sexually harassing behavior can be either direct (targeted at an individual) or ambient (a general level of sexual harassment in an environment), and it is harmful in both circumstances. The research reveals that gender harassment that is severe or occurs frequently over a period of time can result in the same level of negative professional and psychological outcomes as single instance of sexual coercion. In response to this research, we recommend that institutional leaders pay increased attention to and enact policies that cover gender harassment. Because it is the most common form of sexual harassment, it usually accompanies other forms of harassment, and thus addressing it will have a large impact on preventing the other types of harassment.

The research available on academic environments reveals that over 50 percent of women faculty and staff experience sexual harassment², and for students in higher education, depending on their field, 20-50 percent of them will experience sexual harassment from faculty and staff while at their institution.³ In addition, the research shows that certain populations experience more harassment. Women of color experience more harassment, whether sexual, racial or ethnic, or more often a combination of the two. And Sexual- and gender-minority people experience more sexual harassment than heterosexual women do.

What is especially discouraging is that at the same time that so much energy and money is being invested in efforts to attract and retain women in science, engineering, and medical fields, it appears women are often bullied or harassed out of career pathways in these fields. Even when they remain, their ability to contribute and advance in their field can be limited as a consequence of sexual harassment—either from the harassment directed at them; the ambient harassment in the environment in their department, program, or discipline; or the retaliation and betrayal they experience after formally reporting the harassment.

The research shows that sexual harassment undermines women’s professional and educational attainment and their mental and physical health. When women experience sexual harassment in the workplace, the professional outcomes include increased job stress, declines in job satisfaction, reduced productivity and performance, withdrawal from their organization (meaning they distance themselves from the work either physically or mentally or they actually leaving their job), and declines in their organizational commitment (meaning they feel disillusioned or angry with the organization). For women in science, engineering, and medicine, these outcomes include stepping down from leadership

² Ilies, R., Hauserman, N., Schwochau, S., and Stibal, J. 2003. Reported incidence rates of work-related sexual harassment in the United States: Using meta-analysis to explain reported rate disparities. *Personnel Psychology*, 56(3): 607–631.

³ Swartout, K. 2018. University of Texas Climate Survey. Report on the University of Texas System Campus Climate Survey. P. A. Johnson, S. E. Widnakk, and F. F. Benya (eds.) In *Sexual harassment of women: Climate, culture, and consequences in academic sciences, engineering and medicine* pp. 275–292. Washington, DC: The National Academies Press.

opportunities to avoid the perpetrator, opting out of research projects to avoid the perpetrator, and deciding not to attend professional society meetings to avoid the perpetrator. It is important to recognize that women take these actions in an effort to escape an abusive situation and to protect themselves. When students experience sexual harassment, they suffer similar negative outcomes, including decreased motivation to attend class, not attending classes or school, dropping classes, paying less attention in class, receiving lower grades, changing advisors, changing majors, transferring to another educational institution, and dropping out entirely.

When it comes to mental and physical health, the more often women are harassed, the more they report symptoms of depression, disordered eating, stress, anxiety, and physical complaints such as headaches, exhaustion, and sleep disruption. According to one study, 1 in 5 sexually harassed women meet clinical criteria for Major Depressive Disorder, and 1 in 10 meet criteria for Posttraumatic Stress Disorder.⁴ According to another study, exposure to just sexist comments – in other words, gender harassment – triggered greater cardiovascular reactivity, which over the long term can put women at increased risk for coronary heart disease and depressed immune functioning.⁵

Additionally, our committee found that individuals do not have to be directly targeted with sexual harassment to feel its effects. Research shows that people who merely see sexual harassment targeted at others, report negative outcomes that parallel those of direct victims – for instance, the same declines in wellbeing such as symptoms of depression, stress, and anxiety, and the same withdrawal from their job and declines in productivity.

When considering sexual harassment that occurs in research environments, our committee found that sexual harassment violates the standards and values of research integrity. This is actually a finding from a previous National Academies report titled *Fostering Integrity in Research*⁶, which clearly defined sexual harassment as a type of “other misconduct,” that violates the integrity of research. This is a category that also includes the misuse of funds and violating government research regulations on human and animal subjects – two topics which are taken very seriously by federal agencies and academic institutions. However, in the case of sexual harassment, too often the judicial interpretation of Title IX and Title VII has incentivized institutions to create policies and training on sexual harassment that focus on symbolic compliance with current law and avoiding liability, rather than taking this matter seriously and working to prevent it from occurring in the first place. As a result, our committee recommended that academic institutions and federal agencies should consider sexual harassment equally important as research misconduct in terms of its effect on the integrity of research, and that academic institutions, research and training sites, and federal agencies should move beyond interventions or policies that represent basic legal compliance.

Our committee found that there are at least five factors that create the conditions under which sexual harassment is likely to occur in academic science, engineering, and medicine:

First, there is often a **perceived tolerance for sexual harassment** in academia, which is the most potent predictor of sexual harassment occurring in an organization. The degree to which the environment within academic departments, schools, programs, and institutions reflects an unflinching commitment to the principle that any form of sexual harassment behavior (from expressing any form of gender harassment to making any type of unwanted sexual advance) is unacceptable is a critical factor in determining whether harassment is likely to occur. The evidence suggests that the workplace climate

⁴ Dansky, B.S., and Kilpatrick, D.G. 1997. Effects of Sexual Harassment. in W. O’Donohue (ed.), *Sexual Harassment: Theory, Research, and Treatment*. Boston: Allyn and Bacon.

⁵ Schneider, K. T., Tomaka, J., and Palacios, R. 2001. Women’s cognitive, affective, and physiological reactions to a male coworker’s sexist behavior. *Journal of Applied Social Psychology*, 31(10): 1995–2018.

⁶ National Academies of Sciences, Engineering, and Medicine. 2017. *Fostering integrity in research*. Washington, DC: The National Academies Press.

is seen as *intolerant* of sexual harassment when targets of sexual harassment are supported and protected; instances of harassment are investigated fairly and in a timely way—with due process for both targets and alleged harassers; those found to have committed harassment are punished appropriately; and the campus community is regularly informed about how the institution is handling/attending to claims and disciplining those who have violated policies. These are important ways to demonstrate and declare that sexual harassment is taken seriously and is unacceptable under any circumstances.

Second, environments where men outnumber women, leadership is male dominated, and/or jobs or occupations are considered atypical for women, have more frequent incidents of sexual harassment. On many campuses, these programs and departments persist as **male-dominated work settings**. More often than not, men are in positions of authority—as deans, department chairs, principal investigators, and dissertation advisors—and women are in subordinate positions as early-career faculty, graduate students, and postdocs.

Third, the environments in which the **power structure** of an organization is hierarchical, with strong dependencies on those at higher levels or in which people are geographically isolated (such as at a field site or off-campus research setting), are more likely to foster and sustain sexual harassment. Moreover, when power is highly concentrated in a single person, perhaps because of that person's success in attracting funding for research, students or employees are more likely to feel as if revealing the harassing behavior will have a negative impact on their lives and careers.

Fourth, an increased focus on **symbolic compliance** with Title IX and Title VII has resulted in policies and procedures that protect the liability of the institution but are not necessarily effective in preventing sexual harassment. Judicial interpretations of these statutes incentivize creating policies and procedures and having training on the policy. However these policies and procedures have not been shown to prevent sexual harassment, and they are based on the inaccurate assumption that a target will promptly report the harassment without worrying about retaliation. While policies against sexual harassment are widely in place and have been for many years, nonetheless, sexual harassment continues to exist and has not significantly decreased. While adherence to legal requirements is necessary, it is not sufficient to drive the change needed to address sexual harassment.

Fifth, uninformed **leadership** on campus that lacks the intentionality and focus to take the bold and aggressive measures needed to reduce and eliminate sexual harassment is another contributing factor. While most college and university presidents, deans, and department chairs aspire to reduce or eliminate harassment on their campuses, many lack the tools needed to achieve that goal. Fortunately, some institutions have begun creating and implementing strong, campus-wide policies and systems that start with explicit statements from leadership and move toward concrete intervention strategies aimed at preventing sexual harassment.

Our committee was, however, encouraged by the research that suggests that the most potent predictor of sexual harassment is an organizational climate—that is, the degree to which those in the organization perceive that sexual harassment is or is not tolerated. This means that institutions can take concrete steps to reduce sexual harassment by making systemwide changes that demonstrate how seriously they take this issue and that reflect that they are listening to those who courageously speak up to report their sexual harassment experiences and it is why we recommended that institutions move beyond legal compliance to address their culture and climate. We recommended that academic institutions do this by following four key recommendations:

1. **Create diverse, inclusive, and respectful environments.** Academic institutions should work to create a diverse, inclusive, and respectful environment where these values are aligned with and embedded into the systems, structures, policies, and procedures of the institution. Their leaders should prioritize taking actions that will result in greater gender and racial equity in

hiring and promotions, thus improving the representation of women at every level. They should also foster greater cooperation, respectful work behavior, and professionalism at the faculty, staff, and student/trainee levels, and should evaluate faculty and staff on these criteria in hiring and promotion. Institutions should combine anti-harassment and civility-promotion programs. They should ensure that training on preventing and addressing sexual harassment is tailored for specific populations, provides skills needed by all members of the academic community, teaches how to interrupt and intervene when harassment occurs, and focuses on changing behavior, not on changing beliefs. Critically, institutions must evaluate training programs for efficacy and to determine what aspects most effectively change climate, and reduce and prevent harassment.

2. **Improve transparency and accountability:** Academic institutions should develop and readily share clear, accessible, and consistent policies on sexual harassment and standards of behavior. They should include a range of clearly stated, appropriate, and escalating disciplinary consequences for perpetrators found to have violated policy and/or law, and such consequences should be punitive, not something often considered a benefit, such as a reduction in teaching load. Policies should also include an investigative and decision making process that is fair to all involved and that is undertaken and completed in a timely manner. Academic institutions should strive for greater transparency in how they are handling reports of sexual harassment while balancing a need for confidentiality. They should issue annual reports that provide information on (1) how many and what type of policy violations have been reported (both informally and formally), (2) how many reports are currently under investigation, and (3) how many have been adjudicated, along with general descriptions of any disciplinary actions taken. Lastly, academic institutions should be accountable for their organizational climate, and utilize climate surveys to further investigate and address systemic sexual harassment, particularly when surveys indicate specific schools or facilities have high rates of harassment or chronically fail to reduce rates of sexual harassment.
3. **Diffuse the hierarchical and dependent relationship between trainees and faculty:** Academic institutions should identify and enact mechanisms to diffuse concentrated power and dependencies in relationships between trainees and faculty/advisors, such as using mentoring networks and committee-based advising, and providing independent funding.
4. **Provide support for the target:** Academic institutions should convey that reporting sexual harassment is an honorable and courageous action and provide (1) access to support services (social services, health care, legal, career/professional) regardless of if a formal report is filed, (2) alternative and less formal ways to record information about an incident, and (3) approaches that prevent the target from experiencing or fearing retaliation, and that support the target reintegrating into the workplace or educational environment.

While our report was focused on academic institutions, our committee recognized that other actors have a role to play, including Congress, state legislatures, and federal agencies, and I have submitted a copy of the report highlights for policymakers along with my testimony. Our committee recommends that federal and state legislatures consider new and additional legislation with the following goals: requiring institutions receiving federal funds to publicly disclose results from campus climate surveys and/or the number of sexual harassment reports made to campuses; better protecting sexual harassment claimants from retaliation; prohibiting confidentiality in settlement agreements that currently enable harassers to move to another institution and conceal past adjudications; banning mandatory arbitration clauses for discrimination claims; allowing lawsuits to be filed against alleged harassers directly (instead of or in addition to their academic employers); and finally requesting that the

National Science Foundation and the National Institutes of Health devote research funds to doing a follow-up analysis on the topic of sexual harassment in science, engineering, and medicine in 3 to 5 years to determine 1) whether research has shown that the prevalence of sexual harassment has decreased; 2) whether progress has been made on implementing these recommendations; and 3) where to focus future efforts.

For federal agencies, the report recommends that they: increase support for research and evaluation of the effectiveness of policies, procedures, and training on sexual harassment; require institutions to report to federal agencies when individuals on grants have been found to have violated sexual harassment policies or have been put on administrative leave related to sexual harassment; hold accountable the perpetrator and the grantee institution by using a range of disciplinary actions that limit the negative effects on other grant personnel who were either the target of the harassing behavior or innocent bystanders; and reward and incentivize colleges and universities for implementing policies, programs, and strategies that research shows are most likely to and are succeeding in reducing and preventing sexual harassment.

Building from our report, the Combating Sexual Harassment in Science Act of 2019 addresses many of the recommendations that our committee made to federal agencies, Congress, and academic institutions. For instance, it directs NSF to establish a program to award grants on many of the topics that our committee identified were in need of research. By calling for an updated version of “On Being a Scientist: A Guide to Responsible Conduct in Research” that specifically addresses and includes sexual harassment, H.R. 36 reflects our recommendation to consider sexual harassment equally important as research misconduct in terms of its effect on the integrity of research. By establishing an interagency working group to develop policy guidelines for how Federal science agencies address sexual harassment involving grant personnel and requiring that the policy guidelines include a requirement that grantees report to the Federal science agencies when there is a finding or determination of sexual harassment or grant personnel are put on administrative leave related to a sexual harassment investigation, the bill reflects our recommendation that federal agencies require institutions to provide this information. By directing the interagency working group to consider guidelines that require grantees assess their climate using climate surveys, make the results of such surveys publicly available, and reward and incentivize grantees working to create a climate intolerant of sexual harassment, H.R. 36 reflects the recommendations we made to academic institutions to improve transparency and accountability and to measure their progress.

In conclusion, as a medical professional, I want to note that our report very clearly shows that sexual harassment in academia is a public health problem, and we need to treat it as such. This means we need to work toward reducing the risk of it occurring, toward preventing the spread of this behavior, and toward recognizing and remediating the harm it causes to the community, and especially to those who have been the direct victim of sexual harassment.



Consensus Study Report

JUNE 2018

HIGHLIGHTS FOR FEDERAL POLICY MAKERS

SEXUAL HARASSMENT OF WOMEN

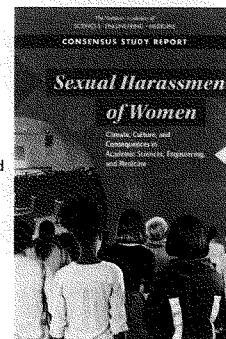
Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine

The National Academies of Sciences, Engineering, and Medicine undertook the most comprehensive examination to date of sexual harassment in academic sciences, engineering, and medicine, and its effects on women's well-being, their careers, and the scientific enterprise.

The study committee's report finds that sexual harassment in academic sciences, engineering, and medicine is common. There is no evidence that current policies, procedures, and approaches have resulted in a significant reduction in sexual harassment. The cumulative result of sexual harassment is significant damage to research integrity and a costly loss of talent in academic sciences, engineering, and medicine.

A system-wide change to the culture and climate in higher education is needed to prevent and effectively respond to sexual harassment, concludes the report. It recommends that colleges, universities, and federal agencies adopt holistic, evidence-based policies and practices to address sexual harassment. For example, sexual harassment occurs at lower rates in systems in which prohibitions against unacceptable behaviors are clear and which hold members of the community accountable for meeting behavioral expectations established by leadership. Sexual harassment is also less likely to occur when organizational systems and structures support diversity, inclusion, and respect. Sexual harassment is also less likely to occur if targets of sexual harassment are supported.

The legal system alone is not an adequate mechanism for reducing or eliminating sexual harassment, the report stresses. Adherence to legal requirements is necessary but not sufficient to drive the change needed to address sexual harassment. As such, academic institutions and federal agencies should treat the legal obligations for addressing sexual harassment under Title IX and Title VII law as a floor, not a ceiling, and work to move beyond basic legal compliance to promote sustainable, holistic, evidence-based policies and practices.



RECOMMENDATIONS FOR CONGRESS AND FEDERAL AGENCIES

The report recommends that state legislatures and Congress consider new and additional legislation with the following goals:

- Better protecting sexual harassment claimants from retaliation.
- Prohibiting confidentiality in settlement agreements that currently enable harassers to move to another institution and conceal past adjudications.
- Banning mandatory arbitration clauses for discrimination claims.

- Allowing lawsuits to be filed against alleged harassers directly (instead of or in addition to their academic employers).
- Requiring institutions receiving federal funds to publicly disclose results from campus climate surveys and/or the number of sexual harassment reports made to campuses.
- Requesting that the National Science Foundation and the National Institutes of Health devote research funds to doing a follow-up analysis on the topic of sexual harassment in science, engineering, and medicine in 3 to 5 years to determine 1) whether research has shown that the prevalence of sexual harassment has decreased; 2) whether progress has been made on implementing these recommendations; and 3) where to focus future efforts.

The report recommends that federal agencies:

- Increase support for research and evaluation of the effectiveness of policies, procedures, and training on sexual harassment.
- Attend to sexual harassment with at least the same level of attention and resources devoted to research misconduct. They should increase collaboration among offices that oversee the integrity of research (i.e., those that cover ethics, research misconduct, diversity, and harassment issues); centralize resources, information, and expertise; provide more resources for handling complaints and working with targets; and implement sanctions on researchers found guilty of sexual harassment.
- Require institutions to report to federal agencies when individuals on grants have been found to have violated sexual harassment policies or have been put on administrative leave related to sexual harassment, as the National Science Foundation has proposed doing. Agencies should also hold accountable the perpetrator and the institution by using a range of disciplinary actions that limit the negative effects on other grant personnel who were either the target of the harassing behavior or innocent bystanders.
- Reward and incentivize colleges and universities for implementing policies, programs, and strategies that research shows are most likely to and are succeeding in reducing and preventing sexual harassment.

COMMITTEE ON IMPACTS OF SEXUAL HARASSMENT IN ACADEMIA

Paula Johnson, NAM (Co-Chair), Wellesley College; **Sheila Widnall**, NAE (Co-Chair), Massachusetts Institute of Technology; **Alice M. Agogino**, NAE, University of California, Berkeley; **Nicholas Arnold**, Santa Barbara Community College; **Gilda Barabino**, City College of New York; **Kathryn Clancy**, University of Illinois at Urbana-Champaign; **Lilia Cortina**, University of Michigan; **Amy Dodrill**, Trumpf Medical USA, Hill-Rom; **Lisa Garcia Bedolla**, University of California, Berkeley; **Liza Gold**, Georgetown University School of Medicine; **Melvin Greer**, Intel Corporation; **Linda Gundersen**, U.S. Geological Survey; **Elizabeth Hillman**, Mills College; **Timothy Johnson**, University of Michigan; **Anna Kirkland**, University of Michigan; **Ed Lazowska**, University of Washington; **Vicki Magley**, University of Connecticut; **Roberta Marinelli**, Oregon State University; **Constance Morella**, former Congresswoman; **John Pryor**, Illinois State University; **Billy Williams**, American Geophysical Union; **Frazier Benya**, Study Director; and **Tom Rudin**, Director, Committee on Women in Science, Engineering, and Medicine.

For More Information ... This Consensus Study Report Highlights was prepared by the Committee on Women in Science, Engineering, and Medicine based on the Report *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Science, Engineering, and Medicine* (2018). The study was sponsored by the National Science Foundation, the National Aeronautics and Space Administration, the National Institutes of Health, the National Institute of Standards and Technology, the National Oceanic and Atmospheric Administration, the Burroughs Wellcome Fund, the Henry Luce Foundation, and the Howard Hughes Medical Institute. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project. Copies of the Report are available from the National Academies Press, (800) 624-6242; <http://www.nap.edu> or at www.nationalacademies.org/sexualharassment.

Committee on Women in Science, Engineering, and Medicine
Policy and Global Affairs

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Paula A. Johnson, M.D., M.P.H.

Paula A. Johnson, President of Wellesley College, is an innovator recognized the world over for advancing, promoting, and defending women's education, health, and well-being. This critically important work is deeply informed by her broad range of experience as a pathbreaking physician-scientist and educator who is an expert in health care, public health, and health policy. With a remarkable track record of accomplishments—including founding the Connors Center for Women's Health and Gender Biology at Brigham and Women's Hospital—she has led in the field of women's health, taking an approach to biology that integrates insights from sociology, economics, and many other fields.

A cardiologist, President Johnson was the Grayce A. Young Family Professor of Medicine in Women's Health at Harvard Medical School and professor of epidemiology at the Harvard T.H. Chan School of Public Health.

Her research—and the research, health care models, and training programs of the Connors Center—has had an impact on women across the country through its influence on health care and health policy reforms. Her work has also influenced and educated emerging leaders beyond the borders of the United States who are seeking to improve the health of women globally. Recently, President Johnson co-chaired the landmark report of the National Academies of Sciences, Engineering and Medicine, entitled *Sexual Harassment of Women: Climate, Culture and Consequences in Academic Sciences, Engineering and Medicine*.

President Johnson is a member of the American Academy of Arts and Sciences and the National Academy of Medicine, the nation's leading advisory organization providing expertise on issues relating to biomedical science, medicine, and health. She has been recognized as a national leader in medicine by the National Library of Medicine and has received several honorary degrees and numerous awards for her contributions to science, medicine, and public health. Most recently, she received the Stephen Smith Medal for Distinguished Contributions in Public Health by the New York Academy of Medicine.

In her three years as president of Wellesley, she has advanced women's higher education, championing cross-campus efforts to integrate the ideals of inclusive excellence into every aspect of academic and residential life. Under her leadership, the College is also developing new opportunities across all fields by drawing on the synergies found at the intersection of science, the humanities, and social sciences.

President Johnson attended Harvard and Radcliffe colleges, received her A.B., M.D., and M.P.H. degrees from Harvard, and trained in internal medicine and cardiovascular medicine at Brigham and Women's Hospital. A native of Brooklyn, New York, she and her husband are the parents of a son and a daughter.

Chairwoman JOHNSON. Thank you, Dr. Johnson.
Dr. Jean Morrison.

**TESTIMONY OF DR. JEAN MORRISON,
UNIVERSITY PROVOST AND CHIEF ACADEMIC OFFICER,
BOSTON UNIVERSITY**

Dr. MORRISON. Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee, thank you for inviting me to testify this morning. My testimony will focus on two things: One, how Boston University is addressing gender-based harassment on campus; and two, what legislators can do to help universities.

I entered the academic world in the 1980s by pursuing my Ph.D. in Earth sciences. Like all aspiring scientists, we were taught that our science had to be rigorous, exacting, objective, and unforgiving in its pursuit of the facts. These approaches remain the same today nearly 40 years later.

But in hindsight it's also clear that we misapplied these approaches by extending them to the culture of our workplace and to our relationships. We created a tough, unforgiving, and unwelcoming workplace environment. No wonder, then, that people, especially our more junior students and faculty, felt more hazed than helped and that women, feeling the additional burden of gender discrimination, fared even worse. But today's scientists and engineers are showing my generation that a positive culture of inclusion and respect is really the best way to achieve truly excellence in science.

I'm pleased to tell you today what BU is doing to support our scholars, but I want to make clear that we are also still a work in progress. Yes, our values and our intentions are in the right place, but it's our job to match those values with concrete actions.

You're no doubt familiar with the case publicized in *Science* magazine in 2017. A BU Earth scientist was accused of harassing and bullying two former graduate students more than 20 years ago at a field site in Antarctica. Following our investigation of the accusations, we initiated a serious consequence. The BU scientist lost his tenured position and was terminated.

The case reverberated at BU. We recognized that we needed to redouble our efforts to combat gender-based harassment, and here's what we're doing. First, we're prioritizing diversity, equity, and inclusion. Why do I identify that first? Because taking explicit steps to achieve greater gender and racial equity in hiring and promotions is essential to creating a community that rejects harassment.

We've changed the tenure clock to include time for parental leave, offered childbirth and adoption accommodations for our doctoral students, and welcomed our first Associate Provost for Diversity and Inclusion. These changes benefit all faculty and staff but are especially important for women.

Second, BU joined the AAAS (American Association for the Advancement of Science) STEM Equity Achievement (SEA) Change effort with a rigorous self-assessment of our commitment to inclusion and equity in STEM and an action plan to address the barriers that we identified. Due to this work, we were one of three universities to receive the inaugural SEA Change Bronze Award.

Third, BU initiated mandatory online sexual misconduct prevention training for our more than 34,000 undergraduate and graduate students and our nearly 11,000 faculty and staff.

Fourth, I created a working group on gender-based harassment prevention to deliver recommendations to me on how BU can provide an environment that is free of harassment.

And fifth, BU has joined the more than 55 institutions in the National Academies' Action Collaborative. And universities are of course foundational to this work, but we do not operate alone.

So thank you to this Committee for introducing the bipartisan *Combating Sexual Harassment in Academia Act*. I appreciate many of the bill's provisions, including, first, the governmentwide approach to handling sexual misconduct by Federal grantees. It's better for all of us in science if there is one clear set of rules at the Federal level.

Two, authorizing the National Science Foundation to fund research on gender harassment, so our efforts are data-driven and evidence-based.

I do, however, want to ask the Committee to take a fresh look at two things. First, ameliorate potential legal conflicts between the bill and existing education employment and civil rights laws; and second, to be explicit about what privacy protections you envision for this significant new data reporting in the bill. We learned that sometimes complainants and witnesses in harassment cases only come forward if they know their information will not be shared with others.

So, again, thank you for holding today's hearing. I feel this issue very deeply and personally. Today, my daughter is in a STEM Ph.D. program, and I want her and every other young woman in her generation to have every opportunity to thrive. Thank you.

[The prepared statement of Dr. Morrison follows:]

**Testimony of Dr. Jean Morrison, Provost and Chief Academic Officer of Boston University
House Committee on Science, Space, and Technology
Hearing on Combatting Sexual Harassment in Science
June 12, 2019**

Chairwoman Johnson, Ranking Member Lucas, and members of the Committee, thank you for inviting me to testify this morning. I am Dr. Jean Morrison, Provost of Boston University. That means I am the University's chief academic officer, overseeing BU's academic programs, research, global engagement, enrollment and student affairs.

My testimony will focus on two things: (1) how BU is addressing gender-based harassment on our campus and (2) what legislators can do to help universities address harassment in the most effective way. First I want to share my own story and stories of my BU colleagues, so you can understand academia's evolving approach to gender-based harassment.

My Story

I have served as BU's Provost for more than eight years. I am a geologist by training, and my research has focused on the evolution of the earth's crust over time. I entered academia and began pursuing my doctorate in the 1980's. Then, like now, excellence in science demands rigor and discipline. Our job was and is to blaze a fact-based trail to the truth. Our methodology is exacting and unforgiving in its objectivity. Had those traits applied only to our science it would have been a good thing. But as scientists we let those traits encroach into our workplace culture. That culture, like our science, had to be tough, and if we were to be demanding in our methodology we believed we had to be taskmasters as well of those under us. Our students had to be taught how to play the game, and with the power squarely on the side of the faculty, the work environment was harsh, and hazing not infrequent. This was especially true for women who had the added burden of gender-based discrimination.

In the five institutions where I've studied and taught, I was often the only female in a meeting or one of only a small number of women at a field site. Bullying behavior was baked into the system, and there certainly wasn't an expectation that science be collaborative or welcoming.

Back then, efforts to change that culture were only sporadic and arose from individual efforts, and not from the scientific or academic communities-at-large. In fact, you would not have been considered a serious scientist if you even raised the issue for discussion. And, despite the existence at that time of laws and policies prohibiting sexual harassment and other forms of sex discrimination, attempts to report and enforce these laws and policies was also rare and could be perilous to a budding scientist's career.

But with the publication of the *Study on the Status of Women Faculty in Science at MIT* in 1999 and the acceptance of the findings of that report by the leadership of the Institute, the ground began to shift. It became acceptable to both be a serious scientist *and* to want to work to change the culture and enhance the opportunities for women in science and engineering. In

2002, I became the founding Director of the University of Southern California's Women in Science and Engineering (WiSE) initiative, and today, as provost at Boston University, I supported the launch of the ARROWS program - Advance, Recruit, Retain & Organize Women in STEM.

I feel this issue very deeply and personally. My daughter is in a PhD program in STEM and I want to be sure that she has the opportunity to thrive.

Boston University

Happily, time and people's attitudes are changing, and the fight for gender inclusion in science is not as lonely anymore. Today's scientists and engineers are showing my generation that excellent science is compatible with a culture of inclusion and respect, and – furthermore – a welcoming, positive culture makes it *more likely* the best science will result!

When I think of the current generation of scientists, I think of people like BU neuroscientist Steve Ramirez. You may have seen his famous TED Talk about whether we can implant false memories in the brain. Dr. Ramirez prioritizes a collaborative lab environment and uses the motto, "We stand on each other's shoulders, not each other's feet." He pledges to have a lab that is "supportive in our daily endeavors, conducive to rigorous science, proactive about collaborating, and full of solidarity." It's no surprise, then, that his team of post-docs, research assistants, and students is majority female. Dr. Ramirez understands that great science is inclusive.

And I think of BU ecosystems ecologist and biogeochemist Robinson "Wally" Fulweiler, who is thriving in her research. This year, Dr. Fulweiler won BU's highest teaching honor, the Metcalf Cup and Prize, because she understands that the "legacy of your students is how you really make a mark on the world." Dr. Fulweiler is dedicated to lifting up the scientists coming behind her, welcoming people into science rather than pushing them out.

BU's Path to Change

This new generation of scientists is changing academia's norms, and they need our help. I am pleased to tell you what BU is doing to support them, but I want to make clear that we are still a work in progress. Yes, our values and our intentions are in the right place, but our job is to take the concrete steps needed to match those values with actions.

You are no doubt familiar with the case that was publicized in *Science* magazine in 2017: an earth scientist at BU was accused of harassing and bullying two of his former graduate students more than twenty years ago at a field site in Antarctica. One student was so fearful that reporting the behavior would derail her scientific career that she waited until she was a tenured professor at another institutions to let BU know what had happened. Following our investigation, we initiated a serious consequence: the BU scientist lost his tenured position and was terminated.

This case and its repercussions reverberated powerfully at BU. It was followed closely by the release of the National Academies report on *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*, which starkly laid out the terrible costs of gender-based harassment in science, engineering, and medicine.

So we recognize that we need to redouble our efforts. Here's what we're doing:

1. *Diversity, equity and inclusion.* Why do I identify diversity, equity and inclusion as a necessary first step in addressing harassment? Because as the National Academies report on harassment in academia makes clear, taking explicit steps to achieve greater gender and racial equity in hiring and promotions and improving the representation of women and underrepresented groups at every level of the University is key to creating a culture and climate that rejects harassment. Those of us at the highest levels of the University have to make clear our values and act on them in order to create an environment that nurtures excellent, collaborative science.

For example, we have changed the tenure clock to include time for parental leave, we are expanding child care offerings for employees and their families, and we have a childbirth and adoption accommodation policy for doctoral students. These changes benefit all at BU, but are especially important for women.

Dr. Crystal Williams joined the BU as our inaugural Associate Provost for Diversity & Inclusion in 2017. We have increased our focus on recruiting and hiring a more diverse faculty, and Dr. Williams recently hired staff who will be engaged with inclusive organizational development and training. (<http://www.bu.edu/provost/diversity/>).

I'll note the deans of some of our leading schools and colleges - Medicine, Business, Law, and, soon, Communication - are all women, as are the General Counsel, the Vice President and Associate Provost for Research, and me, the Provost. Yes, our work continues, but we are serious about having an inclusive community at all levels of the University.

2. *AAAS STEM Equity Achievement (SEA) Change.* Dr. Joyce Wong, the founding director of BU ARROWS: Advance, Recruit, Retain & Organize Women in STEM, led a rigorous University-wide assessment of BU's commitment to inclusion and equity in science, engineering, and mathematics and developed an action plan to address the barriers she identified. As a result, BU was one of three universities recognized for STEM equity by the American Association for the Advancement of Science with its inaugural SEA Change Bronze Award (https://www.eurekalert.org/pub_releases/2019-02/aast-art021119.php). We were recognized both for our commitment to support undergraduate students transitioning to PhD and our work to create more women STEM leaders at BU by supporting associate women STEM faculty as they transition to full professor rank. This Committee heard in May from Dr. Shirley Malcom, who leads AAAS

SEA Change, so you understand how powerful it can be for institutions to assess their own culture and commit to systemic change.

3. *Mandatory sexual misconduct prevention training.* During this academic year, BU initiated a mandatory, online sexual misconduct prevention training course for all 34,000 undergraduate and graduate students and 11,000 faculty and staff at the University (<http://www.bu.edu/safety/sexual-misconduct/training-sexual-misconduct/>).
4. *Working Group on Gender-Based Harassment Prevention.* Earlier this year, I tasked a group of faculty and University leaders to develop recommendations for how BU can advance our effort to provide a working and learning environment that is free of gender-based harassment (<http://www.bu.edu/provost/files/2019/02/Formation-of-Working-Group-on-Gender-based-Harassment-Prevention-2-26-19.pdf>). Their mandate is broader than the science, engineering, and medicine fields; the working group is looking at the whole of our University, which also includes the arts and the humanities. The group will deliver its recommendations this fall.
5. *National Academies Action Collaborative on Preventing Sexual Harassment in Higher Education.* BU has joined more than 45 other institutions to launch the National Academies Action Collaborative on Preventing Sexual Harassment in Higher Education (<http://sites.nationalacademies.org/sites/sexualharassmentcollaborative/index.htm>). Building upon the recommendations of the June 2018 National Academies report on harassment in academia, the group held its first meeting this week. We are eager to share best practices with our peers, develop an evidence-based approach for harassment prevention, and embark on a collective activity that can bring the change we seek in academia.

The Role of Federal Policymakers

Universities are foundational to this work, but we do not operate alone. We have watched as scientific societies lead the way on addressing harassment at scientific gatherings, we have seen a handful of federal research agencies roll out policies to address harassment by grantees, and we recognize Congress will act as well. As recipients of federal funds, it is appropriate that we uphold the nation's values of respect and inclusivity as we conduct our research.

I thank this Committee for introducing H.R. 36, the bipartisan Combatting Sexual Harassment in Academia Act. I appreciate the bill's focus on a government-wide approach to handling sexual misconduct by federal grantees. There are several items I particularly want to praise:

1. *Clarity and consistency for federal grant rules.* It has been heartening to see science agencies start to tackle the issue of gender-based harassment, but it's better for all of us in science if there is one clear set of rules at the federal level. It will not make sense for

any lab to operate under different anti-harassment policies based on which agency funds its research.

2. *Research.* Thank you for authorizing the National Science Foundation to fund research on gender-based harassment – this is essential. As scientists, we want the data. We absolutely must evaluate our efforts on campus to make sure that something we do because it is well-meaning is also effective and evidence-based.
3. *Stakeholder input.* Thank you for ensuring that the interagency working group led by the Office of Science and Technology Policy will incorporate stakeholder input. When it comes to changing federal rules, it's important to consult those who will be impacted so you get it right the first time.
4. *Responsible Conduct of Research.* I agree it makes sense to have the National Academies update its "On Being a Scientist: A Guide To Responsible Conduct of Research" report to include updated professional standards of conduct and methods for identifying and addressing sexual harassment.

I do, however, want to ask the Committee to take a fresh look at a few items in the bill:

1. *Potential conflicts between federal science and education agencies, Congress, and state law.* Title IX, the Clery Act, and state law all govern how sexual misconduct is handled on college campuses. If students are involved, the Family Educational Rights and Privacy Act (FERPA) may come into play, and employment law may be a factor with faculty and staff cases. I hope the Committee will carefully assess how this bill interacts with these existing laws and regulations. I will give you two examples:
 - a. If students are considered to be grant personnel, how will a University's obligation to report a harassment case to a science agency comport with FERPA?
 - b. If the OSTP interagency group decides to mandate a climate survey, how will that fit with similar, mandatory surveys that are being proposed by the Congressional education committees and states like Massachusetts?
2. *Privacy of data collection.* The bill creates new data reporting by universities. It is important to ensure that adequate privacy protections for those who report sexual harassment are built into the bill. Despite the increasing acceptance of reporting harassing behavior, we have learned from the cases we have adjudicated that sometimes complainants and witnesses are only willing to come forward if they know their information will not be shared with anyone else. The Committee should make clear what privacy protections are contemplated.

Again, thank you again to this Committee for holding today's hearing, bringing public attention to gender-based harassment in academia, and listening to universities as we work towards solutions. I look forward to answering your questions.

Dr. Jean Morrison
Provost and Chief Academic Officer
Boston University

Jean Morrison was named University Provost and Chief Academic Officer of Boston University in January 2011. She provides leadership for the University's overall academic, budgetary and planning processes and oversight of its academic programs, research, global programs, enrollment, and student affairs.



Provost Morrison is the University's 2nd ranking officer and oversees the academic deans of BU's 17 schools and colleges. Since her appointment, she has overseen several key efforts designed to enhance BU's academic quality and global competitiveness, including the development of a University-wide process for academic program review, the launch of a University-wide Arts Initiative, and the establishment of new Associate Provost positions to lead and oversee the University's efforts in graduate education, digital learning and innovation, and diversity and inclusion.

A geologist by training, Provost Morrison's research in earth sciences has focused on understanding the evolution of the earth's crust over time, with particular emphasis on the physiochemical characteristics in earthquake fault systems, as well as the properties of the earth's deep crust. She has served as an editor of the *Journal of Metamorphic Geology* and associate editor of both the *American Mineralogist* and the *Geological Society of America Bulletin*. Prior to her arrival at BU, she was a Professor of Earth Science and Executive Vice Provost for Academic Affairs at the University of Southern California.

At BU, Provost Morrison is a professor in the Department of Earth & Environment. She received her Ph.D. from the University of Wisconsin, Madison in 1988; her M.S. from the University of Georgia in 1983; and her B.A. from Colgate University in 1980.

Chairwoman JOHNSON. Thank you very much, Dr. Morrison. Dr. Kass.

**TESTIMONY OF DR. PHILIP KASS,
VICE PROVOST FOR ACADEMIC AFFAIRS AND
PROFESSOR OF ANALYTIC EPIDEMIOLOGY,
UNIVERSITY OF CALIFORNIA, DAVIS**

Dr. KASS. Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee, it's a privilege to be here today to discuss the University of California, Davis' efforts to address sexual harassment issues in science.

The University of California is committed to creating and maintaining a community where all individuals can work and learn together in a safe and secure environment free of harassment and discrimination. Combating sexual harassment and fostering a culture of respect and accountability is what the 10 campuses of the UC system are striving for and has led the system to take a strong and public stand against portions of the Department of Education's proposed Title IX rule that would narrow the definition of sexual harassment and lower the standards to which schools are held.

At UC Davis, we're especially passionate about the issue of combating sexual harassment. Fifty-nine percent of our more than 30,000 undergraduates are female. In 2012, UC Davis received an NSF ADVANCE Institutional Transformation grant to increase the participation and advancement of women in academic science and engineering careers. And in 2016, Forbes listed UC Davis as the number one college for women in STEM.

In February 2019, UC Davis was one of three universities in the United States to receive the inaugural AAAS SEA Change Bronze Award certification. UC Davis' innovative hiring practices such as offering childcare services to interviewees, helping partners find jobs, using contributions to diversity statements, and having policies in place to address salary equity were among the reasons for UC Davis' selection. I mention the AAAS SEA Change award as it was a voluntary self-assessment and action from UC Davis and reflects our commitment to fostering a culture of respect and accountability.

To further support this commitment, on July 1, 2018, UC Davis initiated a pilot program to conduct reference checks on final candidates for academic appointments with tenure. The pilot reference check program enables UC Davis to obtain and review information about candidates' personal conduct in their previous academic appointments that may be important to the appointment decision. This includes conduct involving gender discrimination, sexual harassment, and sexual violence.

The campus includes a statement in the posting of Senate ladder-rank faculty positions with tenure providing notice to applicants that UC Davis will conduct reference checks on final candidates prior to hiring. The statement highlights the University of California's commitment, quote, "to creating and maintaining a community dedicated to the advancement, application, and transmission of knowledge and creative endeavors through academic excellence where all individuals who participate in the university programs and activities can work and learn together in a safe and se-

cure environment free of violence, harassment, discrimination, exploitation, or intimidation,” unquote.

Based on this commitment, UC Davis conducts a reference check on all finalists for tenured positions. The reference check involves contacting the administration of the applicant’s previous institutions to ask whether there had been substantiated findings of misconduct that would violate the university’s faculty code of conduct.

To implement this process, UC Davis requires all applicants to complete, sign, and upload a form as part of their application. If the applicant does not include the signed authorization with the application materials, the application will be considered incomplete and will not receive further consideration.

Academic Affairs, in consultation with the dean and the department chair, will then conduct an individualized assessment of any information received, including the nature of the conduct, the length of time passed, any corrective action taken, and any explanation offered by the candidate. After reviewing the information, we will determine whether the candidate is still eligible to be considered for the position.

We have not received any protests about this program from faculty applicants or institutions we have contacted. We request feedback within 7 days and, in most cases, receive it. To date, the pilot has resulted in 14 candidates requiring reference checks, 23 academic institutions contacted, 19 responses received, and 0 instances where discipline was provided.

We believe that potential applicants for faculty positions who have been disciplined, upon reading UC Davis’ requirement for a signed authorization, will be dissuaded from applying. The reference check process is therefore likely acting as a prescreening deterrent, consistent with our belief that we do not want to faculty whose behavior is inconsistent with our faculty code of conduct and principles of community.

Finally, consistent with the language of H.R. 36, we believe our reference check program is an intervention for reducing the incidence and negative consequences of sexual harassment in both the STEM and non-STEM workforces, including students and trainees. We believe it’s our moral imperative to protect our students, as well as all other members of our campus community, and so in our minds this modest step is long overdue.

We found no impediments to its implementation, and during the second year of the pilot program, we will again review and share our findings with other universities at the University of California. We expect and hope that other universities around the country will want to follow in our footsteps to prevent offenders at one university from relocating to another and become potentially serial offenders, and we stand prepared to help these institutions.

Thank you for the opportunity to testify today and for your continued support for the academic community. I look forward to answering your questions.

[The prepared statement of Dr. Kass follows:]

P.H. Kass, DVM, MPVM, MS, PhD
House Committee on Science, Space, and Technology
June 12, 2019

Testimony of

Philip H. Kass, DVM, MPVM, MS, PhD
Vice Provost for Academic Affairs
Professor of Analytic Epidemiology
University of California, Davis

Before the U.S. House of Representatives
Committee on Science, Space, and Technology

On

Combating Sexual Harassment in Science
June 12, 2019

Chairwoman Johnson, Ranking Member Lucas, and Members of the Committee on Science, Space and Technology, it is a privilege to be here with you today to discuss the University of California, Davis' efforts to address sexual harassment issues in science.

Background

The University of California (UC) is committed to creating and maintaining a community dedicated to the creation, application, and transmission of knowledge and creative endeavors through academic excellence, where all individuals who participate in University programs and activities can work and learn together in a safe and secure environment, free of harassment and discrimination. Combating sexual harassment and fostering a culture of respect and accountability is what the 10 campuses of the UC system are striving for and has led the system to take a strong and public stance against portions of the Department of Education's proposed Title IX rule that would narrow the definition of sexual harassment and lower the standards to which schools are held.

At UC Davis, we are especially passionate about the issue of combating sexual harassment. Fifty-Nine percent of our more than 30,000 undergraduates are female. In 2012, UC Davis received a National Science Foundation ADVANCE Institutional Transformation grant to increase the participation and advancement of women in academic science and engineering careers, and in 2016, Forbes listed UC Davis as the No. 1 college for Women in science, technology, engineering, and math (STEM).

It was amidst this backdrop that in 2018 UC Davis applied for the American Association for the Advancement of Science (AAAS) STEM Equity Achievement (SEA) Change Institutional Bronze Award, which is an initiative from AAAS to effect institutional transformation in support of

diversity and inclusion through a self-assessment and commitment to the SEA Change principles. In February 2019, UC Davis was one of three universities in the United States to receive the Bronze Award Certification. UC Davis' innovative hiring practices – such as offering child-care services to interviewees, helping partners find jobs, using contributions to diversity statements, and having policies in place to address salary equity – were among the reasons for UC Davis' selection. I mention the AAAS SEA Change Award as it was a voluntary self-assessment and action from UC Davis and reflects our commitment to fostering a culture of respect and accountability.

To further support this commitment, on July 1, 2018, UC Davis initiated a pilot program for the 2018-19 hiring year to conduct reference checks on final candidates for academic appointments with tenure or security of employment. Our current faculty hiring process solicits information regarding candidates' academic qualifications through external evaluation letters. The pilot reference check program enables UC Davis to obtain and review information about candidates' personal conduct in their previous appointments that may be important to the appointment decision. This includes conduct involving gender discrimination, sexual harassment, and sexual violence.

The reference checks do not involve any process for criminal background checks, which are covered by other University policies.

Implementation

The UC Davis pilot program follows various steps to conduct reference checks for candidates who are the final choice for hiring into professor or lecturer titles with tenure or security of employment, respectively.

The campus includes a statement in the posting of Senate ladder rank faculty positions with tenure or lecturer/senior lecturer with security of employment providing notice to applicants that UC Davis will conduct reference checks on final candidates prior to hiring. The statement highlights the University of California's commitment to "creating and maintaining a community dedicated to the advancement, application, and transmission of knowledge and creative endeavors through academic excellence, where all individuals who participate in University programs and activities can work and learn together in a safe and secure environment, free of violence, harassment, discrimination, exploitation, or intimidation."

Based on this commitment, UC Davis conducts a reference check on all finalists for tenured positions. The reference check involves contacting the administration of the applicant's previous institution(s) to ask whether there have been substantiated findings of misconduct that would violate the University's Faculty Code of Conduct. To implement this process, UC Davis requires all applicants for any open search for assistant/associate/full professor to complete, sign, and upload a form as part of their application. If the applicant does not include the signed authorization with the application materials, the application will be considered incomplete, and as with any incomplete application, will not receive further consideration.

When the selection of the first-choice candidate has been made, the dean and/or department chair contacts Academic Affairs to initiate the reference check process. Academic Affairs in turn contacts the Academic Personnel Office (or equivalent) in one or more of the previous institutions where the candidate has been employed. The candidate is notified before the contact is initiated. Academic Affairs provides the signed release to the previous institution(s) and asks for information about misconduct related to teaching, research, service, and (if applicable) clinical care. Academic Affairs does not contact the candidate's department or search chair unless there is no other office of record for faculty misconduct at the institution.

Academic Affairs, in consultation with the dean and department chair, will conduct an individualized assessment of any information received, including the nature of the conduct, the length of time passed, any corrective action taken, and any explanation offered by the candidate. After reviewing the information, Academic Affairs, in consultation with the dean and department chair, will determine whether the candidate is still eligible to be considered for the position.

Again, this pilot reference check program applies to final candidates selected for appointment with no previous UC appointment, as well as candidates with current or prior UC appointments. In order to protect a candidate's privacy, all information received in connection with the reference check process is treated as confidential and retained in accordance with UC policy. Should the candidate be offered and accept the position, any information received shall be securely maintained and held in the campus Academic Affairs Office.

To date, the pilot has resulted in 14 candidates requiring reference checks; 9 completed reference checks; 23 academic institutions contacted; 19 responses received; and zero instances where information about discipline was provided.

We have not received any protests about this program from faculty applicants or institutions we have contacted. We request feedback within seven days, and in most cases receive it.

As noted above, none of our reference checks have led to disclosure of disciplinary actions. We believe that potential applicants for faculty positions who have been disciplined, upon reading UC Davis' requirement for a signed authorization in order for their application to be considered, will be dissuaded from applying. The UC Davis reference check process therefore is likely acting as a pre-screening preventative, consistent with our belief that we do not want to hire faculty whose behavior is inconsistent with our Faculty Code of Conduct and our Principles of Community.

Consistent with the language of HR 36, the Combating Sexual Harassment in Science Act of 2019, we believe our reference check program is an intervention for reducing the incidence and negative consequences of sexual harassment in both the STEM and non-STEM workforces, including students and trainees. At UC Davis, we believe it is our moral imperative to protect our students, as well as all other members of our campus community, and so in our minds this modest preventive step is long overdue. We have found no impediments to its implementation, and during the second year of this pilot program we will again review and share our findings with our counterparts at other University of California campuses. We expect, and hope, that other universities will want to follow in our footsteps to prevent offenders at one university from

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relocating to another, and potentially become repeat offenders, and we stand prepared to help these institutions.

Thank you for the opportunity to testify today and for your continued support for the academic community. I look forward to answering your questions.

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BIOGRAPHY

Philip Kass
Vice Provost for Academic Affairs
University of California, Davis

Prior his appointment to the position of Vice Provost, Dr. Kass held the inaugural position of Associate Vice Provost for Faculty Equity and Inclusion. He holds Doctor of Veterinary Medicine, Master of Preventive Veterinary Medicine, Master of Science in Statistics, and Doctor of Philosophy in Epidemiology degrees, and is Board Certified in Epidemiology in the American College of Veterinary Preventive Medicine. He also completed a post-doctoral fellowship at the UCLA School of Public Health, and was recently named a Fellow of the American Association for the Advancement of Science.

A Professor of Analytic Epidemiology since joining the UC Davis faculty in 1990, he has authored or co-authored over 500 manuscripts and book chapters largely in the field of veterinary epidemiology. As an epidemiologist and biostatistician, he uses these evidence-based skills to now study issues of importance to faculty success, including academic advancement, salary equity, enhancing an inclusive and safe academic environment, promoting work-life integration and leadership, building community, and establishing a more diverse faculty.

Chairwoman JOHNSON. Thank you, Dr. Kass.

At this point, we will begin our first round of questions, and the Chair recognizes myself for the first round.

Mr. Neumann, thank you for presenting GAO's preliminary findings regarding policies and procedures in place at agencies to prevent and address sexual harassment. One finding that concerns me is that few agencies in your analysis have undertaken efforts to evaluate the effectiveness of their policies. Is GAO considering making any recommendations regarding agency efforts to assess the effectiveness of their policies?

Mr. NEUMANN. Yes. As I noted in my statement, none of the agencies have currently taken any steps to evaluate the effectiveness of their policies. As we noted, there's a variety of policies—the agencies are using a variety of policies to communicate their sexual harassment efforts, and so we believe that there's likely an area that agencies could improve on there, and so we're looking at making, you know, some recommendations to improve the—that part of the work.

Chairwoman JOHNSON. OK. Thank you. Dr. Johnson, the National Academies' report found that women of color are at an increased risk of sexual harassment relative to their white peers. Can you discuss the unique challenges faced by women of color who experience sexual harassment in academia and perhaps what more we can do to support them.

Dr. JOHNSON. Thank you, Chairwoman Johnson. Women of color do experience higher rates of sexual harassment compared to their peers, and unlike their white peers, there's often the sense in the academic environment that they actually don't experience harassment. So they're starting from a place of tremendous lack of knowledge within academic sciences, engineering, and medicine.

Second is that they are frequently in the minority, so as numbers have increased with regard to women in academic science, engineering, and medicine, those numbers have not commensurately increased for women of color, and therefore, there is increased isolation. So there is a sense that, without a doubt, creating an environment of inclusion, diversity, and one of equity requires increasing the numbers but also increasing what is an inclusive environment and paying very close attention to that.

And then last, it is very important that we focus on supporting the targets of sexual harassment, making sure that they understand that they will be protected from retaliation and figuring out and developing strategies for them to report in ways that give them more agency. And there are ombudspeople. There are online methods of reporting that also allow them privacy until they are ready to come forward.

And last, to make sure that all women, but particularly those who are from other minority groups, understand that reporting is an act of courage.

Chairwoman JOHNSON. Thank you very much. Dr. Kass and Dr. Morrison, in February 2019 both of your institutions were selected to receive the Bronze Award certification as part of the new American Association for the Advancement of Science, AAAS, SEA Change initiatives. First, congratulations to both of you for that achievement, but then the question, can you talk about why your

institution chose to pursue the SEA Change award and what steps your institution took to earn the recognition? And what were your biggest challenges?

Dr. KASS. Would you like to go first?

Dr. MORRISON. Sure. We chose to pursue it because we thought it was an important opportunity to develop a really comprehensive database around participation in STEM, and that database that was developed as a result of our making the application has been extremely useful in helping to guide our action steps to follow up. We've been able to identify clearly at a department level where representation is—underrepresentation of women in STEM and underrepresented groups is particularly severe so that we can target our actions to that. So we saw it as an opportunity to create a database that would allow us to use the information to most effectively remediate where we have real issues.

Chairwoman JOHNSON. Thank you very much. Dr. Kass?

Dr. KASS. So the AAAS SEA Change program is based upon the United Kingdom's Athena SWAN (Scientific Women's Academic Network) program, a program that has largely become institutionalized in the United Kingdom. We saw this at UC Davis as a way to establish baseline information about the myriad programs that we have across the campus that we're not all even aware of on such a large campus.

Another advantage of this program is that once we receive the award, we become then committed to a series of action plans who will hold us accountable over the next 5 years, and we are committed to meeting those. This is actually consistent with suggestions that were in the National Academies' report as well that universities across the United States should participate in programs like SEA Change.

Now, having done that, we also see our responsibility to try to share knowledge about the program with other University of California campuses and, to an even greater extent, to other universities around the country. This helps raise consciousness, this helps raise the campus profile. This lets everybody know that this is an important issue for all of us and that it's not enough to simply rest on our laurels but that we want to do even better in the future, and there's built-in accountability for that.

Chairwoman JOHNSON. Thank you very much. Mr. Lucas?

Mr. LUCAS. Thank you, Madam Chair.

Dr. Morrison, I'd like to first thank Boston University for its cooperation during the Committee's investigation last year. From that review, the Committee found the National Science Foundation did not have a clear policy on how to deal with a grantee when they are placed on administrative leave.

So I have a two-part question for you. One, could you please share how this lack of guidance from NSF tied Boston University's hands in taking actions in that case? And then once you've done that, follow up, please, with do you feel that the NSF's updated grant policies have clarified the process? Two parts.

Dr. MORRISON. Sure. To the first part, during the investigation when we were trying to determine what the appropriate steps were, there were a series of queries from BU to NSF, and we were—you know, we asked what are our responsibilities here, and

we were told don't worry about it right now. And so it created a sense of uncertainty about what our obligations were. But I would note that we did reach out and try to understand what the appropriate steps were.

What I think was most valuable about it is it really revealed that neither we nor NSF knew what the rights steps were to take because there's a lot on the line in a situation like this. While we want to ensure that we are holding individuals who have engaged in gender-based harassment or sexual harassment accountable, we also feel very strongly about the importance of due process. And so in trying to balance those two, the absence of those guidelines just made it very much harder.

And what was the second question?

Mr. LUCAS. The second part was do you feel that the NSF's updated grant policies—

Dr. MORRISON. Oh.

Mr. LUCAS [continuing]. Have helped clarify the situation?

Dr. MORRISON. Yes. It's better than it was. I think there are still important questions around the precise language about when we need to notify Federal agencies, and I think that's going to take more discussion. And I think it is an extremely important point for the very reason I just cited in that we want to make sure that we are both appropriately addressing inappropriate behavior but also ensuring that people who are accused are entitled to due process.

Mr. LUCAS. Absolutely. Mr. Neumann, from GAO's initial findings, what inconsistencies have you found in sexual harassment policies for grantees across the five Federal agencies that GAO is examining?

Mr. NEUMANN. Yes, I think the main inconsistency we saw is there are some agencies like NASA, NIH, and NSF that had, you know, very detailed policies, they had manuals for grantees, they had best-practice documents, and others just had general policy statements that didn't specifically address grantees and their responsibilities. I think that was the most significant difference.

Mr. LUCAS. So in the process of what you're doing now and since time has passed, briefly, have there been steps taken to coordinate across agencies to develop a uniform Federal policy?

Mr. NEUMANN. Well, certainly, the agencies are collaborating. As I mentioned in my statement, they collaborate through the Department of Justice's STEM working group, and they also take on some individual collaboration with each other. But that's an area that we want to look at a little more closely because we believe that there could be additional steps they could take to better collaborate and share information.

Dr. Morrison was talking about the uncertainty that NSF's policy or lack of guidance created for them, and I think that's partly due to the fact that the agencies haven't really evaluated the effectiveness of their policies to see what is working, what—you know, is this effectively reaching the grantees so they know what they are required to do?

Mr. LUCAS. And in the time I have left, I turn to my three doctors. Would you like to see uniform policy for grantees, and what would it mean to your institutions? Yes, that's an open-ended question, but the floor is yours. Dr. Johnson?

Dr. JOHNSON. The answer would be yes. I think that having uniform policies and procedures across the Federal funding agencies would be extremely beneficial—beneficial to our institutions and also beneficial to our grantees.

Dr. MORRISON. I agree, absolutely. It's essential in order to facilitate our ability to be effective in working through these always complicated situations.

Dr. KASS. And we concur. Having a uniform policy across all Federal agencies would reduce potential errors. In addition, many faculty investigators receive funding from multiple sources, and so we would ostensibly otherwise be faced with the possibility of trying to apply different standards to the same individual, so we would welcome a uniform policy.

Mr. LUCAS. Very valid point. With that, I yield back, Madam Chair.

Chairwoman JOHNSON. Thank you very much. Ms. Bonamici?

Ms. BONAMICI. Thank you, Chairwoman Johnson and Ranking Member Lucas, for the hearing, also for your bipartisan legislation, which I am proud to support. And to our distinguished panel, thank you.

A few years ago I heard from a talented fisheries biologist whose career was basically put on hold—she was conducting research on a NOAA (National Oceanic and Atmospheric Administration) vessel when she finally reported the harassment, which of course she delayed for a long time because she was afraid for her career. The scientist, not the individual who harassed her, was advised against returning to the sea, so she was given a desk job, and her research was basically derailed.

And like with so many other cases of harassment in the sciences, the investigation was slow. I finally contacted then-NOAA Administrator Dr. Kathryn Sullivan, who began the process of really making some tangible changes. They have updated their policies. And I noticed NOAA is not one of the agencies in your report, Mr. Neumann. They updated their policies and procedures for reporting. They began training the NOAA workforce. They started to improve the investigation protocol. Fortunately, the scientist was able to return to her work, and NOAA has now implemented a full-time workplace violence prevention and response program manager. I just got an update from them yesterday, and they really have taken it seriously. But of course we have a lot of work to do.

And we know of course that this is not just restricted to remote areas like a NOAA research vessel. According to the comprehensive report, more than 58 percent of individuals in academia experienced sexual harassment or gender harassment, and it could be more than that because I don't necessarily have confidence that everyone is reporting. We're losing a tremendous amount of potential when this happens without a way to address it.

Dr. Johnson, you talked about the perceived tolerance for sexual harassment in academia. When does that start? And is it affecting incoming students and their course choices or major choices? Is it affecting faculty and faculty recruitment? Where does that start? I'm on the Education Committee, so I'm always looking at prevention.

Dr. JOHNSON. Well, thank you, Representative Bonamici. And our report very clearly states that this is a pervasive problem and that it impacts students, trainees, postdoctoral students, as well as faculty, so across the board there is significant impact.

So one particular area I'd like to just reference, though, in your question or in your statement was the particular issue that's experienced by those who are engaged in field site research because there is also a problem. Our report clearly stated that evidence shows that it's an area where the rates of documented sexual harassment are even higher.

According to the SAFE (Survey of Academic Field Experiences) study, which was run by one of our committee members Kathryn Clancy, the estimates are about 64 percent of those in field sites are experiencing sexual harassment with the greatest numbers being amongst female trainees. On those sites, both men and women experience harassment. It's experienced somewhat differently, but it is a pervasive problem. And according to the study, there is a real lack of understanding of any codes of conduct, lack of understanding how to report, and so it's a particular area, in addition to all of the others that we've discussed, where there really needs to be attention.

Ms. BONAMICI. Thank you. And I'm going to try to get another couple questions in real quickly. Dr. Johnson, in addition to Chairwoman Johnson and Ranking Member Lucas' bill, the report says treat the legal obligations for addressing sexual harassment under Title IX and Title VII as a floor not a ceiling. What else do you recommend Congress do?

Dr. JOHNSON. Title IX and Title VII really are the base, and what has happened is that in many institutions, the approach to addressing harassment has been one that's been legalistic and one that really looks to only decrease liability. It's important that we really focus on the culture and the climate in order to prevent harassment. And it is the areas that I focused on in my opening statement: Increasing the culture of diversity, inclusion, and respect; changing the power dynamic in the mentor-mentee relationship; supporting targets of harassment; and really improving accountability and transparency.

Ms. BONAMICI. Thank you. And I real quickly want to ask Mr. Neumann because you brought this up in your testimony about the Department of Justice Title IX STEM workgroup meetings, but you also suggested in your testimony that the discussions about sexual harassment are not happening in those meetings. So do you agree that OSTP is the appropriate entity to help provide this consistency? What's happening with those conversations if sexual harassment is not being discussed in those workgroup meetings?

Mr. NEUMANN. Well, so I think that it's the emphasis, as Dr. Johnson mentioned, is more on compliance with the law. That's what the focus of that working group is and how they can jointly conduct compliance reviews. So it's all very valuable, but it doesn't really get at the broader issues that have been raised by the National Academies' report. And that's something we definitely want to look at, you know, are agencies' policies effective in addressing the larger issue?

Ms. BONAMICI. Thank you. I'm over time. I yield back. Thank you, Madam Chair.

Chairwoman JOHNSON. Thank you very much. Mr. Weber?

Mr. WEBER. Thank you, ma'am. I want to follow up on what Congresswoman Bonamici said, Dr. Johnson, if I may. She asked you the question where does sexual harassment start, but I want to ask you a different question. Where does it end? And here's what I mean by that. You talked about in the field there seems to be a lack of understanding of codes of conduct, which I find astounding because you would think that that should have been made obviously apparent in the institutions. And then you said there was a misunderstanding or lack of understanding on how to report. So if we're going to end this, how do you fix those two problems?

Dr. JOHNSON. Our report gives a number of recommendations, and one particular one is if we look at what training should at least include from the knowledge we have now, understanding that there's more research to be done in terms of the most effective strategies. It's very clear that training that is targeted toward particular groups and not just a vanilla training across all is indicated. So specific training for students, for postgraduate students, for faculty and staff. The experience is different across those groups and requires different types of training.

It's also clear that training should not focus on changing beliefs but should focus on changing behavior. Often, training that is on-line and brief is focused on really understanding some of the rules, which is beneficial, but it really does not get at the heart of how we need to change behavior.

Mr. WEBER. Well, that sounds interesting to me that training should be focused on not changing beliefs, but if we don't encourage people to think differently, some that believe they're entitled or believe they can get away with stuff or whatever, that seems a little incongruous with what we need to be doing. And I know you all researched that and so you're educated in that and I appreciate that.

I want to go over to Mr. Neumann and follow up with what Congresswoman Bonamici said also. Mr. Neumann, you said there were five agencies, and she asked were they having conversations about this. And you've studied these five agencies. Is there one person generally in charge? When you did this study in each of these agencies, was there one person accountable for progressing this issue and relaying that back to you and interfacing with you?

Mr. NEUMANN. Well, there's a variety of offices depending on the agency that are involved. It's usually the, you know, civil rights or diversity offices that are involved in enforcing sexual harassment policies.

Mr. WEBER. Is there a time when you double back or do you just do the one study and you're done?

Mr. NEUMANN. No, we have—and actually, we're continuing to do additional work, so we had initial conversations, we met with different officials at the agencies, gather documentation, reviewed that documentation. Now, we go back and finalize our analysis with them. And the last step of the process is getting their input so they have a chance to, you know, give us any additional evidence before we make any final recommendations.

Mr. WEBER. Do you give them a grade, a report card if you will?

Mr. NEUMANN. We certainly will point out any weaknesses in areas that we see could be improved and make recommendations.

Mr. WEBER. And is that information made public to anybody who is seeking to come be employed there or come to a college, for example, or be a grantee? And I'll come back to you Dr.—is it Kass or Kass?

Dr. KASS. Kass.

Mr. WEBER. Kass in just a minute. But do you give them a report card? Do you make that information public so if anybody wanted to go to work there knows the pervading atmosphere there, Mr. Neumann?

Mr. NEUMANN. Well, so we wouldn't be giving a report card, you know, for the universities. We're focused on the Federal agencies.

Mr. WEBER. Well, that's what I'm talking about.

Mr. NEUMANN. Right. So we wouldn't be looking—yes, so we'd be providing recommendations that we made publicly available on our website, and agencies will take action in response to that.

Mr. WEBER. OK. And then, Dr. Kass, you just said something—thank you for that, Mr. Neumann.

Dr. Kass, you said something that got my attention. You said that the program—somebody asked you about going after the SEA deal, and you said it was fashioned after a U.K. program.

Dr. KASS. That's correct. In the United Kingdom there's a program called Athena SWAN, and that program, which has been around for a number of years—

Mr. WEBER. Athena—

Dr. KASS. Athena, hyphen, SWAN, S-W-A-N.

Mr. WEBER. OK.

Dr. KASS. And the program exists to try to help United Kingdom universities diversify their faculty particularly with respect to gender.

Mr. WEBER. OK. And then you said one thing that caught my attention. I think you said that program had permeated the institutions in the U.K.

Dr. KASS. Yes, many, many universities in the United Kingdom are either bronze-, silver-, or gold-certified. And indeed, for some government grants, it is required that you achieve a certain level of certification in order to become eligible to even apply for those grants.

Mr. WEBER. OK. Well, I've got other questions, but I'm over my time. Thank you, Madam Chair. I yield back.

Chairwoman JOHNSON. Thank you very much. Mr. Tonko.

Mr. TONKO. Thank you, Chairwoman Johnson, and thank you for holding this hearing and for your continued dedication to this critical issue. And thank you to each and every witness here this morning for joining and helping shine a light on this problem.

Every time a woman in America is driven out of the sciences, it diminishes our Nation's leadership and our competitiveness. When sexual harassment in the fields of science, technology, engineering, or math is accepted or ignored, we lose future leaders, inventors, innovators, and pioneers.

The greatness of a nation has often been measured by its achievements in science. If half of us and half of the people in fu-

ture generations are held back from their full potential, we squander the potential of those amongst us who would have gone on to find lifesaving cures, make discoveries that enhance our lives, or change our understanding of the universe and do research that pushes us forward.

We must act decisively on this issue to end the outdated and useless culture that allows for harassment and discrimination in science. There is no reason to perpetuate a perverse dynamic that can only serve to limit our perspectives and our ability to solve problems.

As an engineer, I want to thank the Society of Women Engineers for their work highlighting this issue and for reminding us that we lose a golden opportunity when many of the women who want to go into engineering are thrown into a culture where sexual harassment is tolerated and they are undermined. This is indeed unacceptable.

I have supported many pieces of legislation to diversify the STEM workforce and inspire young women to go into the STEM fields. However, if the STEM fields are not a welcome place for women and this culture of sexual harassment is allowed to continue, we will lose these very same young women whom we have worked so hard to inspire to go into STEM, and we will lose every extraordinary thing they would have achieved because we failed to address the problem before us today.

That is why I'm so grateful for today's hearing, and I for one will continue to listen closely for opportunities and actions that we can take to more fully realize America's potential in science.

So with that said, Dr. Morrison, in your testimony you mentioned your personal experience as a woman in the sciences, and you describe a culture that absorbs the, quote, "exacting and unforgiving nature of the scientific discipline." Can you elaborate on what specific cultural challenges exist in academia that may contribute to a hostile environment?

Dr. MORRISON. Sure. I think, as I said both in my oral and written testimony, that when one, you know, asks the question, well, where did this start so we can get to where does it end, it's a very good question, where does it start, because this is not necessarily characteristic of other organizations. And I think it—and STEM—and in fact we don't see it in quite the same ways manifest in other disciplines within the university. And I think it goes back to the exacting and rigorous nature of how we think about the scientific process where you have a hypothesis and you gather data and you could repeatedly question and question and question to get to the truth. And so that characteristic where a sort of dogged pursuit of the truth can often be hostile.

And certainly I had a number of exchanges during the course of my Ph.D. where in what should be sort of rational back-and-forth and discourse and, you know, question and answer, it gets hostile because people can take it personally. So I think that's in part where it drives from.

And I think the other element is that particularly in research universities, these are institutions that are extremely decentralized, so faculty do most of their teaching and research within the context of a department. And those departments are led by a de-

partment chair who's been elected from among the group. And so they are in some ways isolated from broader structures, and so they have a tremendous amount of autonomy. And I think that decentralization of academic departments where cultures get established and are allowed to exist without aggressive intervention is part of the issue.

Mr. TONKO. Thank you. And, Dr. Johnson, you list a number of negative professional outcomes when women experience sexual harassment in the workplace, all of which affect retention of women in STEM. Having done a lot of work on that issue, does sexual harassment in STEM also serve as a barrier to recruitment of women in STEM studies and careers? And where's the pipeline—where in the pipeline are its impacts first felt?

Dr. JOHNSON. What we know and what our study showed was that along the pipeline there are barriers. And we don't have good data regarding whether it's a barrier to entering. What we do have data on are the increasing numbers of women in certain fields entering that pipeline but then dropping out. And I think it's evidence that this is a pervasive problem and contributes to that high dropout rate.

Mr. TONKO. OK. Thank you very much. And let's all keep up the fight. Thank you. I yield back.

Chairwoman JOHNSON. Thank you very much. Mr. Marshall.

Mr. MARSHALL. Thank you, Chairwoman. My first question is for Dr. Johnson. The Federal definition of research misconduct was last revised over 20 years ago and was altered to take out the detrimental research practices from the definition. Is it time to revisit whether sexual harassment and other abusive behavior should be part of the Federal definition of research misconduct?

Dr. JOHNSON. Thank you. And our report recommends that sexual harassment be considered as important as research misconduct, and it really negatively impacts the integrity of science. And therefore, it is time to relook at the definition and to look at the full definition of what negatively impacts and constitutes a negative impact on research, so yes.

Mr. MARSHALL. OK. Dr. Morrison, would you add anything to that?

Dr. MORRISON. No, I think that's absolutely—it's absolutely essential that is added to the definition.

Mr. MARSHALL. OK. My next question for Dr. Kass, in many of the harassment cases that have recently come to light, one running theme is that nondisclosure agreements and other privacy considerations have allowed abusers to go unchecked. In education, this often means perpetrators are able to go from university to university committing the same egregious behavior. How does UC Davis pilot program—check program assist in addressing this hurdle?

Dr. KASS. By requiring applicants to sign a disclosure agreement authorizing the previous institutions to disclose to us any substantiated charges of sexual harassment and discipline. We think that we'll be able to then mitigate that problem.

Mr. MARSHALL. So have you been able to exercise that or is it working so far? Is it too early to tell?

Dr. KASS. The problem—well, it's working in the sense that so far we have not had anybody applying for tenured faculty positions

who have had substantiated sexual misconduct. And we can't be sure why that is, but we suspect that our program is a deterrent to them to even apply in the first place knowing that if they did have substantiated sexual harassment, they would be forced to sign an agreement allowing their previous university to disclose it to us.

Mr. MARSHALL. I'm trying to be the devil's advocate here I guess. If I was university X where there was an issue and now they're applying to your university, if I was at university X, I'd probably be consulting about 15 lawyers to say, look, I've got a nondisclosure agreement, and this person now is—it sounds like he's waiving their nondisclosure agreement. That seems like a hassle or an issue probably.

Dr. KASS. Well, it hasn't come up so far, so we haven't had to cross that bridge. I suppose we would reach out to the university then to understand why they were not being responsive to us. Is it that they simply don't have the time or whether or not they are declining to respond to us for unknown reasons, which would raise a red flag.

Mr. MARSHALL. Does anybody else have any comments how we overcome the hurdle? Yes, Dr. Johnson, please.

Dr. JOHNSON. One thing that we have recommended in our report as a potential congressional action is that we really do away with confidentiality statements because this is at the heart of the problem. If there are confidentiality statements that are signed, then it creates many barriers, as you've stated. So if we can do away with those statements, we'd go much farther in having much more of an open book around what institutions can or can't say.

Mr. MARSHALL. OK. Anybody else have any further comments on that? OK. Thank you. I yield back.

Chairwoman JOHNSON. Thank you very much. Dr. Foster.

Mr. FOSTER. Thank you, Chairwoman Johnson, Ranking Member Lucas, and our panelists.

You know, this is an important subject. Throughout my 25-year career in physics, our field always struggled with gender diversity, and I always wondered what fraction of that struggle might be due to harassment and discrimination. It's a very difficult question to answer, as Dr. Morrison mentioned.

You know, in science, you know, everyone talks over everyone else, you know, and, you know, it's just—it's the way it is, and that culture, you know, lands particularly hard perhaps on women who choose not to be as aggressive.

And my first question, Mr. Neumann, it relates to table 3 on page 8 of your written testimony. The statistics on this are small, but it seems like there are significant differences in the rates of reported sexual harassment complaints received by different agencies. And I was wondering if you can say something—does this just reflect difference in the number of grantee institutions, a difference in the number of potential targets, the number of different reporting criteria, or what other factors?

Mr. NEUMANN. Well, I think part of the issue is that the complaints don't always reach the agencies. A lot of them are addressed at the university level or they go to the Department of Education, so they go through a different process. The ones that

are reaching the agencies are going to be limited based on the nature of the oversight.

But NSF, as we noted, had more complaints, and that was because of a change in agreement they had with the Department of Education which previously handed their complaints for them. And now NSF is handling those directly, so that number went up recently.

Mr. FOSTER. Yes. And are you optimistic that you'll be able to come up with standardized reporting criteria so we'll actually be able to look across all the different agencies and see if there is potentially a cultural problem in one of the other agencies?

Mr. NEUMANN. We'll definitely continue to look at the information-sharing. It's an area that we believe there is likely to be improvements that we'll recommend because the agencies themselves have noted that they would like to be able to share more information. They haven't really identified any legitimate barriers yet that we could see to that information-sharing, so we want to continue to pursue that in the rest of our analysis.

Mr. FOSTER. Are there appropriate workshops that are attended by the relevant people who could standardize the policies so at least we could have some idea, you know, to have a level look at the different agencies?

Mr. NEUMANN. Each agency is taking different steps, you know, that some are creating working groups, others are working with each other, you know, on a bilateral basis to kind of coordinate on different policies, so there's definitely a lot of workshops. And we'll include some of that information in our final report.

Mr. FOSTER. Thank you. And I guess this is a question for the whole panel. Is the line drawn—both for harassment and discrimination in academia the same as the lines that are drawn in business? You know, for example, in big law firms, you know, there are very, very explicit, you, rules and training that, you know, the associates at the law firms have to take, you know, when, you know, two lawyers at a firm develop a relationship, there are very explicit rules on—they have to report it, they have to, you know, deconflict any legal problems, and so on, and as well as laws about harassment and so on, or rules about harassment. I'm not aware that there are such explicit rules about reporting it when someone leaves a law firm because of some trouble. They may or may not leave quietly.

I was wondering, are the rules in academia comparable, more lax, or more stringent than those in general business?

Dr. MORRISON. I would say that the culture is very different if you compare a law firm with a university where tenured and tenure-track faculty members have a shared governance role in the institution. That structural difference I think has led to differences in how the two institutions, a law firm and a university, address these things. I think we're working toward having the kinds of policies and procedures that corporations and businesses have, but it is complicated by the role and the fundamental structure of the university where faculty are deeply engaged in the process. I think we're moving—we strive toward that, but I think there are real differences.

Mr. FOSTER. Dr. Johnson?

Dr. JOHNSON. There are other differences. For example, the very close and dependent mentor-mentee relationship in which the mentee or advisee at different levels is fully dependent on the mentor or the senior faculty member for funding, for mentorship, and that frequently goes unchecked. And so in the report we really recommend that this is an opportunity where academia is quite different, and it's an opportunity for us to really think about diversifying that model, widening that mentorship circle, changing the models of funding so that, in addition to all of the other recommendations, we're also changing some of the fundamental structures that we think are very important in leading to harassment.

Mr. FOSTER. Thank you. And I guess I'm out of time here and yield back.

Chairwoman JOHNSON. Thank you very much. Mr. Gonzalez.

Mr. GONZALEZ. Thank you, Madam Chair, for holding this important hearing, and thank you to our panel today for your testimony and your tireless work to shed a light on this important issue.

So little bit of my background, I, prior to this job, ran a technology company, small startup run by two incredible female entrepreneurs, one, our CTO was from MIT, and we used to talk a lot about this issue specifically. And I know we've made progress, but it's still unbelievably frustrating and I can't thank you enough for all your work. And I'm glad we're here today.

And I want to first direct my first question to Dr. Johnson. In your written testimony you recommended academic institutions diffuse the hierarchical and dependent relationship between trainees and faculty. You were just talking about that. Could you speak as specifically as you can on how we could actually do that. How can we incentivize that as Congress? Because it's such a unique and kind of odd structural arrangement that hurts us here.

Dr. JOHNSON. Yes. So in our report, we recommend the widening of that mentorship circle and really thinking about widening how funds are granted. What can be done through Congress and through our funding agencies is to set certain expectations for how grant-receiving institutions must create these opportunities for changing the paradigm.

Mr. GONZALEZ. Great.

Dr. JOHNSON. And this is another opportunity obviously for research.

Mr. GONZALEZ. OK. But I'm trying to figure out how we decouple—because there's this notion that you're almost beholden to your superior no matter what in the academic world, so how do you kind of get around that or how do we—

Dr. JOHNSON. Yes.

Mr. GONZALEZ [continuing]. Decouple those?

Dr. JOHNSON. So what we recommend in the report is that you will always have a relationship—

Mr. GONZALEZ. Right.

Dr. JOHNSON [continuing]. With a senior faculty member or mentor, but that should not be singular—

Mr. GONZALEZ. Yes.

Dr. JOHNSON [continuing]. That there's an opportunity here to broaden that mentorship circle to create very, very intentionally a

different model of mentorship so that a trainee is not alone in that singular relationship.

And second, the funding piece is also quite important——

Mr. GONZALEZ. Right.

Dr. JOHNSON [continuing]. And what we recommend is that we consider potentially pooling funds and having funds come centrally to the trainee as opposed to being directly handed over or that direct one-on-one dependency.

Mr. GONZALEZ. Great. And then another one of your recommendations has to do with better protecting claimants from retaliation.

Dr. JOHNSON. Yes.

Mr. GONZALEZ. Could you maybe go into that a little bit as well, you know, specifically how can we do that?

Dr. JOHNSON. Yes. So a lot of what H.R. 36 is recommending in terms of helping to create not only a different culture but also helping to do the research that allows us to better evaluate some of the interventions we recommend I think is important.

The second thing is to really give the target of sexual harassment more agency in the process. And what I mean by this is really thinking about other ways that the target can have control over reporting. We know that there's underreporting. How do we make reporting safe? How do we create greater opportunity for reporting that is confidential? How do we also look at opportunities to report where a victim may not have to come forward but can actually record the incident, timestamp it, and when they're ready come forward. So the more agency we can give a target, the more we believe will come forward.

Mr. GONZALEZ. Great, thank you. And then, Dr. Kass, I just want to drill down on Athena SWAN a little bit. You were mentioning it earlier. Can you tell me about how that program's working today and what the interplay is between kind of the government versus the institutions themselves?

Dr. KASS. Well, from what I can see from across the Atlantic it seems to be working fairly well. Universities across the United Kingdom want to become certified through Athena SWAN. It has now spread to Australia as well. So it seems to have become part of the United Kingdom's fabric. And, as I said, there are now some grants that universities would otherwise not be eligible to apply for were they not showing some measure of success in creating a more diverse and equitable environment for female faculty.

Mr. GONZALEZ. Fantastic. Thank you again for your time and your important work, and I yield back.

Chairwoman JOHNSON. Thank you very much. Mrs. Fletcher.

Mrs. FLETCHER. Thank you, Chairwoman Johnson. Thank you for holding this hearing and Ranking Member Lucas, and thank you to all of our witnesses who are here testifying. This is a really important topic.

And folks here have heard me say before that I'm the aunt of a niece who wants to grow up to be an engineer, and I want to make sure that path is clear on the way, as well as in arriving.

And we've had the privilege on this Committee of hearing from many accomplished, incredible women, including those on our

panel today, who are in the sciences, and it's critical that we create environments where we can do that.

So my questions are really geared around how do we in Congress help combat some of these challenges? And I think that, as a lawyer, one of the things that stuck out to me, Dr. Morrison, was your testimony that H.R. 36 is a good step but that we need to look at the conflicts and kind of ameliorate some conflicts between the existing laws and the requirements under H.R. 36. And I wonder if you could just expand on that a little bit for us of the things that you see that are potentially intentioned that we might address now.

Dr. MORRISON. Yes. I think there are a variety of things. We want to make sure that the guidance from the Federal Government and all the different areas is consistent and clear so that, as we go then to communicate to our decentralized organization, that we can talk with one voice about particular things, and that, you know, one of the critical issues is around H.R. You know, we've talked about the policies that are standard as part of H.R. contracts. And while we don't have necessarily confidentiality agreements, it is the nominal expectation that personnel matters are held in confidence. And I think to move away from that basic expectation of confidentiality is an important one.

Mrs. FLETCHER. OK. And does anyone else on the panel have additional suggestions on potential conflicts or issues that we should address now in this bill?

Dr. JOHNSON. Thank you, Representative Fletcher. Just a couple of additions. I already talked about the confidentiality agreements. I think there are a couple of others that we recommended in the report. Really banning mandatory arbitration clauses could be another, allowing lawsuits to be filed against alleged harassers directly instead of or in addition to academic employers, so I think these are another couple that might be helpful.

Mrs. FLETCHER. Thanks. That's helpful. Anyone else?

Well, then, I also want to follow up, Dr. Johnson, on your testimony. And Mr. Gonzalez's questions touched on it as well, but I'm really interested in your conversation about really rethinking the funding system and how we do that, and so I don't know if you have in mind or if a working group has come up with sort of alternative funding models, but it seems like there's an opportunity to really rethink at a big level how our Federal funding is administered and what we could do or what we could require to come up with really alternative models. So I'd love your thoughts on that.

Dr. JOHNSON. So our report did not go into detail that was beyond the scope. We did make the recommendation, and I do think that in H.R. 36, in its focus on funding research in this area, there's the opportunity to really take this up as we could test models and then determine which ones are the best.

Mrs. FLETCHER. Terrific. Does anyone else have any thoughts on the funding models to share?

Otherwise, just more broadly I guess, do you all have any other recommendations for us about how we as lawmakers can tackle the problem of sexual harassment in the sciences outside of this particular piece of legislation or suggestions for us? Mr. Neumann,

have you seen anything in the scope of your report that you think—outside of what we're talking about?

Mr. NEUMANN. So I—there's a couple areas that we're looking at that do—I think the bill would address like, you know, kind of the policy—looking at the policies and the information-sharing. We're going to continue to look at agencies' efforts to do compliance reviews and the investigation process, so there may be other things coming in under that but nothing that I see that would be—that isn't, you know, envisioned in some of the bill right now.

Mrs. FLETCHER. Dr. Johnson?

Dr. JOHNSON. Just briefly, as our report had recommended the use of high-quality climate surveys, this is in the bill, but I do want to state we have not discussed yet today that this is very important in terms of really having high-quality tested climate surveys and sharing of that information, making it public so we can all truly get better at understanding what are the best methods.

Mrs. FLETCHER. Thank you very much. I yield back my time.

Chairwoman JOHNSON. Thank you very much. Mr. Baird.

Mr. BAIRD. Thank you, Madam Chairwoman and the Ranking Member Lucas and all the witnesses. I appreciate you being here today.

You know, the National Academies have outlined several of the factors that contribute to sexual harassment in academia. These include a culture of symbiotic compliance with Title IX and Title VII where the institutions are great at checking legal boxes but maybe not able to reduce and eliminate sexual harassment.

So my question to all of you is how can we in the Federal Government, as well as you in academia, ensure that the spirit, not just the letter of the law, is being adhered to? Start with you, Mr. Neumann.

Mr. NEUMANN. So I think, you know, one area that the agencies, you know, can look at is when they do compliance reviews at universities, you know, they can—those are pretty—can be comprehensive and look at best practices, as well as deficiencies. But I think even more importantly going back and looking at are the policies they have in place really getting at the issue? So I think that requires an evaluation of the effectiveness of the policies. If agencies were to do that, they may identify those things that'll—that are more useful in combating the sexual harassment issue at universities.

Dr. JOHNSON. Again, looking at the policies at the grant-receiving institutions is what our report recommended, particularly around the transparency and accountability of policies. Ensuring that there are very transparent policies not only regarding reporting but also regarding what are the consequences for varying levels of sexual harassment if one is found in violation of policy. I think the greater the transparency, the greater the trust in the organization, and that is what the evidence supports.

Dr. MORRISON. To build on those things, I would add that leadership both at institutions where we continue to emphasize the importance of this and how we select deans and leaders within the university to ensure that women and people of color are more represented than they are now is critical and that the—you know, you asked sort of more broadly than H.R. 36 that the leadership and

guidance out of the Federal Government more broadly, including the Department of Education, would speak to the importance of supporting universities and working on this critical issue.

Dr. KASS. And I would just point out that there are other organizations that are also working on this, and it would be great for people in the government to work with those organizations. I'll give as an example of that the AAU's (Association of American Universities) advisory board on sexual harassment and gender discrimination, which is comprised of leaders of all levels at the university who encounter issues related to sexual harassment firsthand. You know, this—they have this advisory board in order to come up with new ideas, ideas for research, ideas for prevention, and will be meeting on a regular basis to come up with what we hope will become best practices.

Mr. BAIRD. Thank you. My last question because we only got about a minute or so—and I'm glad you brought up the issue about gender because, as we previously noted, women hold only 24 percent of the STEM jobs. This creates an inherent imbalance of power in this field. So my question to you folks is would you care to comment on if and how a change in the gender balance in STEM fields, specifically one in which more women were employed in STEM careers, could contribute to decreased harassment?

Dr. JOHNSON. Well, our report clearly states that the data point to the male-dominated fields. Those that are most male-dominated experience greater rates of sexual harassment. So, as Dr. Morrison indicated, really diversifying not only the pipeline but really diversifying the leadership is critically important to decreasing rates of sexual harassment.

Mr. BAIRD. I think I'm out of time, so I yield back my time, Madam Chair.

Chairwoman JOHNSON. Thank you very much. Mr. Casten.

Mr. CASTEN. Thank you to the Chair. Thank you to all the witnesses.

There's really a larger group that I'd like to thank. And it strikes me that the stuff we're talking about today is not particularly new. It's been out there for a long time. We just kind of accepted it as part of the background not necessarily willingly but we did accept it.

And the—what's new in the moment is that we are talking about this ubiquitousness of sexual harassment in a whole lot of workplaces, academia and STEM not included. And as the old saying goes, admitting you have a problem is the first step. We're not done yet, but we're at least starting on a road to recovery.

And we wouldn't be there but for all the—you know, the tremendously brave women in male-dominated fields who stood up in this Me Too movement and said we got to stand up. And they're really the ones that we owe the most thanks to today, sort of the silver lining of a lot of the negative news in our moment right now.

Our job now is: Number one, to believe them, and number two, to make sure that we're establishing policies that demonstrate our commitment to ensuring a workplace where everyone can feel comfortable, valued in their roles as professionals. In going through and reading the background, my first job out of college was doing cancer research, then spent a couple years doing basic research on

biofuels development. And to the best of my knowledge those were all very tolerant workplaces, but it's not lost on me that most of my colleagues were overworked, overcaffeinated, young, single men. And the bravery that's required for women to enter that environment is certainly something I appreciated.

And I was struck reading Dr. Johnson's testimony coming in that maybe my experience wasn't typical. I think you said that over 50 percent of women in academic environments and somewhere between 20 and 50 percent of students in higher education experienced sexual harassment at the hands of their colleagues, mentors, faculty members. Maybe our experience was typical and I didn't know about it.

But what I'm struck by in the moment is, how do we catalyze that fix? Because even with the best of intentions, I'm sympathetic to the bravery that's required for the first woman to enter a lab that's dominated by men or the first two to come in.

And so, Dr. Johnson, what steps would you recommend—I don't want to say to break the cycle but how do we sort of create the activation energy to catalyze that to make it easier for the next generation that comes through and not make this such an act of bravery every time?

Dr. JOHNSON. As we look at the Academies' report and we look at what's happened in the past year since the publication of the report, I think we've seen an activation, and we've seen actions by NSF that we've talked about. We've seen actions by NIH, and they're further looking at their policies on extramural research. We've seen the various societies, professional societies enact codes of conduct and take even greater steps. We've seen the National Academies themselves develop new codes of conduct and also take a number of steps. And we've seen the National Academies develop an action collaborative that has brought together over 50 universities and colleges to come together to address this issue to share what are—I won't say best practices—to share practices and do work together so that we can combat this issue.

So what I would say is that I think there has been an activation. This has been a complex problem. We have not seen any decrease in the rates of sexual harassment over time. And H.R. 36 is very important in this. It is a multifaceted problem that is going to require constant attention and a number of inputs. And I think that the Federal funding agencies, as we have recommended, play a very important role in this. So it's going to be really continuing the work, but I do believe that what we see is an activation over the past year.

Mr. CASTEN. Yes, go ahead, Dr. Morrison.

Dr. MORRISON. I would add the other thing I think is catalyzing some movement is the next generation of junior faculty. There are a number of new up-and-coming faculty who just don't accept this old culture, and they are working to establish welcoming and collaborative environments in their laboratory. And that they are, through their actions and who they select to be their students and their postdocs and how they interact within the context of their labs, they are changing the culture. And I think there's a tremendous amount that is positive and hopeful about that. They look at the world differently, and it's very good.

Mr. CASTEN. Thank you. I see I'm out of time, but to date my musical preferences that the kids are all right. Thank you, and I yield back.

Chairwoman JOHNSON. Thank you very much. Mr. Crist.

Mr. CRIST. Thank you, Madam Chair and Ranking Member Lucas.

I was curious. Three of you are at academic institutions presently. Is it common that such institutions have confidentiality statements for incoming employees to sign?

Dr. MORRISON. At Boston University it is presumed part of a personnel agreement. It is not an explicit element of a contractual relationship, but we're—we presume that our contractual relations with faculty and staff are confidential.

Mr. CRIST. But do they all have to sign a confidentiality agreement?

Dr. MORRISON. No, they sign a contract that comes with the presumption that it's confidential.

Mr. CRIST. So the presumption is written out in it?

Dr. MORRISON. No, it is not. It's—

Mr. CRIST. How is it presumed?

Dr. MORRISON. Through practice, that we would not—that we would not disclose the details of a personnel interaction or personnel matter.

Dr. KASS. We do not have them, and if we have substantiated sexual harassment, we disclose it under a Public Records Act request.

Dr. JOHNSON. We do not have confidentiality agreements at Wellesley.

Mr. CRIST. So why are we discussing them? I mean, I know you were asked a question about it, so that's the short answer, but if your institutions don't have them and only one of them presumes them, is it an issue or not?

Dr. JOHNSON. From our data that we've looked at, it's one thing for an institution to have them. It's another thing when episodes of harassment occur and a perpetrator is found in violation to have a very specific confidentiality agreement signed having to do with the finding. So, as I'm talking about confidentiality and outlined confidentiality agreements, they pertain to sexual harassment.

Mr. CRIST. Which I think is great. You know, transparency should be the order of the day. What does it say, that the best disinfectant is light. So I guess what I'm curious about is why would there even be a presumption at, say, Boston University of a confidentiality within a contract for a new employee? What is it that is trying to be protected or not disclosed?

Dr. MORRISON. Well, that is—my understanding is that's generally standard practice.

Mr. CRIST. Yes, why? Should it be, given the topic we're talking about?

Dr. MORRISON. Should it be is an important question, and I think our conversations go to the question of should it be. And we are—I think all of the—everything we've learned from the difficult situations we have faced suggested it should not be. However, that has to be balanced against, you know, an individual's right to privacy

in their contractual dealings with their employer, so I think there are elements that need to be balanced in sorting through it.

Mr. CRIST. Well, of course, but we're talking about sexual harassment here today, right? Is there any kind of right to try to protect from disclosure of sexual harassment at an institution?

Dr. MORRISON. Yes. No, I don't think there's a right to protect—to keep sexual harassment silent. No, I don't agree with that.

Mr. CRIST. Great. That's good. So I guess the presumption in your contractual situation you would expect it would be something that would be not presumed in the near future?

Dr. MORRISON. Yes, we—this is—as we examine our policies and practices, this is an issue that's at the top of the list.

Mr. CRIST. Great. Thank you very much. Thank you, Madam Chair.

Chairwoman JOHNSON. Thank you very much. Ms. Stevens.

Ms. STEVENS. Thank you, Madam Chair, and thank you to our witnesses for today's very important hearing.

Dr. Morrison, just to kind of pick up on the line of questioning that we were just having, you—in your hearing you mentioned the importance of inclusion policies as part of broader cultural change, and I think that's what we're all here talking about is we're talking about a culture, you know, that can't necessarily always be pinpointed on one individual or one group. Certainly our institutions set a tone for culture, they set a tone for a way of life, and they have a really important role to play.

And we commend our universities, we commend the leadership that they take in terms of listening and engaging the students to faculty to addressing the tough topics. We have a rich history in this country of change coming from universities, change coming toward some of our tougher social topics.

So what other concrete policy changes have been made to consider this, you know, greater diversity and equity charge? I'm thinking about child—you know, paid family leave, you know, increasing the wage, you know, things that like sometimes are often the barriers to entry that, you know, you might be working on that we haven't yet discussed here today.

Dr. MORRISON. Yes, there are a variety of things. And I agree with you; it is a whole-scale cultural change. Universities are some of the oldest institutions and—globally, and so the—you know, they're very deeply grounded in the history and a culture that is dominated by white men. And so there are a lot of changes that are necessary as women and people of color enter the academy.

And so we've been working on a number of policies around—one of the more recent ones is that we have mandated vacation time for our doctoral students, which seems an odd thing, but, you know, the way graduate students are funded on grants, it's not clear that they are necessarily entitled to vacation, so that's an example where we thought it was important to call out that—the students who work extremely hard, and the expectation is that, you know, they're working long hours but that vacation is a normal part of what is to be expected. And we've instituted a number of policies around family and childbirth leave and an array of different policies.

Ms. STEVENS. Thank you. And I'd also just like to remark how significant it is that today's hearing is being Chaired by our incredible Chairwoman Eddie Bernice Johnson. It's truly a marker in history that we're having this discussion here in 2019 in the 116th Congress commenting a very tough topic. Obviously I'm a proud co-sponsor of H.R. 36, the *Combating Sexual Harassment in Science Act*, that's being led by our Chairwoman, and we thank you for your insights on this important work.

I yield back the remainder of my time.

Chairwoman JOHNSON. Thank you very much. Ms. Wexton.

Ms. WEXTON. Thank you, Madam Chair, and thank you to the witnesses for coming today to testify before us.

Mr. Neumann, one of the key findings from the 2018 National Academies' report on sexual harassment was that agencies and universities have to move beyond a culture of just bare compliance with Title IX in order to effectively address sexual harassment. Have any of the agencies or universities contacted you about that, about what they might be able to do or sought your guidance and advice about things that they could do?

Mr. NEUMANN. Yes. Even just in the course of our review we've been seeing agencies taking additional actions, you know, toward some of the recommendations in the National Academies' report. And, for example, all the agencies have updated their definition of sexual harassment to include gender harassment, which the National Academies' report, you know, has as one of the most common forms of sexual harassment. So we're seeing some positive steps. That doesn't mean there isn't room for improvement, but definitely the agencies are taking this seriously and want to do more. And I think with our review it can maybe identify some areas that they might want to target to improve.

Ms. WEXTON. OK. And I guess with agencies being so focused on—and universities being focused on Title IX now with what, you know, I certainly perceive as the potential erosion of Title IX, the—with the proposed overhaul and regulations that were released by the Department in November of last year, that—Dr. Kass, you talked about what the UC system has done that you guys have taken strong and public stance against certain aspects of the proposed overhaul of Title IX. Can you talk about the impact of the proposed regulations at UC Davis and the other campuses in the UC system and what you all have done in response to them?

Dr. KASS. Well, my understanding is that they have not been finalized yet, so at the moment we're simply resisting them because we think that it will have a very negative impact on reporting incidents of gender discrimination and sexual harassment were these to go into place, particularly if victims were to be confronted by the alleged perpetrators. So we think it would actually inhibit the reporting.

Ms. WEXTON. So how will your institutions then ensure that the proposed regulations don't weaken the policies you already have in place? Are you just participating in the rulemaking process in the hopes that it does not become final?

Dr. KASS. Yes, the University of California systemwide is participating in that process. It's not being done campus by campus but rather for the entire system.

Ms. WEXTON. OK. And, Dr. Morrison and Dr. Johnson, I'd be interested to hear your thoughts on these proposed regulations and the impacts that they would have in your campuses to your ongoing efforts to address sexual harassment.

Dr. MORRISON. Yes, I would support what Dr. Kass said, that we're concerned about the effect it will have on reporting. And we've been very engaged in responding to the call for input with the hope that the regulations, when they do come out, will not reflect what we saw at the outset.

Ms. WEXTON. Very good. And, Dr. Johnson?

Dr. JOHNSON. So I'm going to answer this question as President of Wellesley College to say that there are several issues. One, I would agree both with Dr. Morris and Dr. Kass around the significant concern on reporting. I think the other concerns are the definition of harassment. That is far more limited. And also the lack of ability to address cases of harassment that have occurred off of one's campus.

So these are all very significant issues, and we have participated with a number of organizations to provide input, as well as my writing a letter individually, having served as the co-chairperson of the National Academies' committee.

I do want to add, though, that with all of the difficult issues with this proposed set of rules is that the work that is recommended in the report and that needs to move forward aggressively does have to do with the culture, does have to do with all of the other issues we have discussed today and have been really outlined in the report—changing leadership, diversity, inclusion, and so much more.

Ms. WEXTON. Very good. Thank you very much. I'll yield back.

Chairwoman JOHNSON. Thank you very much. Mr. Beyer?

Mr. BEYER. Thank you, Madam Chair. And thank you all very much for being part of this.

Dr. Johnson, I was Wellesley spring 1971 living on Beebe Hall, which is a—

Dr. JOHNSON. You're one of the campus exchange.

Mr. BEYER. Yes, exactly. Yes, there were 19 of us men on campus with 2,000 women. It's the first time in my life I got over being shy. It was a wonderful experience.

And I'm really fascinated by this, and especially the notion of gender harassment, which I confess is a new idea for me but easy to relate. My oldest daughter is in the automobile business with us, and when she went to the general management school, 2 women with 52 guys, I think mostly what she dealt with for that whole year was the gender harassment, not sexual harassment—people weren't hitting on her—but just a completely different perspective, where my next daughter, who went to the coding course for 12 weeks, again, 1 woman and 27 guys, and there was a sense that she couldn't compete or that she was different even though she was smarter than the 27 guys.

How do you address gender harassment in a meaningful way? And I was particularly interested in the whole notion in your study about hierarchical power structures making gender harassment easier to present itself, more difficult to overcome.

Dr. JOHNSON. Yes. Thank you for addressing this important issue. Gender harassment is pervasive. And from the data that we

looked at and presented in the report, again, culture change is really the predominant focus and way forward. Training is also important as we look to change behavior. And, in addition to more general training, a certain type of training called bystander training. Harassment not only affects a particular targeted victim, but more ambient harassment also impacts those who experience it and experience it negatively. And giving those people, the bystanders, the power and agency and the training to come forward, report, and really look forward and give them an ability to be part of that solution is also, from the data, quite important.

Mr. BEYER. How different is it when a woman is the leader, is at the top of that hierarchical structure?

Dr. JOHNSON. Well, the data show that when you have a more diversified leadership structure, you will also have more diversified personnel. So to say that any one person correlates with a difference—I think we don't have those data, but what we can look at is overall when there's diversity at the top that these issues are experienced differently.

Mr. BEYER. You know, one of the things that my wife picked up at the World Economic Forum 7 or 8 years ago was the notion of certifying companies for their women-friendly policies, essentially, the economic dividend from having the gender diversity within a company, much like LEED (Leadership in Energy and Environmental Design) certification for buildings. Is this something that would apply in an academic setting, too, where you say Boston University is a great place for women to work and to lead in this study?

Dr. MORRISON. Yes, I think it could. There are a variety of rankings, you know, best place to work in Boston or company friendliest to LGBTQIA (lesbian, gay, bisexual, transgender, questioning, intersex, and asexual (or allies)) folks, so there are a variety of different kinds of competitions for recognition, and I think that is one that could be very useful.

Mr. BEYER. OK. Mr. Neumann, the—they pointed out that a number of the agencies had 4 or 5 gender complaints, but the National Science Foundation had 14. I know my pal Dr. Foster asked about that earlier. Did you see anything systemic within the National Science Foundation that would make you more likely to experience gender or sexual discrimination?

Mr. NEUMANN. No. I think the numbers are overall relatively small and are more reflective of a change in the way the investigation complaints were handled. Prior to 2017, the Department of Education handled it on behalf of the National Science Foundation. Now, they're—the NSF is handling it themselves, so the numbers have recently increased. Those are all, I think, in the last year or so because of that change. But no, there's nothing—and we'll continue to look at the number of investigations, as well as a little more information behind those investigations to find out, you know, what the numbers mean.

Mr. BEYER. Great. I know one of the big things that you all pointed out was how important it was to bring public attention to this, so I really want to thank our Chairwoman for having this hearing to do exactly that.

Chairwoman JOHNSON. Thank you very much. I think that ends our list of witnesses. Let me express my appreciation to this outstanding panel, and thank you for being here today.

The record will remain open for 2 weeks for additional statements from the Members or any additional questions the Committee may ask of the witnesses.

The witnesses are now excused, and the Committee is adjourned. [Whereupon, at 11:53 a.m., the Committee was adjourned.]

Appendix I

ANSWERS TO POST-HEARING QUESTIONS

ANSWERS TO POST-HEARING QUESTIONS

Responses by Mr. John Neumann

The enclosure provides your questions and our responses for the record and supplements information provided to your committee in our testimony, *Sexual Harassment in STEM Research: Preliminary Observations on Policies for University Grantees and Information Sharing among Selected Agencies* (GAO-19-583T, Washington, D.C.: June 12, 2019).

Questions for the Record

The Honorable Eddie Bernice Johnson
Chairwoman
Committee on Science, Space, and Technology
United States House of Representatives

- 1. We know that other agencies are at least looking at NSF's new policy for grantee reporting and considering what new policies to propose for their own agencies. But many agencies need to go through a formal rule-making process, which NSF did not. Do you see this as a major impediment for these agencies to follow NSF's lead?**

We have not examined whether the formal rulemaking process is required or is a major impediment for the other agencies to follow NSF, and at this point these agencies have not pursued such a change.

The National Science Foundation (NSF) and National Aeronautics and Space Administration (NASA) have modified or are taking steps to modify their grant terms and conditions to require grantees to report on findings of sexual harassment.¹ NSF and NASA officials told us that these modifications will help hold grantees accountable for reporting sexual harassment.

The Department of Energy (DOE), the National Institutes of Health (NIH, a component agency of the Department of Health and Human Services), and the Department of Agriculture, including its National Institute of Food and Agriculture (USDA-NIFA) have not pursued a modification to their grant terms and conditions similar to NSF. We have not examined whether a formal rulemaking process is required or is a major impediment for the three agencies. However, DOE officials told us a challenge for agencies pursuing agency-specific modifications similar to NSF is reducing the administrative burden on grantees, therefore DOE prefers federal-wide requirements or a federal-wide policy on reporting findings of sexual harassment to federal funding agencies.

Though we have not examined whether the formal rulemaking process is required or is a major impediment for the three agencies to follow NSF's and NASA's lead, we have reported on the federal rulemaking process and recommended improvements to the Office

¹GAO, *Sexual Harassment in STEM Research: Preliminary Observations on Policies for University Grantees and Information Sharing among Selected Agencies*, GAO-19-583T (Washington, D.C.: June 12, 2019). According to officials, NASA intends to remove its regulations addressing grant terms and conditions and instead issue its grant terms and conditions in a NASA policy manual. NASA officials explained that this action makes it easier to change the grant terms and conditions while remaining within the parameters of the Administrative Procedures Act. NASA began the process in 2018 and expects new grant terms and conditions to be published in the Federal Register for public comment in fiscal year 2019, according to officials.

of Management and Budget (OMB), which coordinates the process.² For example, in 2009 we found that these processes can take years to complete, averaging about four years from initiation to final publication.³ In addition, in 2016 we noted how opportunities remain for OMB to improve the transparency of its rulemaking process, citing 25 past recommendations to OMB to address transparency issues identified in seven GAO reports, including 2007 report recommendations that OMB develop guidance to agencies for regulatory review activities and OMB work with agencies to identify opportunities for Congress to revise the timing and scope of existing regulatory review requirements.⁴

²GAO, *Federal Rulemaking: Regulatory Review Processes Could Be Enhanced*, GAO-14-423T (Washington, D.C.: Mar. 11, 2014).

³GAO, *Federal Rulemaking: Improvements Needed to Monitoring and Evaluation of Rules Development as Well as to the Transparency of OMB Regulatory Reviews*, GAO-09-205 (Washington, D.C.: April 20, 2009). The average rulemaking process time of four years is based on findings from 16 case-study rules at four agencies.

⁴GAO, *Federal Rulemaking: Opportunities Remain for OMB to Improve the Transparency of Rulemaking Processes*, GAO-16-505T (Washington, D.C.: Mar. 15, 2016).

Questions for the Record

The Honorable Mikie Sherrill
Committee on Science, Space, and Technology
United States House of Representatives

1. Mr. Neumann, in your testimony you discuss the mechanisms agencies use to communicate their sexual harassment policies to their grantee institutions.

• Do you believe these mechanisms, and any best communication practices, are readily available and accessible to agencies and grantees?

Our preliminary observations show that the mechanisms the five selected agencies (DOE, NASA, NIH, NSF, and USDA-NIFA) use to communicate their sexual harassment policies to their grantee institutions are, for the most part, available and accessible to agencies and grantees. For example, all of the mechanisms used by each agency we reviewed—director or secretary-level policy statements, agency websites, agency documents, grant terms and conditions and grantee assurance of compliance forms—are publicly available on the internet, and the agencies continue to provide online updates on the development of and revisions to their policies and communication mechanisms for grantees. Although, it is not clear to what extent grantees, including students, are aware of these statements, websites, documents, etc. As part of our ongoing work, we plan to assess the steps agencies are taking to evaluate their sexual harassment prevention policies for grantees, and this information may provide examples of whether or not selected agencies know if grantees or students are aware of their policies to prevent sexual harassment.

In addition, not all agencies communicate information on best practices to address sexual harassment at grantee institutions. As we described in our testimony statement, the amount and type of guidance given by the agencies vary, with some agencies using more communication mechanisms and providing more guidance than others. For example, NSF and NASA provide information on best practices for grantees to address sexual harassment, while DOE, NIH and USDA-NIFA do not. However, NIH is starting to discuss next steps for providing best practices. On June 13, 2019, NIH's Advisory Committee to the Director presented an interim report that outlined institutional actions for future discussion and next steps to change NIH culture and end sexual harassment, including communicating the importance of optimizing institutional processes and support through use of best practices. The NIH Advisory Committee to the Director plans to develop a final report and recommendations for its December 2019 meeting.

• How are agencies currently communicating their sexual harassment prevention policies and are they adhering to best practices for doing so?

Based on our preliminary review, we found that agencies are currently communicating their sexual harassment prevention policies in a variety of ways. NASA, NIH, and NSF communicate their policies on sexual harassment in multiple forms, such as grantee policy manuals, best practices documents, and online FAQs. The result is that grantees receive a relatively high level of detail about preventing sexual harassment and mechanisms for reporting complaints. In contrast, DOE and USDA-NIFA provide fewer

forms of guidance. They provide guidance either through their website or agency director and Secretary-level policy statements and documents, which focus more generally on the broader category of sex discrimination or provide different levels of information on sexual harassment prevention policies for grantees. See table 4 on page 10 in GAO-19-583T for more information. As part of our ongoing work, we plan to assess whether agencies are taking best practices into consideration in the development and evaluation of their sexual harassment prevention policies for university grantees. We anticipate publishing our findings later this year.

• Did your study find that there is ongoing support for research and evaluation of the effectiveness of policies and procedures related to sexual harassment?

Our preliminary analysis showed that NSF and DOE were beginning to support efforts to evaluate the effectiveness of their sexual harassment prevention policies and procedures for grantees, while NASA, NIH, and USDA-NIFA had not yet evaluated the effectiveness of their policies. As part of our ongoing work, we plan to examine and assess the selected agencies' prevention policies for university grantees and the steps they are taking to evaluate them. We anticipate publishing our findings later this year.

Responses by Dr. Paula A. Johnson

Responses to Questions for the Record
 For Dr. Paula Johnson, Chair, National Academies Study Committee on
 Sexual Harassment of Women: Climate, Culture, and Consequences in
 Academic Sciences, Engineering, and Medicine

July 15, 2019

Question Submitted by Ranking Member Frank Lucas

Dr. Johnson, during your testimony, you stated that the National Academies' consensus report, "Sexual Harassment of Women: Climate Culture, and Consequences in Academic Sciences, Engineering, and Medicine," recommends that sexual harassment should be considered just as important as "research misconduct." Can you please clarify if the report recommends that the federal definition "research misconduct" should be amended to include sexual harassment? Or is there another option?

Response by Dr. Johnson

The committee for the National Academies' consensus report *Sexual Harassment of Women* recommended that federal agencies attend to sexual harassment with at least the same level of attention and resources devoted to research misconduct. This recommendation was made in light of the finding that parts of the federal government have opted to focus more broadly on policies about research integrity and on codes of ethics rather than on the narrow definition of research misconduct. This broader focus allows them to include and emphasize that sexual harassment is unethical and affects the integrity of research.^{1,2} The committee did not recommend that the federal definition of "research misconduct" be amended to include sexual harassment. Our report provides a lengthy consideration of this issue, which included some of the historical context and which occupied a considerable amount of the committee's time and attention. The following pages provide a full discussion (excerpted from pages 114-118 of our report):

¹ See <https://www2.usgs.gov/usgs-manual/500/500-25.html> [April 2018].

² See <https://www.doi.gov/scientificintegrity> [April 2018].

SEXUAL HARASSMENT AND POLICIES ON RESEARCH MISCONDUCT AND RESEARCH INTEGRITY

NSF currently defines research misconduct as “fabrication, falsification, or plagiarism (FFP) in proposing or performing research, reviewing research proposals, or in reporting research funded” (45 C.F.R. 689.1.a). However, in the 1980s, when both NSF and the Public Health Service were developing definitions of research misconduct, they initially used language that allowed for allegations related to sexual misconduct. These definitions included both FFP and phrases that related to “other serious deviations” from accepted practices (Price 1994). Using this definition, NSF prosecuted a case in 1989 involving serious sexual harassment, sexual coercion, and rape of female students at a remote field site and in the perpetrator’s office and car. Students were blackmailed by the professor by the withholding of their research data and resources (NSF 2002). NSF defended the use of the deviations phrase in the definition of misconduct and its use in the sexual harassment case (Buzzelli 1993) to make sure that behavior that affected research practice, including the appropriate training and mentoring of students, protection of intellectual property, and preventing hostile research environments, was covered. During this time the definition of misconduct promulgated by the Public Health Service was coming under attack because researchers worried that the “other serious deviations” phrase might be used to limit novel approaches to science (Schachman 1993).

In its 1992 report on integrity in the research process, the National Academy of Sciences (NAS) recommended removing the “other serious deviations” language and stated that the definition of research misconduct needed to be very specific (NAS 1992). In that report, the NAS defined research misconduct as fabrication, falsification, and plagiarism, and said “sexual harassment and financial mismanagement are illegal behaviors regardless of whether scientists are involved, but these actions are different from misconduct in science because they do not compromise, in a direct manner, the integrity of the research process.” Further, the NAS recommended that such behaviors, which affect the integrity of research, were covered by law or other policy and should be dealt with by those jurisdictions. The NAS definition of research misconduct was incorporated into a definition of research misconduct released by the Office of Science and Technology Policy (OSTP 2000) that was subsequently adopted by the federal government and most government-funded institutions. Misconduct thus became focused almost solely on fabrication, falsification, and plagiarism. The recent NAS report *Fostering Integrity in Research* (NAS 2017) reiterated that the formal definition of research misconduct is designed to apply only to those issues unique to the scientific process, upheld the current definition of research misconduct, and clearly states that sexual harassment is not included. That report instead categorizes sexual harassment as “Other Misconduct” that affects the integrity of research but is “not unique to the conduct of research, even when they occur in a

research environment” (page 75). Additional items in this category include “the misuse of funds; gross negligence by persons in their professional activities, vandalism, including tampering with research experiments or instrumentation; and violations of government research regulations, such as those dealing with radioactive materials, recombinant DNA research, and the use of human or animal subjects” (page 75). While sexual harassment is included as an issue that affects the integrity of research, some believe that not calling it research misconduct specifically may make it seem that it does not affect the integrity of research. In her paper discussing the legal challenges of sexual harassment for women in science, Ellen Sekreta (2006) said:

Title IX makes sex discrimination and sexual harassment illegal at research institutes; however, the force of the law is weakened by several factors. By excluding sexual harassment from the definition of “science misconduct” the federal government has reinforced the notion that sexual harassment affects neither the integrity of scientific research nor accepted scientific norms. (page 136)

Other members of the scientific community argue that sexual harassment is directly affecting the integrity of scientific work and thus should be defined as research misconduct.²¹ They also call for processes and resources to be put into place that would more effectively investigate sexual harassment and prevent harassers from continuing to receive federal funding. Federal funding agencies could handle sexual harassment by including it along with their efforts to enforce research misconduct, and such an approach would provide a mechanism for withdrawing funding and holding the institution and the individuals responsible.

Recent articles in scientific journals (Kuo 2017; Witze 2016; Hoy 2016) discuss the arguments for and against including sexual harassment in the definition of research misconduct. Several of the authors express concern that processes in place for investigating research misconduct are ill equipped to address allegations of sexual harassment in the research and educational environment and that other jurisdictions exist to address them. When this committee interviewed a panel of deans and other senior academic administrators, issues of increased cost, lack of expertise, and increased personnel resources, and the existence already of Title IX processes were cited as reasons not to bring sexual harassment into the realm of research misconduct. They indicated that for many colleges and universities, sexual harassment, infractions of the institution’s honor code, and research misconduct (as federally defined) were each handled by different offices.

One of the consequences of strictly defining research misconduct as FFP is that many detrimental behaviors, from conflict of interest to harassment, can go unchecked when institutions focus exclusively on research misconduct rather

than the broader concept of protecting research integrity. Research integrity experts such as Nicolas Steneck, a research ethicist at the University of Michigan, have recently indicated that reexamining the strict definition of research misconduct is needed. In his comments in a recent Retraction Watch article, (22) Steneck pointed out that the current definition of research misconduct “means that the vast majority of cases are not being addressed.” Further, he said that the tendency to not want to trigger the formal process tends to make people “back away from it.”

In the past few years, some scientific organizations, as well as parts of the federal government have opted to focus more broadly on policies about research integrity and on codes of ethics rather than on the narrow definition of research misconduct. This broader focus is allowing them to include and emphasize that sexual harassment is unethical and affects the integrity of research. Both the U.S. Geological Survey and the Department of the Interior have broader scientific integrity policies that apply to employees, appointees, volunteers, grantees, and contractors and include other professional behaviors in addition to the federally defined research misconduct behaviors. (23,24) Some scientific societies, like the American Geophysical Union (AGU), (25) the Institute of Electrical and Electronics Engineers, (26) Geological Society of America, (27) and American Astronomical Society, (28) have developed new ethics policies that explicitly call out sexual harassment and discrimination. These professional societies recognize the need to protect students and early-career scientists at meetings and on field trips and to include specific ethics codes related to those venues and as services such as the SafeAGU program that protect targets of harassment at meetings. Many of these policies require a high-level senior official be responsible for handling ethics code violations, a single investigation protocol that allows for the addition of expertise and processes related to the nature of the specific complaint, and collaboration with other jurisdictions as appropriate, and include programs for education and training. Only the AGU has changed its definition of research misconduct to extend beyond the federal definition of FFP and include sexual and other forms of harassment in their definition. (29,30) However, further changes in this direction should be expected since NSF recently awarded a grant for examining and developing training materials that present sexual harassment as research misconduct. (31)

The advantages of adopting a broader emphasis on research integrity is that it provides multiple options for targets of sexual harassment to report behavior (either as an ethics violation or as a Title IV or VII violation), multiple mechanisms for administrators to discourage harassment, and a way to specifically address the health of the research environment.

As shown in Chapter 4, sexual harassment in departments, research laboratories, and the field can create an environment that impacts the research conducted by both the individual and the group, damaging scientific careers, collaboration, performance, productivity, and the integrity of research.

While dealing with sexual harassment is difficult and making changes to existing systems will not be easy, a powerful incentive for change may be missed if sexual harassment is not considered equally important as research misconduct in terms of its effect on the integrity of research. For institutions such as professional societies that are beginning to address sexual harassment in their codes of ethics and policies on research integrity, it will be important to include collaboration as appropriate with the experts in sexual harassment, legal counsel, and the home institutions. Policies should have clear and detailed procedures, confidential due process that protects both complainant and respondent, fair and thorough evaluation of evidence by a panel of experts, and appropriate sanctions. For universities and funding agencies, considering sexual harassment as equally important as research misconduct will entail thoughtful revision of current policies and may benefit from the coordination and sharing of expertise across offices that deal with research misconduct, discrimination, and sexual harassment.

Notes:

- 21 See <http://www.sciencemag.org/news/2017/09/scientific-society-defines-sexual-harassment-scientificmisconduct>; <https://newrepublic.com/article/146733/scientists-accused-sexual-misconduct-can-still-getgovernment-grants>; <https://www.scientificamerican.com/article/science-suffers-from-harassment/>; and <https://www.chemistryworld.com/news/ustoo-movement-targets-sexual-harassment-in-science/3008715>.
- 22 See <http://retractionwatch.com/2017/02/23/labeling-bad-behavior-scientific-misconduct-helphurt-research-integrity-debate-rages/> [January 2018].
- 23 See <https://www2.usgs.gov/usgs-manual/500/500-25.html> [April 2018].
- 24 See <https://www.doi.gov/scientificintegrity> [April 2018].
- 25 See <https://ethics.agu.org/files/2013/03/Scientific-Integrity-and-Professional-Ethics.pdf/> [April 2018].
- 26 See <https://www.ieee.org/about/corporate/governance/index.html> [January 2018].
- 27 See https://www.geosociety.org/GSA/Membership/Code_of_Conduct/GSA/Membership/Code_of_Conduct.aspx [January 2018].
- 28 See <https://aas.org/ethics> [April 2018].
- 29 See <https://ethics.agu.org/files/2013/03/Scientific-Integrity-and-Professional-Ethics.pdf/> [April 2018].
- 30 See <https://harassment.agu.org/> [January 2018].
- 31 See https://www.nsf.gov/awardsearch/showAward?AWD_ID=1725879 [April 2018].

Responses by Dr. Philip Kass

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

Questions for the Record to:

Dr. Philip H. Kass

Vice President for Academic Affairs

Professor of Analytic Epidemiology

University of California, Davis

Submitted by Chairwoman Eddie Bernice Johnson

1. Dr. Kass, in addition to your positions at UC Davis, you are also a member American Association of Universities (AAU) **"Gender Discrimination Advisory Board and Strategy for Sexual Harassment."** Can you tell us more about the work of the Advisory Board?

- The Advisory Board had been formed to help identify, collect, and discuss promising practices to address sexual harassment and gender discrimination on campus. The Board is still in its nascent stage and is still defining the work the Board will take on. However, one of the objectives will be to explore new ways that AAU universities can collaborate to help to combat sexual harassment in the academic workplace. They will also discuss instances where practices employed by AAU institutions to combat harassment have not worked, and why. After identifying effective practices, the Advisory Board will help AAU to determine the most effective ways to disseminate and replicate these practices in an effort to promote collective action and culture change at both AAU and non-AAU universities. Additionally, the Advisory Board will help provide valuable input to the AAU staff as they assess and provide input into Congressional and federal policy proposals aimed at addressing sexual harassment and gender discrimination on university campuses.

What are the goals of the Advisory Board? When can we expect to see a report or other product from the Board?

- The advisory board will serve primarily in an advisory role for AAU staff, the AAU Board of Directors, and the AAU membership. They will also help to identify and share promising policies and practices among AAU institutions that are being utilized on campus to combat sexual harassment and gender discrimination amongst the faculty. As such, there is no defined report or product that would be provided from this Advisory Board. However, the Advisory Board may make recommendations on policies, practices, and legislation as it pertains to combating these issues on an AAU campus.

In what way does the work of the AAU advisory board complement or overlap with the work of the National Academies Action Collaborative?

- The advisory board is a separate endeavor from that of the National Academies Action Collaborative; however, its work will certainly run parallel to and complement the efforts of the Action Collaborative. The Advisory Board is aligned with the Action Collaborative in that it, like the Action Collaborative, recognizes that to eradicate sexual harassment and gender discrimination from our campuses, AAU members must work together to

collectively agree to implement policies and practices that discourage and prohibit these actions within the academy. Utilizing the Advisory Board, AAU feels it can and will play a unique role in directly making recommendations to and engaging senior campus leaders, including AAU presidents and chancellors, in a meaningful discussion about how to effectively and collectively address issues on campuses relating to sexual harassment and gender discrimination

Appendix II

ADDITIONAL MATERIAL FOR THE RECORD

STATEMENT SUBMITTED BY REPRESENTATIVE EDDIE BERNICE JOHNSON



**Statement from the American Society for Microbiology
in response to the
House Science, Space and Technology Committee Hearing:
“Combatting Sexual Harassment In Science”**

June 12, 2019

The American Society for Microbiology (ASM) commends Chairwoman Johnson, Ranking Member Lucas, and members of the House Science, Space and Technology Committee for convening today’s hearing to shine a light on the pervasive problem of sexual harassment in the science, technology, engineering and mathematical (STEM) fields, and to discuss actions the federal government can initiate to support research on and support efforts to prevent and respond to sexual harassment. ASM is the largest single life science society, composed of 30,000 scientists and health professionals. Our mission is to promote and advance the microbial sciences, including programs and initiatives funded by the federal government departments and agencies, by virtue of the integral role microorganisms play in human health and society.

We strongly support the Committee’s efforts to address sexual harassment in the scientific workplace and wherever it exists, as we believe government has an important role to play in terms of convening stakeholders, authorizing data collection, and funding research to better understand the factors that contribute to sexual harassment. To that end, ASM has endorsed H.R. 36, the Combatting Sexual Harassment in STEM Act of 2019, and its companion legislation in the Senate.

Recognizing the important role that scientific societies play in ensuring a safe and inclusive environment, ASM has joined with more than 50 other scientific organizations to launch the Societies Consortium on Sexual Harassment in STEMM (science, technology, engineering, mathematics and medicine). Together, the members of this Consortium will do our part to advance professional and ethical conduct, climate, and culture across our respective fields.

Likewise, ASM and its members stand ready to assist the Committee in its efforts to address sexual harassment. We are committed to promoting an environment that both allows for the free expression and exchange of scientific ideas, and promotes equal opportunities and respectful treatment for all. The best science is conducted when research environments are diverse and inclusive, regardless of gender, race or ethnicity, religious affiliation or sexual orientation. Harassment in any form or for any reason undermines the facilitation of good science.

