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A REVIEW OF SEXUAL HARASSMENT AND MISCONDUCT IN SCIENCE

HEARING

BEFORE THE

SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

FEBRUARY 27, 2018

Serial No. 115–49

Printed for the use of the Committee on Science, Space, and Technology

Available via the World Wide Web: http://science.house.gov

U.S. GOVERNMENT PUBLISHING OFFICE
28–936PDF WASHINGTON : 2018

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CONTENTS

February 27, 2018

	Page
Witness List	2
Hearing Charter	3

Opening Statements

Statement by Representative Barbara Comstock, Chairwoman, Subcommittee on Research and Technology, Committee on Science, Space, and Technology, U.S. House of Representatives	4
Written Statement	7
Statement by Representative Daniel Lipinski, Ranking Member, Subcommittee on Research and Technology, Committee on Science, Space, and Technology, U.S. House of Representatives	10
Written Statement	12
Statement by Representative Lamar S. Smith, Chairman, Committee on Science, Space, and Technology, U.S. House of Representatives	14
Written Statement	16
Statement by Representative Eddue Bernice Johnson, Ranking Member, Subcommittee on XX, Committee on Science, Space, and Technology, U.S. House of Representatives	
Written Statement	18

Witnesses:

Ms. Rhonda Davis, Head, Office of Diversity and Inclusion, National Science Foundation	
Oral Statement	21
Written Statement	23
Dr. Kathryn Clancy, Associate Professor, Department of Anthropology, University of Illinois	
Oral Statement	30
Written Statement	32
Ms. Kristina Larsen, Attorney, Law Office of Kristina K. Larsen	
Oral Statement	44
Written Statement	46
Ms. Christine McEntee, Executive Director, American Geophysical Union	
Oral Statement	62
Written Statement	64
Discussion	70

Appendix I: Answers to Post-Hearing Questions

Ms. Rhonda Davis, Head, Office of Diversity and Inclusion, National Science Foundation	94
Dr. Kathryn Clancy, Associate Professor, Department of Anthropology, University of Illinois	98
Ms. Kristina Larsen, Attorney, Law Office of Kristina K. Larsen	103
Ms. Christine McEntee, Executive Director, American Geophysical Union	109

A REVIEW OF SEXUAL HARASSMENT AND MISCONDUCT IN SCIENCE

Tuesday, February 27, 2018

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

The Subcommittee met, pursuant to call, at 10:08 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Barbara Comstock [Chairwoman of the Subcommittee] presiding.

LAMAR S. SMITH, Texas
CHAIRMAN

EDDIE BERNICE JOHNSON, Texas
RANKING MEMBER

Congress of the United States
House of Representatives
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
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A Review of Sexual Harassment and Misconduct in Science

Tuesday, February 27, 2018
10:00 a.m.
2318 Rayburn House Office Building

Witnesses

Ms. Rhonda Davis, Head, Office of Diversity and Inclusion, National Science Foundation

Dr. Kathryn Clancy, Associate Professor, Department of Anthropology, University of Illinois

Ms. Kristina Larsen, Attorney, Law Office of Kristina K. Larsen

Ms. Christine McEntee, Executive Director, American Geophysical Union

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

HEARING CHARTER

February 27, 2018

TO: Members, Subcommittee on Research and Technology

FROM: Majority Staff, Committee on Science, Space, and Technology

SUBJECT: Research and Technology Subcommittee Hearing:
"A Review of Sexual Harassment and Misconduct in Science"

The Subcommittee on Research and Technology of the Committee on Science, Space, and Technology will hold a hearing titled *A Review of Sexual Harassment and Misconduct in Science* on Tuesday, February 27, 2018 at 10:00 a.m. in Room 2318 of the Rayburn House Office Building.

Hearing Purpose:

The purpose of the hearing is to review sexual harassment and other workplace misconduct in science, learn how science agencies and research institutions handle complaints under current policy and law, assess the impact of harassment on women's participation in science, and discuss recommendations for improving the complaint and resolution process as well as the culture in science.

Witness List

- **Ms. Rhonda Davis**, Head, Office of Diversity and Inclusion, National Science Foundation
- **Dr. Kathryn Clancy**, Associate Professor, Department of Anthropology, University of Illinois
- **Ms. Kristina Larsen**, Attorney, Law Office of Kristina K. Larsen
- **Ms. Christine McEntee**, Executive Director, American Geophysical Union

Staff Contact

For questions related to the hearing, please contact Jennifer Wickre of the Majority Staff at 202-225-6371.

Chairwoman COMSTOCK. The Committee on Science, Space, and Technology will come to order. Without objection, the Chair is authorized to declare recesses of the Committee at any time.

Good morning, and welcome to today's hearing entitled "A Review of Sexual Harassment and Misconduct in Science." I now recognize myself for five minutes for an opening statement.

Imagine being a young astronomer, and your dream of working with one of the most well-renowned astronomers in the world comes true. Then, imagine the horror when the professor you hope will be your mentor, who you've revered, turns out to be your tormentor, a predator. You are in his office and he tries to kiss you. You spur his advances, but later at a work dinner, he puts his hand on your leg and slides it up your thigh under the table. You try to report the behavior, but some at the university are more interested in protecting one of their most powerful and lucrative researchers. This actually happened. This is a real case. It took years for the professor, in this case a professor from Berkeley, to leave. But that young woman left the field of astronomy because of the harassment.

Now, imagine if this were your daughter, your sister, your wife, or your mother, driven out of a dream career in a field with lifelong high earning potential. Sexual harassment, abuse of power, and intimidation in the workplace, classroom, or research field site is unacceptable in any situation. Whether it's in Congress, where we've been dealing with this also, or in the fields of science and technology, every worker has a right to a safe work environment, free of harassment, where one can learn and thrive in their environment.

Concerns about sexual harassment occur against a backdrop of women continuing to lag in many STEM fields and occupations. Women filled 47 percent of all U.S. jobs in 2015, but hold only 24 percent of STEM jobs. Only 23 percent of women with STEM degrees work in STEM fields.

Can sexual harassment have a significant negative impact on the ability of female students and early career researchers to engage in research and to get these high-paying jobs on this path? That's what we want to look at here because we have been working here on this Committee, really on a bipartisan basis on bills where we are trying to get women into that pipeline at a very young age. We have wonderful STEM initiatives going down to preschool to make sure that we are having that kind of gender equity and racial equity. We want to make sure none of these things are going on. So we really appreciate the opportunity to have this hearing today.

In this case, you know, with this person with such a prominent researcher in the United States, a quote from somebody in this case said, "The stakes here couldn't be higher." We are working so hard to have gender parity in this field, and when the most prominent person is a routine harasser, it threatens a major objective we have nationally and with that pipeline.

So over the last few months, we've had a watershed moment and really tried to open eyes to the systematic harassment and abuse in many different fields and workplaces.

What has happened in Hollywood, in the media, and in other industries has opened the floodgates for women and men who have

been afraid to speak in the past to come forward about predators in their workplace. I know recently we saw even something in a long story about the modeling industry and young women preyed upon and exploited and really some horrible things going on there.

And in the last few months we've worked together, my colleagues and I, to reform the process of reporting sexual harassment in Congress and to create that zero-tolerance environment that we want in all workplaces. Democrats and Republicans, men and women, have been working to change the process so that victims have a safe place to turn and predators are no longer protected by taxpayer dollars or silence.

Today is an opportunity to shine a light on how predatory and abusive behavior is affecting or may be affecting the science industry and the response that's going on here and the women who are here today to testify who have been active on the front of really promoting that zero-tolerance.

Women in science are particularly vulnerable to harassment and abuse. Powerful scientists who manage large federal grants have enormous influence within universities and exert significant control over the education and training of young scientists. If a Ph.D. student is being harassed by her advisor, what safe avenues does she have for reporting the misconduct without derailing her education and career? How does a university respond to this when an abuser is a rainmaker for the university?

And while I would note I have been saying "her" in some of these cases, we do understand there could be abuse on both sides of men or women.

But as more and more victims come forward, I cannot help but wonder how many brilliant scientists, men or women, and their ideas we have lost in the STEM fields because of this because we know when people are harassed and leave their field, many of them don't return to their field. That is something common that we have seen in the study of harassment. So how many women have given up these good, lifelong, high-earning jobs? When we look at the overall wage gap, how—you know, when—this is particularly a field where we want to make sure women are staying in in this career field.

Currently, there are laws and policies in place designed to protect individuals from gender-based discrimination and harassment in education, but we want to make sure the process is working right. Since October, the Science Committee has been investigating—and thank you to our staff who have been working on this—how federal science agencies and universities handle harassment complaints. So far, the Committee has found inconsistency in how different agencies deal with complaints and investigations, unclear policies and procedures that leave victims unsure of where to turn, and institutions more interested in checking the boxes of compliance rather than doing the right thing. A survey by the National Postdoctoral Association found that nearly 30 percent of postdoctoral candidates had experienced sexual harassment.

I was pleased to see that, two weeks ago, National Science Foundation Director France Córdova, Dr. Códova, made a strong statement to the science community about zero tolerance. NSF also announced it is taking additional steps towards protecting scientists

and students. We are fortunate to have a strong, accomplished woman leading NSF, and I appreciate her shining a light on the problem and acting quickly to respond.

I think we all understand we are learning a lot as we go through this process. That certainly has been the case whether it's the media or Hollywood or those of us here in Congress, so we appreciate even though this has been a long-time problem, we are all learning how to deal with it in our different workplaces.

So the purpose of this hearing is to learn how science agencies and research institutions are handling current complaints under current law and policies, assess the impact of harassment on women's participation in STEM and advancement, and discuss recommendations for improving the process, as well as the overall culture.

Taxpayers spend millions of dollars a year on research and education programs to get young girls and young women interested in STEM. I meet young women eager to go into STEM careers from my district nearly every day. My 3-year-old granddaughter, her favorite place to go every week is the local children's science museum, so we all want to make sure that those little girls who are so excited at 2 and 3, when they step into that science museum, know they have a path in a career forward. I want to guarantee every one of them that they are given those tools.

So I really look forward to hearing the testimony of our witnesses, and thank you so much for all that you're doing and for being here today.

[The prepared statement of Chairwoman Comstock follows:]

COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
February 27, 2018

Media Contacts: Thea McDonald, Brandon VerVelde
(202) 225-6371

Statement by Chairwoman Barbara Comstock (R-Va.)

A Review of Sexual Harassment and Misconduct in Science

Chairwoman Comstock: Imagine being a young astronomer and your dream of working with one of the most well renowned astronomers in the world comes true.

Then imagine the horror when the professor you hope will be your mentor turns into your tormentor—a predator. You are in his office and he tries to kiss you. You spur his advances, but later at a work dinner, he puts his hand on your leg and slides it up your thigh under the table. You try to report the behavior, but some at the university are more interested in protecting one of their most powerful and lucrative researchers.

This happened. This is a real case. And that young woman left the field of astronomy because of harassment.

Now imagine if this were your daughter, your sister, your wife or your mother. Driven out of a dream career in a field with lifelong high-earning potential.

Sexual harassment, abuse of power and intimidation in the workplace, classroom or research field site is unacceptable in any situation. Period.

Whether it's in Congress or in the fields of science and technology, every individual has a right to a safe work environment—free of harassment—where one can learn and work.

The last few months have been a watershed moment and opened many eyes to systematic harassment and abuse in a variety of workplaces.

What has happened in Hollywood, the media and in other industries has opened the floodgates for women who are no longer afraid to speak out against predators in their workplaces.

For the last few months, I have worked with my colleagues to reform the process of reporting sexual harassment in Congress and to create a zero tolerance environment. Democrats and Republicans—men and women—have been working to change the process so that victims have a safe place to turn and predators are no longer protected by taxpayer dollars and silence.

Today is an opportunity to shine a light on how predatory and abusive behavior are affecting another community—science.

Women in science are particularly vulnerable to harassment and abuse. Powerful scientists who manage large federal grants have enormous influence within universities and exert significant control over the education and training of young scientists.

If a PhD student is being harassed by her adviser, what safe avenues does she have for reporting the misconduct without derailing her education and career? How does a university respond to this when an abuser is a rainmaker for the university?

As more and more victims come forward, I cannot help but wonder how many brilliant women and their ideas we have lost in the STEM fields to harassment. How many women have given up good, life-long earning capacity as they leave fulfilling careers due to harassment?

Currently, there are laws and policies in place designed to protect individuals from gender based discrimination and harassment in education, but the process does not seem to be functioning well.

Since October, the Science Committee has been investigating how federal science agencies and universities handle harassment complaints. So far, the committee has found inconsistency in how different agencies deal with complaints and investigations, unclear policies and procedures that leave victims unsure of where to turn, and institutions more interested in checking the boxes of compliance rather than doing the right thing. A survey by the National Postdoctoral Association found that nearly 30 percent of post-doctorate candidates had experienced sexual harassment.

I was pleased to see that two weeks ago National Science Foundation (NSF) Director France Córdova make a strong statement to the science community about zero tolerance for harassment.

NSF also announced it is taking additional steps towards protecting scientists and students. We are fortunate to have a strong, accomplished woman leading NSF, and I appreciate her shining a light on this problem and acting quickly to respond. I look forward to learning more about those proposed policies today.

The purpose of this hearing is to learn how science agencies and research institutions handle complaints under current law and policies, assess the impact of harassment on women's participation in STEM, and discuss recommendations for improving the process as well as the overall culture in science.

Taxpayers spend millions of dollars a year on research and education programs to get young girls interested in STEM. I meet young women eager to go into STEM careers from my district nearly every day.

I want to guarantee that every one of them is given the tools and support necessary to succeed, without fear of harassment or abuse.

I look forward to hearing the testimony of our witnesses and their ideas for ensuring a bright and safe future for every scientist.

###

Chairwoman COMSTOCK. And I now recognize the Ranking Member, the gentleman from Illinois, Mr. Lipinski, for his opening statement.

Mr. LIPINSKI. Thank you, Chairwoman Comstock, for holding this hearing, and thank you to our witnesses for being with us this morning to discuss this very important issue.

The stories we've been hearing about widespread sexual harassment occurring across different workplaces, industries, and seemingly in every corner of our society are sickening. We must do all we can to fight the scourge of harassment, sexual or otherwise. There is much we need to do as a society to ensure that all individuals are treated with the dignity that they deserve. I'm hopeful that this societal moment in which we are collectively recognizing the scope of this problem will lead to significant real change.

I want to thank Chairwoman Comstock for her comments and for her work that she has done here in Congress to help us to better handle and to combat sexual harassment in Congress.

Today's hearing is specifically about sexual harassment and misconduct in the sciences. The issue of sexual harassment in the sciences is not new. It's a longstanding problem of mistreatment that violates individuals' dignity and is keeping some of the brightest minds from pursuing their ambitions, and thus impeding the progress of science. It is critical for this Committee and this Congress to find new and better ways to address sexual harassment and misconduct in the sciences.

This conversation has taken on a new sense of urgency in recent years due to numerous high-profile revelations involving prominent scientists. Their individual stories have helped to bring this issue to light, and research shows that their experiences are not rare. A survey conducted by one of the panelists here today, Dr. Clancy, revealed that 35 percent of female scientists have experienced some form of harassment. On this Committee, we often talk about encouraging more women to pursue their interest in science. How might a young woman's decision to pursue science be affected when she learns she has a one-in-three chance of being sexually harassed during her career? I look forward to hearing more about this study and research into sexual harassment in the sciences, including the impact on the recruitment, retention, and advancement of women.

A major challenge is the low rate of individuals reporting when they are harassed. A 2015 campus climate survey on sexual assault and harassment revealed that only eight percent of victims report their experiences. The most commonly cited reason for students not reporting the harassment was that they did not think anything would be done, and many junior scientists do not report harassment by their more senior colleagues for fear that doing so will negatively impact their careers.

There's certainly—I understand from my time in academia and certainly as a—before that as a graduate student, the unevenness and the fear that, you know, everyone has about doing something that's going to damage their career. We cannot effectively address the problem of sexual harassment in science without a better understanding of the scope of the problem. One topic I hope we discussed today is how the reporting systems can be made more accessible and responsive.

The National Academies is conducting a study to review the research on the impact of sexual harassment and to identify successful policy interventions. This is an important step to improving our understanding of how best to address sexual harassment to the benefit of individuals and the scientific enterprise as a whole. I look forward to recommendations the study panel will produce and to working with my colleagues on this Committee to implement them.

In the meantime, universities, federal science agencies, and scientific societies all have a role to play in creating a more welcoming, safe, and inclusive environment for STEM students and researchers. Fortunately, promising changes are being made. For example, the National Science Foundation has proposed a change to its award terms and conditions, requiring universities to our findings of sexual harassment. NASA recently launched an anti-harassment campaign to assess and improve the training and coordination related to their antiharassment programs. And several scientific societies, including the American Geophysical Union, which is here with us today, have updated their codes of conduct and training programs to prohibit and prevent harassment.

As a longtime supporter of women in the workplace, I'm encouraged to see progress being made on this issue. I look forward to a discussion on the additional cultural and structural changes that will foster a safe environment for all students and researchers. We cannot afford to lose another brilliant scientist because she did not feel safe in her lab, but even more important, no one should stand by idly while we have an opportunity to prevent harassment in any context.

Thank you, and I yield back the balance of my time.

[The prepared statement of Mr. Lipinski follows:]

OPENING STATEMENT
Ranking Member Dan Lipinski (D-IL)
of the Subcommittee on Research and Technology

House Committee on Science, Space, and Technology
Subcommittee on Research and Technology
"A Review of Sexual Harassment and Misconduct in Science"
February 27, 2018

Thank you, Chairwoman Comstock, for holding this hearing and thank you to the witnesses for being with us this morning to discuss this very important issue. The stories we have been hearing about widespread sexual harassment occurring across different workplaces, industries, and seemingly in every corner of our society are sickening. We must do all we can to fight the scourge of harassment, sexual and otherwise. There is much we need to do as a society to ensure that all individuals are treated with the dignity and respect they deserve. I am hopeful that this societal moment, in which we are collectively recognizing the scope of this problem, will lead to a real significant change.

Today's hearing is specifically about sexual harassment and misconduct in the sciences. The issue of sexual harassment in the sciences is not new. It is a long-standing problem of mistreatment that violates individuals' dignity, and it is keeping some of the brightest minds from pursuing their ambitions and, thus, impeding the progress of science. It is critical for this Committee and this Congress to find new and better ways to address sexual harassment and misconduct in the sciences. This conversation has taken on a new sense of urgency in recent years due to numerous high-profile revelations involving prominent scientists. Their individual stories have helped to bring this issue to light and research shows that their experiences are not rare.

A survey conducted by one of the panelists here today, Dr. Clancy, revealed that 35 percent of female scientists have experienced some form of harassment. On this Committee, we often talk about encouraging more women to pursue their interests in science. How might a young woman's decision to pursue science be affected when she learns she has a one in three chance of being sexually harassed during her career? I look forward to hearing more about the research into sexual harassment in the sciences – including the impact on the recruitment, retention, and advancement of women.

A major challenge is the low rate of individuals reporting when they are harassed. A 2015 campus climate survey on sexual assault and harassment revealed that only eight percent of victims report their experiences. The most commonly-cited reason for students not reporting their harassment was that they did not think anything would be done. And many junior scientists do not report harassment by their more senior colleagues for fear that doing so will negatively impact their careers. We cannot effectively address the problem of sexual harassment in science without a better understanding of the scope of the problem. One topic I hope we discuss today is how the reporting systems can be made more accessible and responsive.

The National Academies is conducting a study to review the research on the impact of sexual harassment and to identify successful policy interventions. This is an important step toward improving our understanding of how best to address sexual harassment to the benefit of individuals and the scientific enterprise as a whole. I look forward to the recommendations the study panel will produce and to working with my colleagues on this committee to implement them.

In the meantime, universities, federal science agencies, and scientific societies all have a role to play in creating a more welcoming, safe, and inclusive environment for STEM students and researchers. Fortunately, promising changes are being made. For example, the National Science Foundation has proposed a change to its award terms and conditions, requiring universities to report findings of sexual harassment; NASA recently launched an anti-harassment campaign to assess and improve the training and coordination related to their anti-harassment programs; and several scientific societies, including the American Geophysical Union, which is here with us today, have updated their codes of conduct and training programs to prohibit and prevent harassment.

As a longtime supporter of women in the workplace, I am encouraged to see progress being made on this issue and I look forward to a discussion on additional cultural and structural changes that will foster a safe environment for all students and researchers. We cannot afford to lose another brilliant scientist because she did not feel safe in her lab. But even more important, no one should stand by idly while we have an opportunity to prevent harassment in any context.

Thank you. I yield back the balance of my time.

Chairwoman COMSTOCK. Thank you, Mr. Lipinski. And I thank you for your leadership role on this and for your unique experience because of your background and really understanding this issue. I really appreciate your work.

And I now recognize the Chairman of the full Committee for a statement, Mr. Smith.

Chairman SMITH. Thank you, Madam Chairwoman, and also thank you for taking the initiative and having this hearing.

Although federal law prohibits gender discrimination, including sexual harassment, a disturbing number of cases of inappropriate behavior and harassment of women in science occupations and studies have come to light. There must be fair, timely, and consistent procedures for investigating and adjudicating allegations of harassment. Unfortunately, we will hear this morning that such procedures are not always in place and are not uniformly administered. These inconsistencies create an environment where harassment and discrimination goes unchallenged in classrooms, labs, and workplaces. Individuals affected by such misconduct can suffer long-term harm in their education and careers, as well as to their mental and physical well-being.

There are broader implications as well. Engaging more young women in STEM studies and STEM careers is essential to meeting our global competitive challenges in science and technology. Despite representing half of college graduates and half of the total U.S. workforce, women account for less than a quarter of America's STEM workforce.

In the last few months, the Committee and the full House approved several bipartisan bills aimed at boosting interest in STEM subjects and opportunities among women, our military veterans, and other underrepresented groups. But efforts to boost STEM opportunities for women might be greatly hampered if there is a culture in science that does not respect and support them. It is the responsibility of the science community, universities, and federal science agencies to ensure there is a fair, functioning process under the law in place for harassment complaints and resolutions. It is their responsibility to take steps to ensure that classrooms, laboratories, and workplaces are safe.

No taxpayer dollars should be awarded to a university researcher who engages in harassment and inappropriate behavior toward a colleague or a student under their charge. Regardless of the merits of a particular research project, all scientific research is undermined if misconduct is allowed to go unchallenged. And if there is a finding of research or workplace misconduct by a federally funded researcher, that information should be made public so that every research institution, federal agency, and student is aware of the finding.

Last month, Ranking Member Johnson and I requested that the Government Accountability Office conduct a full study of federal grant-making agencies' compliance with relevant laws and policies for harassment, how agencies share relevant information, and identification of recommendations for better enforcement. I look forward to that report, in addition to the recommendations from today's witnesses.

And I'll yield back.

[The prepared statement of Chairman Smith follows:]

For Immediate Release
February 27, 2018

Media Contacts: Thea McDonald, Brandon VerVelde
(202) 225-6371

Statement by Chairman Lamar Smith (R-Texas)

A Review of Sexual Harassment and Misconduct in Science

Chairman Smith: Although federal law prohibits gender discrimination, including sexual harassment, a disturbing number of cases of inappropriate behavior and harassment of women in science occupations and studies have come to light.

There must be fair, timely and consistent procedures for investigating and adjudicating allegations of harassment.

Unfortunately, we will hear this morning that such procedures are not always in place and are not uniformly administered. These inconsistencies create an environment where harassment and discrimination goes unchallenged in classrooms, labs and workplaces.

Individuals affected by such misconduct can suffer long-term harm to their education and careers, as well as to their mental and physical well-being.

There are broader implications, as well. Engaging more girls in STEM studies and more young women in STEM careers is essential to meeting the global competitive challenges in science and technology.

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In the last few months, the committee and the full House approved several bipartisan bills aimed at boosting interest in STEM subjects and opportunities among women, our military veterans and other under-represented groups.

But efforts to boost STEM opportunities for women might be greatly hampered if there is a culture in science that does not respect and support them.

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charge. Regardless of the merits of a particular research project, all scientific research is undermined if misconduct is allowed to go unchallenged.

And if there is a finding of research or workplace misconduct by a federally funded researcher, that information should be made public so that every research institution, federal agency and student is aware of the finding.

Last month Ranking Member Johnson and I requested that the Government Accountability Office (GAO) conduct a full study of federal grant-making agencies' compliance with relevant laws and policies for harassment, how agencies share relevant information, and identification of recommendations for better enforcement.

I look forward to that report in addition to the recommendations from today's witnesses.

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[The prepared statement of Ranking Member Johnson follows:]

OPENING STATEMENT

Ranking Member Eddie Bernice Johnson (D-TX)

House Committee on Science, Space, and Technology
Subcommittee on Research and Technology
"A Review of Sexual Harassment and Misconduct in Science"
February 27, 2018

Thank you Chairwoman Comstock and Ranking Member Lipinski for holding this very important hearing on sexual harassment and misconduct in science. And thank you to the witnesses for being here this morning. This is an exceptionally qualified panel of experts to help inform a discussion on this topic and I look forward to your testimony.

As my colleagues have noted, one-third of female scientists overall report having experienced some form of sexual harassment. The problem is especially acute for women of color, who bear the burden of both sexism and racism. A 2017 survey of astronomers and planetary scientists found that 40 percent of women of color reported feeling unsafe in their workplaces. Women of color still face so many cultural and institutional barriers to successful careers in STEM. I am saddened to know that concern for their personal safety remains one of them.

Several factors contribute to an environment in which sexual harassment is pervasive. Most fields of science remain male dominated. Even fields that graduate large numbers of women have few women in senior positions. Students and post-docs depend almost exclusively on their faculty advisors in the early stages of their scientific careers. This intrinsic power imbalance between predominantly male faculty and their trainees puts young women at particular risk. Another factor is the large amount of money and prestige that faculty in STEM fields bring to a university. There have been some highly publicized cases in recent years in which it seems to many of us that the universities in question did the wrong thing before they did the right thing in handling a case involving a high profile male faculty member.

I recognize the difficulties that university administrators face in providing due process for all parties while minimizing their legal liability and protecting their reputation. However, I also believe that we are entering a new era in which following the letter of the law – in this case Title IX – is not sufficient. We must develop and implement new policies that go further to protect women and reduce the scourge of sexual harassment.

While I applaud NSF for their recent steps to strengthen oversight of universities, I also want to recognize the agency for its nearly two-decade old ADVANCE program. ADVANCE awards grants to support institutions in their efforts to identify and eliminate structural barriers to the full participation and advancement of women in academia.

I believe that a mix of incentive-based interventions and improved enforcement of Title IX – a carrot and stick approach - will be required to achieve our goals. I also look forward to a discussion about the challenges and merits of including sexual harassment in official definitions of research misconduct.

I hope that today's hearing represents the beginning and not the end of this Committee's role in fostering a public discussion of this critical issue. Every time we help chip away at a barrier to the full participation of women in STEM, we help strengthen the U.S. scientific enterprise overall.

I yield back.

Chairwoman COMSTOCK. Now, let me introduce our witnesses. Our first witness today is Ms. Rhonda Davis, Head of the Office of Diversity and Inclusion at the National Science Foundation. Ms. Davis joined NSF in 2010 from the U.S. Department of Agriculture's Office of the Assistant Secretary for Civil Rights, where she served in several positions, including Acting Associate Assistant Secretary for Civil Rights. She holds a master's of science degree in agriculture economics from North Carolina Agriculture and Technical State University and a bachelor's of science and agriculture economics from the University of Arkansas at Pine Bluff.

Our second witness today is Dr. Kathryn Clancy, Associate Professor of the Department of Anthropology at the University of Illinois. Dr. Clancy's research integrates life history, evolutionary medicine, and feminist biology to understand how modern environments influence women's health and well-being. She and her colleagues have empirically demonstrated the continued problem of sexual harassment and assault in the field sciences astronomy and planetary science. She also serves on the National Academy of Sciences Committee to address sexual harassment in the sciences. She was named one of Nature's "10 Most Influential Scientists" in 2013, and has received local leadership awards from the Girl Scouts and YWCA. She received her PH.D in anthropology from Yale University, and a joint honors bachelor's degree in biological anthropology and women's studies from Harvard University.

Ms. Kristina Larsen, our third witness, is an attorney in private practice. She has over 20 years of experience in higher education, human resources, and employment law, including serving as an Assistant Vice Chancellor at a university where she oversaw all aspects of human resources for academic employees. She has represented and advised individuals at numerous universities and academic institutions including UCLA, Stanford, the Smithsonian, Scripps Research Institute, and many more. Ms. Larsen received both a Bachelor of Arts in political science from the University of California San Diego, as well as her juris doctorate from the University of San Diego.

Our final witness today is Ms. Christine McEntee, Executive Director of the American Geophysical Union, an international scientific society that represents 60,000 scientists seeking to promote discovery in earth and space science. Previously, Ms. McEntee has held leadership positions at the American Institute of Architects, the American College of Cardiology and its foundation, and the American Hospital Association. She was named *CEO Update's* "CEO of the Year" in 2016 and one of America's top women mentoring leaders. She graduated from Georgetown University and holds a master's degree in health administration.

And I would also like to note that Mr. Billy Williams, also from the association—from the union—is also joining us today, and he is a constituent from Leesburg, so we thank you for joining us and for all of your good work. I appreciate you being here.

So I now recognize Ms. Davis for five minutes to present her testimony.

TESTIMONY OF MS. RHONDA DAVIS, HEAD, OFFICE OF DIVERSITY AND INCLUSION, NATIONAL SCIENCE FOUNDATION

Ms. DAVIS. Good morning, Chairman Smith, Chairwoman Comstock, and Ranking Member Lipinski, and Members of the Subcommittee. I am Rhonda Davis. I'm the National Science Foundation's Office of Diversity and Inclusion Head. Thank you for the invitation to testify on sexual harassment in science and on the steps NSF has taken to ensure equitable and safe access, irrespective of gender or background, to research experiences in the STEM disciplines supported by our agency.

NSF does not tolerate sexual harassment of any—or any kind of harassment within the agency at awardee organizations, field sites, or anywhere NSF-funded science and education are conducted. As the primary funding agency of fundamental science and engineer research in the United States, NSF recognized that to enable scientists, engineers, and students to work at the outermost frontiers of knowledge, the agency must be a role model for teamwork, fairness, and equity.

That is why, earlier this month, NSF announced new steps to help eliminate sexual harassment from science and engineering. NSF will be proposing a new award term and condition to make it clear when an awardee organization finds that an NSF-funded investigator or coinvestigator has committed sexual harassment, NSF expects to be notified of that finding.

Due to the importance of this issue, NSF is making the change a priority and fast-tracking this process. The new award term and condition will go into effect after completion of the Federal Register process, which includes a 60-day public comment period. Once that process is complete, all new awards and funding amendments on existing awards will include the new term and conditions, and all awardees must adhere to it. NSF expects all awardee organizations to establish and maintain clear standards of behavior to ensure a harassment-free workplace.

To mine the best ideas, we've also recently instituted a cross agency special task force to examine and collect promising practices and model codes of conduct. We will be using one web portal, NSF.gov/harassment, to make it easier for the research community and the public to access important information. These new steps and resources will complement NSF's title IX compliance program, which we have bolstered in the recent years. Title IX requires schools to take steps to prevent and remedy sex-based harassment. If an institution is suspected of not complying with title IX, NSF and its federal partners may conduct a review of the institution. If an institution is in violation and refuses to take corrective action, their funding can be revoked.

Like similar agencies, NSF conducts title IX compliance reviews of at least two funded organizations each year and makes its—these reports publicly available. NSF has also enhanced its training program for internal staff to provide guidance for an employee who may be notified of a title IX matter. In addition, our program offices receive training on sexual harassment during the merit re-

view process training. NSF policies are meant to ensure that the actions of one do not negatively affect the careers of all.

It is vitally important that we do not punish innocent award participants. If an awardee adjudicates a sexual harassment case in a way that results in the investigator being unable to fulfill the terms and conditions of his or her award, NSF will act to minimize the impact on others supported by the project, including students and postdocs.

NSF is committed to doing everything within our power to help eliminate sexual harassment in science and engineering. NSF accounts for approximately 27 percent of the total federal budget for basic research conducted at U.S. colleges and universities and has been vital to many discoveries that impact our lives and drive the economy. However, we cannot and will not succeed in our mission if we do not eliminate unsafe research environments that upset the whole balance of the science ecosystem, harm our scientists, and impede the very progress of science itself.

With the support of this Committee, the research community, and outside experts, NSF will continue to work to eradicate sexual harassment and to eliminate barriers to gender equity in science and engineering. Thank you and I'll be pleased to answer any questions.

[The prepared statement of Ms. Davis follows:]

Testimony of

Rhonda Davis
Office Head
Office of Diversity and Inclusion
National Science Foundation

Before the
Subcommittee on Research and Technology

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

February 27, 2018

"A Review of Sexual Harassment and Misconduct in Science"

Good Morning Chairwoman Comstock, Ranking Member Lipinski, and members of the subcommittee. My name is Rhonda Davis and I am the Head of the National Science Foundation's (NSF) Office of Diversity and Inclusion (ODI). Thank you for the invitation to testify today on sexual harassment in science, and on the steps NSF is taking to ensure equitable and safe access, irrespective of gender or background, to research experiences in the STEM disciplines supported by our agency.

Established by the National Science Foundation Act of 1950 (Public Law 81-507), NSF is an independent Federal agency whose mission is "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." With an annual budget of approximately $7.5 billion, NSF's unique mission is to support fundamental research across all fields of science, technology, engineering and mathematics (STEM) and all levels of STEM education. NSF funds reach all U.S. states and territories through grants to nearly 2,000 institutions of higher education (IHE) and other organizations. Each year, NSF receives more than 48,000 competitive proposals for funding and makes about 12,000 new funding awards. Investing in STEM research and education is essential to America's prosperity, economic competitiveness, and quality of life. A vibrant scientific workforce and breakthrough discoveries enabled by NSF investments sustain, accelerate, and transform America's globally preeminent innovation ecosystem. NSF is a respected steward of taxpayer dollars, operating with integrity, openness, and transparency.

As noted above, NSF makes the vast majority of its awards to institutions of higher education and other organizations such as non-profits. Only infrequently and through specialized programs, such as NSF's Postdoctoral Fellowship Programs, do NSF funds go directly to individuals. One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities that we support at NSF awardee organizations. These organizations recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the US technology-based economy. By supporting institutions, these awards touch thousands of researchers from faculty to post-doctoral fellows, graduate students, undergraduate students, and even K-12 students and teachers.

As the primary funding agency of fundamental science and engineering research in the United States, NSF recognizes that to enable scientists, engineers and students to work at the outermost frontiers of knowledge, the agency must be a role model for teamwork, fairness, and equity. NSF does not tolerate sexual harassment, or any kind of harassment, within the agency, at awardee organizations, field sites or anywhere NSF-funded science and education are conducted. Investing in science, engineering, and education for the Nation's future necessitates a safe environment that fosters equal opportunity for all.

Two years ago, NSF joined with other leading U.S. scientific organizations to emphasize its strong commitment to preventing harassment and to eradicate gender-based discrimination in science, and issued a press statement[1] to reiterate our unwavering dedication to inclusive workplaces. Since then, NSF has significantly stepped up its efforts to help eliminate sexual harassment within the science and engineering community by taking a proactive approach to promote inclusive, diverse workspaces through new actions and ongoing programs; strengthening our Title IX compliance program; and practicing transparency in our guidelines and actions.

New Steps To Combat Sexual Harassment

On February 8, 2018, NSF reiterated the policy that sexual harassment and misconduct will not be tolerated, and announced new steps to help eliminate such transgressions from science and engineering. NSF issued an important notice[2] to Presidents of institutions of higher education and heads of other NSF awardee organizations detailing these new steps. Most importantly, NSF has proposed a new award term and condition that would make it clear that when an awardee organization finds that an NSF-funded investigator or co-investigator has committed sexual harassment, NSF expects to be notified of that finding so we can take decisive action, as is appropriate, using all the tools at our disposal. NSF employees also received a notice[3] clarifying how sexual harassment complaints within the agency are to be reported and handled. The response to these announcements has been very positive with great support from our colleagues in institutions of higher education and awardees that operate our facilities.

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[1] *The National Science Foundation (NSF) will not tolerate harassment at grantee institutions* https://www.nsf.gov/news/news_summ.jsp?cntn_id=137466

[2] *Important Notice No. 144: Harassment* https://www.nsf.gov/publications/pub_summ.jsp?ods_key=in144

[3] *ODI Bulletin No. 18-01, Sexual Harassment Reporting* https://www.nsf.gov/od/odi/docs/odi1801.pdf

Specifically, the important notice to the field addressed the following:

- **New Award Requirements:** NSF has developed a new award term and condition that will require awardee organizations to report findings of sexual harassment, or any other kind of harassment regarding a PI or co/PI or any other grant personnel. The award term and condition also will require the grantee to report the placement of the PI or co-PI on administrative leave relating to a harassment finding or investigation. This term and condition will make it clear that NSF may take unilateral action as necessary to protect the safety of all grant personnel, to include suspending or terminating an award or requiring the grantee to replace or remove personnel. NSF will solicit feedback on this new award term and condition through the Federal Register process within the next several weeks.

  Due to the importance of this issue, NSF is making this change a priority and fast-tracking this process. The new award term and condition will go into effect after completion of the Federal Register process, which includes providing 60 days for public comment. Once that process is complete, all new awards and funding amendments on existing awards will include the new term and condition and all awardees must adhere to that term and condition. The policy will not be retroactive and will not apply to expired awards.

- **Harassment-Free Research Workplaces:** NSF expects all awardee organizations to establish and maintain clear and unambiguous standards of behavior to ensure harassment-free workplaces wherever science is conducted, including notification pathways for all personnel, including students, on the primary and supplemental awards. This expectation includes activities at all research facilities and field sites and during conferences and workshops. All such settings should have accessible and evident means for reporting violations and awardee organizations should exercise due diligence with timely investigations of allegations and corrective actions. NSF recently instituted a cross-agency special task force to examine and collect promising practices for clear and unambiguous model codes of conduct. When finalized, these codes of conduct will be placed in one location on the NSF website for easy access.

- **Enhanced Web Resources:** ODI is tasked with seeking to ensure that NSF-funded programs and projects are free of discrimination. ODI recently launched a dedicated web portal to consolidate policies and procedures, promising practices, and frequently asked questions relating to sexual and other forms of harassment with the intent of making it easier for the research community and the public to access information. This portal is where NSF will continue to add content related to ending harassment. To access the portal, please visit NSF.gov/harassment.

NSF is working to make certain that awardee organizations respond promptly and appropriately to instances of harassment. A community effort is essential to eliminate sexual and other harassment in science and to build scientific workspaces where people can learn, grow and thrive.

One long-standing way NSF has focused on the prevention of harassment has been by working closely with awardee organizations to support inclusive, diverse and safe workplaces. To further address the issue, NSF has funded a National Academies of Sciences, Engineering, and Medicine study[4] on the prevalence and impact of sexual harassment in science, engineering, and medical departments and programs. When completed, this study will form a foundation for further consideration of our policies while providing important information to science and engineering institutions and organizations. NSF also recently made an award[5] to a group of geoscientists to partner with professional societies to develop best practices and training workshops for safer, more productive STEM education and research workplaces. This award was made through NSF's ADVANCE program, our longstanding effort to foster gender equity in science and engineering through a focus on the identification and elimination of organizational barriers that impede the full participation and advancement of all women faculty in academic institutions.

Title IX and the Complaint Process

NSF adheres to Title IX of the Education Amendments of 1972, which states that Federal agencies awarding grants to educational institutions or program activities are obligated to take steps to ensure that such institutions do not discriminate based on gender. Title IX also requires schools to take steps to prevent and remedy two forms of sex-based harassment: sexual harassment (including sexual violence) and gender-based harassment. If an institution is suspected of not complying with Title IX, NSF and its federal partners may conduct a review of the institution.

NSF follows federal guidelines, and every institution of higher education that receives federal dollars from NSF must certify compliance with Title IX. Under these guidelines, institutions' Title IX coordinators are responsible for handling Title IX complaints and allegations. NSF must ensure through its compliance activities that individual cases are not indicative of larger cultural issues within these institutions. This means working with the institutions, which takes time.

NSF may be contacted about potential Title IX issues both formally and informally. The appropriate action varies with the nature of the contact and issue. When NSF receives a formal Title IX complaint, the complaint is evaluated to determine whether an NSF-funded program is involved. If an NSF-funded award is involved in the complaint, NSF may accept it for investigation. For Title IX complaints not involving NSF-funded awards, to ensure that the proper Federal agency will investigate the complaint, NSF may forward the complaint to the U.S. Department of Education and/or consult with the institutions who may be funding personnel or activities involved in the complaint. Title IX requires Federal agencies to first provide the awardee with an opportunity to take corrective action. If the awardee refuses to take corrective action, agencies can take steps to revoke all of the enforcing agency's Federal funds from the awardee as a tool to compel compliance.

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[4]*Sexual Harassment in the Scientific and Technical Workforce And its Effects on the Careers of Scientists, Engineers, and Medical Professionals*
https://nsf.gov/awardsearch/showAward?AWD_ID=1644492&HistoricalAwards=false
[5]*ADVANCE Partnership: From the Classroom to the Field: Improving the Workplace in the Geosciences*
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1725879

For many years NSF referred Title IX complaints to the Department of Education's (ED) Office for Civil Rights (OCR) under a delegation agreement between ED and NSF. However, NSF was recently informed by OCR that the delegation agreement does not apply to Title IX complaints. As a result, NSF has initiated additional protocols to bolster its Title IX Compliance program to include Title IX complaint activity. NSF has significantly strengthened its compliance program by increasing staff and improving oversight. Staffing in ODI, which handles NSF's Title IX compliance program, has been increased to focus more effectively on implementation of best practices and proactive approaches to institutions' Title IX compliance. This includes the hiring of an Equal Opportunity Compliance Program Manager. NSF now conducts Title IX compliance reviews of at least two NSF-funded organizations each year, and makes reports of Title IX compliance reviews publicly available. NSF has already conducted one Title IX compliance review this year and has at least one more planned. These on-site reviews are selected based on several factors such as known Title IX compliance issues, amount of NSF funding provided to the university, and others. These reviews are comprised of students, faculty and staff interviews; review of records and statistics; and site inspections of academic departments that receive NSF awards.

NSF has also enhanced its training program for internal staff to include in-person training, written publications, and video presentations. The training provides guidance for any employee who may be notified of a Title IX matter. Training is provided to all new employees during the onboarding process on Title IX and sexual harassment. Program Officers receive training on sexual harassment during the Merit Review Process training.

With the current spate of incidents of sexual harassment and assault at universities, NSF acknowledges that more needs to be done. NSF program participants deserve nothing less than learning and research environments free of sexual harassment and sexual assault. NSF is looking to other procedural and policy avenues that will hold PIs, and awardee organizations, accountable in an expeditious and fair manner. In tandem with the Title IX regulatory approach to ensuring awardee compliance, NSF is also using Federal-wide administrative requirements to ensure that awardees are fulfilling their award conditions. If award conditions cannot be met, then the organization may propose that a substitute PI be named and NSF can accept or reject the proposed change. If an awardee adjudicates a sexual harassment case in a way that results in the investigator being unable to fulfill the terms and conditions of his/her award, NSF will act to minimize the impact of such a decision by the awardee on others supported by the project, including students and postdocs. NSF polices are meant to ensure that the actions of one do not negatively affect the careers of all. It is vitally important that we do not punish innocent award participants because of the actions of one person

In summary, NSF will continue to provide training on Title IX and sexual harassment prevention, and regularly conduct Title IX compliance reviews of awardee organizations and the academic research departments funded by NSF. NSF may terminate funding to any institution found to be in noncompliance with Title IX regulations and that does not voluntarily come into compliance.

Conclusion

NSF is committed to doing everything within our power to help eliminate sexual harassment in science and engineering. NSF accounts for approximately 27 percent of the total Federal budget for basic research conducted at U.S. colleges and universities and has been vital to many discoveries that impact our daily lives and drive the economy. However, we cannot and will not succeed in our mission if we do not eliminate unsafe research environments that upset the whole balance of the science ecosystem, harm our scientists, and impede the very progress of science itself. With the support of this committee, educational and research institutions, the community, and outside experts, NSF will continue to work to eradicate sexual harassment in scientific research and learning environments and to eliminate barriers to gender equity in education and research experiences.

Thank you for the opportunity to testify today and for your continued support of NSF. I will be pleased to answer any questions.

Rhonda Davis is Head of the Office of Diversity and Inclusion (ODI) in the Office of the Director at the National Science Foundation (NSF).

Ms. Davis joined NSF in 2010 from the United States Department of Agriculture's Office of the Assistant Secretary for Civil Rights where she served in several positions including Acting Associate Assistant Secretary for Civil Rights. Davis' experience includes establishing and managing nondiscrimination and diversity programs for both small and large federal agencies.

Ms. Davis holds a MS in Agricultural Economics from North Carolina Agriculture and Technical State University and a BS in Agricultural Economics from the University of Arkansas at Pine Bluff.

Chairwoman COMSTOCK. Thank you. And I now recognize Dr. Clancy for five minutes to present her testimony.

TESTIMONY OF DR. KATHRYN CLANCY, ASSOCIATE PROFESSOR, DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF ILLINOIS

Dr. CLANCY. Thank you, Chairwoman Comstock, and thank you for the opportunity to share my research and expertise with you today, and thank you for taking on such an important topic.

I want to start by sharing a bit about what sexual harassment is, how it manifests in the sciences, and what I hope you'll help us do about it. Sexual harassment comes in two main forms: come-ons, which are unwanted sexual advances and sexual coercions; and putdowns, also called gender harassment, nonsexual behaviors that are crude or hostile regarding gender.

While the come-ons are the types of behaviors you see in articles about Harvey Weinstein and in sexual harassment trainings, the majority of sexual harassment are in fact the putdowns. These are the kinds of behaviors most women in the workplace have experienced at least once in their lifetimes and many experience every day. The offensive remarks, subtle exclusions, requests to make coffee, yes, but also starting rumors, sabotaging a promotion, or ruining a career.

One of the more recent cases of sexual harassment in the sciences is by alleged perpetrator David Marchant, a Boston University geologist who conducted fieldwork in Antarctica. This case involved horrifying and physical gender harassment, blowing volcanic ash into the already snow-blind eyes of a grad student, pushing her down a mountain multiple times, and throwing rocks at her if she dared go to the bathroom.

There are a few conditions that make sexual harassment more common in the workplace. When workplaces are male-dominated not just in numbers but in culturally how they behave, sexual harassment happens more. When workplaces demonstrate that they're tolerant of sexual harassment by ignoring reporting, retaliating against reporters, or not sanctioning perpetrators, sexual harassment happens more. In 2016, the EEOC wrote a report that showed that only 1/4 of sexual harassment is reported, and of those who report, 3/4 of them faced retaliation.

I study sexual harassment in the sciences because I am a scientist. I care about science, and I'm interested in the ways in which the manifestation of harassment varies by work context. But this is a problem not just of science but of American workplaces. In the sciences, sexual harassment looks like this: women having less access to their advisors, to the materials they need to conduct their research, and withstanding constant questioning of their intelligence and worth. I have stories from my research of sabotaged lab equipment, of intentional safety violations, of rumormongering, and yes, sometimes of sexual assault and rape.

What bothers me the most about how it usually looks in science is that we wrap sexual harassment up in this package that we claim is intellectual rigor and meritocracy. It's like we think that rudeness and cruelty are the same thing as being smart without noticing that we direct these cruelties more at women than men,

more at women of color than white women, more of sexual minorities than straight folk.

We say that asking a nasty question at a colloquium is how we push people to be better scientists. We say when we see an all-male research team that it must just be that the best scientists for the job are all men. We say that the sole woman in a department is the affirmative-action hire. We spent all this taxpayer money supporting recruitment of women to STEM fields and supporting their educations only to lose that money when they are forced out by damaging behaviors. We also lose their diversity of perspectives and thus end up with a flatter, more boring, less complex, and less innovative American science.

Too often I've heard that harassment and bad behavior are the price we must pay for star scientists, but are they really doing star science? When I'm writing my papers or analyzing my data on sexual harassment in the sciences, I'm thinking of the victims and the science we've lost. We've lost their ideas; we've lost their perspectives. We scientists do this work because we want to give the best of ourselves to the advancement of science. Women keep trying to give us their best, and we blow ash in their faces and push them down mountains.

The way we've tried to fix this problem isn't working. We have decades of evidence to prove it. Let's move away from a culture of compliance and towards a culture of change. Let's convince universities to worry less about litigation and more about legacy. Do you want to be on the right side of history when it comes to how you center victims and how you improve the lives of women? Do you want to be the hub for exciting groundbreaking science? Do you want to be the place everyone wants to work at or the place all women warn each other about?

I hope you will join me in encouraging universities and other science workplaces to take a values-into-action approach to eliminating sexual harassment. That means locational, contextual solutions that create respectful and equitable climates for everyone. That means focusing on the behaviors we want to see, not creating fear around the legally actionable ones, and that means creating confidential avenues for women to speak and to be heard.

I just want to say one last thing because this testimony is public record and it's important that I say it. In a climate where perpetrators are being centered and where the conversation has been on reporting and speaking up, I want to say today to victims that I see you. I see whether or not you report, whether or not you've been one of my studies. I see when you email me, tweet at me, when you stay silent. I see you and I think of you and I thank you for getting up every day and I derive strength from you. I hope you know how much you mean to those of us who do this work. Thank you.

[The prepared statement of Dr. Clancy follows:]

Kathryn B. H. Clancy, PhD
Associate Professor of Anthropology
University of Illinois at Urbana-Champaign

Committee on Science, Space and Technology
Subcommittee on Research and Technology
United States House of Representatives

A Review of Sexual Harassment and Misconduct in Science: Written Testimony

I am an anthropologist who studies workplace climate in the sciences. I am an associate professor at the University of Illinois at Urbana-Champaign. My degrees are in anthropology (PhD, Yale University) as well as biological anthropology and women's studies (BA, Harvard University). With my collaborators, I have published three papers across two projects: one survey (n = 666) and interview (n = 26) project on sexual harassment and assault in the field sciences (Nelson *et al.* 2017; Clancy *et al.* 2014), and another survey (n = 474) and interview (n = 18) project on many forms of harassment (sexual, racial, etc) in astronomy and planetary science (Clancy *et al.* 2017). I have completed data collection on two more projects, a survey of female undergraduate physicists (n = 470) and focus groups of women of color science faculty (n = 15). In this written testimony I'll be sharing my expertise from these projects and from the broader literature on sexual harassment. The main takeaways of this testimony are:

1. Enforcement efforts and media attention often miss the most prevalent forms of sexual harassment in the workplace.
2. Gender harassment, comprised of non-sexualized forms of sexual harassment, is widespread and responsible for the loss of women in science, to the detriment of science.
3. There are some key features of workplaces and the culture of science that enables this behavior to persist and that amplify its damage to the advancement of American science.
4. There are concrete, evidence-based steps we could take to make healthier workplaces, retain more women, and improve the state of our science.

Defining sexual harassment

> It is unlawful to harass a person because of that person's sex. Harassment can include "sexual harassment" or unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature.... Harassment does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. For example, it is illegal to harass a woman by making offensive comments about women in general.... [H]arassment is illegal when it is so frequent or severe that it creates a hostile or offensive work environment or when it results in an adverse employment decision (such as the victim being fired or demoted). – Equal Employment Opportunity Commission

The Equal Employment Opportunity Commission offers a great working definition of sexual harassment, however, in practice this definition is often used to excuse a significant number of behaviors that make workplaces inhospitable to women and gender minorities. In theory the bar for illegal sexual harassment that is "so frequent or severe that it creates a hostile

Kathryn B. H. Clancy, PhD
Associate Professor of Anthropology
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or offensive work environment" is more than adequate. In practice, this bar is so high that a significant number of unwanted behaviors that do impact climate, health, and productivity continue to be prevalent in the workplace.

Sexual harassment is comprised of three distinct sets of behaviors: unwanted sexual advances, sexual coercion, and gender harassment. The first two forms of behaviors are sexual in nature, and therefore are often considered together in studies of sexual harassment as "come-ons." Gender harassment, the third category, includes crude behaviors and sexist hostility, or sexist behavior that isn't necessarily sexual in nature. These behaviors are considered "put-downs."

Come-ons are the most frequently reported to Title IX offices (Cantalupo and Kidder 2017) as well as those most reported by the media (Kantor and Twohey 2017; Ghorayshi 2016, 2015). However, across several decades researchers have consistently found that put-downs are the most frequent sexual harassment behaviors of the workplace (Leskinen, Cortina, and Kabat 2011; Schneider, Swan, and Fitzgerald 1997). Even when perpetrators commit come-ons, they almost always also include some form put-down, such that put-downs comprise over 90% of workplace sexual harassment (Schneider, Swan, and Fitzgerald 1997).

Therefore, in defining and seeking to understand sexual harassment, we must pay special attention to gender harassment, or put-downs, as 1) the most prevalent and frequent form of sexual harassment and 2) a set of behaviors that can precede sexual forms of sexual harassment.

Examples of gender harassment. Gender harassment can include crude behaviors such as offensive sexual teasing, sexual insults, obscene gestures, or pornographic images posted at work, or sexist hostility such as degrading remarks about bodies, sexist insults, harassment of feminists, harassment of mothers, or outright sabotage. These put-downs may seem less extreme than the come-ons, but they encompass non-sexual forms of both verbal and physical harassment targeted towards women. When gender harassment is frequent, and/or the perpetrator has power over the victim, gender harassment has the same level of job and mental health outcomes as more sexual forms of harassment (Langhout *et al.* 2005).

The recent case against David Marchant at Boston University provides several horrifying examples of gender harassment. Marchant is a geologist who does field research in Antarctica; two of his alleged victims have recently come forward, waiting years to report him because they believed doing so would destroy their careers. The two complainants on this case alleged that Marchant called them "slut," "whore," "bitch," and "cunt." One complainant revealed:

> "His taunts, degrading comments about my body, brain, and general inadequacies never ended.... Every day was terrifying."

Another complainant alleged having rocks thrown at her by Marchant whenever she urinated while conducting fieldwork, being thrown three times down a mountainside, and having volcanic ash blown in her already-damaged eyes (Wadman 2017).

Kathryn B. H. Clancy, PhD
Associate Professor of Anthropology
University of Illinois at Urbana-Champaign

In my own research, I have seen additional examples of women being punished for urinating while in the field, and being punished for eating. In our samples women have also been given fewer interesting tasks in the field compared to men, have been denied access to materials or locations necessary for their research, or were forced on extended hikes for non-scientific reasons, then taunted when they tired (Nelson *et al.* 2017). **None of these behaviors are about wanting to have sex with someone: they are about exerting power, causing humiliation, derailing careers, all because of the victim's gender. This is about sabotaging women in science.**

Intersecting forms of harassment. Women of color, as well as people who are sexual minorities or gender minorities (LGBTQIA+ folk) face additional obstacles. Women of color and/or sexual minority women experience more sexual harassment compared to straight, white women, women from these groups experience a much higher rate of intersecting forms of harassment, such as racial-gender harassment or heterosexist harassment (Berdahl and Moore 2006; Cortina, Fitzgerald, and Drasgow 2002; Silverschanz *et al.* 2008). Our research also suggests that women of color have worse workplace outcomes even when experiencing similar rates of sexual harassment, suggesting the type of harassment they receive may be more severe (Clancy *et al.* 2017).

Causes of harassment. Sexual harassment tends to be more prevalent in workplaces defined by two factors: male dominated work environments and organizational tolerance towards harassment (Willness, Steel, and Lee 2007). A male dominated work environment is defined as when a workplace has more men than women; has more men in leadership; or is a historically male job. Male domination is a key variable in understanding sexual harassment because most perpetrators are men, and most victims are women. Therefore conditions where women are outnumbered in general or in leadership, or are considered to be outside the norm for that job, are places where they are at greater risk of harassment. Increasing women in science is not a straightforward problem: male and female scientists hold implicit biases against women that affect their grades as well as their ability to be hired and paid adequately for their work (Grunspan *et al.* 2016; Moss-Racusin *et al.* 2012).

Organizational tolerance towards harassment is used to describe an organization that fails to take complaints seriously; fails to sanction perpetrators; or fails to protect complainants from retaliation (Willness, Steel, and Lee 2007; Bergman *et al.* 2002). When a victim is harassed, she is unlikely to report her experience if she has the impression or has been warned that her workplace doesn't care about harassment. Organizational tolerance of harassment not only influences the risk of harassment, but the downstream experiences a harassed person has, as she is likely to feel unsupported and be retraumatized if she dares report her experience. Many science workplaces are tolerant of a number of unsavory or outright unsafe behaviors in the name of producing science. Interview respondents shared stories of field sites where it was common to not boil their water long enough to kill parasites; where scientists were bitten by animals and not provided adequate first aid; where they lived in tents that did not protect them from the elements (Nelson *et al.* 2017).

Kathryn B. H. Clancy, PhD
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Many American workplaces could be argued to be both male dominated and tolerant of harassment, from politics, to the military, to the sciences. In the sciences, these factors often manifest as a disregard for safety and feelings, sabotage and other unhealthy forms of one-upmanship, and a prioritization of the research over all else. In some settings, scientists are expected to ignore bodily signals of hunger or the need to urinate, to ignore family commitments, and to flout rules if it means getting the data they want. At the same time hierarchy is strict and authority is expected to be obeyed at all times: to obtain the best possible science "pedigree" students and junior scholars must often work with a single supervisor whose regard for their work is the sole predictor of career success. Interview respondents often shared times they were yelled at by their supervisor to conduct their research using a particular technique that was outdated, incorrect, or lead to a loss of data, but disobeying meant only more abuse (Nelson *et al.* 2017). Authority that does not listen and engage, or hostile workplace environments that are about competition rather than cooperation, do not lead to the production of better science (Tepper 2007).

These impressions, and these behaviors, are harmful to scientists and to the advancement of American science. Therefore another significant roadblock to scientists being able to work unhindered by a hostile workplace is our fundamental misconception that scientists should endure horrible working conditions out of love for their science.

In our research on field site science, many of our interview respondents never reported their experiences because they were confident they wouldn't be believed, based on what they had already observed of problematic behavior at the site. In general only about one quarter of workplace harassment is reported, and three quarters of those who report are retaliated against for doing so (Feldblum and Lipnic 2016). Therefore it's likely that a large number of American workplaces, including science workplaces, are tolerant of sexual harassment.

But, in our sample, some did try to report the behavior they experienced. One respondent shared her story of staying in her tent one day because she was ill. A fellow field site worker tried to forcibly rape her while she was sleeping. She managed to fight him off, and she reported the incident that same day. That respondent said:

> "[The director] believed my story but he didn't really know what to do. He was like, 'in different cultures that's not abnormal.'.... He did talk to the guy, he just said that he needed to stay away from me and that I was feeling uncomfortable and I don't know how much it worked, it was still weird. Because at night we'd have a fire, and he'd still find his way to come and sit next to me and sit there and try to put his arm around me and I'd tell him to stop and leave or I'd move so that I'm never around him."

Despite having to fight off a rapist in a remote field site, this respondent had to continue to live and work with her aggressor for months (Nelson *et al.* 2017). Allowing the perpetrator to

continue to work at the site not only opened up the victim to more mental and physical trauma, it sends a signal that this type of behavior is tolerated in science.

The scope of the problem in science

The descriptions above are worrisome features of certain science workplaces. In our samples, we have found high numbers of women reporting sexual harassment in the field sciences (71% across their careers), and astronomers and planetary scientists regularly observe sexist remarks from coworkers (79% from peers, 44% from supervisors, 85% from others in the workplace over just the last 5 years) (Clancy *et al.* 2017; Clancy *et al.* 2014). In the field sciences, women in our sample also experienced more frequent harassment from perpetrators with more power in the hierarchy compared to men, who more often were harassed by peers (Clancy *et al.* 2014). Peer to peer harassment is in general the most common form of workplace sexual harassment (Rosenthal, Smidt, and Freyd 2016), which may indicate additional problems in field contexts due to the remoteness of the location and the authoritarian leadership style common at such sites. Field scientists in our sample described being encouraged to keep quiet about their field experiences with epithets like "what happens in the field stays in the field" (Nelson *et al.* 2017). As one interview respondent stated:

> "I feel like [my field site director] just sees this divide between the field and at home. What happens to you in the field, it's just like a different world so the way you behave can, it's just completely separated from your daily life."

In astronomy and planetary science, harassment was not more likely to originate from supervisors (Clancy *et al.* 2017). In interviews with respondents from these disciplines, they described a more systemic culture of hostility, intellectual takedowns, and competition that lay the groundwork for harassment (Clancy *et al.* in preparation). As research continues to disentangle the ways in which the cultural and historical context of the workplace affects the nature of the harassment that occurs there, one thing is clear: few workplaces are immune to it.

Impact on science and scientists

The effect of sexual harassment on workers has been well-studied, from job to mental health to physical health outcomes. Workers victimized by sexual harassment report a higher intention to quit, and are more likely to withdraw from work, be absent, and be less productive (Herschcovis and Barling 2010; Langhout *et al.* 2005; Nye, Brummel, and Drasgow 2009). Workers victimized by sexual harassment also report more depression, anxiety, and even physical pain, compared to those who are unaffected (Li *et al.* 2016; Stock and Tissot 2012; Miner-Rubino and Cortina 2004; Richman *et al.* 1999). Sexual harassment can even adversely impact cardiovascular health (Thurston and Kubzansky 2017).

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Sexual harassment reduces scientific productivity and drives scientists from the field. In our sample of field scientists, those who experienced sexual harassment felt far greater ambivalence about their field, stalled out in their careers, made lateral career moves to avoid their perpetrator, and in some cases left science altogether (Nelson *et al.* 2017). Those who experienced harassment in the field also observed that the effects of that harassment reverberated throughout their careers. For some, they felt physical resistance to working on the project once home; for others they were forcibly removed from projects, particularly if they had rebuffed the advances of anyone with control over their field site, materials, or collections (Nelson *et al.* 2017).

Forty percent of the women of color in our astronomy and planetary science sample reported they felt unsafe in their workplace due to their gender. Twenty seven percent of white women also reported they felt unsafe due to their gender (Clancy *et al.* 2017). Those who were harassed were more likely to skip work events, ranging from seminars to meetings to data collection at observatories, due to feeling unsafe. One respondent shared her story of social withdrawal after being raped by a fellow student.

> "Yeah, and then at some point we were working at his house, at 3:00 a.m. on a lab report, and he just made a move on me. I rejected him, but he just—it wasn't violent or anything, but he just wouldn't stop pushing me. It was just horribly uncomfortable, and then he spread a rumor that we were in some consensual thing. I was like, 'No, no, you basically raped me.'.... I really withdrew from the [physical science] department after that. I did my work, but my social group after that was [a different physical science] department." (Clancy et al in preparation)

Perpetrators often have the power to dominate the narrative, and present a different face to the rest of the world. In some of the major cases covered by the news media, the alleged perpetrators have been allies for women in science (Ghorayshi 2015), or superlative teachers and mentors (Wadman 2017). This leaves victims feeling disempowered and unable to reintegrate into the workplace, which in turn lessens the contributions they can make as diverse team members.

Women, and in particular women with multiple marginal identities, must regularly push against a culture that does not feel welcoming to them. While today they are less likely to experience overt discrimination, research has shown that implicit bias still influences social distance, eye contact, and other ways of including or excluding fellow workers (Hebl, Madera, and King 2008). Diversity resistance is still an obstacle in the sciences, where many are enamored with the idea that the sciences operate as a meritocracy. This leads many scientists to believe that the lower number of women generally, and women of color specifically, must be related to aptitude or desire. However the data overwhelmingly point to implicit bias, discrimination, and sexual harassment as forces driving women out of science (Wasserman 2000; Xie and Shauman 2004; Caplan 1993; Gutiérrez y Muhs *et al.* 2012).

Kathryn B. H. Clancy, PhD
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The false notion that career success in the sciences is objective and the best scientists have the most success drives out women and others who, despite intelligence and persistence, face substantial barriers to success. These scientists would diversify our workforce and thus allow for more rapid solutions to today's complex problems (Hong and Page 2004; Hajro, Gibson, and Pudelko 2017; Jackson, Joshi, and Erhardt 2003; Roberge and van Dick 2010). Instead, those who are sexually harassed not given the full opportunity to make contributions to scientific advancement and discovery.

Hope for the future. That said, there are many individuals, laboratories, field schools, and professional societies who have decided to take steps to eliminate sexual harassment from their workplace and discipline. In our field sciences project, I interviewed several people who had either had positive field experiences, or were themselves taking steps to create positive field experiences for their students (Nelson *et al.* 2017). Our interview respondents identified several factors that made their science workplaces healthy, helped them produce the best science, and made them want to persevere in a challenging discipline. These were: having rules for appropriate conduct, implicit or explicit; swift consequences for those who transgress the rules; an egalitarian workplace structure; and commitment to a healthy workplace from the leadership (Nelson *et al.* 2017).

Recommendations for improving the culture of science

The main ways to overcome sexual harassment in science are directly tied to the ways in which male domination and organizational tolerance manifests in these workplaces. While the answer lies in increasing the number of women in science and creating stronger rules and enforcement structures against bad behavior, we cannot continue to operate our diversity and anti-harassment initiatives the way we always have. **At this point, we have ample evidence stemming from nearly every American college and university that the ways we are trying to increase diversity and decrease harassment are not working.** It is time for something new.

Making room for women. Women in science initiatives have long operated between a rock and a hard place: trying to advocate for change while not wanting to advocate too hard and alienate their largely male coworkers (Phipps 2006). These initiatives are also typically under- or un-funded, and do not take into account the varying experiences women from different backgrounds have in science. A focus on recruitment brings women into a workplace that is hostile to them, and tends to put them on the lowest rung where they are most vulnerable to harassment. Girls and women are blasted with the rhetoric that they can do anything, so when they encounter hostile behavior and/or sexual harassment, they often internalize these experiences and assume they are not worthy of science. We need to stop asking women to adapt to science. Instead, science has to adapt and make room for women and gender minorities.

Science culture. Several elements of science culture need to be addressed to make it more hospitable to a wider range of scientists. First is the way in which academia generally, but science specifically, sets up single advisor-student relationships where the student must depend

Kathryn B. H. Clancy, PhD
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fully on the support and good will of a single person to determine their educational and career success. If that advisor is not supportive when the student is encountering a problem, or if the advisor themselves is the problem, that student can easily find herself with no path to graduation or no recommendation letters or networking to help her land a job. Because advisors still tend to be male and the majority of the women in science are students, problematic mentoring relationships block women from career success in the sciences.

Next, scientists need to reevaluate how they define rigor: in many disciplines hostility, incivility, and one upsmanship parade as thoroughness, care, and objectivity. Many scientists believe that this is a culture that affects everyone equally, that everybody has to get used to it and accept that this is what it takes to do the best science. What few realize is that the evidence has demonstrated, again and again, that when there is a seemingly overall disrespectful environment, the reality is that those daily incivilities operate selectively against women, people of color, and specifically women of color (Cortina *et al.* 2013). Scientists may think they are toughening up the workplace, but what they are doing is targeting people from underrepresented groups and making them unwelcome.

Creating incentives and expectations around a respectful and equitable workplace is probably one of the greatest changes that will improve science culture. This will lead to a greater respect for basic safety practices, work against the exclusion and isolation that many women in science face, and make room for questioning leadership styles that are authoritarian without being thoughtful.

Respectful and equitable workplaces. An equitable workplace – one with clear guidance on appropriate workplace conduct, consequences for bad behavior, and a cultural emphasis on cooperation and inclusion is the way to ensure Americans continue to lead in the sciences. Additionally workplaces that acknowledged the differential production of reproductive and domestic labor would lead to the retention of more women, and would lead to the more rapid and innovative production of science.

What Congress can do. Here are some changes within Congress's power to reduce or eliminate sexual harassment in science:

- Mandates:
  - Universities and other science workplaces need adequately staffed and accessible ombudsperson offices where victims could confidentially discuss their experience to plan next steps without necessarily having to formally report.
  - Encourage universities to adopt victim-led resolution policies. This means centering the experiences of the victim and making sure they feel heard and respected, but also that their wishes for resolution are considered.
  - Encourage swift sanctions for those who commit abuses. Most Title IX-reported abuses take months if not years to be investigated. While due process is important, swift resolution is crucial to keep the workplace intact and make workers feel as though their safety and respect matter to the leadership.

  - Encourage a values-driven approach to eliminating sexual harassment. This means being willing to evaluate policy, trainings, and procedures, and being willing to change them based on that evaluation. This also means developing training programs that focus on the creation of a respectful workplace, rather than the elimination of only the most egregious unwanted behaviors.
  - Encourage extralegal solutions. For too long we have abdicated responsibility of workplace culture to the court system. The legal standard only addresses the end game and the most egregious cases of sexual harassment. Create opportunities for mediation as well as confidential or even third party reporting.
- Funding (e.g., NSF, NIH, NASA, NOAA):
  - Provide funding for research on sexual harassment in the workplace.
  - Provide funding for organizations who propose novel ways to change their workplace structure and evaluate outcomes for women.
  - Provide funding for research on methods for improving recruitment and retention of women from underrepresented groups in science (e.g., racial and ethnic minorities, sexual minorities). At this time the main increases in numbers of women in science are those of white, cisgender, straight, able-bodied women. This is also the only group to have consistently benefitted from affirmative action policies.
  - Financial incentives and awards for collaborative research, graduate and undergraduate mentoring, service to one's discipline or society. This acknowledges the important work of being cooperative, ethical, and thoughtful scientists.

To my mind, what's most important is to move away from symbolic compliance and towards real change. It is not enough for universities to comply in name only with Title IX with trainings we know don't work, with policies we know aren't followed, with reporting structures we know are harmful to victims. Universities and other institutions that employ scientists must want real change, and be willing to do the work, for this change to happen (Grossman 2003).

While the study of sexual harassment in the particular context of the sciences is new, the study of sexual harassment in the workplace is not. We have several decades of research, and ample empirical evidence, to suggest a new way forward in the elimination of discrimination in the workplace. It is time to move away from unfunded mandates for trainings that worsen gendered beliefs (Tinkler, Li, and Mollborn 2007), from reporting structures that disincentivize guilty convictions (Bergman *et al.* 2002), and from a culture of compliance rather than willingness to change (Grossman 2003). It is time to move towards a true commitment to healthy, respectful, equitable workplaces in the sciences, in order to advance innovative practices in American science.

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Clancy's critical research on the culture of science has also received widespread attention. She and her colleagues have empirically demonstrated the continued problem of sexual harassment and assault in the field sciences, astronomy, and planetary science, and she serves on the National Academy of Sciences Committee to Address Sexual Harassment in the Sciences. Clancy was named one of *Nature's* "10 most influential scientists" in 2013, and has received local leadership awards from the Girl Scouts and YWCA. She has a significant online presence, with a popular Twitter feed at @KateClancy, a website and blog at www.kateclancy.com, and Period Podcast, a podcast about women's health in its second season. She has two daughters, two pets, and a roller derby addiction.

Chairwoman COMSTOCK. Thank you very much. And I now recognize Ms. Larsen.

TESTIMONY OF MS. KRISTINA LARSEN, ATTORNEY, LAW OFFICE OF KRISTINA K. LARSEN

Ms. LARSEN. Thank you. Chairwoman Comstock and Ranking Member Lipinski, thank you so much for having this hearing and for giving me the honor to talk to you today about sexual harassment and misconduct in the sciences.

We are all here today because we are committed to the common goal of ensuring that women are able to succeed in STEM fields. Despite our collective efforts, we too often send these brilliant individuals barreling into a brick wall. And this wall is formed by a complex set of conditions, many exacerbated by the decentralized and individualized nature of science and many still inadequately addressed by our current discrimination laws and university policies.

Gender-based discrimination and harassment predicated on sex stereotyping remains pervasive in science, yet it is nearly impossible to prove cause and effect because of the incremental ways in which these biases occur and then are laundered through so-called objective evaluation processes which are in turn given great deference by our courts.

In addition, with very few checks and balances on individual faculty power, this power is easily abused. Abuse of power takes many forms: bullying, intimidation, spreading rumors, humiliation, changing feedback coupled with unreasonable expectations, just to name a few. Not all of these abusive conducts are considered illegal under our current discrimination laws even though, in my opinion, they are perpetrated because women and underrepresented individuals are more often perceived as safe targets.

Even when the conduct is clearly prohibited under title IX, title VI, or title VII, significant problems remain in how these issues are reported and adjudicated. There are too many to talk about here today, but there are three that stand out to me as significantly important in women choosing to leave science or being forced out. The first is confusion over where to get help. The confusing organization of most universities, the splits between administrative functions and academic functions, and the added complications of shared governance make the complexity of finding the right person to help, if there is even one, especially daunting, especially given how many times a woman will be told by someone "I'll take care of it," "Don't tell anyone else," or "I'll talk to him" only to have nothing happen except perhaps they will be retaliated against even more.

When ineffective processes are highlighted by the media or by faculty, a university often reacts by creating even more places for people to go, which only adds to the confusion. The amount of energy to simultaneously do as much as everybody else, fight back against the abuses you're facing, and try to find someone to help make the abuse stop is time-consuming and emotionally and physically draining. A dedicated legal advocate for those who are targeted for abuse, somebody not affiliated with the university but available to empower an advocate from the very beginning rather

than at the end when most attorneys are involved may help shift the substantial power imbalance and reduce that sense of exhaustion, isolation, and betrayal and hopefully lead to quicker resolutions.

The second is the secrecy of the proceedings. Without exception, every person I have advised or represented wanted only for the conduct they were experiencing to stop. They don't want to get anyone fired; they are not looking for retribution. They simply want to get on with their work and spare others from facing the same obstacles that they experienced, yet at every step they are encouraged not to formally report, not to disclose what they formally reported to others. The complainant may not be told what the outcome was or, more important for them, what the consequences that will be imposed are.

The pressure not to report comes from peers, chairs, deans, even by title IX officers. Some are threatened by the abusers, who will flaunt their power and their money, or by the university's administration, who will almost always have more to fear from the powerful faculty bringing grant money than from the student or more junior faculty. Those targeted for abuse deserve to be able to tell others what happened to them. Under the cloak of secrecy, abusive conduct almost always becomes serial conduct.

The third is the harm to the abused even when there is a successful finding. Even in the rare instances where the process has worked and a faculty member is found to have committed a violation of the policy, by the time that happens the complainant is exhausted. They are demoralized, isolated, and behind on their work. Others may have taken advantage of their vulnerability, and many of their peers in the field will fall into two categories: those who sympathize with the abuser because he is a great scientist or a good person and those who avoid her because they're not sure what to say, don't believe her, or wish to stay neutral in what they consider an interpersonal dispute.

There is very few obligations to advocate or to rehabilitate the careers of women who have actually suffered this type of abuse, and they are often left entirely on their own to pick up the pieces. It is not hard to see why many of these incredibly smart women choose to take their talents elsewhere into a more supportive setting. For this to change, more resources and peer support needs to be targeted to those who were abused, in addition to the energy put into what the consequences are for the abused—abuser. And I hope that with the help and the leadership from both the funding agencies and the professional societies, we will be able to accomplish that.

Thank you very much for your—allowing me to be here today.

[The prepared statement of Ms. Larsen follows:]

Testimony of

Kristina K. Larsen
Attorney and Former University Administrator

Before the
Committee on Science, Space, and Technology
Subcommittee on Research and Technology
United States House of Representatives

"A Review of Sexual Harassment and Misconduct in Science"

February 27, 2018

Good morning Chairwoman Comstock, Ranking Member Lipinski, and Members of the Committee. My name is Kristina Larsen. I am an attorney, and a large part of my private practice is advocating for women and underrepresented individuals in STEM and in academia who are experiencing discrimination, harassment, and retaliation. I have represented and advised undergraduate students, Masters students, Ph.D. students, Postdocs, and faculty at all levels. Prior to entering private practice I was a Human Resources administrator at the University of California, San Diego for more than 20 years.

I would like to thank you for holding a hearing on this important topic and for the honor to appear before you today to discuss sexual harassment and other workplace misconduct in science.

Before I begin, I would like to address a few important points. First, although many University policies address both sexual harassment and sexual violence, the processes and problems with reporting and adjudicating sexual violence are different than those for addressing sexual harassment, and I would not do justice to either issue if I attempted to discuss them both here today. Today my comments focus solely on sexual harassment. I have represented and advised many survivors of sexual violence and in focusing on sexual harassment and other misconduct at this hearing, it is not my intent to ignore or minimize the substantial obstacles still faced by survivors of sexual violence on college campuses.

Second, for the purposes of brevity it is necessary to sometimes speak using general terms. While I may refer to challenges or barriers faced by women in science, it is important to acknowledge that not all women will experience the same challenges or barriers, and some may not experience any at all.

Having represented many women of color, I would also like to recognize the significant additional challenges and barriers often faced by women and persons of color in science (see Double Jeopardy? Gender Bias Against Women in Science).

Finally, to illustrate how certain policies or processes detrimentally impact individuals, I have been given permission to share the personal stories of several courageous and brilliant women. In all cases I will identify the University where the events occurred, but I will not name my client unless they have explicitly given me permission to use their first name.

We are all here today because we are committed to the common goal of ensuring that more women are able to succeed in STEM fields.

To this end I want to acknowledge the important work those on this Committee and in Congress are doing to increase interest among and exposure to STEM fields for young girls, including recent legislation like the *Code Like a Girl Act* and the *Building Blocks of STEM Act*.

Increased interest and access are critical. As Assistant Vice Chancellor at UC San Diego I was involved in efforts to increase the numbers of female graduate students and postdocs in STEM fields. I am also proud of my contributions toward increasing the number of female and under-represented faculty in STEM departments. I continue this work as a board member supporting the important efforts underway at the Center for Diverse Leadership in Science at UCLA.

But despite all of our collective efforts to increase interest, access, and hires in STEM fields, we are still failing to achieve our goal because too often we are sending these brilliant individuals barreling headfirst into a massive and sometimes impenetrable "brick wall".

This "wall" is not any one thing; it is a complex set of conditions, many unique or exacerbated by the decentralized and individualized nature of academia.

That said, I acknowledge that the term sexual harassment is commonly used by all of us - including in the media - as a "catch all" term to describe a more complex set of conditions and obstacles faced by women in the workplace. But I have also observed that many, including the peers of "notorious" faculty, their department chairs, deans, other administrators and leaders - despite having had mandatory sexual harassment prevention training – continue to default to an outdated and often stereotyped notion of what sexual harassment looks like, and these notions are often reinforced by popular culture and in the media. In fact if you Google "sexual harassment" you will find pages of images, many showing a man with his hand on the shoulder or leg of an, attractive woman in a business suit.

As a result, centering a conversation around sexual harassment often leads to a frustrating disconnect between what women are experiencing – the actions and inactions that detrimentally impact them, and what those around them believe the problem to be.

By starting with a more comprehensive examination of how gender biases impact women in science more acutely than in other workplaces, and the range of abuses that occur in academia, it becomes clearer why the current laws, policies and reporting processes have been – to date - so ineffective.

In turn I hope this will allow us to identify creative solutions that will result in the outcome this Committee and all of us want - an unfettered career path to success for women and all underrepresented individuals who are interested in STEM.

Invisible Hand Discrimination

Gender and racial biases are not unique to academia; we know from 40 plus years of research that all of us carry implicit and explicit biases. But in academia these biases flourish behind the seemingly ironclad curtain of department autonomy and individual academic freedom. This is because anyone with the responsibility to stop gender bias is usually in the administrative side of the university and does not have any authority to pierce the department autonomy and take action, and those with the authority to address the issue do not believe they have any responsibility to do anything about it.

The result is what Pamela Haag terms "Invisible Hand Discrimination":

> *Such discrimination is real in its effects but elusive in the law. It falls between the two major legal theories of discrimination: It does not happen because an individual consciously intends to discriminate (the theory of disparate treatment), or because a policy or practice discriminates (the theory of disparate impact). Instead, it happens because decision makers unwittingly discriminate in applying otherwise valid policies. Invisible-hand discrimination isn't irrelevant or fanciful -- just hard to prove, given that sex-discrimination law is ill equipped to handle subconscious bias. (Navigating the New Subtleties of Sex-Discrimination Cases in Academia, Chronicle of Higher Education, P. Haag, February 11, 2005)*

In 1999, MIT conducted a study focused on the treatment of female faculty members as compared to their male counterparts. They found that while gender bias was not necessarily conscious or willful on the part of men, it was very real: "...it operates in a 'stealth-like way,' ... Unintentional as it may be, though, it can have devastating effects on women's careers". The MIT study concluded that the gender bias experienced by women amounted to "many small factors that work slightly against women and accumulate over time, so that a little less ends up being a lot less". (*An MIT Professor's Suspicion of Bias Leads to a New Movement for Academic Women*, Chronicle of Higher Education, R. Wilson, December 3, 1999)

This invisible hand discrimination is prevalent in large part because of the entrepreneurial nature of scientific discovery. Each person desiring to advance in STEM must constantly negotiate to succeed: their lab space, renovation budget, funding sources, office space, start up funds, teaching load, personnel support, committee service, and the list goes on.

Yet we also know from the extensive research on gender biases that many of the attributes needed to do this successfully do not conform with the stereotype of how many (men and women) will expect women to behave.

In addition, movement up the academic ranks by those more junior is largely predicated on the perceptions of those more senior, yet processes that rely on personal perception will open the door to implicit and explicit biases being introduced. Even when more than one opinion is sought, these opinions are

influenced by the informal sharing of these perceptions among those with influence in the field.

These biased perceptions are then "laundered" through the evaluation process both within the university and within the field, and are touted as objective and neutral. Yet as I have seen time and time again, the most objective and neutral evaluation results in a bias infused decision. This is the first challenge many women will face, and our current discrimination laws are ill equipped to address it, as are current university policies and procedures.

Abuse of Power

In a recent piece in the Chronicle of Higher Education, K.A. Amienne made an astute observation:

> *Anytime you have a highly competitive system in which a single person has the power to make or break someone else's career — whether it's the crowded, greasy pole of Hollywood or a flooded Ph.D. pipeline — you will have abuse.*
>
> *Not only rape and overt sexual aggression, but also the many complicated and twisted forms of abuse that can sink a woman's chances of succeeding in an already biased business.* (Chronicle of Higher Education, November 2, 2017, K.A. Amienne)

Ms. Amienne is absolutely correct, and this is particularly true in scientific training and discovery because it is, by design, founded upon this individualized hierarchical power structure in which one or a few academics may entirely control the fate of the aspiring scientist.

Abuse flourishes in this environment, and almost every conversation I have had with a person on the receiving end of abuse in academia will include with some version of "I am afraid to speak up/report/fight back" because [NAME] is "really powerful" or "a big presence/superstar/well respected in the field" or "very influential".

The first time I heard a faculty member tell me they would "ruin" someone more junior to them was 24 years ago, only months after being hired as the Human Resources manager for a department in the School of Medicine at UC San Diego. I was shocked when a senior male professor bragged to me that he would "destroy" a more junior (and the only female) professor in the department.

The only thing that has changed in those 24 years is that I am no longer shocked when I hear someone say this. Twenty four years ago, this male professor did successfully drive the only female faculty member out of the department, and out of academia (although I am happy to report that in her case, she did return to academia and is now a senior professor at another University in the Midwest); I have several clients today experiencing something very similar to what she did 24 years ago.

To be clear, abuse of power can happen to anyone regardless of race, ethnicity or gender; I have seen men be targeted too. But, in their book "Faculty Incivility"

authors Twale and De Luca share research going back to the 1970s concluding that those targeted for abuse in academia are most often those individuals who are "different than the others or who threaten the status quo" and this aligns with my own experiences. (*Faculty Incivility: The Rise of the Academic Bully Culture and What to Do About It*, 1st Edition, Darla J. Twale and Barbara M. De Luca, Jossy-Bass, 2008)

Even with the understanding that those who are "different" are more likely to become targets for abuse, this doesn't necessarily explain *why* any one individual becomes targeted. It is a question I am asked a lot. When I'm short on time my answer is simply because the more senior person can. Of course it is more complex than that, but quite frankly not much.

Like systematic bias, the many ways in which power is abused against those with less power are difficult to address under our current laws, policies or reporting processes. Even the conduct that in theory is reportable under Title IX and VI is too often not adequately resolved for the reasons presented below.

How Science Agencies and Research Institutions Handle Complaints and Conduct Training under Title IX of the Education Amendments of 1972 and Title VI of the Civil Rights Act of 1964 and Other Relevant Policies

There are more than 2,600 accredited Universities and Colleges in the United States and this does not include independent research institutes or other government sponsored research facilities. This means there are thousands of different policies and procedures for handling complaints of harassment, discrimination, and retaliation in scientific institutions.

The Organization of, and Definitions Used in Institution Policies are Not Consistent

How a university's policies are organized can impact how effective they are addressing the discrimination, harassment or retaliation when reported.

The University of California has one policy defining "Sexual Violence and Sexual Harassment", and another, entirely separate policy addressing Discrimination, Harassment, and Affirmative Action in the Workplace. The definition of sexual harassment in the UC policy does not include any language distinguishing between sexual harassment and gender-based harassment predicated on sex-stereotyping.

If one believed they were being "sexually harassed" they would be directed to the campus Title IX office, but if they believed they were being "discriminated against or harassed", they "are encouraged to submit complaints through their local Human Resources office, Affirmative Action/Equal Employment Opportunity office, Academic Personnel office, Labor Relations office, or the University Whistleblower Hotline."

It is nearly impossible for someone to "categorize" what they are experiencing into either sexual harassment or discrimination or harassment based on gender or other

protected category. As we have said above, it is most often a messy combination of all these things.

In contrast, Caltech has one effective policy that broadly defines all forms of gender discrimination and harassment as Sexual Misconduct, and it explains clearly the difference between gender based harassment and sexual harassment:

> *Gender-Based Harassment is harassment based on an individual's actual or perceived sex, including harassing or bullying conduct based on the individual's gender expression, gender identity, transgender status, gender transition, or nonconformity with sex stereotypes.*
>
> *Sexual Harassment is pervasive and/or severe unwelcome sexual advances, requests for sexual favors, and other conduct of a sexual nature when ...*

Caltech's Sexual Misconduct also makes clear that behavior does not need to rise to the level of "unlawful harassment to be determined inappropriate"

In addition Caltech also has a comprehensive Unlawful Harassment policy and both policies are administered by, and reported to the Assistant Vice President for Equity, Accessibility, and Inclusion Initiatives, who is also designated as Caltech's Title IX Coordinator.

Challenges Because of the University's Organization

There is typically a sharp divide between administrative and academic structures within a university. Within the academic structure, there is an added split between faculty governance and academic administrative functions (shared governance). The result is too often those with official responsibility (usually on the administrative side of the university) rarely have authority to do anything meaningful about what is reported to them about faculty, and those who could have authority to take meaningful action (on the academic side of the house) believe they do not have any authority or responsibility to do so.

It Can Be Very Hard to Figure Out How to "Formally" Report

There are often too many places to report and too few requirements to act for those receiving the complaint.

Individuals hearing complaints are very often "mandatory reporters." But many times they either don't report on it or, if they do, nothing is done as a result of the report because Title IX will almost never begin a formal investigation without a "named complainant" agreeing to file a formal report.

In every single case I have been involved in, by the time the abused individual gets to the right office in order to file a formal complain they have told their story dozens if not hundreds of times; they are already exhausted and demoralized and they haven't even started to resolve their complaint yet.

There are no consequences for failing to report incidents to Title IX

When one of my clients at Duke informed her dean about the abuse she was experiencing, the dean ordered her to tell no one. Over the next year this made matters worse, she was further isolated and blocked from accomplishing the research she needed to. She was eventually fired from Duke and with no one willing to write her a letter of recommendation, effectively pushed entirely out of the field. When she sought advise as to whether she could litigate against Duke, she was told that since they had done something for her (they moved her office away from the abuser), the fact that their actions rendered her "unemployable" in the field did not matter; they had not been "deliberately indifferent".

The complainants are often pressured into "informally resolving" their complaints

Almost all the processes for both sexual misconduct and discrimination push informal resolution, and informal resolution is often discussed as a way to resolve the issues with both sides assuming some of the blame and having to compromise, even though one side is being abused and the other side is abusing. Most importantly, it leaves no formal trail of the reported misconduct.

The above issues are all present with one of my clients at UCLA. She has relentlessly endured discrimination, harassment and retaliation from powerful senior male faculty in her department. Over a three-year period she made over 90 attempts to report what she experienced to more than 20 different administrators at UCLA; not one of which was considered a formal complaint. When she would meet with one person, she was almost always directed to another office.

She learned that a number of the faculty in her department had attempted to convince others to vote against awarding her tenure (despite a record considered by some to be the strongest ever for tenure), because she had not "expressed being sufficiently contrite" and was considered by these senior men to be "arrogant" and "aggressive." She sought help from UCLA's Discrimination Complaint Office. Over a period of several months she met multiple times with the Discrimination Complaint Officer, but was told her claims appeared to be more "gender based" than "race based", and was referred to the Title IX office.

Seven months ago she filed what was finally recognized as a "formal" complaint, and just last week we were informed they will finally conduct an "intake" interview to determine whether an investigation is warranted. When I reminded the Title IX officer that her claims were discrimination and harassment based on both gender and race, he told us that they normally didn't handle race based claims, but would see if they could make an exception in her case.

The Title IX Coordinator

Title IX Coordinators often lack the authority to be effective.

Over the years I have met with, and worked with many campus Title IX coordinators. Without exception they have all been very good people who want to

do the right thing, but very often have little power to do anything to actually stop the abusive conduct of faculty. When they do take action, they are often overruled by someone above them after a "powerful" faculty member hears about the complaint, and in turn complains to someone higher up on the academic side of the university.

For example, in the spring of 2017 Nga, a Masters student at the Florida Institute of Technology (FIT), and a research assistant for the onsite Applied Behavior Analysis program director, went on a research trip with a professor to Sierra Leone.

Before departing Nga was "warned" about this professor by more than one person, though no specifics were provided. In Sierra Leone this professor became extremely controlling and at one point effectively forced Nga to share a hotel room with him; she ended up sleeping on a chair and at one point, after the professor climbed into the bed while she was sitting on it, she ended up staying in the lobby of the hotel. When she decided to move to a different hotel and informed him she was uncomfortable with his treatment of her, he effectively fired her as a research assistant on the spot in Sierra Leone. He ordered her to immediately stop speaking with the other researchers on their project, ordered the female associate to obtain any materials or data she had, and made her pay the female associate for her accommodations in Bo prior to moving to the new hotel. He then basically abandoned her in Bo, Sierra Leone. This young woman, in a dangerous country for the first time, had to figure out travel arrangements on her own and pay for transportation back to Freetown in order to catch her flight home.

As you can imagine, her experience in Sierra Leone was traumatic. Instead of learning valuable career skills and building collaborative relationships with others in her field, she came back in financial debt, feeling isolated, abused and betrayed by her professor's conduct.

Nga formally complained to Title IX in May of 2017. In August of 2017 she received a letter from FIT's Title IX officer advising her that she (the Title IX officer) had reviewed her complaint and the professor's response and, "as a result, [professor] received a reprimand and other sanctions."

That fall my client learned that her former professor, known throughout the whisper network as someone emotionally manipulative and abusive to his female students in addition to his "legendary" "boundary issues", had been invited to speak at a women's conference. I spoke to another student of his and she described there being a collective "gasp" when many of female students learned this (by the way I reached out to another of his students and she said she was still too traumatized by how he treated her to talk with me).
On October 11th Nga wrote the following to the conference organizers:

"I wanted to respectfully inform you that [NAME] had a title 9 claim filed against him this summer, which resulted in FIT reprimanding and implementing sanctions on him. In August, he attempted to appeal this ruling. However, he was denied. [NAME] is prohibited from contacting me.

I felt that it was important you knew this before you allowed him to be the speaker at WIBA. WIBA is a place for women and for those that support women in their careers and private lives. I considered not speaking up, but I didn't want other women to possibly go through what I went through. ...I sincerely hope that WIBA will seriously reconsider him as an invited speaker at this point in time."

The committee organizers thanked her for having the courage to reach out and the professor was uninvited as a speaker at this conference.

On October 30th, 2017 Nga was ordered to the Title IX office. For almost two hours she was admonished by the Title IX officer for having spoken of her complaint to others, she was informed that her doing so constituted "retaliation" because she was "endeavoring to harm the career of the respondent and prevent him from further pursuits such as presenting at conferences", and if she continued to "retaliate" against her advisor she would be expelled from FIT.

Before leaving she was presented with a formal Letter of Warning in which she was advised to immediately "cease and desist from actions that could be construed as, or appear to be, retaliatory against the respondent". She was also handed a "No Contact Order", issued by the FIT's Director of Security. The NCO listed the "Incident Type" as Nga's "alleged University Code of Conduct Violation #4 Harassment". Finally, after two hours, with her visibly upset and still crying, she was made to sign a document stating she understood the "allegations" against her and that it was her responsibility to "abide by FIT's policy and procedures".

A little more than two months later Nga received a certified letter from FIT dated January 3, 2018. It was written by Dr. Monica Baloga, FIT's Senior Vice President for Academics and Provost and in this letter Dr. Baloga effectively overruled the Title IX office: "I am writing to rescind and clarify an August 24, 2017 letter sent to you by Dr. Joni Oglesby regarding a complaint you filed regarding [NAME]. Specifically, following an investigation into your complaint, the University did not determine that [NAME] violated the University's Title IX Policy. To the extend Dr. Oglesby's letter suggests otherwise, it is incorrect....[NAME] was provided a warning that he should exercise better judgment in subsequent out-of-country trips. He was also instructed to take a course on Title IX and Sexual Harassment, which is required of all faculty members."

Challenges with the Investigation Process

In almost every case I am aware of, the respondent's response to a complaint of bias is that the accuser was simply not producing good quality work, or some other

variation of she's just a weak scientist. But the only individuals that are usually consulted to corroborate whether this is true are often other people who are paid by the accused's grant funding, or in some cases their "weakness" is set up.

In one case at UCSD, my client, a post-doc researcher in the lab of a faculty member known "widely" for being abusive, vindictive and sexist, filed a sexual harassment complaint against him after having endured years of abuse. Before she was granted a green card he would remind her frequently that he could fire her and get her deported, and to avoid deportation he expected her to work late into the night, and on weekends and holidays. When a faculty FTE was approved in the department he informed my client he was proposing his male postdoc, because "he had a family to feed" (she too was a parent).

At one point he asked her to do something she considered research misconduct and she told him no. Despite an excellent performance record up to that point, almost immediately he declared her a "poor researcher", ordered her to switch to another project she was less familiar with and began hounding her on a daily basis with requests for updates and data, then criticizing her when she wasn't able to produce it in his timeline.

In response to her complaint the respondent claimed she was a "bad scientist" and to corroborate this the Title IX officer interviewed other people in the lab. Unfortunately for my client, the others were also paid by the accused person's funding, and understood clearly they would be "next" to lose their funding if they didn't agree with the version of the story told by their boss. The Title IX officer did not find sexual harassment.

Incidentally, the Title IX officer did find that he had retaliated against my client after she filed her complaint, and referred the matter on for discipline. Less than a month later she received a letter from the Title IX officer informing my client her finding had been "rescinded" and the matter would not be reviewed by an investigator at the Office of the President; she decided to drop the matter rather than go through the traumatic investigative process again. She also took a substantial demotion and left his lab. She is now a staff researcher and will likely never rise any higher than this. The man who discriminated, harassed and retaliated against my client continues to get grant funding and awards from his peers.

Two other clients, both postdoc fellows, were kicked out of a PI's lab after they informed him they were pregnant. He told both women they would never succeed in science as mothers and he didn't want to waste his resources on them. Both filed complaints in Title IX but the office would not consider the complaints together. Instead they are being handled separately even though they establish a pattern of behavior. Again the PI's excuse was they each was a "weak" scientist. In investigating this matter those interviewed to corroborate were all funded by this same PI.

Timeliness

While most policies have timeliness requirements, there are no consequences for not meeting those timelines, nor is there any requirement that Title IX offices be sufficiently staffed to handle the volume of investigations they receive. The result is very often a frustrating delay in starting or completing investigations with no recourse for the accuser.

After a Finding

In the very rare instance there is a finding against a faculty member, there is a strong incentive to informally (and secretly) settle with the faculty member. The disciplinary process is managed entirely by faculty peers, who are very often not legally trained or advised. This can introduce a level of uncertainty that most administrators want to avoid.

There is also little or no effort placed into helping the target of abuse recover from the physical, psychological and professional damage done by what will almost certainly by the time of a finding be years of abuse.

The Problems with Secrecy

Every person I know who reported abuse by faculty member did so for the sole purpose of trying to ensure this never happened to anyone else. In the case of several young women at Cornell, they learned quite accidentally that all of them had had an almost identical and completely inappropriate experience with a faculty member.

Together they filed a complaint with Title IX. While initially appreciative of the complaint, Title IX eventually stopped communicating with them and when they finally inquired many months later about what had happened, they were told Title IX could not tell them what had happened. Neither, does it seem, that anyone in the department was told formally, including students.

This secrecy leaves students and junior scientists vulnerable and is the primary reason that so much of the conduct becomes serial conduct. It also leaves those who have suffered significant abuse with little closure, most especially assurances that their sacrifice may have saved someone else from experiencing the same.

The Impact of How Science Agencies and Research Institutions Handle Complaints on Women's Participation in Science

Without exception, the hundreds of amazing women I have met with, advised and/or represented over the years tell me what happened to them *after* they attempted to report harassment, discrimination or retaliation was far more traumatic and damaging than the harassment, discrimination or retaliation itself.

Most suffer from the effects of PTSS, brought on by their constant state of being unsafe and the knowledge no one will do anything to stop the conduct from impacting them. Most have reported significant health effects from the prolonged abuse they have experienced coupled with the inaction of anyone else witnessing what is happening to them, including weight gain, physical illness, insomnia, depression, anxiety; two reported having miscarriages brought about by the stress.

Many decide to, or are at this moment contemplating whether to stay in science given how they have been treated.

For example, with only one semester remaining before she earns her Masters degree, Nga's immediate and understandable reaction to learning that her University valued a serially abusive faculty member over a vulnerable student abandoned in a third world country, she considered dropping out of her program. She told me she did not want a degree from a University that did not live its values. I am grateful that Nga ultimately chose not to drop out, but I very much understand her sense of betrayal. This is a very common feeling among the amazing women I have had the privilege to represent.

Recommendations for Improving the Complaint and Resolution Process

- In cases where abuse against students is reported, especially if it is reported to have occurred in the field, universities should be required to interview other students, both former and present to ascertain if there are others who have experienced similar conduct.

- Universities should be required to develop procedures for investigating systemic gender and racial biases including measure to be taken in response.

- Universities should not be permitted to have statute of limitations on reporting of abuse.

- In cases where a faculty member is found to have abused students or others in the field, especially when a pattern of behavior is found, universities should be required to inform the complainants as well as the department and all other students of the conduct found to be inappropriate as well as the consequences imposed to ensure no other persons are harmed by the conduct.

- Universities should be required to disclose findings to future employers and should not be permitted to agree to total confidentiality regarding the circumstances of the complaint.

- Even when the process works as it is supposed to, the accuser is almost always so irreparably harmed they will ultimately decide to leave the field or science

altogether. When there is a finding of abuse, faculty member should be responsible for making reparations, including repairing any damage to the accused reputation and they should be required to be personally responsible for financial reparations.

- The University should be required to pay for counseling or other medical services or other services required to help rehabilitate the career the complainant.

The Role of Funding Agencies and Professional Societies

I am grateful to NSF for their bold requirement that Institutions report findings of sexual harassment to them.

However by the time an individual has waded through the intense pressure from multiple sources to "amicably resolve" the harassment, discrimination or retaliation directed at them, finally figured out how and to whom to formally report sexual harassment or discrimination, and survived the glacially slow investigation and finding process (during which they are often relentlessly bullied and ostracized by their peers), it has almost always taken too great a toll on the individual's personal and professional reputation, physical health, or their psyche (or all), and they may still choose to leave science, even if the process results in a "finding" against their abuser.

In addition, given the already hard fit between the types of biases and abusive conduct women experience and an institution's sexual harassment and discrimination policies and processes, the requirement to report findings of sexual harassment to funding agencies may actually create a greater incentive for universities to "find" that an abuser did not violate the letter of their policy.

Finally, as the stakes are raised for finding sexual harassment or discrimination, Title IX officers – who are keenly aware of how powerful faculty are and how easy it is for them to be overridden – may want to take even more time to complete investigations, further slowing an already frustrating slow process.

- So, in addition to holding universities responsible for reporting findings of sexual harassment, funding agencies and professional societies might also consider establishing direct reporting processes to allow individuals – both those being abused and peers observing the abuse to report any form of "abuse", even that which may fall short of legally defined sexual harassment or discrimination, but that is clearly still inappropriate. I acknowledge that some already do this; I hope this trend continues.

I want to recognize AGU as one of the most innovative and progressive professional societies working to combat the barriers impacting women and underrepresented individuals. This is a testament to their great leadership.

- I encourage all professional societies to consider revising their codes of conduct, using as a foundation feedback from female and underrepresented graduate students and junior professors about the types of conduct they experience that creates unnecessary barriers and obstacles for them. I also encourage professional societies to continue their efforts to expect all members of professional societies to enforce codes of conduct, not just those experiencing violations of these codes.

- I recommend that funding agencies or professional societies consider creating a fund to pay for legal advocates to advise graduate students or junior faculty who are contemplating reporting sexual harassment and discrimination, or even just for those seeking help addressing harmful abuse of power. More than any other feedback I am told over and over that I am almost always the first person who has just validated that what they were experiencing was wrong – even if it wasn't illegal, it is wrong and for the first time they feel they have someone on their side and who will speak for them. As a lawyer with 20 years of experience in and around universities, it is challenging for me to figure this out sometimes; it can be nearly impossible for a graduate student.

  While I believe junior faculty also need this type of support, it is vital for graduate students. I am contacted by at least one graduate student every single week asking for my help and advice. Unfortunately I cannot advise the all, but every graduate student case I have taken, I do pro bono. I am proud to say that in at least three of these cases the student has reconsidered leaving the field because of my advocacy. It could make a big difference in terms of individuals feeling supported and deciding to stay in science.

- I also recommend that funding agencies and professional societies review their processes for granting awards and honors, with an eye toward eliminating opportunities for implicit or explicit bias. For example, creating a two-part funding review process, the first of which would be blind. For awards, consider whether current requirements for letters of recommendation are creating barriers for some to be considered for awards.

- Consider introducing new awards to highlight those who have had the courage to stand up to abusers, and incorporate as a factor in earning all prestigious awards, abiding by the code of conduct, and reviewing how and from whom recommendations are required before someone can be considered for an award.

Thank you again for the honor to appear before you today.

Kristina K. Larsen, Esq.

Kristina K. Larsen is a lawyer, activist, and advocate for those facing discrimination, harassment, retaliation or other challenges in academia and the workplace. She is passionate about educating and empowering individuals so that they can communicate effectively, make informed decisions confidently, and ultimately succeed in their respective fields.

With more than twenty years experience in higher education, human resources, and employment law, Kristina's unique perspective allows her to successfully assist individuals as they identify the root causes of conflict, understand applicable laws and policies, determine risk tolerance and goals, and create and implement appropriate solutions using forward-thinking strategies that avert or minimize harm.

Upon receiving her Bachelor of Arts in political science from UC San Diego she began her career in higher education as a departmental human resources manager. She became interested in the legal aspects of her position and the close connection between the law and human resources. Acting upon this passion Kristina attended law school at the University of San Diego and became a member of the California bar in 2003. Upon earning her Juris Doctor, she dedicated herself to conflict resolution and litigation prevention. With these goals in mind, Kristina was appointed as the inaugural Director of Academic Employee Relations at UC San Diego, transitioned into the role of Senior Advisor and Director of Academic Policy Development, and ultimately served as the Assistant Vice Chancellor for Academic Personnel overseeing all aspects of the human resources program for UC San Diego's academic employees, including compensation, equal opportunity, employee relations, policy development, appointment, advancement and training.

Kristina is a formally trained mediator, a skilled presenter and instructor, and has led numerous trainings and appeared as a speaker at workshops both within the university setting and for external organizations.

She has represented and advised individuals at numerous universities and other academic institutions including UCLA, UC San Diego, Stanford, Johns Hopkins, NASA, the Scripps Research Institute, the Smithsonian, Florida Institute of Technology, Cornell, Duke, and many more.

Chairwoman COMSTOCK. Thank you. And I now recognize Ms. McEntee for five minutes.

TESTIMONY OF MS. CHRISTINE MCENTEE, EXECUTIVE DIRECTOR, AMERICAN GEOPHYSICAL UNION

Ms. MCENTEE. Chairs Comstock and Smith, Ranking Members Lipinski and Johnson, and Members of this Committee, thank you so much for inviting the American Geophysical Union to testify on efforts we are taking to address sexual harassment in the scientists—in sciences. AGU is an international scientific society representing 60,000 members from 137 countries, and our mission is to promote discovery in earth and space science for the benefit of humanity.

Harassment in academic environments, especially in scientific disciplines with limited diversity, is real and confirmed by research, as you have heard today. Research has also shown that harassment puts scientific careers at risk. The lack of support networks and well-defined resources for reporting and responding to harassment increases the vulnerability of those who have felt harmed and often fear reprisal for reporting.

For AGU, this is an issue that cuts close to home. The earth and space sciences typically involve remote field settings. In the field whereas—accepted workplace norms are difficult to enforce. When coupled with a male-dominated environment and power structures, these situations can amplify the problems, making women and underrepresented groups even more vulnerable to harassment.

Right now, the earth and space sciences only have 27 percent of the field that is women, more than it was 40 years ago but drastically below the U.S. population as a whole and other STEM disciplines. While women today account for nearly 50 percent of our members under the age of 30, AGU recognizes the need to be more proactive to continue this trend.

As a scientific association that represents our members and tries to chart a vision for the future, we have a responsibility to promote a safe, inclusive, and professional environment. A failure to uphold these principles harm scientific credibility, the well-being of individual scientists, and the entire scientific enterprise.

AGU first took up the issue of sexual harassment as scientific misconduct in 2015 and 2016 when several cases broke in the news media. As a result of discussions that AGU held with our board and members on harassment and our community, we convened a task force and ultimately in 2017 formally adopted a revised ethics policy. The new language defines harassment, bullying, and discrimination as scientific misconduct and redefines established norms of acceptable scientific behavior. Violations of this policy can now be addressed through professional sanctions such as ineligibility for or loss of honors, awards, and volunteer opportunities and also membership. Our members have voiced their strong support for this new policy, and they have praised us for our efforts. However, this is just a first step in addressing this very serious issue.

We commend other scientific societies like the American Astronomical Society and the American Geosciences Institute who have put in place similarly strong policies. We also thank the other members of this panel for their hard work and the National

Science Foundation for creating a new policy that we believe will provide a strong incentive for institutions to take sexual harassment seriously.

Here are some additional measures we believe will be needed. One, universal policies against sexual harassment with clear and transparent reporting and follow-up procedures with consequences; two, providing an environment in which individuals are free to report and speak out against harassment without fear of retribution; three, smart training beyond that required for legal compliance, training that encourages bystander intervention and culture change rather than resentment and backlash; four, positive approaches such as awards or certifications for those institutions that publicly measure their progress towards positive work environment and gender equity issues. Lastly, legislation can be a powerful incentive and should include both positive and punitive measures to hold harassers accountable and encourage a safer, more inclusive environment for all scientists.

We very much appreciate the Committee holding this hearing to understand and address some of the important steps we can collectively take and to bring attention to this critical and important issue. I'm happy to answer any questions you may have and look forward to working with you and your colleagues to put an end to sexual harassment in science.

[The prepared statement of Ms. McEntee follows:]

Written Statement of Christine McEntee
Executive Director and Chief Executive Officer
American Geophysical Union
Before the Subcommittee on Research and Technology
Committee on Science, Space, and Technology
U.S. House of Representatives
27 February 2018

Chairwoman Comstock, Ranking Member Lipinski, Chairman Smith, Ranking Member Johnson and members of the subcommittee, thank you for inviting me to testify on behalf of the American Geophysical Union to talk about our efforts to address sexual harassment and scientific misconduct. My name is Christine McEntee, and I am the Executive Director and CEO of the American Geophysical Union (AGU). AGU is an international scientific society with roughly 60,000 members in 137 countries. Our mission is to promote discovery in Earth and space science for the benefit of humanity.

Harassment in the sciences, and in fact, in any industry, is not a new issue. But, it is an issue that has become much more prominent as more victims have taken the brave step of coming forward. Research confirms the extent of harassment in academic environments and especially in disciplines with low diversity, where the lack of established support networks can lead to feelings of vulnerability and professional insecurity. Another problem identified by research on harassment is the scarcity of well-defined resources for reporting and responding to inappropriate behavior, including the perceived risk that the victims' careers may be jeopardized if they speak out (Clancy, et. Al, 2014).

The Earth and space science community has a lower representation of women compared to both the general U.S. population and many other science, technology, engineering and

mathematics disciplines. While the demographics of AGU's members and the Earth and space science community have evolved over the years, we know more work is required to ensure diverse perspectives are represented in our sciences. In 1975, AGU's membership comprised of just 15% women; by 2016 that had grown to 27%, with women accounting for nearly 50% of our members under the age of 30.

Additional considerations specific to the Earth and space sciences are that careers typically involve remote work experiences in the field or on ships where accepted work norms may be hard to enforce. When coupled with a male-dominated environment and power structure, these isolated environments can amplify the issue and make women more vulnerable to harassment. Collectively, these factors demonstrate an urgent need for scientific institutions to address their role and obligations regarding harassment and workplace climate.

AGU leadership affirms the international principle that the free, open, and responsible practice of science is fundamental to scientific advancement and human and environmental well-being. As a member of the scientific community and enterprise, AGU also affirms its desire to foster and support a safe and professional environment in order to learn, conduct research, and communicate science with integrity, respect, fairness, trustworthiness, and transparency at all organizational levels and in all scientific endeavors. This includes all professional interactions within the scientific community and with members of the public. We recognize that failure to uphold these principles harms our profession, our scientific credibility, and the well-being of individuals and the broader community.

Based on the above, and after in-depth discussion on the topic of harassment impacts in our scientific community with AGU Council, AGU Board, and an AGU Member Town Hall Meeting, in June 2016, AGU leadership, under the direction of our Past President Margaret

Leinen, convened a task force to review the AGU ethics policy and practices. The task force was charged specifically with addressing code of conduct expectations related to harassment, bullying, and other professional misconduct impacting our scientific work-climate. This policy update was to set clear expectations for the behavior of AGU members and those participating in AGU-sponsored activities.

In September 2017, AGU formally adopted a revised ethics policy with new language that defines harassment, bullying, and discrimination as scientific misconduct. The update expands the ethics policy's coverage to include code-of-conduct implications for all AGU programs, including Honors and Awards as well as Governance. In addition, it identifies conditions under which the policy's provisions may apply to actions that occur outside of AGU programs. It also outlines clear procedures for reporting and follow-up on ethics issues. This updated policy was a significant advancement from the previous policy for two reasons. First, by defining scientific misconduct more broadly to include professional misconduct beyond the typical research misconduct definitions of plagiarism and falsification of data, we help establish norms of what is acceptable scientific behavior. Secondly, this change acknowledges the severe impact that sexual harassment has in our scientific workplace, and we can now address it with professional sanctions – such as in our professional honors and awards programs.

We believe we are on firm ground in defining the behaviors in this way because of the damage they inflict on the entire scientific enterprise. Our members vocalized their support for stronger policies, and research has shown the profound destructive effects of harassment not only on the people directly involved, but also on the research, institutions, students, faculty and colleagues surrounding the misconduct.

I am proud of the steps that AGU, our leadership, staff, and members are taking to address this important and harmful issue. Our new policy aims to set new and strong expectations for the culture we will accept, but it is only one step towards desperately needed culture change.

AGU understands that no one organization can do it alone. We commend the other scientific societies, such as the American Astronomical Society and American Geosciences Institute, who have instituted similarly strong policies on harassment, and the other members of this panel for their work. In particular, we believe the new NSF policy will provide a strong incentive for institutions to take sexual harassment seriously.

However, we know ultimately, we will need the help of the entire scientific community to work together to protect scientists from unwanted advances and intimidation and ensure a harassment-free environment for the future. This is why AGU is establishing an ethics resource center by collaborating and partnering with other institutions on programs which will include developing new and leveraging existing resources, and providing tools, trainings and research to help address ethics and harassment in science.

We very much appreciate the Committee holding this hearing to understand and assess some of the important steps we can collectively take. Here are some of the actions that we believe will make a difference:

1. Strong policies against sexual harassment with clear and transparent reporting and follow-up procedures with consequences can play a large role in changing the culture around this issue. It is important to also provide and support an environment where individuals can report and speak out against harassment without fear of retribution.

2. Training, education and building awareness are essential to combating this issue. However, training that is simply in place for legal compliance reasons is known to be insufficient, and, in some cases, may even be counter-productive. AGU has sponsored bystander intervention training over the past one year with very positive feedback from participants.
3. Consideration should also be given to positive approaches for supporting the necessary culture change – such as awards or certifications for those departments and institutions that publicly measure and track their progress towards positive work-climate and gender equity issues.
4. Lastly, legislation can be a powerful incentive to ensure that organizations take sexual harassment seriously and that all of us are moving forward to provide a harassment-free environment. Any legislation that is proposed should include not only robust reporting requirements and clear, strict consequences for harassers, but should also incorporate training, education, and the positive approaches I mentioned earlier. By using a combination of both positive and punitive measures, we can not only hold accountable those who are engaging in this bad behavior, but also encourage a safer, more inclusive environment for the next generation of scientists.

Again, I would like to thank the committee for convening this hearing and bringing attention to these important issues, and I appreciate the opportunity to testify here today. I am happy to answer any questions you may have and look forward to continuing to work with the committee and others to put an end to sexual harassment.

Brief Narrative Biography of Christine McEntee
Executive Director and Chief Executive Officer
American Geophysical Union

Before the Subcommittee on Research and Technology
Committee on Science, Space, and Technology
U.S. House of Representatives
27 February 2018

Christine McEntee is Executive Director and CEO of the American Geophysical Union (AGU), an international scientific society that represents 60,000 Earth and space scientists and seeks to promote discovery in Earth and space science for the benefit of humanity through publishing scientific journals and other technical publications, sponsoring scientific meetings, supporting education and outreach programs designed to increase public understanding of and support for its science, and a variety of other activities.

Over 25 years, Ms. McEntee has made her mark as an association leader and innovator, building a steady record of achievement in leading large organizations through changes in governance, membership and the fluid public policies that confront them.

Ms. McEntee has previously held leadership positions at the American Institute of Architects, the American College of Cardiology and its Foundation, and the American Hospital Association. She also has served on numerous non-profit boards. Among her honors, Ms. McEntee was named *CEO Update's* CEO of the Year (2016) and one of America's Top Women Mentoring Leaders. She is a graduate of Georgetown University and holds a Masters in Health Administration-Health.

Chairwoman COMSTOCK. Thank you so much. And I thank the witnesses for their very powerful testimony and your very important work. I now recognize myself for five minutes for questions.

Dr. Clancy, you talked about the victims and the science we've lost, and that's so powerful and you seeing those people and giving them a voice and knowing the work you're doing. One of the things that we are doing in Congress is having a workplace survey. What type of workplace surveys have you found to be most effective? I talked to a woman who implemented policies in the Navy that actually dramatically reduced things, and they really went in and thoroughly looked at first the whole culture everyone was kind of swimming in, both the workplace but then, you know, for them it was a base. You know they went to restaurants, they went to the bars, they went to the dorms, everywhere where people were to understand—and understanding they're very young people often, which is something you have in the situation with young scientists. The military has it. We have it here in Congress. How can we intervene before these things happen, and what are some of the policies you've found have been the most aggressive in prevention?

Dr. CLANCY. Sure. I mean that's a great question. I think that there are a number of ways that you can go at this sort of depending on the context. Like you pointed out, you know, when you have a bunch of young people together or when you're thinking about a military context versus, say, an astronomical observatory versus, you know, a field—an anthropology field school, there are different contexts that actually have to be considered. So the most important thing is to make sure that you're involving a subject matter expert in the creation of the survey. A lot of folks think that a survey is just, hey, it's a bunch of—let's just put a bunch of questions together and figure out what happens, but just like with any experimental protocol, bad questions lead to the development of bad data, and then it's actually hard to assess over time whether you're really seeing improvement or not.

So climate surveys are a really great first step, especially if you're using subject matter experts. There are a couple of validated questionnaires already out there that people often sort of use and fold into their existing survey, and you can pick and choose them depending, again, on what you know about your context.

As an anthropologist, I also really like a mixed-methods approach, so I think it's really important to make sure that you interview or do focus groups with folks so that you can learn more again about the particular context of that workplace.

I think that that leads to prevention because of the ways in which first assessing what's going on helps you get a sense at what the problems really are, so, you know, for—again, for some workplaces, the culture might be like a real bro culture and for others it might be widespread incivility. And across the now three or four different work contexts I've started to look at, I can say that there are different historical and cultural contexts that lead to slightly different manifestations. So with a bro culture we might want to take on sort of why is it that people think they have to act macho to be good scientists? With incivility, we can be asking, well, why is it that professional—you know, we're considering professional

conduct that is uncivil to be appropriate and respectful? So once we can start asking those questions, we can move towards change.

Ms. LARSEN. May I—I want to add to that that I think—you know, a lot of times because of the confusion over what harassment is, you know, I often tell people, you know, don't write a zero-tolerance policy until you're really clear on what you're not tolerating. And so starting from what is the conduct that is actually damaging to them, not worrying about whether it's legal or illegal under the law but really what are the things, what are the actions that are occurring that, you know, are really causing women to feel that they are being treated and are actually being treated differently, but really starting from that point of conduct versus conclusion about what that conduct is.

Chairwoman COMSTOCK. I wonder if there needs to be some kind of checklist sort of like when if you're going out and you're going to be alone and you're driving home or something and you think, okay— you park in a certain place, you take certain actions, you're trying to protect yourself physically from safety and danger, but we don't often instruct, say, our children or young people to protect yourself in this type of environment and what to expect, and I think—you're coming in, say, as a college student or a graduate student with all kinds of different experiences, particularly in a science career where it involves a lot of studying and things and perhaps they haven't been engaged socially a lot and then they're put in these circumstances.

I'm thinking of this checklist, you know, when you're socializing, say, with your colleagues, go with a buddy. What kind of things can we really—just sort of commonsense kind of things that our mom might tell us but that we haven't maybe thought of to prevent some of these things because you think culturally somebody from one part of the country and they come into a different situation or racially if people have different expectations, and it's just so many different approaches here. And I feel like a lot of times when these young people are getting into these circumstances, we just haven't prepared them. And how can we do that?

Dr. CLANCY. I certainly agree that some kind of checklist would be really important. I really think it's on the PI, the principal investigator or the boss or the director of the field site to be the one creating that checklist and the one responsible for it. So in our research that was published in 2014, in field sciences we found that the majority of our respondents were not aware of a code of conduct or sexual harassment policy for their field site and a very small number of people who were actually harassed felt—even knew what the reporting mechanism was. So to my mind the bigger issue is that these behaviors are not—people don't tend to just spontaneously become harassers. It has to do more with the culture that they're in and whether it's permissive. So if the director——

Chairwoman COMSTOCK. And they're usually—the predators are repeat offenders, too.

Dr. CLANCY. They can be, yes. And I think they often are but they're not always. And it has to do with the fact that if the culture is permissive of that behavior, then it's much more likely to happen. So it really has to be the person in charge demonstrating lead-

ership and making clear what's acceptable and not acceptable in both implicit and explicit codes of conduct.

Chairwoman COMSTOCK. And I know one of the things that we've heard in looking at this in Congress is when you have these new policies in place, usually you're going to see first a spike in complaints because people feel free to come forward now, but then if there is, you know, consequences and they see that and they now know that there's going to be action taken, there is then a reduction in both the activity in the first place and sort of the confidence that this is going to be handled. Is that consistent with what you've seen or what you've all——

Dr. CLANCY. Yes, absolutely across workplaces it's consistent that if you have consequences, not just that you claim to have them but that you actually have them, that people face sanctions, then you do see a reduction in harassment—or you see less harassment in those workplaces at least.

Chairwoman COMSTOCK. All right. Thank you so much. And I now yield to Mr. Lipinski.

Mr. LIPINSKI. Thank you. I want to thank all of you for your testimony. I think I was particularly moved by Dr. Clancy, your testimony, because having been an academic, I understand the hierarchy and the—how those who are lower on the totem pole, those who are lower in status are relying on those who are above them for their career, for their entire career, whether you're a grad student or you're, you know, a faculty member. If you are—have a higher ranking, you have a lot of power over those below you. And I think that there is a cultural problem in general with those who are higher up sometimes being abusive. And that is—it's a terrible problem.

I can't say that I suffered harassment at any point although I was in situations where things were said to me that were—did not make me comfortable. But I certainly heard stories from colleagues that were definitely harassment. And, you know, nothing that I heard that ever really came of that. And again, it's because of the hierarchy and because, you know, when you are a star, if you're considered a star academic, you are protected. And so this is something that really is—makes this even tougher when we're talking about academia.

So I wanted to ask Ms. Davis about the—what NSF is doing now. So the proposed requirement you talked about says that grantee organizations need to report findings of sexual harassment to the agency. We have to make sure in doing this that NSF needs to make sure that such a requirement is not going to chill investigations of assault for fear of making a finding that jeopardizes grant money. Again, something that is—we need to be very careful about that.

So I want to ask, how will the NSF enforce its requirement—well, first, will researchers, technicians, and students be able to report harassment directly to the NSF, and if not, how you ensure that grantee organizations have effective reporting mechanisms in place?

Ms. DAVIS. Thank you. Yes, they will be able to report it directly. We have set up a portal so anyone can go to this portal whether

it's a postdoc, a student, or if it's a faculty member and report directly to us. It will come directly to us.

In regards to the chilling effect, we thought about that, we talked about it. We think that we're in a time now that—for universities to take the approach to have a chilling effect could be at their own peril if you see what is happening to universities. What we like about this new portal that we have is that anyone can report to us. So if a university has a finding, or if they have investigated and just decided the degree of what has happened, they're going to put the person on administrative leave. If they elect not to notify us, it could be the student that was involved, it could be a postdoc that was involved, it could be the community, it could be professional societies, anyone that could notify us and we would have like many compliance reviews of that situation.

We had a situation recently where we were just made aware of something, and within two hours we were able to be on the telephone with the university and to begin addressing it right now before the policy is in place—the difference with the policy is that they will be required. But we learned through another means, we will still implement it right now.

Mr. LIPINSKI. And how will you enforce the requirement, given that many victims sign nondisclosure agreements as part of their settlements?

Ms. DAVIS. Thank you. We run into that situation, too, with nondisclosure agreements. We'll have a lot of back and forth, but what we're looking at is if you put that person on administrative leave, this is a term and condition. If they're not able to carry out their term as it relates to the research, we can actually have the university replace that PI that is on there, or we would do everything in our power to make sure that no student under contract is impacted. The enforcement part of it will be from the perspective of can they carry out the terms of the agreement?

Mr. LIPINSKI. All right. Thank you. Very quickly, Ms. McEntee, scientific societies play an important role in shaping the culture in scientific communities. How can scientific societies best leverage their position within the community to bring about cultural change?

Ms. MCENTEE. Well, thank you. You know, we think we have a lot of ability to work both within our society and with others. We view this as a community effort. We are establishing an ethics resource center that is providing—in collaboration with other scientific societies and research institutions—tools, resources, research, training that everyone in the community can benefit from. It'll also be a place where we can share best practices and what's working well to change this climate and will allow us to collaborate more broadly both within the scientific societies but also with colleagues here that are on this panel. And we also hope that many others will adopt policies as strong as ours that call harassment, bullying, and discrimination scientific misconduct because it harms scientific careers and the entire scientific enterprise.

Mr. LIPINSKI. Thank you. I yield back.

Chairwoman COMSTOCK. Thank you. I now recognize Mr. Marshall for five minutes.

Mr. MARSHALL. Yes, thank you, Chairwoman.

It's hard to believe but 33 years ago today I was a second-year medical student and decided to go into obstetrics. I know that because today is my daughter's birthday, our firstborn 33 years ago, and as a medical student trying to figure out what I wanted to do and that was certainly a sentinel day. But what I didn't realize when I became an obstetrician was that I'd be spending 95 percent of my time with women. And certainly, I saw the world through their eyes. I got a glimpse through their world more so than many people do. And whether it was spousal abuse, I did over 100 rape exams one year as a resident, but certainly, this issue of sexual harassment is something maybe I would see more than other people. You know, why is a woman perfectly happy at a job, she sees me once a year, and she walked into my office and she quit a really good job. And, you know, they would kind of beat around the bush, but too often this was the reason.

You know, I want to talk about being proactive rather than reactive and challenge you all. What can we do to be more proactive? I think about culture, and my concern is that there's a cultural acceptance in an institution this is more likely to go on. And certainly, we control the purse strings, we give grants through the NSF. You know, in sports we'll see if an institution has a constant disregard for the rules, like the NCAA, eventually, we give them the death penalty and you're done. You don't get any scholarships, you don't get any—in this case, any grant money—so it would be more than just the single person. You know, where there's smoke, there's fire.

What are we doing to kind of get to institutions where this is a socially accepted norm rather than just one person? And maybe start with Ms. Davis and answer that question. What can we do to be more proactive rather than waiting for this complaint to be filed?

Ms. DAVIS. Thank you. We believe we have several tools in being proactive, and one of those tools is our outreach to let them know from a title IX perspective when it comes to compliance what our expectations are. Beyond those expectations, if we see universities where we are seeing repeat problems over and over and over, when we go in and conduct these title IX compliance reviews. We could address those with the new term and condition that we have. We do not give the money directly to principal investigators. We give the money to the institution, so we can have these really hard conversations that may be difficult for the universities, which I believe we're at a time right now where even universities who've had a lot of complaints really can see that everybody——

Mr. MARSHALL. Have you had any of those hard conversations with any universities or institutions?

Ms. DAVIS. When we go on our Title IX compliance—yes, we have.

Mr. MARSHALL. Good.

Ms. DAVIS. We've had some of the conversations that—I wouldn't want to go into——

Mr. MARSHALL. I understand.

Ms. DAVIS. —specific names now that have resulted in some results that have made the harassment community a better community.

Mr. MARSHALL. Okay. Dr. Clancy, you want to take a shot at that one, being proactive?

Dr. CLANCY. Certainly. So there—it turns out there's actually a pretty good literature on this. There are researchers who do work on what's called respect climates in the workplace. They're also called inclusion or diversity climates, some really great social scientists who conduct research to try to figure out how do we actually start with the culture and move forward from there. And what a lot of that research seems to show is that we need to do a lot more of the hard work, not just, you know, like slapping on a policy and saying, okay——

Mr. MARSHALL. Exactly.

Dr. CLANCY. —sexual harassment is fixed but actually coming together as a group, you know, doing workshopping sessions for instance where you get together and ask, okay, what are our values? What are our shared values? What's important to us? What is the current culture of this organization? And is this the culture we want? So if it's very hierarchical, you know, which often happens in the sciences, is all of that hierarchy justified? So are there times where we're hierarchical for the sake of being hierarchical instead of doing it because of expertise or experience?

And I think if we really encourage more science workplaces and more workplaces generally in the United States to ask these questions first, then they can start to put together value statements and do more values-into-action trainings instead of sexual harassment trainings, which just tell you don't do these behaviors. Values-into-action trainings and respect trainings say here's what we want a professional workplace to look like. Let's encourage each other to do these behaviors, and it incentivizes the positive behaviors.

Mr. MARSHALL. Great. Ms. Larsen, go ahead.

Ms. LARSEN. Thank you. You know, a couple of things, I agree with everything. The challenges in—you know, in change management they often say that people don't change because they see the light; they change because they feel the heat, and there is no heat in academics, so there is no way to compel somebody to do exactly that unless they feel it.

And one of the cases that I have been working on for now three years with a client, her department has been found over 15 years by several external reports to have a terrible climate for women and to have it observed that women are leaving, including a NASA title IX investigation. There is no one to follow up and enforce the department making any changes. The department has done nothing in 15 years.

Two years ago, a program review within the university done by the academic senate, which is where I say that we have a shared governance issue, you know, also found that this was still a problem, that women were leaving in large numbers. Two out of three of the women in this department went directly to that committee and said, you know, we don't think the department is taking this seriously; they're not doing anything. And the academic senate still closed that program review and basically said we'll review them again in three years. The senate has no accountability and responsibility for what goes on in the department, and the administrative

structure has no ability because there—you know, this idea of departmental autonomy, they can't go in and compel a department do anything. So we have a problem with enforcement. I would like to see federal agencies effectively saying if I don't—we don't see changes, we will pull funding.

And to the point about money, it is true that the money is given to an institution, but it is considered the PIs, and that money is abused all the time. I have seen so many cases where equipment is withheld from one person because they don't like them. This is happening to a tenured faculty member who was denied access to a lab that was paid for by federal money, and there is nothing that can be done about that. A reporting structure to say this person is abusing the funding that we had, again, whether or not it falls under a legal definition, they're abusing the funding and this happens far too often. And a reminder that it is the university's money, not the PI's.

Mr. MARSHALL. Yes, thank you. And I yield back.

Chairwoman COMSTOCK. Thank you. And I now recognize Ms. Bonamici.

Ms. BONAMICI. Thank you, Madam Chair and Ranking Member, for holding this hearing, and thank you to our very impressive panel.

Over the past several months we've seen so many survivors of harassment and abuse speak up, and it really is making a difference and I appreciate you're here to—that you are all here today. And no matter what the industry is, everyone deserves to work in a safe workplace.

As policymakers on this Committee, we have to do everything we can to make sure that our scientists and researchers are able to do their work free from harassment and abuse. We talk a lot about getting more women in the sciences, but we need to not only get them in the sciences, we need to be able to keep them there when they get there. And a working environment that's free from harassment and abuse and power abuse will mean that researchers can focus their full attention on finding the next great scientific achievements. I thank Dr. Cordova for her leadership at the NSF on this issue.

A few years ago a fisheries biology—biologist who's very passionate about her work came into my office with a serious issue. She and some of her female colleagues had experienced sexual harassment while conducting research on a ship owned by NOAA, National Oceanic and Atmospheric Administration. After reporting the harassment, this talented scientist had been effectively grounded from furthering her career. Her research was derailed. Her colleagues and her harasser knew that she had reported the harassment, and she was counseled against going back out to sea for her own safety. There seemed to be little investigation into her case at the time, her case and other women's cases.

I contacted NOAA, including then-Administrator Dr. Sullivan who—Kathryn Sullivan, who took this issue very seriously, and with Dr. Sullivan's leadership, NOAA changed their policies and practices. They made it easier to report sexual harassment, they implemented new training, and they changed their investigation

protocol. And I just thank Dr. Sullivan for really taking the lead on that.

This investigation into this particular case was completed, and best of all, this talented scientist returned to sea. Since then, she's gone on three research cruises and she said, and I quote, "For the first time in my career, I was able to focus entirely on my work." So it really does make a difference.

So we have to do more to both prevent harassment and to make sure that victims can seek justice, and all of our agencies need to take a close examination of their practices and put into place these accountability measures that will focus on prevention and also justice for survivors.

So, Dr. Clancy, your research talked about how women conducting research in isolated field sites are particularly vulnerable, so I want to ask you, Ms. Davis, and Ms. McEntee, can you talk about some particular protections that can be implemented at field research sites to keep scientists safe? And I want to save time for a question for Ms. Larsen as well.

Dr. CLANCY. Some of the first things are, at least in our most recent research, we had a paper come out in November of 2017 that talked about the importance of having both implicit and explicit rules at the field site. So generally speaking, I think explicit rules are the best, you know, having an actual code of conduct of some sort, having a clear line of reporting, especially one that is third-party or independent of the PI who's there or whoever the director of the field site is, so I think that that's really important. But then I also think that the implicit rules like just getting everybody together on the first day and saying, okay, so here's what I think is appropriate behavior, here's what's inappropriate behavior and being very clear about both of those, so articulating those.

Ms. BONAMICI. I don't want to interrupt, but, Ms. Davis and Ms. McEntee, can you add anything to that for remote sites because I want to get to Ms. Larsen as well?

Ms. DAVIS. Yes, and thank you for your dedication to this issue. We took it as a prevention and reporting approach to this issue, and so we have instructional videos on—for anybody who's at a field site, a ship, Antarctica, or any of those locations on actually how they report. We have a new web portal that we set up where anyone at these sites will know how to access information quickly, and we have several other steps we've taken—

Ms. BONAMICI. Terrific. I'm going to get to Ms. McEntee——

Ms. DAVIS. Yes.

Ms. BONAMICI. —because I want to save time for Ms. Larsen.

Ms. DAVIS. Thank you.

Ms. MCENTEE. So we would add also we think you need training not just for those who are leading the expedition or the field but also for bystanders so they know how to act and you can—they can also implement programs like our Safe AGU where individuals are publicly identified as having the training to assist when someone is experiencing harassment.

Ms. BONAMICI. I think a bystander speaking up is important.

Ms. Larsen, in 2011 President Obama released new guidance for the implementation of title IX by universities. It clarified that title IX cases are to be decided under a preponderance-of-evidence

standard and impose a 60-day limit for concluding title IX investigations and introduce an appeals process for both parties. Last year, Secretary DeVos withdrew those updates, effectively reverting to the title IX guidance from 2001. The specifics of the 2011 guidance of course were debated, but ultimately, the goal was to make sure that title IX is actually protecting individuals from harassment and abuse.

So to what extent has the 2009 guidance already led to institutional change, and how will withdrawal of that guidance affect title IX cases? And I noted also that apparently NSF used to refer title IX complaints to the Department of Education Office for Civil Rights, and even that was rescinded, so, Ms. Larsen?

Ms. LARSEN. You know, I think that—thank you. You know, I think that it wasn't—you know, I used to say that working at a university is like dog years; it takes seven years to accomplish what it—would normally take a year—

Ms. BONAMICI. Just like Congress I think.

Ms. LARSEN. So I think that it was, you know, slow to begin with, so by the time the—you know, the rescission happened, I think it was—it wasn't where I would've liked to see it in the first place, but I think the rescission did add a lot of confusion over, you know, what is the process and it reinforced this idea that it is two-sided. And I—you know, I absolutely believe in due process, and again, I want to be very clear that there's a difference between how we look at sexual assault and harassment, but it is—you know it reinforced this idea that it's a 50–50 problem and that, you know, we have to really watch out for both rights in an environment where the rights of the powerful are well, you know, protected by other ways. It—I think it did reinforce this idea that the victim is really not going to be supported well.

Ms. BONAMICI. Thank you. As a member of also the Education Committee, we'll probably follow up with you on that as we approach higher education at reauthorization. I thank you. I yield back, Madam Chair.

Chairwoman COMSTOCK. Thank you. And I now recognize Mr. Beyer for five minutes.

Mr. BEYER. Thank you, Madam Chair, very much and thank you very much for being here. As the—I have four sisters and three daughters, and so this is a very important issue at home.

Dr. Clancy, in your testimony you emphasize the importance of addressing sexual harassment because it's the most prevalent and frequent form, and it's often a predecessor to more extreme behaviors, but then we also—there's been a lot of talk about culture. And some of the factors in your testimony, the fact that a student's or postdoc's career is entirely dependent on their advisor, that principal investigators are given complete control of the research funding, that departments have this autonomy, that I no longer want to be a college president. I just want to figure out—I had no control over all that money that was coming in. Are these structures—structural elements of the scientific community that can be changed, can be addressed and are these discussions that have been having within the National Academies?

Dr. CLANCY. So there are definitely some ways in which these structures can be addressed. I know that some universities are

moving to a co-advisor model for instance. In fact in my department that's primarily what we do is we make sure that there are always two primary advisors for most of our students so that if there are ever difficulties with one, there's always a second avenue. I think empowering a Director of graduate studies to be able to work with faculty who are being a problem is another way to handle it.

I think also just, you know, in terms of this fundamental culture change, I think part of what has to happen is faculty have to be willing to call each other out when we see bad behavior a bit more, so kind of to speak to Ms. McEntee's call for more bystander intervention training, just in general we need to be able to say, look, I don't think the way you're treating your student is appropriate, and I don't think that she should be retaliated against for, you know, doing whatever it is she's doing. And so to me those are sort of the big things that we can be doing on the ground.

Mr. BEYER. Okay. Good. And that's sort of university by university or——

Dr. CLANCY. Yes. I mean I think there are also ways in which professional societies can maybe be addressing this and maybe Ms. McEntee or Ms. Davis would be able to address this as well.

Mr. BEYER. Great. Thank you. Ms. Davis, you talked about NDAs, the nondisclosure agreements. Do they potentially permit serial abusers? And what's the—you know, when the abuser is not identified, what's the trade-off in terms of using NDAs versus the—you know, the good versus the bad there?

Ms. DAVIS. Thank you. The nondisclosure agreements are a challenge when you're trying to get information about what happened. We know that's a challenge that we will probably be getting a lot of feedback on when we put our Federal Register notice out there. That's why we approached this from—can they fulfill the terms? This bolstered title IX is not a title IX where we're conducting the investigation and we actually need to know all of the particulars that happen. We really need to know can they still fulfill the terms of the agreement. That's why we took this first approach, and we are actually doing everything that we can do inside of NSF and NSF's control.

Our second phase, is that the Director put a sexual harassment task force together, which is across the foundation. We will be looking at other things we can do inside, but also how we can go out and collaborate with our other federal science agencies. To the degree it comes to something that title IX needs to change, we'll be looking at that, too. Nondisclosure agreements can be challenging in a title IX setting, but we're approaching this from can you still fulfill the requirements whether we know all the details.

Mr. BEYER. All right. Thank you. Ms. McEntee, it's been suggested that one of the things the #MeToo movement may do in a pernicious way is that men will simply stop hiring and promoting women. You know, I think Sheryl Sandberg wrote that she's heard rumblings of a backlash in the tech industry where women are already significantly underrepresented. We just read that Florida legislators and lobbyists have told the Miami Herald that many male legislators won't meet with women privately. So is this a danger in academia also where, you know, one-on-one relationships are

very important with the advisors or with the principal investigators? Will fear of accusations against male researchers exclude female students from mentoring opportunities?

Ms. MCENTEE. Well, that fear already exists, and certainly, if there's more fear of backlash, that will just reinforce the culture that we all know needs to change. That's why sanctions are important. We also need to start rewards and recognitions for departments and universities and others who are starting to adopt really proactive codes of conduct and are putting in place effective resources and training and mechanisms like co-advisors where we're starting to see a change, and then we need to continue to fund research to track progress and share those best practices. This is going to take a community effort, and we can't allow fear of backlash to stop us from trying to address and create the kind of positive work environment we need for science.

Mr. BEYER. I agree. Thank you very much. Madam Chair, I yield back.

Chairwoman COMSTOCK. Thank you. And I now recognize Mr. Hultgren for five minutes.

Mr. HULTGREN. Thank you, Madam Chair. Thank you all so much for being here today, but more importantly, thank you for your really important work and the mentors that you are. This is an important hearing so that we can make sure that federal agencies are following the law, and proper protocols are in place to protect students and researchers from abuse.

I have a STEM Scholars program that we started in our district in Illinois, the suburbs of Chicago. This is our second year of our STEM scholars. We've got 30 high school students from around the seven counties that I represent that are part of our STEM scholars program. I meet with them once a month. We go to different places throughout Northern Illinois to see application of STEM fields in our communities. It's been an amazing time for me to learn from them what sparked their interest but then also for them to see some great opportunities right close to home for them.

One of the things I'm most excited about this year with the 30 students that we have, the majority of our STEM scholars are young women, so I'm encouraged by that and I'm learning from them and just excited about their passion and want to do everything that we can to encourage all young people that we need them in our science and technology fields. I know so much more can be done to spark an interest and foster passion for STEM, but all of this can be so dishearteningly be undone if young women especially find themselves in an academic setting with a culture of sexual harassment and abuse. If people leave these fields because of abuse, then we are losing the very best and brightest we need to be supporting at this time. We need institutional safeguards in place so that victims can feel safe reporting abuses, and abusers can be identified and removed.

Dr. Clancy, if I could address my first question to you, we know that only 23 percent of women with STEM degrees stay in STEM fields. What impact do you think harassment and discrimination play in women leaving the STEM fields?

Dr. CLANCY. Unfortunately, I think it explains most of it. You know, for a while a lot of folks tried to make the claim that moth-

erhood is the reason that a lot of women don't stay in science because the nature of the job is so difficult, and really, that just hasn't been borne out. I had fact have my—I'm a breastfeeding mom and my daughter is in the next room right now. I had to bring her with me in order to come to this hearing. So I don't think that motherhood is what's holding women back in the sciences. I really think it's the daily indignities of being told that you are less than.

And again, I want to emphasize that a lot of times these experiences are, you know, small incivilities and small slights, so it's how do you—how exactly do you report a systemic problem where you're always the one asked to take notes at the faculty meeting or you're always the one asked to make the coffee or, you know—or you're always the one who's ignored or left off the emails or somehow not given access to a really important piece of equipment. Those kinds of things are really hard, I imagine, to adjudicate and really hard to report on the side of the victim. So to me, again, these broader prevention measures to encourage women to provide more peer mentoring to each other and to work together and for them to feel like their work environment actually cares about these issues and won't retaliate against them if they try to speak up, those are the things to me that I think are really key.

Mr. HULTGREN. I think that's a really good point. And you're right, too, that so much of it is—it might seem at the time, well, this isn't a huge deal, but it is a huge deal, because it's got to just have the cumulative effect of feeling pressed down or excluded, and we've got to do everything we can to change that, to stop that.

Ms. LARSEN. May I?

Mr. HULTGREN. Yes, that would be great if you would.

Ms. LARSEN. I just—I want to add, you know, I have been, you know, in private practice and also in my years in the university I—they may exist but I have never met a woman who told me that she chose to get out of science because she just decided that it wasn't for her. But I have a client right now, in fact two in the same lab, who were told, I don't know, 6 months ago when they informed their PI that they were pregnant that mothers couldn't make it in research and he didn't want to waste his resources on them, and they both suddenly lost their funding. And when the title IX officers investigated, the people that they asked—because the excuse always is they just weren't good scientists—are all the other people who were funded on the same money who know that if they actually said anything different than what the PI has said, they lose their funding, too, so—

Mr. HULTGREN. It's horrible. Ms. Davis, if I can address—I just have a minute left or less. The federal definition of research misconduct was last revisited over 20 years ago. It was altered to take out detrimental research practices from the definition. Is it time to revisit whether sexual harassment and other abusive behaviors should be part of the federal definition of research misconduct? And then with a few seconds left, I'd love to from you, and if others have thoughts, I'd love to hear from you as well.

Ms. DAVIS. Thank you. We've had a lot of discussion around this, and fortunately, our Director, actually chaired a working group on that issue back in the 1990s. We see sexual harassment as having

a vehicle to address this, title IX. When they were looking at definitions for fabrication, falsification, plagiarism, there was nothing—no vehicle to address it. We are not taking anything off the table. We know—we looked at what's within NSF's scope, and some of these things will be across the whole federal sector as it relates to research.

The thing that we were concerned about is having a consistent way of handling sexual harassment. If you have some parts of it in the research misconduct area being handled, and other areas where there's sexual harassment issues handled outside, it could possibly strip down the law, so we were concerned about that. So those are some of the things we talked about saying right now; it seemed like our energies would be better suited doing something swiftly that we could do now and then look at what we can do across agencies.

Mr. HULTGREN. Well, I've run out of time.

Ms. MCENTEE. If I could add, please?

Mr. HULTGREN. Yes, real quick, sure.

Ms. MCENTEE. I would say that we're extremely proud that our policy that was approved in September of last year defines harassment, bullying, and discrimination as scientific misconduct.

Mr. HULTGREN. Thank you. Again, thank you all so much. I've got probably 10 more questions I would love to ask but just 5 minutes goes by way too fast—or 6 minutes, 20 seconds goes by way too fast, but I may follow up in writing if that's okay. And we really do want to help. We need you. We need your brilliance and expertise, and this has to stop. And so we just one all our best and brightest young people to see that we want you to excel, and anything that gets in the way, we've got to work to stop it. So thank you.

Thanks, Chairwoman, for your indulgence. I yield back.

Chairwoman COMSTOCK. Thank you. And I did want to note how important it is that that has been changed. The policy on scientific misconduct includes this. It's really important, and I did just want to take a point of privilege to—you know, this issue of backlash and worrying about women not getting hired because we start to hear a little bit of that. It's important that everyone understands that is illegal. That is already illegal. You can't say, oh, I'm not going to hire women now because of this or that, so it's important, because I've seen this even around here where reporters are asking us that, and we know we've had problems in the media, so we want to make sure that everyone understands, under current law, that is illegal and you can't say now the way you're going to deal with harassment is not to hire women. So thank you for letting me jump in on that.

And I now want to recognize Mr. Loudermilk for five minutes.

Mr. LOUDERMILK. Thank you, Madam Chairman, and thank you for having this hearing.

Ms. Davis, I want to go back to something that Dr. Clancy brought up, which was Dr. Marchant with Boston University. And during—the first question I have is during that time period, did the NSF have the authority to immediately remove him or anyone from a grant if someone's been put on administrative leave or is under investigation?

Ms. DAVIS. The authority that NSF has with the university is we would work with the university to find a replacement PI if the PI is on admin leave or something, and is not meeting the terms and conditions of the grant. The authority—what we're doing now, the authority didn't change. The only thing that's different is that they have to report to us.

Mr. LOUDERMILK. Okay. So during that time period you did have the authority to—okay.

Ms. DAVIS. If I can make that clear——

Mr. LOUDERMILK. Yes.

Ms. DAVIS. —the authority to work with the university for them to do the removal.

Mr. LOUDERMILK. Right.

Ms. DAVIS. Yes.

Mr. LOUDERMILK. Okay. And thank you for that clarification.

Ms. DAVIS. Yes.

Mr. LOUDERMILK. I and of course many Members have concerns about the recent interaction between Boston University and the NSF regarding this matter, and I actually have some emails between NSF and Boston University I'd like to kind of walk through. And, first of all, let me say thank you for the NSF and Boston University providing these documents to the Committee during our investigation. That isn't something that we get a lot of cooperation on with a lot of other agencies, so I do appreciate that.

Mr. LOUDERMILK. And so, again, this is an email chain between the NSF and Boston University regarding the alleged sexual harassment by a prominent Boston University geologist Dr. Marchant. The first slide, as you can see, that we already have up, Boston University found that Dr. Marchant did sexually harass a graduate student while on a research expedition in Antarctica, which Dr. Clancy has already brought up here today, and he was immediately put on administrative leave, so hats off to Boston University for doing the right thing at that time. And Boston University sent an email to the NSF on December 5 notifying the NSF that Dr. Marchant currently had an NSF grant.

Then, on December 11, 6 days later after a phone conversation with the NSF, the university followed up with an email asking for clarification. Apparently during the phone call, there was some information passed along that he could not remain as the principal investigator. But they were asking for clarification from why they would not allow him to continue as principal investigator on the grant.

[Slide.]

On Dec 5, 2017, at 11:49 AM, [redacted] <[redacted]@bu.edu> wrote:

Dear [redacted],

You may be aware that Boston University has completed an investigation of accusations made against Prof. David Marchant. Prof. Marchant was recently place on administrative leave pending his appeal of our Dean's decision to seek termination for cause.

I understand that he has a NSF grant that is currently in a no-cost extension year. We are hoping to use the remaining funds to support of the completion of a masters degree by one of his graduate students and would like to explore the option of naming a replacement PI for the remainder of the project.

Would you have time to connect by phone this week?

The next two mornings
(Tues/Weds) are relatively open for me.

Thanks, [redacted]

[redacted]
Boston University

[redacted]

From: "[redacted]" <[redacted]@bu.edu>
Date: Monday, December 11, 2017 at 12:45 PM
To: [redacted] <[redacted]@nsf.gov>
Subject: Re: David Marchant NSF grant

Dear [redacted],

I wanted to check-in on Dave Marchant's current NSF grant. The acting department chair was in touch with Dave to tell him about our intent to request a change of PI, and Dave asked why this is necessary given that he remains a member of our faculty, at least until his appeal is considered by the institution. Our OSP informed us that because he is on administrative leave, we were required to notify NSF and pursue one of several possible alternatives, of which, we thought a change of PI made the most sense. I just wanted to confirm with you that NSF would not allow Dave to continue as PI while he is on admin leave?

Also, you mentioned that there was an overdue final report on another grant but we have not found any evidence of this. Marchant shared a screenshot of his Project Reports page and it shows only the current grant, with final report and project outcomes not due until 11/30/18. Just wanted to follow-up to let you know that we looked into this.

Thanks, [redacted]

Mr. LOUDERMILK. So if we bring up the next slide, then December the 18, the NSF stated in this email there is no NSF policy that supports the statement, quote, "That NSF would not allow Dr. Marchant to continue as principal investigator while he's on administrative leave." Even though NSF wanted to remove Dr. Marchant from the grant, apparently, it was thought there was no policy to allow that to take place.

[Slide.]

On Dec 18, 2017, at 11:26 AM, [redacted] <[redacted]@nsf.gov> wrote:

Hi [redacted],

I apologize for the delay in getting back to you. I discussed you question below with our Policy Office in the Division of Institution & Award Support and they feel that this is an internal BU issue which would depend on the conditions of the administrative leave. Stated another way there is no NSF policy that supports the statement "I just wanted to confirm with you that NSF would not allow Dave to continue as PI while he is on admin leave". As mentioned before I would be supportive of a change in PI, if a request were submitted, so that the MS student you discussed could get the immediate supervision needed to complete his/her work with the remaining funds available in the grant.

Regarding final reports, there are no pending final reports due at this time.

Sincerely,

[redacted]

[redacted]
Antarctic Instrumentation and Research Facilities (AIRF)
Office of Polar Programs
National Science Foundation
Office: [redacted]
NSF Mobile [redacted]
Personal Mobile: [redacted]
Room [redacted]

From: [redacted]bu.edu>
Date: Monday, January 22, 2018 at 4:51 PM
To: [redacted]@nsf.gov>
Subject: Re: David Marchant NSF grant

Dear [redacted],

I'm writing to follow-up on the status of Dave Marchant's NSF-supported project. Based on the information you provided below, further discussion with Marchant and consideration by our Office of Sponsored Programs, we have decided to keep him as the PI pending further developments. He is continuing to work on the project and is providing mentorship to a graduate student working on the project. As such, our OSP has determined that no formal notification to NSF if required at this time, but I wanted to let you know the current status.

If/when there is a change in Marchant's status at BU, we will re-evaluate his role as PI and notify NSF as appropriate.

Thanks, [redacted]

Mr. LOUDERMILK. Further, and a little bit disturbing, on January 22 the university then indicated that—in this email—that due to NSF's inability to force them otherwise, the university would keep Dr. Marchant on the grant, which is what Dr. Marchant wanted and kind of disturbing to me is that he continued to want—in this email—he wanted to continue to mentor another graduate student.

[Slide.]

From: [redacted]@nsf.gov
Subject: Important: David Marchant NSF grant OPP 1246316
Date: January 25, 2018 at 6:21 PM
To: [redacted]@bu.edu

[redacted]:

I have received clarification from NSF upper management that because Dr. Marchant has been placed on administrative leave, Boston University is required to appoint a substitute PI for the grant. In addition, we will need immediate confirmation that Dr. Marchant is not receiving salary from any NSF grants while he is on administrative leave.

The substitute PI must be appointed without delay. If there are any questions please have your SRO contact me immediately. I would appreciate confirmation of the receipt of this email and confirmation when the change of PI has been made in FastLane.

Sincerely,

[redacted]

[redacted]
Antarctic Instrumentation and Research Facilities (AIRF)
Office of Polar Programs
National Science Foundation
[redacted]

Mr. LOUDERMILK. So then if we go to the last slide, it wasn't until January 25 that the NSF got clarification from upper management that Dr. Marchant was required to be removed as the principal investigator of the grant. This was almost 2 months after the initial December 5 notification by Boston University to the NSF that he had been placed on administrative leave.

So my first question is why did it take so long to determine that Dr. Marchant needed to be replaced as PI?

Ms. DAVIS. Thank you. What you just shared with us here is what we have been addressing. This is unchartered territory. We have typically tried to handle title IX issues within a stovepipe of title IX, and so what happened here, is that the communications were from the program offices, and the program offices were interacting back with the universities. They were talking to each other and they thought that there was nothing we can do. Well, the Director put together a sexual harassment task force, and that task force includes people across the whole foundation. What we learned in that task force is that communication was taking place between the universities and some of our personnel outside of our title IX role, and so as a result of that, we have put in a communication to all employees if anybody reaches out to you about a title IX matter, you immediately notify my office and we will coordinate it.

As a result of that and the lessons we learned from this situation right here, we are now—last Thursday, we learned of an issue of a title IX person being put on administrative leave. Within two hours of learning that, we were able to pull together a team, contact the university, and find out what was going on on the issue, and as a result of that, we've actually made a modification in our Federal Register notice that we're going to put out. This is unacceptable for us, and it's a lesson learned and we've acted upon it.

Mr. LOUDERMILK. Well, thank you for that, and I think you've just answered my follow-up question on that, does your current policy give you the ability to address this immediately? And it sounds like not only can you, you have acted on that as well.

But a question back to the December 18 email, it actually said, "I apologize for the delay in getting back to you. I discussed your question"—and when I say your email——

Ms. DAVIS. Yes.

Mr. LOUDERMILK. —regarding NSF's, not yours personally, because I don't know who actually sent it—but it said, "I apologize for the delay in getting back to you. I discussed your question with our policy office in the Division of Institution and Award Support," and they feel that it is an internal Boston University issue, which would depend on the conditions of the administrative leave, and then it followed up as there is no policy. Was the problem in that policy office that they weren't aware of the ability to remove? I mean, where was the breakdown?

Ms. DAVIS. The breakdown is that it's still stovepipe approaches. We have typically handled title IX issues within my office, and the grants and terms is handled in the policy and the grants division. So no one really—it's almost like what we're seeing in office of research in title IX. We were not communicating across. We've really put the brightest minds together to try to talk about how to tackle this issue, and in doing that, that's when we learned, well, wow,

we have the opportunity in our grants and our award—terms and conditions right now to go back to the university and say that this is not—if a person is being put on administrative leave and they cannot adhere to the terms, we can do something. And so it was a matter of communication.

One was the science office doing it. When they reached out to that office they hadn't been—this is unchartered territory. They had not been dealing with issues around sexual harassment in a grants and terms way.

Mr. LOUDERMILK. Okay. Well, thank you. One last question and—is the NSF reliant on—totally reliant on institutions to appropriately deem what is considered the beginning of an investigation?

Ms. DAVIS. Actually, we created the NSF.gov/harassment portal, and the reason that is a very key is because we want to do a lot of outreach so people can know to reach out to us and let us know if an issue is going on. If the university is conducting an investigation, failed to tell us something or failed to conduct an investigation, we can be notified by numerous sources——

Mr. LOUDERMILK. Okay.

Ms. DAVIS. —including the media, and so it's almost another tool we have to have—to catch violators I would say.

Mr. LOUDERMILK. And thank you.

Ms. LARSEN. May I——

Mr. LOUDERMILK. I see my time has long expired.

Ms. LARSEN. May I please respond?

Mr. LOUDERMILK. Sure.

Ms. LARSEN. I want to make a really important point about the Marchant case. And I actually had dinner not too long ago with one of the women who brought forward the allegation, not a client, just a friend in San Diego. It took her until she was tenured, years later before she felt safe enough to actually bring that allegation. And I wonder how many women were out in the field having rocks thrown at them in the meantime, and so this is a problem we must address, that people have to feel safe to report this. Having rocks thrown at you isn't always thought of as sexual harassment, right? It's not sexual but it is harassment, and I—and that is an issue as well.

I had a third point and I don't remember it. But I think the time that it takes, you know, is really something—oh, I know what I was going to say. She changed her field, so she went from researching in the Antarctica to researching in the Arctic to avoid this person. She went to the opposite pole to avoid him.

Chairwoman COMSTOCK. Wow. That is—thank you all so much for your important testimony. I wanted to pick up on some of those points in terms of—you know, we've talked a lot about the impact on the individual women and how their lifetime careers change, "polar opposites," and also how they're losing income over a long time. And, Dr. Clancy, I thought your point about, this sort of the myth that it was children—and I can't wait to see your little one here, and great that you're a nursing mom, that's a great thing, too. But it is bigger than the individuals who are losing their career here. As a country and as the science, we're losing that bigger picture and the talent, and the cost to our economy. So I think this

is such a human rights issue, it's a sexual harassment issue, but we really need to look at this, how it impacts wages and the individuals and the economy in the bigger context.

So I know we had a hearing last year where we—in another committee that I'm on—where we found that companies with three or more women in senior management functions scored higher in leadership, accountability—what we're all talking about here—and innovation, so that's innovation, you know, moving our economy forward.

And Fortune 500 companies with the highest representative women on their boards outperformed generally, so this means our country would be doing better if these women were advancing at better rates, you know, at the rates that they're going to school. And then women CEOs in Fortune 500 companies have 200 percent better returns on the S&P 500. So this is costing our economy. I know we often say—some people might feel like, oh, we're going to be good and do this. This isn't just doing the right thing, which is first and foremost very important. This is economically an issue that is costing our economy if we don't get this right. So this makes a big impact. You know, women live longer. If women aren't getting their—into their careers and getting to stay in them and making that money, this is costing the country in so many different ways.

So I thank you for your just fabulous research and work and insight and how you're making all of these connections. You know, with the example of the woman who had to wait until she was tenured, you know, I imagine just with the work that you all are doing and having to—the intervention factor, women intervening can sometimes be a difficult thing for you even when you're studying this. So thank you so much for—and please keep in touch with us. I appreciate the great work, lots of good representation here of women scientists here, so thanks so much.

The record will remain open for two weeks and written questions can be submitted. Thank you.

[Whereupon, at 11:44 a.m., the Subcommittee was adjourned.]

Appendix I

Answers to Post-Hearing Questions

ANSWERS TO POST-HEARING QUESTIONS

Responses by Ms. Rhonda Davis

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"A Review of Sexual Harassment and Misconduct in Science"

Ms. Rhonda Davis, Head, Office of Diversity and Inclusion, National Science Foundation

Questions submitted by Chairwoman Barbara Comstock, House Committee on Science, Space, and Technology

1. NSF owns and operates remote field stations in both the Antarctic and the Arctic. The Science Committee has been investigating Dr. David Marchant, a researcher found to have harassed a female student in field sites in Antarctica. Two years ago the NSF inspector general also found that excessive drinking in the Antarctic was contributing to an unsafe work environment. What specific steps is NSF taking to protect researchers and students at both sites?

   Answer: NSF respectfully notes that the OIG *Audit of Health and Safety in the U.S. Antarctic Program* (USAP) found that, in general, NSF's oversight and the Antarctic Support Contractor's performance were effective in ensuring adequate health and safety. In July 2013, prior to the OIG audit, NSF developed the USAP Code of Conduct, which sets expectations for professional behavior and prohibits offensive and disorderly conduct, violations of the USAP alcohol policy, verbal and physical abuse, and other unprofessional behavior. NSF requires all USAP participants to read and agree by signature to abide by the Code of Conduct before every deployment to Antarctica. To further reinforce cognizance of our expectations, as of 2017 NSF has included direct reference to the Code of Conduct in award letters to grantees. As part of its responsive actions to the OIG's audit, NSF also formalized a process for reporting and sharing Code of Conduct violations. With respect to concerns regarding alcohol, to provide a significant deterrent effect, prompt action in response to incidents that occur, including immediate expulsion from Antarctica, is exercised.

   With respect to harassment, in January 2017, NSF also began to issue an annual USAP Affirmation of Non-Harassment Policy Statement that is broadly distributed and reviewed during required in-brief meetings of USAP participants. As of the 2017-18 field season, all Antarctic Support Contract staff are required to take annual training in harassment prevention. NSF provides a number of options for reporting harassment at USAP sites and on USAP vessels, and engages officials from all involved sectors to ensure prompt and appropriate responses to reports.

   NSF is currently updating the USAP Code of Conduct to formalize expectations for all polar field settings, including those in the Arctic, and acknowledges the proactive efforts by the NSF-supported community to prevent and address harassment in Arctic field

settings (e.g. https://toolik.alaska.edu/user_guide/policies.php; https://research.uaf.edu/sites/default/files/032017_IARC%20Field%20Code%20of%20Conduct.pdf; https://agu.confex.com/agu/fm17/meetingapp.cgi/Session/26883).

In the Arctic, NSF's prime support contractor, CH2MHILL Polar Services (CPS), requires sexual harassment training for all employees, with additional training occurring as part of a General Safety Awareness course for field staff prior to deployment to NSF sites. For the 2018 Arctic field season, NSF has updated the risk assessment process at the start of project planning to include the topic of harassment; incorporated a segment on harassment in the Arctic Field Training course offered to researchers prior to going into the field; and published the NSF Press Statement 16-002 noting that NSF does not tolerate harassment on the 'Know Before You Go' webpage (http://cpspolar.com/for-researchers/know-before-you-go/). The topic will now be addressed in arrival briefings at Kangerlussuaq and Summit Station, Greenland.

2. Conferences play a major role in the careers of research scientists. They also take place away from home, away from supervisors, and often involve informal gatherings with alcohol – a perfect recipe for harassment. How will the NSF policy specifically address conferences, where the victim may not be from the same institution as the perpetrator?

   Answer: As you note, conferences play an important role in the careers of research scientists as they provide a venue for collaboration with fellow researchers nationally and internationally. This issue is part of a larger discussion of sexual harassment and assault occurrences taking place in the sciences that NSF has taken an active role in addressing to help prevent and mitigate. To that end, I have established a Harassment Working Group at NSF composed of representatives from all Directorates and Offices to address, and find solutions for, harassment and assault issues in all science settings for NSF-funded awardees. The Working Group is actively examining relevant policy and possible adjustments regarding harassment at conferences and workshops.

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"A Review of Sexual Harassment and Misconduct in Science"

Ms. Rhonda Davis, Head, Office of Diversity and Inclusion, National Science Foundation

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. A particularly vulnerable population within the sciences is international students and postdocs in the country on work visas. What are the unique challenges international students and postdocs face when trying to report sexual harassment? What can be done to ensure international students and postdocs are protected?

   Answer: The new term and condition, which was published in the Federal Register on March 5th for public comment, applies to anyone involved in an NSF-funded grant regardless of national origin and/or postdoctoral status. The NSF.gov/harassment portal is a resource to provide everyone, including international students and postdoctoral researchers guidance, information, and contacts to report incidents.

   Title IX protects international students from discrimination or harassment on the basis of sex in their participation in any academic or research or other education program or activity operated by an NSF awardee. When NSF conducts compliance reviews under Title IX, international students and postdoctoral researchers are interviewed by compliance review teams. This provides an opportunity for NSF to ascertain information about their experiences and for these students to advise us whether they have been subjected to sexual harassment. If harassment occurs, NSF holds the awardee accountable by requiring them to eliminate the harassment and/or hostile environment.

   It should also be noted that postdoctoral researchers are considered employees of NSF awardee institutions and are protected by Title VII of the Civil Rights Act of 1964, which prohibits discrimination on the basis of sex in employment. Sexual harassment is a form of sex discrimination that violates Title VII. If a postdoctoral researcher files a sexual harassment complaint with NSF, it will be referred to the US Equal Employment Opportunity Commission (EEOC) for investigation as required by 28 C.F.R. Part 1691, unless the complaint demonstrates a pattern of practice of employment discrimination or harassment, in which case NSF will investigate the complaint. NSF will also investigate employment

discrimination or harassment complaints if those complaints also allege harassment or discrimination to students who study or participate in NSF-funded awardee programs. NSF may conduct a compliance review if general information is received that discrimination or harassment or other forms of non-compliance with NSF civil rights regulations is occurring in the awardee's programs.

NSF will continue to monitor the effectiveness and impact of the new term and condition as it relates to students and postdoctoral researchers.

Responses by Dr. Kathryn Clancy

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"A Review of Sexual Harassment and Misconduct in Science"

Dr. Kathryn Clancy, Associate Professor, Department of Anthropology, University of Illinois

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. The American Geophysical Union recently updated its ethics policy to broaden the definition of professional misconduct to include sexual harassment. In light of the change made by AGU, some have called for science agencies to change their definition of research misconduct to include sexual harassment. In your view, how would the expansion of NSF's definition of research misconduct to include sexual harassment affect efforts to prevent and respond to incidents of sexual harassment within the sciences? Do you endorse such a change in definition?

   Answer: The NSF definition of research misconduct used to be interpreted to include sexual harassment. As Ellen Sekreta writes in her 2006 paper on the topic, the definition only changed after it was used to rescind the funding of a particular scientist for alleged rape and quid pro quo harassment. The move to rescind funding and bar him from applying for NSF funding for five years led to criticism about this interpretation of their definition of research misconduct. The Office of Science and Technology Policy then began to use a more narrow definition of research misconduct that did not include any room for interpersonal misconduct, and soon after NSF's definition narrowed in a similar fashion. In her article, Sekreta writes,

   > "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 social norms. This suggests that female researchers should be able to separate their career in the sciences from any sexual harassment they experience as a result of the hierarchal culture in their profession, despite the fact that their professional success depends on their ability to succeed within that very culture. Thus, a professor can sexually harass someone and remain a "good" scientist, while a "good" female scientist who complains of sexual harassment and is retaliated against will likely find that her career has been derailed. In addition, universities that profit from large amounts of federal funding are motivated to dismiss, ignore, or hide sexual harassment complaints against their most powerful professors, so that the complaints do not interfere with the professors' scientific credibility and their reputations remain secure."

I concur with this interpretation, and endorse a change to NSF's original interpretation of research misconduct to include sexual harassment. I would add that it should further interpret interpersonal misconduct such as incivilities, bullying, and selective forms of harassment such as racial harassment and harassment of LGBT folk as research misconduct for the same reason. Interpersonal mistreatment harms the enterprise of any workplace where it occurs, and the sciences are no exception.

2. Women of color often bear the double burden of racism and sexism. Your survey revealed that 40 percent of women of color in astronomy and planetary science feel unsafe at work because of their gender. How does sexual harassment affect women of color, specifically? What concrete measures can be taken to ensure women of color are not overlooked in the movement to address sexual harassment in the sciences? How can we work to ensure this double burden does not deter women of color from pursuing science careers?

   Answer: Women of color face negative workplace experiences in the workplace at greater rates than white women (Berdahl and Moore 2006, Kabat-Farr and Cortina 2012, Cortina, Fitzgerald, and Drasgow 2002, Cortina et al. 2013, Clancy et al. 2017). In the sciences, women of color are often a lower rank than white women, and independent of rank feel they have less influence than white women (Settles et al. 2006). What's more, negative workplace experiences have profound negative consequences for women of color in the sciences: they are more likely to report feeling unsafe in the workplace (Clancy et al. 2017).

   The experiences of women of color can be especially overlooked in cultures where hostility is assumed to endemic and experienced by everyone, which is often the case in the sciences. Yet, even in workplaces where workers perceive incivilities to be general, research has shown that they are in fact targeted at more select groups, most of all women of color (Cortina et al. 2013). Racial harassment and anti-diversity attitudes have become increasingly subtle in the workplace, sometimes measurable only by the decreased length of time a worker looks at a Black colleague, or in the increased physical distance created by a white worker towards a Black colleague (Hebl, Madera, and King 2008). Many people "know" they are not supposed to hold racist beliefs, so the way they manifest racist behavior is through selective forms of exclusion. As with incivilities and sexual harassment, racial harassment's more nebulous forms may not seem severe, but they are in fact psychologically distressful, especially when combined with sexual harassment (Buchanan and Fitzgerald 2008).

   Structural inequalities in academia have been documented across multiple identity groups, in terms of service obligations, feelings of influence (Settles et al. 2006), pay

injustice (Carvajal, Armayor, and Deziel 2012, Broyles 2009), and office and laboratory space (MIT Committee on Women Faculty 1999). When interpersonal incivilities or harassment are tied to physical space, resources, or promotion consequences, they can have a profound impact on the careers of women of color science faculty.

The main way to ensure women of color are not overlooked, and that they continue to make important contributions to STEM is to ensure that their voices are heard by putting them in positions of leadership where they have enough resource and support to succeed. Many of the social movements in the United States were started by and kept functioning by the tireless work of women of color, even if our history books do not recognize their contributions and leadership. The best thing many can do is listen, step out of the way, and promote their words. This also means creating incentives to admit women of color as cohorts in STEM graduate programs, and hire them as cohorts as well. Admitting or hiring them one at a time keeps women of color isolated and without a safety net.

3. A particularly vulnerable population within the sciences is international students and postdocs in the country on work visas. What are the unique challenges international students and postdocs face when trying to report sexual harassment? What can be done to ensure international students and postdocs are protected?

   Answer: International students and postdocs are very vulnerable populations in STEM. They are often paid less than their American peers for the same work, they are pushed to work more hours, and they live in fear of losing their visa status and having to end their training. Pay injustices are starting to be resolved, at least at the postdoctoral level, thanks to some pay minimums set during the Obama administration. This also decreases a postdoc's reliance on one PI. But more recently, many cannot travel home for the entirety of their training because they are not guaranteed they will be allowed back into the US, despite their legal and documented status.

   This particular vulnerability puts international students and postdocs at risk of retaliation should they ever report sexual harassment. Issues of international and immigrant workers are not my area of expertise, but my informed opinion is that this vulnerability comes from the ways these visas are arranged at universities. I am not sure if it is a national trend, but at my university, the PI sponsors an international student's visa, not the university itself. This is the nature of the training environment because you are technically working "for" that person. The problem is, should you ever have a problem with your PI/sponsor, they can fire you and you can lose your visa. This gives the PI disproportionate power over international students and postdocs when it comes to mistreating them, silencing them, or retaliating against them if they speak up about injustices in the lab.

Therefore, one potential solution might be to figure out a way to have work visas operate more explicitly within the confines of the university rather than within each laboratory. The work visa signatory could be the university, with then the work visa could specify which lab the trainee is in. More buttressing of administrative support would mean more steps for the PI to take before they are allowed to fire someone from their lab, which would allow for more due process and create better protections against retaliation. And outreach towards international trainees would help them learn their options if they ever do encounter a problem.

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Responses by Ms. Kristina Larsen

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"A Review of Sexual Harassment and Misconduct in Science"

Ms. Kristina Larsen, Attorney, Law Office of Kristina K. Larsen

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. The American Geophysical Union recently updated its ethics policy to broaden the definition of professional misconduct to include sexual harassment. In light of the change made by AGU, some have called for science agencies to change their definition of research misconduct to include sexual harassment.

   Do you endorse such a change in definition?

   Answer: Yes, I do believe science agencies should expand the definition of scientific/professional misconduct.

   However, as AGU's Scientific Integrity and Professional Ethics policy does, any revision of scientific/professional misconduct policies should address more than sexual harassment.

   As I testified, the hostile conditions that many women and underrepresented individuals will face is very often far more complex than what the law currently defines (or most people understand) "sexual harassment" to be.

   AGU's policy appropriately considers any form of "unethical and biased treatment of people" as scientific misconduct (page 12), which includes discrimination or harassment by any means (including sexual harassment), but also bullying and abusive conduct such as "threatening, humiliating, coercive, or intimidating conduct that causes harm to, interferes with, or sabotages scientific activity and careers.

   This latter form of conduct is especially important for funding agencies to address because funding, and equipment and other items purchased with that federal funding are often the "tool" used to sabotage, threaten, or intimidate someone more junior.

   I believe this broader definition is appropriate because, as AGU's policy states, ALL of this conduct – discrimination, harassment of all kinds and bullying conduct "reduces the quality, integrity, and pace of the advancement of science by marginalizing individuals and communities. It also damages productivity and career advancement, and prevents the healthy exchange of ideas" (page 8).

In your view, how would the expansion of NSF's definition of research misconduct to include sexual harassment affect efforts to prevent and respond to incidents of sexual harassment within the sciences?

Answer: A revision of NSF's policy that expands the definition of research misconduct to include any form of unethical and biased treatment of people could be one of the most important ways in which to prevent and respond to the forms of conduct that are, in my opinion, driving women and underrepresented individuals out of STEM.

Funding is not only the life blood of most scientists, it is also the source of a great deal of the abuse causing career damage to others, and it is one of the primary ways in which one obtains "power" and "influence" in their field.

In order for a policy change like this to be effective however, I believe there would need to be a way for individuals to report, and for investigations into allegations of scientific misconduct based on unethical and biased treatment of people, to be handled centrally rather than at the institution level.

I am not certain universities would be appropriately motivated to conduct these investigations given the potential consequences to the institution, but more importantly it would be important to ensure consistency in the standards and practices employed for these types of investigations given the serious consequences.

While I believe this change is critical as both a deterrent to abuse and a means for remedying it once it has occurred, for this change to be impactful the consequences imposed would need to fit the conduct identified, and the consequences should become more significant if warnings are ignored or patterns of conduct are identified.

2. A particularly vulnerable population within the sciences is international students and postdocs in the country on work visas.

   Answer: Yes, they are.

   What are the unique challenges international students and postdocs face when trying to report sexual harassment?

   Answer: There are many challenges. The first is they are extremely isolated. They are typically brought here to work in one specific lab and therefore don't have the benefit of a large network of peers or mentors in close proximity to ask for guidance or with whom to calibrate their experience with others. While many universities do what they can to create community for international scholars, often these communities are other international scholars.

This isolation makes navigating the complex processes for reporting even harder, not to mention for many a language barrier on top of that makes understanding the process and standards of proof near impossible.

Because of their appointment type, many also fall into a type of "no man's land" in which they are not considered employees or students. So, they can get bounced around between different offices. Some are even told (erroneously) they have no rights at all.

I represented an international postdoc who was horribly abused by her PI (I spoke of her in my Testimony, page 11). When I explained to her she had rights she was totally surprised. She had been made to believe by the PI but also by others in the department and in other offices on campus that she did not have any rights.

For the few who may figure out how and to whom to report there is still the matter of what to do if discrimination or harassment is found. What should happen is the PI told to treat the postdoc better and consequences be imposed on the PI to ensure they comply. However almost always the solution is to work around the abuser, and so the resolution will be to move the post doc.

As I mentioned in my testimony though, universities have no obligation to rehabilitate someone's career so it will be entirely up to the international student to figure out how to move on, and without any incentive it may be hard to convince another PI to take on the responsibilities and the costs associated with hiring a foreign student or postdoc.

Given that the end result of complaining is almost always the necessity to go back to their home country rather than to be able to continue the work they came here to do, they will almost always take the abuse rather than report.

What can be done to ensure international students and postdocs are protected?

Answer: This is another area where I believe funding agencies and professional societies can play an important role. International students need a dedicated advocate to help them understand their rights. But they also would benefit from being able to report abuses to the funding agencies directly.

3. While low rates of sexual harassment and assault are often seen as evidence of a healthy environment, in some cases, this may be a sign that an institution is failing to provide sufficient resources for victims of sexual misconduct, or that it is perceived by victims to discourage reporting.

    a. Are low rates of reported harassment and assault perceived as a sign that the problem does not exist at a particular institution?

    Answer: In my personal opinion the low rates of reporting, at least among faculty and students, has more to do with a strong belief (unfortunately justified) that doing so isn't going to change anything, or, usually based on having seen someone else try and suffer the consequences, will likely only lead to more retaliation against them or result in them suddenly becoming labeled as a poor performer.

    It is also a result of how hard it is to figure out how and where to report since it is the sole responsibility of the victim to figure out exactly what is happening to her, where to report that specific type of conduct (i.e. discrimination to one office, sexual harassment to another, retaliation to yet another, and so on), and how to present her case given the standards provided for each in that specific policy.

    For example, since the Hearing in February, the client who I spoke about at UCLA who has tried to report discrimination, harassment and retaliation more than 90 times to more than 20 different individuals or offices (see Testimony, page 8), was told last week – nearly 8 months after she thought she had finally figured out how and where to file a formal grievance – that she had filed her retaliation complaint with the wrong office and now needed to fill out yet another form and report that piece of her complaint to another office. Her response, which I agree with 100%, is that she is experiencing "death by a thousand processes."

    How should numbers of complaints of sexual harassment and assault be used to inform efforts to reform processes for reporting and investigating sexual harassment and assaults?

    Answer: I am not optimistic this can be done at an institutional level for the simple reason that institutions do not have a consistent definition of what a "complaint" even is, let alone any really good way of knowing how many are made.

    This is in part due to the "disconnect" I described in my testimony (see page 3). Women believe they are "complaining", but the person they

are complaining to does not interpret it as anything they should/could take action against, report up the chain, etc. Even when they do report it up the chain usually nothing happens with those reports.

It is also partly because, while a woman will experience a complex set of actions and inactions which are a combination of discrimination, harassment, retaliation, bullying, etc. that she cannot necessarily separate out easily, institutions often require different types of conduct be reported to different offices, sometimes even further divided by whether you are student, staff or faculty.

These offices may not be required to coordinate with each other. So, retaliation goes to one office, discrimination based on race to another, discrimination based on disability, another, gender based complaints to Title IX, etc.

Even when you find the right office, the focus on informal resolution means that the individual may feel they have reported but the institution does not, as was the case at the Smithsonian Institute. In that case the victim reported the incident, which involved unwanted physical contact, to her advisor the day after the incident, he in turn reported it to the EEO office. It was only much later that she learned her "report" had not been considered a "formal" report, and no investigation initiated or any action taken against the perpetrator.

So, if you ask a person experiencing discrimination, harassment, retaliation and/or bullying and abuse of power, they will likely tell you they have complained numerous times, whereas the institution may not have a record of even one "formal complaint".

One idea for determining whether or not reporting and investigation processes are working at an institution level is for perhaps a funding agency or professional societies to develop surveys for individuals to ask if, at an individual level, they feel they have experienced discrimination, harassment, sexual harassment or bullying that they believe has impacted the content, veracity or meaning of their research findings, or that has affected the planning, conduct, reporting or application in their professional, research and learning environments (I would suggest using AGU's definitions of discrimination, harassment, sexual harassment and bullying (page 8) as these definitions accurately reflect how these forms of conduct manifest themselves in academia).

If the answer is yes, they could be asked if they understand how to report at their institution, if they had reported, and was the outcome of doing so satisfactory. If they have not reported, it would be interesting to understand why they did not. This feedback could be provided to institutions in order to help them improve their processes.

This is an ambitious endeavor and perhaps unrealistic (and versions of this already exist in some places), but without really understanding how many individuals believe they have something they could complain about, and how many times they've tried to do so without success, it is impossible to really know if the institution's low numbers are because they are doing a good job, or because individuals choose not to utilize confusing or ineffective processes.

One data point that I do not believe is good indicator of success is the number of "findings" of sexual harassment. As I stated in my testimony (see Page 15), I applaud the NSF's bold requirement that institutions report findings of sexual harassment to them. However, I worry this may inadvertently result in universities less often "finding" sexual harassment in the first place. The outcome of the recent sexual harassment case at the University of Rochester illustrates how easy it is to find conduct that detrimentally impacts many women to still not to violate their policy.

It may be more effective for funding agencies to create reporting portals centrally, especially because many serial abusers move from one campus to the next before there can be a "formal" finding.

Again, I thank you for the opportunity to share my thoughts and experiences, and those of my amazing and brilliant clients, with the Committee and hope this additional information is helpful in pursuing our common goal of assuring women succeed in STEM.

Responses by Ms. Christine McEntee

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"A Review of Sexual Harassment and Misconduct in Science"

Ms. Christine McEntee, Executive Director, American Geophysical Union

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. The American Geophysical Union recently updated its ethics policy to broaden the definition of professional misconduct to include sexual harassment. In light of the change made by AGU, some have called for science agencies to change their definition of research misconduct to include sexual harassment. In your view, how would the expansion of NSF's definition of research misconduct to include sexual harassment affect efforts to prevent and respond to incidents of sexual harassment within the sciences? Do you endorse such a change in definition?

   Answer: The National Science Foundation (NSF), as one of the primary sources for research grants for many scientists and institutions, is in an especially strong position to help combat sexual harassment in the sciences. AGU commends NSF for its proposed policy, which makes significant strides towards addressing and preventing sexual harassment. That policy is now open for public comment, allowing stakeholders to suggest ways to improve the policy. AGU has encouraged our members to contribute as well.

   AGU looks forward to seeing the final NSF policy implemented, and certainly is encouraging other organizations and agencies to work toward making similar changes soon. With stronger policies in place, we can all be more effective in eradicating this damaging behavior. However, the policies that we implement today will need to be reviewed over time and updated to ensure their continued effectiveness. AGU plans to do this for our own policy, and we think it would be good practice for other organizations as well. Again, we will need everyone to work together if we expect to see the culture change we desperately need.

2. The American Geophysical Union has taken on a leadership role in pioneering a number of interventions to address sexual harassment head on. Other societies like the American Astronomical Society and the American Association for the Advancement of Science are also working hard to implement and promote meaningful change. Most societies are not as far along. Can you talk about the communication and coordination between science societies on the issue of sexual harassment? Is more coordination needed? Do large societies have a responsibility to share information and provide guidance to smaller societies on how they address sexual harassment?

   Answer: The National Academies of Science, Engineering, and Mathematics has convened a sexual harassment panel that will be issuing a report with recommendations for combatting harassment. AGU is looking forward to the release of the report, which we believe will be a valuable addition to the societies' efforts and that insights can be applied to our coming Ethics and Equity Resource Center.

   Scientific societies are in a good position to help foster the culture change needed to make the scientific community fundamentally more welcoming to women and other vulnerable groups. For one, we are a source of resources that are important for scientific careers – from journal publications to honors and awards – which can serve as a strong motivator of change. For another, we are well placed to provide education and resources to individual scientists and other institutions. Societies that are leaders in the space of sexual harassment and other workplace climate issues can certainly serve as an example and offer guidance to other organizations and communicate to the entire scientific community that this type of behavior is unacceptable.

   That said, AGU is not leading by example alone. AGU encourages other agencies, societies and universities to review and strengthen their policies regarding harassment and discrimination. No one solution will work for every organization, but we can learn from each other in tackling this issue as a community. AGU has led conversations and responded to inquiries from other science societies across disciplines who want to strengthen their own policies. This helped to drive our decision to develop the Ethics and Equity Resource Center, a place where organizations can to come together to share resources and best practices.

3. A particularly vulnerable population within the sciences is international students and postdocs in the country on work visas. What are the unique challenges international students and postdocs face when trying to report sexual harassment? What can be done to ensure international students and postdocs are protected?

   Answer: International students and post-docs working in the U.S. do face potentially unique challenges in regard to reporting harassment, including language and cultural barriers, lack of support networks, unfamiliarity with national laws, and a lack of knowledge about their rights when reporting harassment. Therefore, when reviewing and updating harassment policies, it is important to get the perspective of individuals from diverse backgrounds.

   To update our own policies, AGU leadership, in 2016, under then-AGU President Margaret Leinen, tasked a panel with reviewing the organization's ethics policy and practices. The Task Force included an AGU Past President, members from AGU Council and Board, and members with experience as scientific integrity officers and who had experience in authoring ethics policies for scientific organizations. Task Force members were from different geographical regions in the U.S. and internationally and represented a range of scientific disciplines. Through the input of this diverse task force, we were able to broadly strengthen our policies.

   The updated policy applies to all AGU members, staff, volunteers, contractors, and non-members who participate in AGU programs—including participants in the AGU Honors and Recognition program, meetings, publications, and governance. Therefore, we encourage any AGU member, including international students and post-docs, to follow AGU guidelines for filing complaints if they feel that someone has violated our policy.

   In addition to strong policies, AGU has implemented programs to combat sexual harassment. For example, SafeAGU helps to set standards for acceptable behavior at AGU-sponsored events and provide a safe space for all of our members, including our international members, to report harassment at our meetings. With programs like these, and other trainings and resources, AGU hopes to change the culture in the scientific community and ensure that our scientists, regardless of their background, feel supported.

4. Many of the policy interventions being discussed are reactive – seeking to make reporting and investigative processes more accessible, transparent, and responsive. In your view, what are proactive measures that can help foster a more welcoming culture within the sciences to prevent sexual harassment from occurring in the first place?

Answer: AGU and other scientific societies that adopt strong policies on workplace climate issues – including against harassment – can motivate others in the community and clearly communicate that these behaviors are a detriment to the scientific enterprise and society as a whole. AGU is committed to serving as a leader on this issue not only by adopting our ethics policy, but also by working with other groups as they review and update their own related policies.

Providing educational resources and implementing trainings and workshops are additional ways science societies can galvanize needed culture change. AGU's Ethics and Equity Resource Center, AGU-facilitated workshops, and the SafeAGU program – which promotes a culture of safety at AGU events – are intended to provide members and the scientific community with new tools to help address and eliminate sexual harassment. At the same time, they are designed to help raise the visibility of the issue within our community and reinforce our expectations for professional behavior.

AGU also recommends using positive incentives to help drive culture change, such as recognition or certifications for institutions or academic departments that publicly measure their progress towards positive work-climate and gender equity issues.

Further, AGU is working to encourage new and ongoing partnerships among scientific societies. These partnerships allow us to share resources and tools to help each other identify policies and programs that will be effective in making further progress towards eliminating and addressing sexual harassment.

AGU will also continue to work with other institutions, including federal science agencies and Congress, to foster culture change within the scientific community. AGU cannot stress enough that we will need everyone at the table if we are to eliminate sexual harassment in the sciences and society more broadly.

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