



# Scientific Workforce Diversity Seminar Series Proceedings

How Do Research-Active  
Institutions Impact the Diversity  
of the Scientific Workforce?

November 30, 2023

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# Executive Summary

This document summarizes the proceedings of “[How Do Research-Active Institutions Impact the Diversity of the Scientific Workforce?](#),” a [Scientific Workforce Diversity Seminar Series](#) (SWDSS) event. The National Institutes of Health (NIH) [Chief Officer for Scientific Workforce Diversity](#) (COSWD) office hosted the seminar on November 30, 2023. Marie A. Bernard, M.D., COSWD, moderated a panel discussion on the critical role Research-Active Institutions (RAIs) have in enhancing scientific workforce diversity. The discussion examined the strategies RAIs employ to achieve student and faculty success in science, technology, engineering, mathematics, and medicine (STEMM) and how NIH and other funders might better partner with and support RAIs to expand their impact.

Darryl Monteau, Ed.D., Associate Director of Mission Programs Native Initiatives, Society for Advancement of Chicanos/Hispanics and Native Americans in Science, was invited but unable to participate in the seminar at the last moment. Dr. Monteau was to represent viewpoints from Tribal Colleges and Universities (TCUs).

This document details the main points from the speakers’ presentations and the subsequent question-and-answer session. [The seminar recording](#) and [panelists’ presentation materials](#) are on the COSWD website.

## The seminar featured the following panelists:



**S. Keith Hargrove, Ph.D., M.B.A.**

Provost and Senior Vice President for Academic Affairs,  
Tuskegee University, Alabama



**Omar S. López, Ph.D.**

Associate Professor, Department of Occupational, Workforce and  
Leadership Studies, Texas State University



**Halaevalu F. Ofahengau Vakalahi, M.S.W., Ph.D.**

President and CEO, Council on Social Work Education



**Nafeesa Owens, Ph.D.**

Assistant Director for STEM Education and Workforce, White House Office  
of Science and Technology Policy, Executive Office of the President



## Opening Remarks

Marie A. Bernard, M.D. – NIH COSWD

**Dr. Bernard welcomed participants to the seminar, which focused on how RAIs contribute to scientific workforce diversity. NIH defines an RAI as an institution that:**

- Has a documented mission to serve populations underrepresented in biomedical and behavioral research
- Awards degrees in the health professions or the sciences related to health or in STEM fields, including social and behavioral sciences
- Has received an average of no more than \$25 million (total costs) in NIH Research Project Grant support for the past three fiscal years

RAIs include Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), and minority-serving institutions (MSIs) of higher education in keeping with the [CHIPS and Science Act of 2022](#).

**Dr. Bernard polled the audience to learn more about who was in attendance:**

- When participants were asked about preferences for information regarding the impact of RAIs on scientific workforce diversity, responses varied: 30% responded “what’s happening at NIH to support these institutions,” 25% reported “barriers and opportunities in contributing to the STEMM workforce,” 21% reported “effective institutional factors to develop a diverse scientific workforce,” 15% reported “how funders might better partner with and support RAIs,” and 9% reported “data evaluation demonstrating the impact of RAIs.”
- When participants were asked to provide the type of RAI they were affiliated with or represented, <1% reported TCUs, 4% reported multiple affiliations (HBCU, MSI, rural institution), 7% reported academic leadership, 11% reported HBCU only, 13% reported MSI, 15% reported faculty, and 71% were unaffiliated.
- When participants were asked to provide their job title, 50% reported federal employee, 22% reported other, 5% reported institutional diversity officer or representative, and <1% reported student.

Dr. Bernard noted that Darryl Monteau, Ed.D., Associate Director of Mission Programs and Native Initiatives, Society for Advancement of Chicanos/Hispanics and Native Americans in Science, accepted the invitation to participate in the seminar and provide viewpoints from TCUs. However, Dr. Monteau was unable to participate at the last moment.



## Tuskegee University: Mission-Driven Transformative Research in Health Disparities for Minority Populations

S. Keith Hargrove, Ph.D., M.B.A., Provost and Senior Vice President for Academic Affairs

Dr. Hargrove discussed NIH funding that supports research and development at HBCUs and other MSIs. NIH has developed initiatives to address funding disparities for these institutions, including the [Path to Excellence and Innovation Initiative](#), the [HBCU Portal for Acquisition and Grants](#), and the [Biomedical Engineering, Imaging, and Technology Acceleration Program](#).

Dr. Hargrove mentioned that most HBCUs were established either via the state or through private sponsorship between 1865 and 1900. The first Morrill Land-Grant Act (1862) established land-grant colleges in the U.S. North and West, while the second Morrill Act (1890) created many HBCUs to provide higher educational opportunities. Today, there are 101 HBCUs in the United States, and one-third of HBCU graduates are science, technology, engineering, and mathematics (STEM) majors. Further, one-third of all STEM Ph.D. recipients received their bachelor of science degree from an HBCU.

Tuskegee University was founded in 1881 by Booker T. Washington. It emphasizes STEM degrees and is the only HBCU designated as a National Center for Bioethics in Research and Health Care. Currently, Tuskegee has \$71 million in research funding, with state and private monies comprising close to 40% of the total funds. Dr. Hargrove highlighted the recent \$25 million award Tuskegee University received from NIH focused on health disparities. This funding is part of the Research Centers in Minority Institutions (RCMI) and directly targets the Center for Biomedical Research.

Tuskegee has a group of researchers who study health disparities in an area of south-central Alabama with many underserved communities with health challenges and limited health care access. This region is known as the Black Belt. Tuskegee focuses on obesity and breast and cervical cancer in populations in this region. The NIH RCMI funding helps to establish, maintain, and sustain research infrastructure to support biomedical research conducted by Tuskegee faculty. Researchers also seek to build trust and establish relationships with local communities and organizations to educate Black Belt communities about the health issues that affect them.

Tuskegee leverages RCMI funding by connecting with other NIH awards and research areas to strengthen its impact, including a partnership with the University of Alabama at Birmingham.



## Minority-Serving Institutions Within the Context of STEM Occupations

Omar S. López, Ph.D., Associate Professor, Department of Occupational, Workforce and Leadership Studies

Dr. López drew on three studies<sup>1,2,3</sup> to answer two questions:

- What occupational artifacts undermine STEM workforce diversity?
- What can MSIs do to overcome these occupational artifacts to enhance STEM workforce diversity?

Dr. López reviewed two labor investigation studies that examined wage determinants of members of underrepresented groups in STEM and non-STEM occupations. The third study focused on language economics based on occupational information network databases from the U.S. Department of Labor. Dr. López began by discussing what the basic regression models from the labor market studies revealed, starting with how wages change in relation to malleable characteristics compared to White males. The least malleable characteristics are those that people have little control over, such as age, race, and sex. Somewhat malleable characteristics include hours worked, disability status, and employment sector. The most malleable aspects are education and having a STEM degree or STEM occupation. Dr. López's data suggest higher wages relate to the possession of a STEM degree and whether an individual is employed in a STEM or non-STEM occupation.

Dr. López followed with an example of a model that can be created with this data. He discussed using it to determine

what wage multipliers exist—for example, having a STEM degree—relative to the salary of a White male working in the private sector. The key takeaway is that wages are determined by whether a worker has a STEM degree and is working in a non-STEM or STEM occupation. However, wage disparities exist for those who are not White males. For example, a Hispanic individual with a bachelor's degree in STEM will earn less than a White male with the same degree. A Hispanic individual must earn a master's degree to earn comparable wages.

Dr. López also described how individuals from underrepresented groups with STEM degrees are frequently lost to non-STEM occupations. For example, out of every four Black individuals who graduate with a STEM degree, only one is employed in a STEM occupation. By education level, the most losses of individuals to non-STEM fields occur at the master's level, followed by the bachelor level.

Dr. López discussed the implications of these studies for MSIs beyond continuing to educate and prepare STEM graduates from underrepresented groups for the STEM workforce. Dr. López suggested that institutions must invest more in social capital for these individuals, such as job networking and salary negotiation skills, that can help foster a successful STEM career. Data indicate that a second essential skill for STEM graduates is a strong command of the English language.

The final skill MSIs and other institutions can support relates to life tools, such as determining work-life balance in a STEM occupation.



## Halaevalu F. Ofahengaue Vakalahi, M.S.W., Ph.D.

President and CEO, Council on Social Work Education

In her role as reactant, Dr. Vakalahi commented on the presentations by Drs. Hargrove and López. Dr. Vakalahi first described the Council on Social Work Education (CSWE), a national organization with approximately 900 accredited programs in the continental United States, Guam, Hawaii, Puerto Rico, and the Virgin Islands.

She then described the three key takeaways from the presentations as follows:

- The STEM education pipeline is leaking, and career paths to the scientific workforce are often inaccessible.
- Diversifying the scientific workforce is about equity, better outcomes, and competitiveness on the world stage.
- NIH has built a strong foundation through various interventions, which now require expansion.

Dr. Vakalahi suggested that the endless contributions of RAIs to STEM education that were described in the seminar can help NIH enhance scientific workforce diversity. For example, RAIs have a history of activism and addressing structural racism. RAIs also have strong community engagement and trust, an essential resource. RAIs generate top STEM workforce talent and economic growth in communities. Return on investment through RAIs is massive, including through the undergraduate and graduate STEM degrees awarded. Science from these institutions provides reverse engineering through community impact, starting with community impact in mind. However, factors

still undermine progress, including racial discrimination, challenges with career advancement, and lack of compensation parity.

Dr. Vakalahi had recommendations for NIH to consider in creating new opportunities for RAIs and enhancing scientific workforce diversity, suggesting the following three actions:

- Employ a mirrored perspective to improve public health, gauge culturally responsible and community-informed responses to needs, and address racism.
- Consider impact investment to expand the strengths of RAIs, such as investing in collaborations that support research capacity or investing in and scaling up bridge programs that facilitate the transition to the STEM Ph.D. level for undergraduates and master's-level students.
- Build the comprehensive capacity of people and space by providing sufficient resources for research infrastructure, targeted recruitment, and mentoring networks.

She concluded with four questions for NIH to consider: What can NIH offer to the next generation? How can NIH further incentivize the participation of underrepresented groups in the scientific workforce? How can NIH integrate social work research and knowledge into its programs? How can NIH leverage the national reach of organizations like CSWE?



## Nafeesa Owens, Ph.D.

Assistant Director for STEM Education and Workforce,  
White House Office of Science and Technology Policy,  
Executive Office of the President

In her role as reactant, Dr. Owens began by describing the White House Office of Science and Technology Policy (OSTP). The National Science and Technology Policy, Organization, and Priorities Act of 1976 established OSTP. Part of OSTP's broad mission is to ensure equity, inclusion, and integrity in all aspects of science and technology. Dr. Owens also noted President Biden's commitment to equity in science and technology through Executive Orders<sup>4-9</sup> and [other equity-focused actions](#).

Dr. Owens highlighted three critical takeaways from the seminar:

- Barriers continue to prevent equitable participation in STEM fields, preventing the U.S. innovation ecosystem from achieving its full potential.

- The U.S. STEM ecosystem is unparalleled in size, scope, and impact. Its success will lead to the world's greatest discoveries, advancing economic growth and social progress.
- It is imperative that RAIs be seen and valued as part of the U.S. STEM ecosystem by leveraging federal government resources and tapping into and developing STEM talent.

Dr. Owens discussed the contributions and connections from the National Science and Technology Council's Committee on STEM (CoSTEM), which works to address these issues. CoSTEM is responding to the CHIPS and Science Act of 2022, focusing on a range of support services, such as increasing the capacity of RAIs to compete effectively for grants, contracts, or cooperating agreements and encouraging RAIs to participate in federal programs.

Dr. Owens closed by sharing two CoSTEM resources: [Best Practices for Diversity and Inclusion in STEM Education and Research: A Guide by and for Federal Agencies](#) and the [2022 Progress Report on the Implementation of the Federal STEM Education Strategic Plan](#).



# Question-and-Answer Session

## Q. What are the most important strategies for diversifying the scientific workforce that institutions should consider implementing?

**Dr. Hargrove:** It is important for strategies to fit the organization. The mission of Tuskegee University is to educate underrepresented students in STEM fields. Educational institutions should be intentional and aggressive in recruiting and graduating this population. We should also look for ways to collaborate with other major institutions that may have more resources that can impact unmet subpopulation needs. For example, Tuskegee is working with the University of Alabama at Birmingham to fund five endowed professors who serve both institutions. NIH, other federal sources, and corporate donors finance this endeavor.

To expand the population of STEM professionals in health care and other areas, we first must seek collaborations with other institutions that may have more resources. Second, we must be intentional and aggressive in serving, recruiting, and graduating this population. Last, I have to shout out the dedication of the faculty here at Tuskegee University, but it mirrors the dedication of all the faculty at HBCUs, TCUs, and MSIs. These are some of the most dedicated individuals you can find in higher education, and they are committed to replicating, reproducing, and replacing themselves with professionals who will hopefully follow them and work in the health care industry.

**Dr. López:** MSIs are trying to recruit, advise, and prepare the next generation of students, but they cannot control outcomes after graduation. People make decisions for many different reasons. They are also affected by the decisions of employers. Are those decisions related to discrimination? Maybe. But it might also have to do with the decisions that people make about where they want to live, how they want to live, and where they are willing to go.

The most I see us being able to do is prepare well and empower each person we graduate to do the things

I outlined, to have the social capital to know how to network, negotiate, and communicate properly. That is what our charge should be, and we should be doing more in these areas.

We are doing it through internships and mentoring. Those are very valuable. But at the end of the day, it's the results that count. What percentage of the data that you see is because they have been discriminated against? Or that they were too weak in communicating that they needed more money, that it was not fair? I don't know. But what I can tell you is that, if we are going to make a dent in diversifying our STEM workforce, we are going to have to empower everyone with the ability to negotiate, to have these skills, while building a life of purpose.

But we need training and development, because we are not very comfortable talking about the kind of things that make us human. When we say, 'I have a passion for science,' what does that really mean? How do you express it? These are the things we need to focus on as faculty for our students. I believe that we can deliver that, but we are going to need resources and development. It will have to take a different focus on the agenda that I see. It's not just about instrumentation and building centers. Yes, that's important. But we must do more, and that's what I'm recommending.

**Dr. Vakalahi:** There is still a designated role for the scientific workforce, but we cannot forget the beginning part of it, when we are recruiting students. We must expand the effort by investing our time and money. I also suggest looking at an organization's national reach, because that might be a place where you can start in terms of recruitment.

I know that a lot of the programs CSWE is involved in go back to the community, because that's our passion. That's why we do what we do. Maybe that's where the partnership needs to go, as well. Students coming in now really expect social justice. They are pursuing community-based experiences in our academic institutions. Perhaps

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we have to listen to what they're saying, because otherwise, we won't build a pipeline that is strong enough for them to get on the path that takes them to the next level of their career.

Dr. Owens: Success doesn't happen in isolation. It's not a siloed process. The problems people face are often complex and far-reaching throughout their lives in many ways. The barriers are not just one and done. We need multilevel, multisystem approaches to help students and faculty address the barriers they face in becoming successful.

HBCUs, TCUs, and MSIs absolutely need to connect with the federal government. But also, how do we bring industry into these conversations? How do we bring other community players and leaders into these conversations? How do we make communities and families a part of the solution?

Regarding the need for constant communication, it's not just one person or group of individuals who need to speak about their needs. Students have to say what they need and connect to the government. We need public forums, so that, no matter where you are in this ecosystem, you have the opportunity to convey what you need to be successful.

It is important to build relationships, trust, and a bidirectional, ongoing exchange of ideas and best practices. Where are things working? Because some of these things are happening and there is success, but we don't know about it because we're not sharing it. Often, you may be looking for something, and you're not quite finding it, but there's somebody out there who has that resource or spark that can set motion and momentum in the right direction. So, always be open to building opportunities and removing barriers for us to share and achieve communal success.

**Q. Can you describe some of the challenges you think RAIs face with research infrastructure and possible ways to mitigate these challenges?**

**Dr. Vakalahi:** Infrastructure is critical for success and can be built and sustained. That's the good news. It's not something that is so abstract that we cannot build it. Building infrastructure requires money, of course, but it also requires people who are committed to it.

For example, a few years ago, Morgan State University (MSU) offered to help Hawaii Pacific University (HPU), where I was, build research infrastructure by replicating their biomedical student research center, which is one of the crown jewels in their ASCEND Program. They received a BUILD Grant, but all the money that came into HPU stayed at HPU. MSU just assisted with the process. They did that because they are champions of students. So, yes, infrastructure requires money, but it also requires the dedication of people who are doing it because they take responsibility for giving the next generation a chance to come into the pipeline and pursue a career in the scientific workforce.

So, my advice for people looking to build infrastructure is to pursue a partnership with others who are willing to because they want to help the next generation. Of course, also pursue relationships with partners who can help get the money needed to start building that infrastructure.

**Dr. Owens:** There is a need for funding, and it is important to leverage community and consortium resources, as not all research must be conducted by a single institution. Partnering with research centers or consortiums is one way to build infrastructure. Also, we should remember that research infrastructure also includes staff who are not doing the research. Support staff are needed to assist with grant writing, technology transfer, and contracts. There are federal resources and opportunities to grow infrastructure capacity, but we have more opportunities to grow that capacity. We should also make sure that folks are aware of opportunities to support research capacity or research infrastructure.

**Dr. Hargrove:** First, HBCUs, TCUs, and MSIs are challenged to create an organizational structure that

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rivals more established, well-known research institutions, such as Johns Hopkins University. In some ways, that's a resource constraint, but it's also a matter of finding subject matter experts.

Second, industry plays a role by investing in RAIs. For example, Boston Scientific has made a commitment to invest in HBCUs and other MSIs. Industry should step up and do this, why? Because graduates from these institutions eventually end up working for Boston Scientific. So, how about collaborating on the front end to work together and conduct research supported by NIH and the National Science Foundation and other organizations? Collaboration between educational institutions, the federal government, and industry is needed to produce a continuous process, rather than coming in at the end of the process.

Lastly, there are gatekeeping policies in place that stifle the opportunity to obtain funding from NIH and other sources. There's a self-check, or self-evaluation, that needs to be done at these organizations. You can promote an initiative like the one I mentioned, the Biomedical Engineering, Imaging, and Technology Acceleration Program, and that's great. But, internally, how does that process work if Howard University responds to that? Or Texas State University? We need a review process that is fair and consistent and that provides the same opportunity across institutions.

**Dr. López:** I'm going to take the viewpoint of a faculty member, since roughly 15% or 20% of our attendees are faculty members. I have a message for them. I'm assuming that you all are in STEM and have a lab, that you have some enterprise at the institution, and that you are a scientist. If you're at a university where you can afford to go across campus and introduce yourself to someone in the college of education, or in the social work area, anywhere outside of your domain: please take the opportunity to do that. Figure out how you might collaborate on some kind of project that is not only scientifically worthwhile, but

also brings in the human element. Because where I see us lacking is that we exist in siloes. I know everyone has heard that, but I mean it when I say that we need to get out of our comfort zone and meet other people who have different perspectives and different paradigms of how they see the world. Only in doing so will we benefit from the things we're talking about.

When I say that we need to invest in our students' ability to have social capital, that doesn't necessarily imply that you must do it as a faculty member teaching engineering. Rather, you may have to bring someone else along who knows how to invest in social capital. The only way to do that is to get out of your comfort zone and invite people to be part of your collaborative. It's not easy. I find that a lot of faculty are uneasy working with people outside their domain. So, it's very important that we start developing faculty and helping them to understand that they are not alone. If you're going to make a change, an improvement, you're going to need help, and that help must come from people that are not experts in your field. It's about teamwork. That's what happens in the private sector. They usually work in teams. We need to be able to do more in higher education to get people together and help them collaborate and make things happen.

### **Q: How can we encourage Research-One Institutions (R1s) to partner with RAIs, including MSIs?**

**Dr. Owens:** R1s should have a genuine commitment to partnership by collaborating at the beginning, not just at the end when you think that it's a missing piece that secures funding. Bring in partners from the beginning, where you are codeveloping a research endeavor together. Seeing the value in partners is critically important.

The other thing is that there are funding opportunities that are truly committed to seeing research developed as a collaborative endeavor. These critical funding opportunities incentivize partnerships and prescribe how

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the funds are distributed. It's not one person who gets the award and distributes it as they see fit. Disbursement is built into the terms of the award. There is co-ownership of the grant's success. That's one of the incentives that helps build and maintain partnerships along the way.

**Dr. López:** Not all institutions have the resources to conduct research at the same levels as an R1. So how do you get institutions that are not R1s and bring them on board? Collaborations should be built based on specific capacities and areas for improvement. There are no weaknesses in my vocabulary. These are opportunities for improvement. If we can identify those up front and say, 'Look, you're at XYZ institution, where you don't have the same research capacity, but you have the potential and you're interested. OK, let's put together a plan for development.' It's a faculty development plan. Faculty should engage and plan potential outputs, with the goal of working to build that capacity. There's got to be some of that up front, because not every institution is going to be able to manage what is expected if they're going to partner on an equal level. They may not be equal when they enter, but by the time they leave that grant, you should be able to see some comparability between the two.

It's very important to work with faculty to create change within that institution that may not be currently up to the spec of an R1, but the possibilities are there. We just must be able to recognize and develop that kind of planning within our grant applications.

**Dr. Vakalahi:** Great organizations are built by great people. You find that champion at an R1 institution, and you network with them to prove that you can be on a level playing field together. It starts with that. It starts with an individual or individuals at an R1 who see the value of an RAI in this partnership. I'd be curious to find out, because I'm sure there are models out there that are successful in terms of having an R1 and RAI partnering in a way that it's truly a partnership. I don't have any data on that, but I wonder if there's data that tells us which models were used here or

there. Maybe those are the models that we need to replicate if we're going to build partnerships between an R1 and RAI.

**Dr. Hargrove:** I could respond to this question for about an hour, because I've seen the best and, unfortunately, the worst of this. In the last 30 years as an engineering professor, on the tenure track, and all of that, in many ways it's been discouraging. But in the last 10 years or so, I've felt a little more optimistic about it. It has a lot to do with who you are partnering with. So, this small institution in Alabama, which in my judgement does incredible work, we collaborate with a lot of R1 institutions. But the key component is the individual who champions our work. Who's the champion at the University of Illinois? Or MIT? Or the University of Michigan? Or Cal-Berkley? Who is that individual, that person who establishes the real relationship?

I'm reminded of an example involving the National Science Foundation. In the past, they relied on a single person to ensure equitable resource distribution. It was not happening. So, the HBCUs and other institutions have said, 'You know, so-and-so institution got \$25 million, but all we've seen are crumbs and not even that.' Then the National Science Foundation responded to that by putting metrics in the grant and its implementation to ensure the equitable allocation of resources throughout the term of that grant. I would suspect that NIH has that, as well. There's a model for that.

Tuskegee University has relationships with a lot of key R1s. A group from MIT is visiting us on campus right now, and we all know what kind of resources MIT has. So, we're talking about not only research collaboration, but also sharing expertise. Because it's not one-directional. We don't see MIT as having all the answers and all the excellence and brilliance. We feel equitable in terms of academic research. But recognizing that, agreeing to that, what can we do together? We can have the same research facility at MIT and Tuskegee or Morehouse or any of our outstanding MSIs.

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Again, it's about the individual, but also the infrastructure—how funding is parsed out, monitored, and evaluated—that plays a critical role in terms of equitable impact for both institutions.

### **Q: What is the one thing you really hope people take away from this session?**

**Dr. Owens:** Success does not happen in a silo, nor is it an isolated process. Shared goals and collaboration will lead to the greatest impact. Working together as a community and receiving feedback on STEM strategies will provide opportunities for improvement. I invite people to send comments on the [Federal STEM Education Strategic Plan](#) to [stemstrategy@ostp.eop.gov](mailto:stemstrategy@ostp.eop.gov) so that we can hear the voices of those who are committed to this and find opportunities to collaborate and exchange ideas toward improvement.

**Dr. López:** Funding is necessary in STEM to create and sustain labs and the technology underpinning this type of research. Today, we discussed relationships, attitudes, and values that can be changed to improve diversity in STEM. We must do that as individuals, but we are not alone. There are a lot of people who are interested in the same thing. You have to network, and find them, and partner with them, and collaborate. Even if it's via Zoom.

Sometimes I get upset by the data I see on the wages. But what encourages me is the possibilities of people coming together and making decisions for the better of our society, students, faculty, and institutions.

**Dr. Vakalahi:** While we wait for things to change, we should continue to nurture and cultivate the brain trust

in our circles. If you're a university, take care of your students and your faculty, and don't lose hope. If you have a social work program at your institution, tap them. They know the community more than anyone I know. I know that sounds biased because I'm a social worker, but we know community. So, don't lose hope and continue nurturing and cultivating your brain trusts while we try to make things different or change and transform the system.

**Dr. Hargrove:** First, I want to thank Marie for this opportunity and to my esteemed panelist colleagues, thank you so much for sharing your insights. You are all so brilliant and dedicated for what you do every day for this mission.

I mentioned at the beginning of my talk and want to acknowledge it again here—not to offend anyone, it's just a fact: HBCUs receive less than 1% of available NIH funding related to STEM. However, NIH is committed to doubling this figure,<sup>10</sup> and recognizes the need for action to impact the communities we serve. That should be applauded. I want to thank NIH for recognizing that and doing something about it.

TCUs, MSIs, and HBCUs want to step up and respond to the programs and initiatives that you offer. We want to respond to those opportunities, submit good proposals, and have industry support us in our responses so that we can impact the communities we serve and enhance the quality of life for those populations. That's the mission of NIH. That's the mission of educational institutions, as well. We look forward to working with you to make that impact.

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