

FINISHED COPY

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (AAAS)

CONFERENCE 3 OF 4

PLENARY 3: PROPELLING CHANGE IN DIVERSITY EQUITY & INCLUSION -
REFLECTIONS ON EFFORTS IN UNDERGRADUATE STEM EDUCATION

JUNE 2ND, 2022

10:00 AM TO 12:30 PM CST

Services provided by:
Caption First, Inc.
P.O. Box 3066
Monument, CO 80132
1-877-825-5234
+001-719-481-9835
www.captionfirst.com

This text document, or file, is based on live transcription.
Communication Access Realtime Translation (CART), captioning,
and/or live transcription are provided in order to facilitate
communication accessibility and may not be a totally verbatim record
of the proceedings or used in any way that may violate copyright law.

>> Good afternoon, everyone. I'll just give -- I see a few people

still milling around, so I'll give you a chance to take your seat.

(Pause.)

>> Awesome, good afternoon, everyone. We want to go ahead and get started, so we hope that you have been enjoying the summit thus far. We're really, really grateful that you're here. We're so excited that so many people actually showed up. We were concerned basically, the team was. We first started planning this, we're like, okay, we're planning this but will they come, and you have shown up so thank you, thank you, thank you so much.

We hope that you've had a great opportunity to engage with colleagues, meet new people, discuss exciting innovations in STEM education.

My name is Chantal Fuqua. I'm so glad to be here. I'm a program director at AAAS, and it's my pleasure to be a coPI, IUUSE grant -- that want to welcome you to our plenary change. Reflections on efforts of undergraduate STEM education.

And I really want to introduce you to our esteemed panelists today bale.

Directly to my left I have Dr. Renetta Garrison Tull, who is the vice chancellor for diversity, equity and inclusion at the University California-Davis, so please welcome her. She'll be giving some remarks.

(Applause.)

>> To get our panel started. Thank you so much.

Next, I want to introduce a very esteemed colleague, so we have

Lilian Martinez. Lilian is the CEO and executive director of Out in STEM, and she's also an engineer by training.

And then our next panelist -- thank you so much.

(Applause.)

>> -- is Samantha Mensah. She is a PhD candidate actually. In materials, chemistry as she is a student at the University California-Los Angeles, and she will be finishing her PhD very soon, so we want to call her a future doctorate.

(Applause.)

>> And then last but not least, our next panelist is Dana Bolles, so Dana is also an engineer by training. We're so glad that she's here.

Dana has been doing some very important work at NASA for several years, so she is a scientific communicator and also an external information technology lead at NASA so please welcome our panelists. We're so glad to hear their input, incites about diversity, equity, inclusion and also accessibility. Thank you so much.

>> Hey, good afternoon, everyone, and thank you very much, Dr. Fuqua, thank you for the introduction. It's a pleasure to be here. Thank you to our esteemed panelists, Lilian Martinez, Samantha Mensah and Dana Bolles.

It's my pleasure to be with you today. My name is Renatta Tull as mentioned I'm the vice chancellor for diversity, equity and inclusion at UC-Davis.

I do have a PowerPoint to start with, and so I am going to give

some framing remarks and a general presentation, and then we're going to get into some questions where I'm going to be moderating for this wonderful panel. We're going to be talking a little bit about sustainable change efforts and the role of faculty and administrators, the role that equity should play in STEM particular courses in laboratories, and then how we can address possible faculty administrator bias, and then bias in other areas.

Before I start, I do want to take just a moment of silence. We did learn -- you might have heard on the news, unfortunately, another killing in Tulsa in the hospital, St. Francis Hospital, and so I know that over and over and over again we keep having these killings happen and the trauma can be a bit overwhelming.

Certainly, it's overwhelming for the families themselves, and I know that there are a lot of triggers that happen and yet we try to move on and move forward and that can be difficult.

But if we can just take a moment of silence -- and I know that there's still grief from Buffalo, from Uvalde, from Memphis, *et cetera*, but just a moment of silence.

(Moment of silence.)

>> Thank you, thank you for taking and thank you for allowing a little bit of a somber moment as we try to still carry on and do things, and when things like this happen it's like how do we still do the things that we need to do and of the energy to do the things that we still need to do?

And one of the things that one of my colleagues talked about,

Dr. Maisha Wynn, back at UC-Davis is that we stay committed to doing what we need to do. We do what we can do to make change; of course, we vote, so I have to say that, but we continue to do what we do.

Let's get into the panel.

Propelling change in diversity, equity and inclusion, and this is reflections on some efforts in undergraduate STEM education.

I do want to say that we are on, as I understand, an Anacostian lands, so I do want to acknowledge the land. If I was back home in California, Putnam lands. I think there's more than 11 tribes that had their tribal lands in Washington, DC, area and on the edges of some had misdemeanor and Virginia, so I want to acknowledge the indigenous people of the land, the unseated land that we're on here today.

Okay. Let's go to the next slide, please. I just realized -- I don't know, I can do it here, okay.

I want to give a little bit of a background and information about UC-Davis and about some of the things that I have seen in my career.

So just a little bit of -- of context, before I came to Davis in 2019, I was the associate vice provost for graduate strategic initiatives. I had done some things with undergraduate education as well as faculty at UMBC and with the university system with Maryland, and the University of California-Davis I took that position in 2019 and right now in terms of DEI, we are really excited that we do have the No. 1 spot in diversity and internationalization.

That is not by accident. There was a lot of work that did go into that, and there are a lot of different kind of accolades and things like that that we've had, but there was a lot of things that were done that were very, very purposeful, and so I do want to give a little bit of context about my position and sort of where we are and what we're doing.

My position at UC-Davis does serve all of the campuses in the University of California for Davis. There are 10UC campuses but UC-Davis itself does have some of them so when we talk about DEI and the diversity program, it does extend throughout.

We have a pretty big organization for DEI and there were some questions where people were asking: Well, how big is your DEI organization? And so I do have DEI for the medical school, the nursing school, the hospital as well as the different campuses under my portfolio, which, of course, includes all the STEM colleges, so it includes the College of engineering, College of biological sciences, letters in science which has mathematics and physics, and so forth, so we have a couple of centers also for faculty, center for advancing change and a multicultural perspectives in science as an example.

We have an Institute for Diversity, equity and advancement, another idea. Understand that there are some other ideas and idea centers, and several different kinds of areas that our portfolio has.

But I wanted to share something about frameworks and some strategic plans.

If you've ever heard me talk, whether it's at NFS or AAAS in the past when I was at UMBC and other schools, we talked a lot about various strategic and conceptual frameworks, how do people feel included? What helps to move diversity, equity and inclusion forward? And there are a couple of frameworks that I use and talk about quite regularly and, so I just wanted to throw them out there once again, just, so we can remember them. One of them was a psychological and psychology by McMillan and Chavis where we look at membership, who feels like a membership, how do people feel that they have influence? Do they have a voice in this, and we heard this a little bit this morning with our panel in terms of student voice and student agency.

Is there integration and fulfillment of needs? And is there some sort of shared emotional connection -- sort of shared emotional connection? And things like this, like this conceptual framework sort of came to bear when I was writing some NFS grants, and they said, all right, well, it's more than just about what you're doing in the lab, let's get some social scientists involved and make sure that you have some science educators and some psychologists and some sociologists and some folks who are doing STEM education involved in the work, so that we can have something that's really steeped in the literature and has some evidenced-based approaches.

Science identity was another one. Sort of that hierarchy of student recognizing themselves in the role of being a scientist or being an engineer but then also having that recognition by meaningful

others in the hierarchy, so Dr. Fuqua, for example, in talking to future Dr. Mensah is already scolding her that having her see in that role based in all the work she's done and all the leadership that she already has put forward as an example, and doing that all the way through, so with your students in the lab, having them see themselves as future scientists. Sometimes even in ceremonies calling them future doctor. Those kinds of things do help with science identity and with that level of STEM identity.

Cultural capital by Yosso, Tara Yosso looking at different kinds of capital aspirational linguistics. This morning we heard about not looking at things as a deficit model but looking at things from an asset-based model so when people speak different languages that is an asset, that is not a deficit.

Familial capital, recognizing the importance of family and that having family, and those familial ties, and that is an asset, and that's something that can be brought into classrooms and labs and bringing people in recognizing that wisdom can come from different people whether they have degrees or not.

Social capital, navigating capital and in resistance capital and resistance capital is something that we've definitely had to help to build over the past couple years with racial reckonings with all the different things helping people in various communities to build their resistance.

At UC Davis we have these road maps to excellence, and this is where I sort of want to go in the conversation because we do look

at our strategic plan, and so I'm wondering -- in fact, I know this morning they asked the question of the audience ahead of time, so I'm going to ask you -- as science educators, faculty, leaders in your groups, how many people actually -- work with your campus-wide DEI office on your strategic plans?

Okay, I see a couple hands but even the hands that I see are not raised that high with a lot of enthusiasm.

(Laugh.)

>> So let's just say that as a COO or a chief diversity officer who's also an engineer and a sign activity who has a lab -- I do have an adjunct position as a professor in electrical engineering, electrical and computer engineering, I'm hoping that one of the things that is moving forward is this movement of working with a strategic plan, actually thinking about how we're going to move forward and giving people a framework to work with.

The document in the middle To Boldly Go -- Dr. Gary May, who's the former dean at Georgia Tech, and now our chancellor, is an engineer and a big Trekkie. He named the triage plan for the university To Boldly Go, so everything kind of goes around that.

We have a strategic plan for diversity. We had an HSI plan in terms of moving toward being a Hispanic-serving institution and To Boldly Go talks about embracing diversity. One of the things it says -- what we need to do is actually look at the strategic plan for diversity which talks about identifying and attracting and graduating a diverse student body, the same thing for faculty and

staff, having a positive climate that is not going to be toxic for any of the people who are on campus, moving instruction forward and making sure that we're working with communities, and then having accountability.

Our strategic plan looks like this. It's a lot of words, but I just want to show you this is what all of our deans get to see, so all of our deans -- when I have meetings with our diversity executive council, our leadership team which includes all of the deans of the university -- we meet once a month, we talk about our strategic plan, and we talk about what they're doing in their schools and colleges related to it.

And I'm not going to have time to go through all of these, but I just sort of want to he should you that each one of these goals has other subpieces to it about what we're focusing on, focusing on a diverse student body and how we're going to do that. Focusing on attracting a diverse faculty and staff and the different things that we need to do that within each division college, school, holding each department accountable, advancing that climate that transfers improvement and research in improvement -- I'm sorry, diversity in research and teaching public service, working with our communities, and then ensuring accountability at that same time.

The final piece that I want to talk about is this conduction with a conceptual framework by two of my colleagues at the School of Occasion Dr. Maisha and Torry Wynn called the five transformative pedagogical for transformative justice and education, and these are

the five things that they talk about that matter: History matters, race matters, language matters, justice matters and futures matter.

And what we've done we've looked at our diversity and strategic plan and connected that with these five pedagogical stances, and we call that the 5X5 model. And, again, all of the deans are well-versed on this. They had sessions on this, and so they are now looking at those things and they've asked them to frame a lot of the work that is being done and being done in terms of these different stances. Making sure that we're thinking about, for example -- I talked about land acknowledgement and really looking at history and not denying anything that history tells us when we dig deep, whether it's comfortable or not.

Same thing about race, language, justice and futures.

And so finally with recommendation, and then we're going to get to our panel, I would just like to share some thoughts about -- considering your overall goals, the goals that you have, the different frameworks that may be used by the campuses and how that might inform your approach in what you're doing. Consider and involving and engaging your DEI office and some offices also have constituents in the schools and stakeholders in the schools. There may be an associate dean of diversity that might be in this School of Biological Sciences a diversity committee that's in the Department of Physics, for example.

But engaging them and having them work together, so that there's some cohesion related to how things are going to move forward and

a sharing of resources, quite frankly, which we all need to be able to leverage and leveraging that partnership for the goals.

That is the final piece that I have but let's have a conversation now with our wonderful panel.

(Applause.)

>> Thank you.

(Applause.)

>> Thank you, thank you.

>> So we're going to get into some questions with our panel, and the first question -- and as we get into the questions, I'm going to ask each of our panelists just to talk a little bit more about what you do and anything that you want people to know about your work as you're thinking about this question.

So the first question is going to be -- to Dana Bolles, and the question is, what are some sustainable change efforts for improving diversity, equity and inclusion in undergraduate STEM education. Some sustainable change efforts? And what are some of the most constructive ways to catalyze this change.

And Dana, the floor is yours.

>> Thank you. I'll give you a little bit about my background first. I've been with NASA 27 years this month, and I've worked at four different centers, and I've done lots of different jobs from engineering to communications and risk management, but I think what I've learned being at NASA could also be applied to undergraduate education at any community really the, and that's -- I think the most

sustainable change is to change the culture, and that's the hardest change; right? Because you could have all these laws that tell people what to do but if the culture -- if the culture doesn't shift, you're not going to be able to make progress, and it won't be sustainable, so there's a lot of strategies to do that. Part of it is to show the commitment at the highest level and for that to trickle down.

At NASA I'm in the science mission directorate and my drugstore -- he wanted to -- well, as an outflow from the Floyd murder, he wanted to create an idea working group, inclusion, diversity, equity and accessibility, and so it's great because we have all the manager -- all the senior managers, all the workers below we're all working together to kind of spell out what our strategies are going to be and what our values are and, in fact, diversity and inclusion is one of our core values in the directorate, and so I'm really proud of that.

Also, in addition to creating these groups to focus on it, I think a really important thing is to be a good ally; right? Because I think the biggest problem about all of the aggressions that we see out in the world is that nobody wants to help when they see things happening if they don't feel it's part of their -- you know, their culture or whatever but really we need to stick up for each other because if we're all looking out for each other, then that's going to help make the environment a better place for all of us, and I want to say from a personal level on accessibility, it's one thing to have

accessibility, but it's another thing to maintain it, and that's a really important thing that gets missed everywhere.

I think there's a saying in the disability community: Nothing -- nothing about us without us, and I think that actually goes along with the whole idea concept is that we need more representation in the top leadership positions because that's going to be a really effective way to come up with more strategies and follow through and, hopefully, shift the culture.

>> Thank you, thank you very much, Dana.

Samantha or Lilian, did you want to share something? And please feel free to give a little bit more about your background as well.

>> Oh, of course.

So my name is Samantha Mensah. I'm a graduate student at UCLA; studied chemistry in 2020. In response to a lot of the racial reckoning response around the world, I cosponsored an organization called BlackinChem where we basically tried to uplift and kind of give voices to people who might, otherwise, might not have a voice in their field as well as increase representation, increase support for black people in chemistry.

From what I learned in this organization it's a final 501c3 profit the cycle of oppression that exists can be sort of -- not necessarily reversed but fought against by cycles of uplifting people so -- so things like representation in the field, low representation causes lower people to come in the field and representation is even worse, but if we do sort of reverse that, we can sort of improve the

representation in the field, improve the experience of black people in chemistry.

A common statistic that I use to show the issue is that -- I know approximately 5 black students who have attempted a terminal degree at UCLA, and we -- in chemistry and only two of them actually got their terminal degree.

The other two dropped out early and one passed away from suicide, and I don't bring that up to bum everybody out, but it's kind of a testament to what people are experiencing in -- in terms of not feeling like they're part of their field, like they're accepted. Not seeing the representation that they need to see to succeed.

To reverse those cycles of oppression, I think, just to circle back, I think, to your question: Being intentional. All of the examples Renatta, Dr. Tull was showing us -- the intentional movements to improve recruitment, improve retention, all of those things -- they can help create a different cycle that actually reverses the cycles that, you know, cause us to not succeed in STEM.

>> Okay, thank you. Thank you very much.

And, Lilian, how about you. What are your thoughts.

>> Hi, my name is Lilian Martinez I use she, her pronouns. I'm the executive director out in Out in Science and Mathematics, Incorporated, which is also a 501(c)(3) nonprofit for LGBTQ people in STEM. I guess I can speak to this, inclusion is important, everything -- echoing everything that both Dana and Sammy have mentioned but also policies are really important for LGBTQ students

in your universities and your organizations.

The use of pronouns as simple as our badges here don't have pronouns, do they; right? Maybe we all assume other pronouns, that's not great but just having that ability makes it, so that other people who are nonbinary or people who have different identities that they want represented feel like it's a welcome space, and so much about it is about normalization. You want to normalize people's pronouns being different, housing policies at universities, where do you go if you have a female dorm and a male dorm, and you're nonbinary? Do you have anywhere, do you have a place to be? Those are things as educators and as staff members you have more power than students do to impact them and change.

Chosen names, people able to say this is what I want you to call me. That's a constant fight at universities. We hear it -- I have 106, I think, current chapters at universities, and we send letters to universities. We help them have conversations about, you know, people should be able to say, hey, this is my name, and I want you to call me by this, and you should call me by this, and it not be a huge -- basically uphill battle and one thing that I can't believe we're still having this conversation in 2022 is gender-inclusive bathrooms at universities are an issue.

At my undergrad, we had one single gender-inclusive bathroom and all of our students had to walk all the way across campuses to go to the one single bathroom, and we had this, you know -- we raised signatures we had conversations with the deans, we had conversations

with the president and nothing happened until an ally -- somebody saw us in the dining hall collecting our signatures as we have been for seven months and said: Why are we even having this conversation? We have so many single stall bathrooms we can convert, and he was the chair of the chemistry department at that point, and you could with a up to the president, and then the signs got changed the next week.

You were talking about allyship. It's so cliché but allyship is not a verb it's a noun. You all have more power than the students and the people who you are educating have, so use that to help them have a more inclusive space.

>> Thank you. I think one of the interesting things -- a theme that seems to be resonating in this conversation is that sometimes these things related to DEI go beyond what we're doing in the lab, and they go beyond what we do in the classroom, and it may not necessarily be what we train for or what we thought we would be doing because when we're in -- whether it's undergrad or graduate school -- again, in a lab doing our post-docs, whatever it is, sometimes these things in training in terms of what your career is going to be -- they don't come up in terms of advocacy, allyship, really thinking about the whole person, who you're serving, *et cetera*, and now that we are really sort of taking the lid off these conversations related to DEI and what it really means to be inclusive, we know that we have to go beyond what we may have been taught, and that's okay, and it's okay to feel a little bit like, oh, I wasn't sure that this was where

I wanted to be, but it's the world that we're in, and we should have been there a long time ago, but it's people really didn't think about it. My thought let's step in. Let's all work together and step in and step forward, so that we can at least, as I said just be human, be human with one another and for one another and continue to move forward together.

And so, Lilian, I'm going to start with you for the next question, so the next question is about -- and you touched on this a little bit, so you might -- if you have something that you want to go further, then you can just about the role that faculty and administrators and even student advocates -- what kinds of things -- what kind of role could they play and should they play in terms of introducing, and then supporting these change efforts?

>> Yeah, thank you.

First of all, I can start by student advocates are great, but the work shouldn't fall on them, and you should support them in their efforts.

I think that this is really important for the LGBTQ community because as educators, you might be the only safe space for these students; right? You're not -- I can speak to my experience growing up, a Latina woman in Mexico. I can tell you in my family, I never had issues for being brown or never had issues for being a woman, but I sure feared the day that I was going to be kicked out because of being a member of the LGBTQ community.

People face a lot of familial rejection in this particular

identity, and you being the educators, the staff members supporting their identity not only helps them succeed in STEM, helps them succeed in school, but it saves lives. This is a fight to your LGBTQ students, and I think it's very much -- you were saying step in and help drive, so it's either you step in and help drive it forward or step out of the way and make sure you're not being the one that's impeding change.

I, unfortunately, heard department heads say: Oh, all of these diversity checklists are watering down our education system, and saying make sure you have a homogenous system but maybe a homogenous system is not what you're going toward or where you want to go. Yeah, thank you.

>> Thank you.

Samantha and Dana, do you have anything that you'd like to add?

>> Can you repeat the question again.

>> Absolutely, yes, so the question is: What is the role that faculty and administrators in addition to student advocates -- what role do they play in introducing and supporting these change efforts?

>> Yeah, I think -- I just want to say kudos to you all because you all are shaping the future of the country, you know, with the undergraduates that you -- that you teach, and you guide, so you do have a major role in helping them, and I like what Lilian said about -- about being a support when maybe no connection is at the institution and -- yeah, it's an important role, and I appreciate what you do.

>> Thank you.

>> I'll say for me someone who -- just to go off what everyone is saying allyship is so important. Someone who influenced me to pursue a doctorate degree, to pursue chemistry was my first chemistry teacher at university. This was a time where I didn't know -- that I know a PhD was an option for me. I didn't know there were careers in chemistry so she sat me down, and she said these are the different fields in chemistry. These are some options for careers, working in a lab, starting off working in a lab. I started in her lab as a freshman, and I stayed there for 5 years working, and that really empowered me to realize I can do science. Like I could -- you know, I could see myself in a lab doing research 'cause I was doing it, and having that opportunity really shaped my trajectory I would say.

Overall, I think getting students into research labs, into doing real -- doing -- you know, getting hands-on science experience, whether it be in the field, in a lab, doing interviews, things like that -- that absolutely shaped -- shaped what they see themselves doing, which is -- which can either, you know, hold us back or push us forward.

>> Thank you. I'm going to add something, and then I'm going to come back to you, Samantha about adding something about labs and STEM courses.

One of the things that I wanted to share -- and this is fresh out of a meeting that we had last night with some of our students who are working for disability justice as an example, and one of the

things that I try to do in my role is not only to share what I'm hearing from students with my own faculty and with our administrators but also far and wide because the thing they say they hear they're having the same kinds of issues around the country, so it's not isolated to what we may be seeing whether it's in Davis or in California or in your region or nationally but a couple things that they talked about asking faculty to please make sure that systems work for all students, so there may be systems that are in play, and they may not necessarily be accessible and work for all students whether it's physical, whether it's some of the rules, whether it's deadlines. Whether it's access to differently kinds of activities, events and courses, those kinds of things, I.T. systems, *et cetera*, making sure that they work for all students.

Also working with our faculty, our colleagues to make sure that student accommodations are honored.

One of the things that we're starting to find out and that we hear quite often is that there are things that are in place that are a part of the sort of rules and regulations and policies of the universities but everyone is not necessarily following through, and so we need to -- and in our positions of power talking about using our power. In our positions of power, we have an opportunity to check up on those things, to make sure that our faculty know what those policies are and that they're following through with them.

And then the final one is based on something that I never -- I'll never forget. I was at a session at the White House during the

Obama Administration several years' ago, and there was a woman who was from a tribe, and she was talking about how in her community when they have differently kinds -- when they have a death in the family, for example, that a death in the family is not an option where you opt out, and you just decide not to come to the funeral but instead it is -- there are a traditional cultural things that they need to do with the family, and it's not just an in-and-out thing where they're just going to get on a plane and come back the next day. It takes time, and so she said -- she wished that every administrator would know that there are cultural norms that often are part of students' lives and that those cultural norms should be honored.

We're seeing that also in terms of different religions and other cultural holidays and traditions, so that's something that we can push as well. Having provisions that allow for family, cultural, holidays, and there's something on the books that we absolutely have the power to make changes on because they've just been there for a long period of time, but we can do some things differently like every student gets a certain number of days where they can -- you know, whatever they need it for, they can opt out, and they can be for family, it can be for -- to take care of any kind of thing that they need, so those are some things to keep in mind.

Okay. Samantha, I'm going to go back to you now with this question, and then after that, we'll have one final question, and we'll get to audience.

What is the role that equity should play in STEM courses,

laboratories, and classrooms to allow students to explore how systems of oppression worked, are maintained and impact the execution and application of STEM in society? That's quite a question. I'll repeat just in case.

What is the role that equity should play in STEM courses, laboratories and classrooms to allow students to explore how systems of oppression work, are maintained and impact the execution and applications on STEM in society?

>> I think the first step is going to be acknowledging the signs of oppression are there and educating people about the systems that oppress them. I think there is, you know, a lot of ways of approaching that first step, but, ultimately, equity should, like -- the curriculum, the effort should be centered around equity so whenever we think about student-centered learning I think we can also think about equity-centered learning in the same vein so just playing around the different equity efforts and trying to figure out how can we make all the students feel like they belong in STEM. They have a place. They are represented. They have a voice.

Something we do in BlackinChemistry is weekly -- an annual black chemistry week where we try to uplift black voices in chemistry. We have plenary talks, workshops and things like that. We've done that every year since 2020, and every time we get together we're realizing a lot of black chemists are having similar experience in chemistry where they're not necessarily feeling included or feeling like they have a voice, and -- there are very -- there are things that we can

do to address this problem that aren't -- that don't even take that much effort.

I mean, so, for example, like including something that we're starting to do at UCLA is including graduate students in the faculty hiring process, so that may be a little bit of a controversial idea but, but it's very easy, and it allows students to feel like they have a voice in -- in, you know, people who are educating in the future of the university, which is very important.

>> Thank you, Dana, what about you? You've been at NASA for more than 20 years so what are your thoughts related to that?

>> I think that the most important thing is to -- to give people a voice because -- like, for instance, I went to a conference two weeks ago and 3 years prior I went to the same conference and had lots of accessibility issues. I wrote a 5-page letter to the hotel. It got forwarded to the conference organizers, so I thought theory of it'll be a lot better; right? But it wasn't, you know, just from day 1, the lift wasn't working to get up to some of the rooms that I needed to get to.

Day 3, the elevator worked, but they kept the doors locked, so I couldn't get into the area, and then the hotel staff is going to argue with me, telling me: Oh, no, I can't leave the doors unlocked. It's a security issue. I go that's not my issue that's your issue. I'm a guest of the hotel and a conference attendee, and this is required to be accessible, so you're not maintaining access. And as a conference attendee I should not have had to do that. I blame

the hotel, but I also blame the conference organizers.

Now, she did come to me and talk to me and said: I'm so sorry, you know. It was in the contract, you know, and we told them every day -- and I said that's the first step because as you see, that doesn't do anything when they don't maintain it. Yeah, they could say they're accessible. It doesn't mean they are. They're not, so you need to have somebody focusing on that and every day going through, making sure these little things can make a huge difference in the daily conference attendee life experience.

It's important to listen and give people the voice because they'll be able to tell you where you -- where you can improve and as long as you're seen as making those efforts, you're going to be appreciated for that, and you can -- and take each input as a way to get better and better.

>> Thank you, Dana.

Lilian, did you have anything you wanted to add before we get to the next question?

>> I think that equity is -- can be really shown in different learning styles and making sure that you are accommodating those. I've heard people mentioning pedagogy, and I saw it in the description. I didn't see andragogy and focusing on adult learners and making sure adults learn and inverted classrooms -- it makes it harder, right, it puts the work on you, and it puts the work on the educators to be able to support your students with different learning styles, but I think we're at the point in life where we need to move past diversity

being a checked box and moving into belonging.

Sure, you can get all of your diverse students and all of your different colors and shapes of people and flavors of people in a room but do they feel welcome? And do they experience belonging in your classrooms?

>> Thank you, thank you for that.

And for our final prepared question -- and as we're asking this question, if you have questions from the audiences, there's -- I know a mic over here, and there's a mic outdoors side and if anyone has a question, and you want to start lining up at the mic, then we can do that as we ask this final question on this side.

How do we address possible faculty and administrator bias -- and bias in other areas of our institutions in regards to student inclusion in STEM, and you touched on this a little bit with evaluation policies? For example, anybody can start with this?

>> Okay. It was quiet for more than 2 seconds.

(Laugh.)

>> I think visibility. You are more likely to walk into a space if there's people that look like you. Presentation, are the people in power actually representing what your student life -- what your student breakdown looks like? Those two are really important and, oh, gosh, I forgot the second part of the question.

>> The second part of the question in regard to student inclusion in STEM, so whether it's faculty bias or administrator bias how do we address that --

>> Yes. You assume and know that bias is there; right? You can look at the people who are coming into your university on the first year bright-eyed and bushy tailed, and those people who are graduating like Sam was saying who are you losing along the way and how is the policy -- how are the policy bias or how are your departments or your distribution of diversity making it an unwelcoming space to others? I think it's about looking and assuming the systems are there and knowing that the bias is there and trying to be active about reaching out and learning from others who might have different experiences or who have knowledge that you don't have and just being aware that it I say ands. We all have bias, and we all have to actively work on trying to make it better.

>> Thank you.

Samantha and Dana, anything to add?

>> I'll say just that -- to echo what Lilian said, acknowledge the bias first. Teach people about what biases they have. I think it's hard for us to overcome it if we can't, you know, see it, we don't think that it exists so something that we're doing at UCLA is something that the graduate students at UCLA recommended in the chemistry department is to have explicit bias training that's mandatory for the faculty, so this might be -- just like a yearly or, you know, similar to the trainings that we already have but addressing bias by teaching people that it's there first is a way for them to feel empowered to not let it drive their actions and opinions.

>> Thank you.

Dana?

>> Yeah, no, I think good inputs is to acknowledge it but also try and research and see if there are creative ways to manage it and deal with it, so that it doesn't affect -- affect the decision-making because ultimately you want -- you want to be able to give everybody a chance at whatever -- at whatever you're doing, whatever you're teaching so -- yeah and there might be creative ways to get around that.

>> Okay, thank you.

And are there any questions or comments? Please feel free to come up to the mic if you have questions or comments. Please feel free to introduce yourself also, and I will say if you have something that is propelling change that you're sharing with the group as part of your questions, please feel free to do that. Please go right away.

>> Good morning, or is it afternoon now.

>> Afternoon, we're in afternoon now.

(Laugh.)

>> Thank you I'm here at the George Washington University.

My area of research kind of looks at some of these issues in addition to what I call my core area but one question that I have is, you know, there are several strategies that have been proposed, several solution ideas have been developed to us, you know, reducing the impact and inferences of bias in education. To increase inclusion, trying to addressing some of the shortcomings what I'm

beginning to see unintended consequences where those that you call the majority have beginning to feel threatened, so the question here is: How do we implement some of those changes that you've been talking about all along? To the point where some of the unintended consequences -- that might not be defined. That's the question that I have.

>> Very good request. Anyone want to take a stab at that one?

>> I was reading it.

(Laugh.)

>> As you're thinking about it I can kind of start a little bit.

>> Okay, yeah.

>> I do see it sometimes -- some fatigue, again, because people often didn't necessarily think that this was going to be part of what they were going to be doing, so they weren't prepared with it.

We do see differences in the next generation because a lot of graduate students now are getting into sort of the is identified whether it's DEI or justice or belonging, JEDI whatever you're going to use with justice, equity, diversity inclusion -- whatever the acronym is going to be used, and we do see a lot of graduate students who are sort of coming up throughout the ranks of higher education who are thinking about belonging -- thinking about diversity along the way and engaging communities and thinking about labor.

Thinking about all of these different kinds of ways they've been through the pandemic. They've been through the reckoning. They're talking to friends. They are part of communities that are very

diverse, and so they are driving a lot of the change that we're starting to see, so much, so that one of the really -- I think successful models that I've been able to see has been having graduate students -- and this sort of speaks to something that Samantha mentioned having graduate students as part of an administration -- maybe an assistant to the dean, for example, or a respected committee member that that has really helped having graduate students on some of the committees to assist with some of the policymaking, to assist with sharing experiences.

We found that that helps with more inclusion, but it also helps the faculty to feel they don't have to necessarily have 100 percent of the answers when they don't even understand all of the questions, and so that has helped.

Having communities, continuing to have community like this and also from my vantage point as a person who's in the administration, one of the things that I'm trying to do is to also support meetings like this and meetings where people have an opportunity to come together in community who are like-minded, who want to build peer relationships. Who want to be able to say: I have this issue: What do you see here? Who want to have safe spaces to be able to talk about some of the challenges and not be judged for it; right? Because not everybody has the same experience. We have different lived experiences, and we don't know all of the answers, but we need an opportunity to be able to talk about, to ask questions and to learn, all of us, continuing to be in a state of learning, and so one of

the things that I did recently at our university is I sponsored an opportunity for more than about 30 people to go to the NADOHE conference, which is the national association for diversity officers and higher education, and it was a wonderful opportunity. We did the same thing for HACU, which is the Hispanic Association for Colleges and Universities and our vice provost for global affairs was there, and we had, you know, various deans who were there, and so having -- opening up, I would say opportunities for people to learn and be in community has been helpful.

That was a little bit more than a minute, but, you know, if anybody wants to chime in before we go to the next question.

>> I think you answered it pretty thoroughly.

>> Okay.

>> Yes, Lilian.

>> Okay with the discomfort. It's not -- it's not an us against them conversation, and that's so much of how it feels and nobody grows in the most comfortable spaces so having this conversation is hard, realizing when you sit in a room, and you're like: Wow, that is bias, and I have tried the longest time in my life to avoid that, and it doesn't feel good, and that's okay. We all have to have the space, take the grace for ourselves and probably support those conversations and say, hey, it is uncomfortable. This is a hard conversation to have, and it is okay to feel the grief that you do, and it doesn't mean you're bad, and it doesn't mean that you're doing a bad thing. It just means now you're learning and let's grow together.

>> Excellent point, Lilian.

There's actually a group in Canada that talks about the right to comfort as a white supremacist method, and so who gets to have comfort; right? When we deny -- when we say only certain people have the right to be comfortable, then we're denying the agency of other people who are in various spaces who are uncomfortable. Great point. Thank you.

Let's go over to this mic and one of our esteemed colleagues who was at our table earlier, please, go right ahead.

>> Hi, I'm Camilla Moses. I'm the dean for the College of Arts and Sciences at the University of Wyoming, and I wanted to just make a comment and also encourage our colleagues in the room about the pivotal roles we play as administrators in helping to be change agents for our various institutions.

One of the things that has helped me a lot is reading things outside of our disciplinary. I'm a biochemist, a plant physiologist biochemist. I have sociologists because they always help me to put cultural things into context.

I've also started reading literature that has been outside of the scientific realm. One of the persons -- or two have the people I find very empowering that can help you put your perspective in diversity, equity and inclusion injustice in perspective is Audre Lorde and Bell Hooks, and the concept of self-care and having love for others is a concept of self-care. Making sure that the community is okay.

I think Audre Lorde -- I learned about her working with some social scientists and behavior scientists while I was the dean at Xavier University, and I read her work -- she's a black feminist and her concept of the role of women in making substantive changes in society, I think, is a foundational to what we're trying to do in this -- in this space.

I think deans and faculty members in particular -- but deans -- faculty members and deans in particular have a critical role because we are the most of -- we're the middle management. We're the people between and what happens at the faculty and how it gets played out at the upper-level by the provosts and/or president, so we have to have courage. We have to also acknowledge what's going on and be open to understand that there are things that are not quite right in the academy, and it's only going to change if we're willing to be that agent and step forward and say we can do better.

One of the things with accessibility that really drives me crazy -- and I want to ask all faculty members to do this at your respective universities. Walk around your university and just kind of look at the sidewalks and see how they're uneven and how impossible that becomes for people who are maybe in a wheelchair or on crutches or have other physical limitations.

A small thing like having uneven sidewalks can insurmountable for students to get in a building. I found this out from a parent who had a child that was able body, and then went into a wheelchair for 3 years, and I've never been so frustrated in my life to realize

that some includes say they're ADA, but that has as someone said earlier check box, but it wasn't until later that I became a dean that I started walking around, and I go to the buildings and push the button to see if the doors actually open and found out most of those doors are not functional.

Because I'm a position in power write an email to facilities saying this has unacceptable, and it has to be fixed and copied it to provost, and it was amazing how fast that building got fixed; right?

(Laugh.)

>> But had I not gotten out of my office, and you could with a around, just my own building to see there was an accessibility problem, we can be allies by doing simple things. It doesn't take a whole lot for us to be allies, but I think we got to do better in this space, and I just wanted to say kudos to the panel. I've enjoyed your discussion. When we were sitting at the table and enjoyed what words you had to say and keep fighting the good fight, and I'm in your corner, and I have your back.

>> Thank you, thank you.

(Applause.)

>> Thank you very much.

>> So there's a theme there, and I think it's a good one for all of us to be thinking about, which is: Step out of comfort zone and can okay with that, and we there's enough of us here that stepping out of a comfort zone -- you're not alone. Stepping out of your comfort

zone. Take that back to your campuses, step out of the comfort zone there and use your power. Use your power. Great, thank you.

>> Hi panelists Travis from AAAS. I have a question that's highly voted in our platform for you all: How do you respond when you encounter resistance, explicit or obscured, to campus-wide or organization-wide DEI initiatives and strategic plans? So how do you respond when you encounter resistance.

And a part 2, how do you find the energy to persist without getting discouraged?

>> Okay, I'm going to let our panelists start because I've been talking a lot so go right ahead.

Dana, you sound like you're ready.

>> I'm speaking from just my everyday life, okay, not -- not at the organization.

I mean, it does happen in the organization also. I always speak out against it because it's important to -- it's a great value of mine, so I'm not going to bow down to it because other people don't support it. It is very frustrating, and I do lose energy at times write take a little break because, otherwise, I'm doing it almost every day of my life, 52 years of doing it.

But I will say getting older I'm very happy to save say my mind. When I was younger -- I may not have much but kudos to aging in that respect.

(Laugh.)

>> I had somebody parking in an accessible lane -- in the access part

of the lane, right, so the disabled parking has the stripes that you're not supposed to park on, so cars like to use that space as a parking spot.

Anyway, this girl parked there, and she backed up over the sidewalk, so I couldn't even open the gate to get out of my apartment, you know, so I tried opening it and the car -- and she got all riled up, and I said: Well, I can't get out, and she tried to explain why she was parked there, and I could not hear her 'cause I was in the back of the car, and I said, well, okay. So she got mad, and she goes, oh, okay well, I'm not moving, so I did it again 'cause I'm 52.

(Laugh.)

>> And I really like where she says do it again, so my third time was my favorite, and she came out, and we had a discussion.

(Laugh.)

>> Anyway my point is I do stabbed up to it all the time, and it does get tiring, but it's what I'm passionate about, and, so I'll always stand up and at work -- even at work, you know, I'm always giving presentations on how to make events more accessible, and I always tell people: Ask me anything, and it's important to be an ally because even on accessibility issues -- because there are so many people who have invisible disabilities, right, and who we really have to be supportive of all of the ways in which in which we're different and wonderful, and we need to bring up our communities so.

>> Wonderful. Thank you.

>> Uh-huh.

>> I think I can say Dana is your friend; right? We're all sadly in a big group of people who maybe study things a little too long before we take action 'cause that's kind of the academic life but UC-Davis just got the No. 1 award -- see all the things and the acolytes and do everything. Don't you want to get that? Don't you also want to be known as a great space of inclusion?

(Laugh.)

>> Think of all of the people and all the grants and all of the things our university could receive if we were just this good, so that is usually my first start.

>> Right.

>> Look at this magical thing that we could achieve.

My second step once you've tried that and you've gotten tired of it is shift to the fear portion and if we don't do this, these are -- look what happened to this university that had these terrible practices and the lawsuit that just happened. Make sure we get ahead of that before it happens to us, and it gets tiring. You fight all the time but there are organizations that are doing this, for example, we get invited -- we get invited to have conversations, facilitate discussions or even participate as part of faculty hiring. They say 4-piece -- we actually want you to come out here and be a part of our discussion so there are groups that our entire work with diversity and equity-based and usually we'll be happy to come help and try to take a little bit off your plate and try to just commiserate and work

with you, so I'm happy to be a resource and, you know, many other people in this space, but those are my three approaches. Usually they tend to work.

>> Thank you. And by the way, UC-Davis is not perfect they won awards, but we have a long way to go. Still have a long way to go.

Samantha, anything you want to add to that.

>> I'll add there was one moment where I was interacting with the DEI committee in the Department of Chemistry at UCLA, and we were discussing different DEI efforts.

Finally, somebody, an older woman, mentioned that maybe these efforts could make other people who are -- who had been in the department for decades uncomfortable, and so I think challenging the idea -- like Dr. Garrison Tull mentioned -- just challenging the idea that some people deserve cover the while others don't or it's a -- a zero-sum game where one person earns and the means have taken from the other, I think challenging the idea is important. Like showing people that -- that discomfort may come from seeing change that actually is going to affect people long-term, and so seeing that change, of course, change is uncomfortable, but I explained -- I still don't totally know the answer to this question, but I think I just explained in that moment diversity helps everybody, not just the minoritized or the marginalized. It improves the institution. It improves the faculty -- the faculty's abilities and what we can accomplish as an institution, so it helps everyone.

>> Thank you, so you mentioned everything doesn't have to be a

zero-sum game, our colleague from Wyoming was talking about reading other books outside of things that are in our field. Heather McGee has a really good book where she talks about that. That doesn't have to be a zero-sum game, so that's a book that you might be able to consider, and I did want to address the piece about the strategic plans just really quickly.

Institution change in a university does not happen overnight and just because we try to do something, and we are really excited about what that change is going to be and how it's going to be a great catalyst do so things differently that everyone is going to be on board. It's going to challenge some of the things that people are really used to and have gotten really comfortable with for many, many years.

At UC-Davis just as an example, the process of starting that strategic plan for diversity started around 2013. Of the actual strategic plan was not printed until 2017, but there was a lot of buy-in, and somebody talked about committee after committee after committee, and one of the things that we've learned that I've learned being in the administration of California is that sometimes committees help because people have a chance to voice their opinion, to feel like they have buy-in, and sometimes those are necessary we don't want to have unnecessary committees but sometimes having enough people at the table and sort of shopping ideas around for a particular period of time, not forever but for a particular time allows things to get massaged.

We're scientists, right, so we try things. We experiment. We look to see what has come from those results, and we take those results and other people's results, and then we look again and see if we can do it differently to get something better. What's reputable? What needs to be changed, so we can apply even the scientific method to the way that we do things you believe we come up with something that's really going to work, so it takes time where we could boldly go to. The chancellor addressed that in 2018, and it's still going good.

The SSI task force plan was implemented, 234, in 2019, and it's 2022, and we're working through the recommendations that some people want it to happen the next year, and our community boards are saying: All right. You have these 11 recommendations, and you haven't done them yet. Well, we've done 5 of them and not the other 5. They take time, and it takes time. Often when we have things to say. Well, how is this going to work and how are we going to move it forward, and that's okay too.

It's okay to recognize that it's going to take time but showing what the intention is, showing what things are being done and looking for low-hanging fruit and looking at particular communities are affected working through that change, taking out what things have been successes so far and making sure the community knows that this is what you're doing and seeing that's what works for them, so that there can be some buy-in, having them connected as well. We talked nothing for us without us, so they can say, yes, that investment of time and money and resources that you put into this change we agree

with that or, no, don't go in that direction. You're going to be spending all of this money, and that's not what we want or what we asked for, right, so you do need to have consensus and buy-in and that takes time. It takes a lot of thought, but it's something that we can do. Please, Dana.

>> To add to that it's because it's a culture shift; right?

>> Yeah.

>> Changing the culture, it takes a lot of time but with intention like you said and persistence and consistency, and these are your values, and you're not going to bend them, that's -- I think that'll eventually help shift the culture.

>> Uh-huh, thank you.

>> And thank you for being so patient. I know you were standing at the mic for a while. Please go right ahead.

>> No worries. I'm from the University of Colorado-Boulder, and this question goes to you that have been student leaders. I think many faculty in the room may be familiar with the phenomenon where you get this incredible student who will show up, and they're just so energized and motivated, and they work really, really hard, and they pour a bunch of time and energy catalyzing change, and then either they eventually get burned out, you know, and have to do all the other things that students are being asked to do or they end up leaving, and then there's sort of a void and all of that momentum that was there just kind of dies. And so for better or worse, faculty are the only sort of constance in academia the entire time, so my

question is what are the most important things that faculty can be doing to support leaders to make sure that, A, they don't get burned out, and they have that sort of protection they need to do the things they're interested in? But also to try and foster continuity in the student leadership and make sure when we lose sort of an amazing student to go off do bigger and better things that the momentum they build doesn't leave with them.

>> Samantha, this sounds like a perfect question for you.

>> Thank you so much for the question. I think a lot of efforts, when it comes to DEI just like I was explaining earlier where empowering students to go into lab and see themselves in the position, you can empower everyone in the room, every educator has the power to empower someone to be a student leader.

I think a lot of people might not know that student leadership is even an option for them that they can improve their presentation and improve a sense of belonging in their department, but it's up to the faculty who are consistent to be, like -- to -- to kind of give -- to empower the students to say, well, you know, you can do this. You can write letters, you can organize people, you can do all these things, and you have the power to do that.

And so I think a lot of us want to help students get into STEM, but it's also a matter of helping students, you know, see themselves in STEM and stay in STEM.

Yeah, faculty can absolutely empower students, every student to be a student leader and the student leaders -- it creates a cycle

because the student leaders empower other students, so it's -- I think it's for almost every educator it's a very accessible path -- path to improving trajectories.

>> Uh-huh.

>> Yeah, so this is something that something that we starting now. If we are going to be funding your chapter to come to our conference, you need to bring freshman with you. I am not going to fund for your upper leaders to come over here, and it's kind of a similar process because then that happens, right, you have this incredible student. They are there for a portion of time and either they work too hard and burn too bright and burn out or they graduate, and that's it and either the club dies in my particular case, of course, we have 106 chapters at the universities. Either the club dies, and then somebody else is like why doesn't this exist and picks it up later or I was the vice president in my chapter, raised a bunch of money left them a great bank account and everything set up and all the policies, and I left and 2 years later they were done, and I did a really bad job at training the leaders behind me, so I try to make sure that happens, but we started engaging the advisors, and that's something that I'm now requiring to have an account with oSTEM and just even saying: Hey, students, your president I'm becoming the advisor of is graduating and here is a binder a Google Drive of the knowledge that they are going to use, like, losing organizational knowledge is a huge issue when your student leaves, and they were the only one who could talk to the club and the only one to has the

password to hear interest the email and ask the student government for funds so on, and so forth, and then you start from zero it's like a huge uphill battle. If you can at least pass on that knowledge and if as the person can hold onto the knowledge -- good luck, I'm here to help you, but at least you've got this to start. Starting with 0 knowledge. I think that is super helpful.

>> Uh-huh.

>> Lilian, did you have anything to add?

>> No, her point was on point, and that's about making sure -- trying to -- trying to create that knowledge transfer and maybe encouraging the person who is shining bright, hey, do you have somebody else helping you? Maybe if they get like a few other students when that person burns out, maybe the other one could take over, you know, just try to build a community of -- of that group.

>> Uh-huh.

>> Thank you for that question. I'm going to give two quick examples that I've seen in two different parts of the country, California and Florida, both in computer science. Dr. Jillian Hays is the dean of the graduate school and a computer scientist at University of California-Irvine and Dr. Juan Gilbert is a computer scientist and professor at University of Florida and both of them have very, very diverse labs and both of them from what I understand from their students encourage connection to DEI, diversity, inclusion issues and encourage them to be leaders in those spaces at conferences that are affinity driven whichever way they want to do it in addition to

working on their science, and they have supported them so funding that they have, to have them go to conferences that are in their discipline, they also have funding and support them to do work outside of the discipline within whatever part of the identity, theirs or others that they want to help support.

And so going to University of Florida and, for example, seeing Dr. Gilbert's lab and how it's set up and how people are decorating their spaces and declaring identities, and so forth and having agency, that is part of the lab culture.

With Dr. Hays, I haven't been to her lab, but I've talked to her students and talked to her, and she does some of the similar things, and they are attracting very diverse graduate students because of the way that they are incorporating that kind of cultural support for their students.

And I think we have the last question. This is our last question of the panel. Please go ahead and thank you for waiting.

>> Yeah, hi, my name is Melissa, and I'm with the Institute for Biomedical philosophy. My question is a little bit different perhaps.

When diversity, equity and inclusion -- when we think about it we often think about -- I don't remember the phrase somebody up there said, the shapes and colors and sizes of people but there are other forms of diversity so diversity of thought and also people have faith and particular within the scientific community, we have a tendency to not be inclusive of people of faith and not be respectful,

I guess, maybe -- I'm not sure what the right terminology is and also people -- we like to use the term like-minded where we want to hang out with like-minded people but reality probably -- everybody's deep down good, we hope, and so how can we find the commonalities for people with diversity of ideologies, diversity of different types of religious backgrounds to be inclusive of -- of everyone, not just based on our physical characteristics, but the other spiritual and intellectual changes and thoughts that we all have?

>> Thank you.

>> I think it's just being aware that it's a problem like you pointed out, and then making an effort to be welcoming to that group. To whatever group feels excluded.

>> Uh-huh.

>> I think also thinking about intersections 'cause I know a lot of us have us -- when I see "us" people like us a lot of people have intersections where there are potential intersectionalities in a lot of areas, and you might actually be surprised. You know it's interesting some of the conferences that we're having and maybe future conferences may have opportunities to talk about that a little bit more, so that we can find where there are commonalities across-the-board and even in some areas that we might not have thought about before so --

>> Yeah.

>> Thank you for bringing that up.

>> AAAS has religious and science as one of the groups. Maybe it's

something that people are interested diversity, equity and inclusion might want to explore within AAAS.

>> Yes, yes, I have to write one of the grants at UMBC about that, and I was really excited when we had that but, yes, that's definitely something that we should be thinking about and thank you again.

Looks like we're at the end our time for our panel. Thanks so much to all of you for being engaged right after lunch.

(Applause.)

>> Thank you to our panelists for coming and spending time with us.

>> Thanks, everyone. We're sorry if there was anyone that had a question that wasn't able to ask it. We always encourage you basically if you have additional questions to put them in the app just, so we can have them for future summits. Also, you know, if you would like to engage with one of our speakers there, please do that.

I'll give just some last shoutouts basically and also a little housekeeping.

So my first shout-out I would like to give is to Dana Bolles. Basically, I want to let everyone know she is an AAAS gift ambassador basically, so this program was to highlight female scientists basically that are contributing in special ways across the scientific enterprise. There was a special exhibit actually for women's month basically. All of the statutes basically were exhibited at the Smithsonian and the statues are traveling around the country, so that shout-out to Dana.

For Samantha, I want to encourage you of you all to follow her at BlackinChem industry and to consider engaging virtually or otherwise, if they have something in person basically for her initiative.

I also want to encourage you to consider following Lilian and her work basically with oSTEM and also the fact that they -- I just found out from my colleague Travis they have a scholarship program basically so if that applies to any of the intersections for students and trainees and, otherwise, faculty administrators that you work with at your institutions, I'd encourage them to search them out. And for Dr. Tull, I would say she's a DEI expert to see what they're doing they're creating a foundation and doing the coolest things at UC-Davis and basically follow her and follow her team.

And the last thing, housekeeping -- at the poster chimes, we don't mean it's over. Basically, we're saying we're moving from basically posters, you know, 1 to posters 2 basically, so we're sorry if there was any confusion last night where people thought that we were ending early, but that's what we mean.

Thank you so much for being here. Please take the break. We're having the -- actually concurrent workshops again at 1:45.

If you have questions, need help, assistance, anything, stop by the registration table or catch one of us on the team. Thank you so much. We'll see you later.

(Applause.)