Demystifying Entrepreneurship: Careers in Small Business Workshop

Access NIH Seed Funding to Support Your Small Business

Stephanie Fertig: Hello. My name is Stephanie Fertig, and I'm the Director of the NIH Small Business Programs within the SEED Office. That's the Small Business Education and Entrepreneurial Development Office here within the Office of Extramural Research. Today, we're going to really be diving into some of the careers and different options within small business. We will be making the presentations and the presentation and the recording and the slides available about a week from today. So, we do try to make those available on our website, so do be looking for those. If you have any specific questions, we ... I encourage you to take a look at the Q-and-A box, and make sure to put your questions in there. We're going to work to answer any questions. In addition, I do encourage you to take a look at the webinar chats. We're going to be putting important links and information in that chat that might be helpful as we're going through our conversations today. So again, I want to welcome you all to our presentation and then discussions later today, and we're really hoping that these are going to be not just PowerPoint presentations but some communications that will really help as you're looking at your different career options moving forward.

But first, we want to talk about what SEED funding support is available for small businesses. And again, for those who just joined, my name is Stephanie Fertig, and I'm the Director of the NHS Small Business Program here within SEED, within the Office of Extramural Research. So, we're going to be talking about a number of different programs and a number of different things here today, and you can find all that information on our small business website, seed.nih.gov. So, if you remember nothing from the talk today, please remember the website, seed.nih.gov. That has all the information that I'm going to be touching on today in a lot more detail, so you can find more information and answers to your

questions there. I encourage you to take a look. So really, as I mentioned in the diversity supplement workshop, we're really utilizing the small business program to meet the mission at NIH, and that's turning discoveries into health.

We're here to take those great innovations and get them into the hands of the patients, clinicians, caregivers, and researchers that need them. Now, these are congressionally mandated programs. We have about $1.4 billion of dedicated funding set aside specifically for small businesses. Now, there are two separate programs, and I touched on this briefly earlier, but there's the Small Business Innovation Research, or SBIR, program, and Small Business Technology Transfer, or STTR, program. Now, these two programs have the same scope and the same general goals, but there's one major, distinctive difference. While the SBIR allows for partnering, the STTR requires partnering between a small business and a US nonprofit research institution.

So, that's the big difference between the two. Now, there are some policy change ... policy differences that come from that core difference. We won't be diving into all those specific details, but there is a link in the webinar chat that talks about some of those differences between the SBIR and STTR, and I encourage you to take a look at that as well. Now, this is really some of the largest sources of early-stage capital for life sciences in the United States. And this funding really allows our awardees to derisk their technology and then leverage that to attract investors and partners. So, we're really in that SEED fund space. We're in that very early-stage space to support companies as they're created and then move them towards manufacturing, sales, and distribution. And a number of companies have done this. We have not ... companies all across the United States.

We fund a number of different modalities, so not just therapeutics and diagnostics but also research tools, digital learning. People ask often, "Hey, do you guys fund ... support AI?" Absolutely, as long as it's meeting the mission of NIH, as long as it's really trying to solve some of the problems within our mission, we are interested in those great technologies. Now, the SBIR, STTR programs are phased programs. This is not related to clinical trials phases. This is an unfortunate similarity in the

nomenclature. Phase I is a feasibility study. Phase II is full research and development. There's a number of different ways to come into the program. You can do a standard Phase I, you can do a Phase I and Phase II that are combined into one application. That's called a Fast Track. Or you can do a Direct-to-Phase-II where you skip over the Phase I and go directly into the Phase II if you've got that feasibility study already in hand. Now, regardless of how you get to a Phase II, we recognize that for biomedical research, you might need additional support either in time or money, and so that's why we do have a number of bridging programs that can support companies as they move to a commercial market, partner, or investor.

Now, one of the myths that I do here is around the budget, and one of the things I really want to point out is that while you see on the slide that there are some guide ... Small Business Administration budgetary guidelines, we do have the ability to exceed these amounts for specific topic areas. And so again, I wouldn't be constrained for these budgets, but it's important to reach out and talk to somebody prior to applying if you're interested in asking for more than the SBA guidelines. And really, that's the theme of what I'm hoping you get from today, is that we're really here to help. We ... You shouldn't be afraid to contact us, and really, contacting program staff is an important step in the submission of your application. Now, we have a number of funding opportunities. We do have specific funding opportunities, but the majority of our funding does go to what we call investigator-initiated grant applications. Those are situations where you're coming to us.

You've identified a problem out there in the community, and you're coming to us with that solution. We call those our omnibus solicitations, and they have standard receipt dates. The next one, it's going to be January 5th, but if you don't make that, don't worry. There's one right around the corner for April 5th. And you can find all of our open funding opportunities, big blue button right up front on our website. Now, I talked about those omnibus solicitations. Again, those are those open-topic solicitations, and you can read the program descriptions and research topics for each of the participating institutes and centers to get an idea of the kinds of technologies and research they support. In addition, we do have targeted solicitations both in grants as well as contracts.

I want to point out that we do have that contract solicitation. We also have specific solicitations like our Women's Health Research, a notice of special interest that's currently out. So, it's important to take a look and see what might fit. But again, if you don't fit into targeted solicitation, don't worry. The vast majority, about 75 percent, of what we fund comes in through that omnibus solicitation. Now, one of our specific program announcements that I do want to point out, our notice of funding opportunity, is the NIH Transition Award. Now, this is a specific grant opportunity for ... to foster early-career scientists transitioning to entrepreneurship. It includes support for research and development as well as entrepreneurial training, mentoring and career development. I encourage you to take a look at these. As you can see, we have both an SBIR and STTR version as well as clinical trials not allowed and clinical trials required. I do really encourage you to take a look at the transition award if you fall within the early career scientist space.

Take a look, and I ... and we do have a specific webinar that went more deeply into this specific notice of funding opportunity. And so, you can find more information as well as frequently asked questions on the website. Now, you'll note, I said that not only is there SBIR and STTR versions, but there's also clinical trials and non-clinical trials versions. It's really important when you're coming into the NIH, and this is actually true across the board, to know whether or not you're considered a clinical trial because not all notice of funding opportunities allow for clinical trials within to submit. And so, you can see the NIH definition of a clinical trial is very broad. It is not limited to the number of participants, and it's not based on risk.

So, it's really important if you're doing anything with human subjects to check the definition and utilize the decision tool that's available online to determine whether or not you're doing a clinical trial as defined by the NIH, and that will help you determine which notice of funding opportunity you can come into. Now, the small business programs do utilize the NIH application and review process. If you did attend the diversity supplement workshop, you heard some about that application and review process, and you were provided some additional information there.

This utilizes that same process. The small business grant is submitted. The application is submitted electronically. It gets assigned to a scientific review group, and it goes through that same process. So, I want to talk about the submission, though, because that's the first big step.
And we have a number of resources that are available online to help individuals with that submission: application instructions, annotated form set, even sample applications. I would also encourage applicants to take a look at the state resources that might be available ... state and local resources that might be available.

The Small Business Administration does support a FAST program, and basically these are programs that are located within a state to help individuals submit to the small business program. So, I would encourage you to take a look at what local support might be available to you as well. But the most important piece of advice that I can provide today is to talk to a program officer. And I would encourage you to talk to a program officer at least a month before the application deadline.

Now, that's because you want to make sure that if the program officer tells you something, you can incorporate that into your grant application. You have enough time to do that, but also you have enough time to get on their schedule. Unfortunately, time is finite, and certainly as you can imagine, as you get closer to that receipt date, our program officer schedules start filling up. So, you want to make sure that you get on their schedule. Now, we have a list of the small business program managers at our website, and what you can do is you can look for the very nice-looking picture of Building One on the NIH campus, and right underneath that is our list of Small Business Program managers.

If you're not sure who to contact, you can always e-mail us at seedinfo@nih.gov. We're happy to assist you and find you the right institute or center that you're likely to be assigned. But we also have the Research Portfolio Online reporting tools, or report.nih.gov, and that's a location where you can see where NIH ... what NIH has supported previously and where that has been assigned. So, you can see, hey, if somebody has submitted a similar project or a project in this area, what institute or center has taken primary assignment of that project, and that can help you determine where you're likely to end

up as well.

And so, this is an example of a reporter, that tool that I was discussing, and if you can see, right here in the corner there's something called Matchmaker. If you look at that, you can click on that, pop in a brief description of your project, and the tool will matchmake you. It will see what similar projects have been supported previously, and again, you can see where they were assigned. And it's a really powerful tool. It helps you ... And I would give you a little tip here. It helps you also determine who else is working in your area, what else is out there. That's a great way of seeing ... determining if something similar has been supported in the past. Now, as I mentioned, the ... We do utilize the peer review process. So, each of our applications do go through the Center for Scientific Review and to evaluate the scientific merit.

Now, the review process is very similar to what you get for a standard NIH grant application, except the questions are very different. It's not hypothesis-driven research, but it's really product development research. So, we're really focused on product development. It's a more commercially focused goal at the end of the NIH small business program. So, I would encourage you to take a look at the specific questions in section five in the Notice of Funding Opportunity. That is the rubric that the reviewers are going to use in order to review and evaluate your application. Take a look at those questions. You'll see those questions for each of the standard criteria are very different. So, significance is going to be talking about commercial potential and a real problem.

Innovation is going to look at competitive advantage. So, you can see there is a slightly different spin on some of those questions compared to a standard NIH application. But the process is the same. Get an overall impact score. You don't get a percentile, but you get an overall impact score, and there are not discussed and discussed applications. Now, regardless of if you're discussed or not discussed, all applications receive reviewer comments. The big thing is persistence, and I know this was touched on in the broader workshop, but I really want to encourage individuals to be persistent. Be prepared to resubmit, and if you don't want to believe me, please believe one of our successful NIH SBIR grantees.

Dr. Carter has been both a reviewer as well as a ... She has successfully received an application and at grant, and she will tell you it's a journey.

It's a process, and that's certainly something we hear from successful SBIR, STTR recipients. Now, beyond SBIR, STTR, we do support entrepreneurship in a number of different ways. I'm going to ... Obviously we are supporting the diversity supplement program, and we do support that. We also do have an Entrepreneurship Boot Camp. It's not open right now, but I would encourage you to take a look at our website. As noted on the website, more information will be coming soon for that program, and that is really to introduce pre-SBIR innovator teams to entrepreneurship and customer discovery and business model about validation. So, I would encourage you if you're interested in there, that's a free SBIR program.

And again, at NIH, I would encourage you to take a look at the website because we do have new programs that come ... are available, and at the end of this, we are going to talk about a Listserv. Definitely join the Listserv if you're interested in SBIR, STTR. You'll see we do post a number of opportunities on the Listserv. We really do try to push that out. Once an applicant has received a Phase I, we have things like I-CORPS to really help people develop their business model canvas, as well as the C3i program. So, these different programs, again, because many of our recipients are new, they have not received or not had a small business before, we really are trying to support entrepreneurship. In the same vein, we do support technical and business assistance and provide technical and business assistance associated with individual applications.

For our Phase I, applicants can request post-award and needs assessment program to get an assessment of the areas that are critical for success in commercialization. For our Phase II, you can request in the application additional funding to hire vendors. So again, we really do want to support not just the research and development but some of these more commercial activities as well. Finally, we do provide innovator support with partnering and investment opportunities. We send companies to different investment and partnering opportunities, some of our recipients as well as regulatory and

business development consultants. So again, even if someone is very new, they've never done a company before, that's okay.

We do provide support and guidance to our small business recipients. And so, with that, I'm going to stop talking. I think I've got a little bit of time for questions. I don't see any questions yet, but I would encourage you to chat ... to connect with us. We have a number of ways to connect with us. Again, that website, seed.nih.gov, it's a great place to make sure to see what's currently available, what opportunities we have. Please do sign up for our Listserv. Our Listserv is a great way to learn about those great new opportunities and programs, particularly some of those programs we have again in the… at the pre-award space. We do announce those not just by notice, but we also do ... We do make sure we push that out on our Listserv, as well. So, I encourage you to take a look at that Listserv.

So, I do see a question in the ... that we have here, but can you access those resources as a grad student, or do I have to have at least completed a postdoc? That's a great question, and this is ... and I'm going to even take it one step further. We often get questions about, "Wait a minute. Who can apply for a small business grant? Do you have to have a PhD?" You do not have to have a PhD in order to apply for a small business grant. Really, we want to make sure that you have the appropriate ... You need to be able ... As a principal investigator, you need to be able to manage the project that you're proposing, but you do not need to have PhD.

For some of our pre-SBIR, pre-award programs, you do not need to have completed a postdoc, and again, you do not need to have a PhD. So, I would encourage you to take a look at some of those programs because as a graduate student, you can be eligible, and I would take a look. So, another question here is, can someone still be in academia and apply for a Phase I to test the idea? You can, so there's ... This gets to the difference between the SBIR and the STTR. So, in an STTR, and again, because that has this partnering requirement with a nonprofit research institution, you can be with both the ... You can be either with a small business full-time or at least 51 percent, at least over 50 percent, or you can be with the academic research institution as your primary employment.

So, you have the ability to do either. As a Phase-I SBIR, you're supposed to be at least 50 percent, so the majority of your employment, with the small business at the time of award, not the time of application. So, what that means is you can apply, but you don't need to be fully with the small business at that point. In addition, an institute or center can provide you a waiver for that requirement, and there are specific situations where they'll allow that. That's something to talk with your program officer about, by the way, before applying if you think that that's the way you want to go for a Phase I. Now, I will tell you for a Phase II, that is the waiver ... To get a waiver on employment at that point for the SBIR, that's a higher bar.

But if you're going to find that you're really working very closely with the academic research institution, and there's an option there for more of a partnership, that might be a better way to go. And again, SBIR versus STTR and some of these questions, these are some questions that you can ask the program officer prior to applying, but that's a great question. All right. I don't see any more questions here, but I do see some of our panelists have joined, and I would encourage those panelists, please do make sure that you change your ... the panelists and put your name down so we can know who you are.

Thank you so much. I do see another question. Do you have to officially create your company and register it before applying? You do, and I didn't touch on this, but I'm really glad you asked those ... that question. Registration is really important for the small business program. There are a number of registrations because NIH grants go to the company, so ... and this is something that is maybe something that many individuals are aware of. When you're talking even a standard research grant, it goes to the institution. It goes to the academic university, and you're the principal investigator on that. Similarly, in the small business program, the grant goes to the company.

The company needs to be ... these to exist. It needs to be registered. There's a number of registrations that need to be done including at the Small Business Administration's website as well as grants.gov, ERA Commons, SAM. So, there's a number of these registrations that do need occur. So, you do need

to have a company, and it does need to be registered. The quick point, if you have a company and you ... and it's been registered and for the ERA Commons, you actually need two registrations.

You need one for the principal investigator and one for the company. Even if that person is the same, the company needs one, and the investigator, that needs to have one. So that is something that can catch individuals as well. But it's really important to make sure that you've done all those registrations. If you're thinking about applying, I would create that company and start those registrations earlier rather than later. And really a big theme that you're going to hear across NIH, and this is regardless of if you're doing a small business plan or other grant applications: Apply early.

Don't wait until the last minute. Always heartbreaking for us if somebody waits to the last minute, tries to apply, and there's an issue, and then we can't solve that or correct that, and you have to wait until the next round. That's a really hard thing to see, and unfortunately there's limited things that we can do there. So again, encourage you to make sure that you apply and give yourself enough time. There's a question here about company size and if company size makes a difference for the award. Actually, it's one of those things where it doesn't. So again, we receive applications from larger companies.

It still has to be under 500,000 ... 500 people, but ... So, it has to be under 500 individuals. However, the vast majority of our companies don't get anywhere close to the person limit. Really, the vast majority of our companies are small businesses. It may be only a couple of people. It may be under 10. That is very common. It's, again, making sure that you have the right individuals to do the work that's being proposed, and that could mean that you partner with other organizations, either a nonprofit or maybe another small company. But again, the size of the company doesn't determine whether or not you're going to get funded.

It's really what you're proposing, and do you have the right team in place to be able to do that work? Great. Well, we've come to the end of my presentation, so I am going to turn this over to the next panel, and I believe the next panel is "Work in Small Business: You Aren't in Academia Anymore!" so take it away. Oh, I think you're on mute, Adam.

Work in Small Business: You Aren't in Academia Anymore!

Adam Sorkin: There we go. Zoom did not want to let me get on mic. Hopefully it doesn't know something that we don't. So, thanks so much, Stephanie, and thanks so much for that fantastic overview of our program, as always. And thank you all, too, our audience, for joining us. And I'm really excited for a good discussion today on the topic, "Work in Small Business: You Aren't in Academia Anymore!" And we really just want to give you a taste of what it's like to make that transition from an academic environment to ... into entrepreneurship, entrepreneurship and working in a small business.

This is a topic that's very near and dear to my heart, as about 15 to 20 years ago, which seems further and further away these days, when I was halfway through a doctorate and had been managing an academic research lab for several years, all of a sudden, about overnight, I found myself splitting time between the business school and onboarding as employee number five of a very small, very new stem cell startup overnight, and it all happened very quickly. And figuring out how to navigate that environment and understand the value that I could contribute was a really nontrivial process.

It was a great one, and it is a big part of where I am right now in my career and the work I'm doing today. But really, we just wanted to get into that with the three great panelists that are joining us today and going to help share their perspectives on this topic. And I will just introduce them briefly and then give them the opportunity to tell them all a little bit more about themselves and how they found themselves where they are today. So, joining us are Alwyn Johnson, the Cofounder and Chief Technical Officer of Recupero Robotics, LLC; Dr. Maureen Mulvihill, CEO of Actuated Medical; and Anna Lisa Somera, CEO of RHAEOS, Incorporated. And so first I will ask each of them to share a little bit about their background and discuss their transition to working in small businesses and entrepreneurship. And we will start with Alwyn.

Alwyn Johnson: Good afternoon, everybody. Nice to join you today. My background, I graduated with a master's from the University of Wisconsin Madison, mechanical engineer with a focus on biomedical product development, essentially. So, in 2006, there weren't very many options for wearable robotics,

so I went into ... I joined a small consultant firm that had just been acquired by a big Fortune 500 firm, and that gave me the opportunity to see inside of a lot of big operations. And then I joined a small business in Colorado. There, we worked on ... Around 2008, we were integrating 3D-printed parts into prosthetics, and we were making what they consider to be off-the-shelf prosthetic sockets or interfaces for amputees. So, I did that for a while, and I then left that company, joined another company, and then I'm here now at Recupero developing rehab robotics for the upper extremity to improve fine motor control as well as dexterity of the heart. I'll just leave it there. That's my quick background ...

Adam Sorkin: Okay, fair enough.
Alwyn Johnson: ... in a nutshell, yeah.

Adam Sorkin: And that's interesting. So, you actually ... I know that you got a degree in you said product development, so you actually had some training of that.

Alwyn Johnson: So, it was a mechanical design focus, but we were doing ... it was not quite ... It mechanical engineering, but it wasn't specifically biomed. It was more of a general program, but it was focused on ... We were making, or I was helping to develop a wearable robot, a soft robotic glove that you've probably seen several versions of it in the world right now, and it was essentially to assist someone who had lost hand function. And that was my master's project, essentially, yeah.

Adam Sorkin: Got it. Well, thanks so much. We'll move to Maureen, tell us a little bit about your background.

Maureen L. Mulvihill: Hi, my name is Maureen Mulvihill, and I'm President and CEO of Actuated Medical. I just got my PhDs 1996, we'll say, and I was doing a postdoc waiting to go to Germany to do a 1-year fellowship and in that, I was working in the lab that I got my PhD in, and we were working with actuators, so motion devices, and I was talking to a gentleman off-and-on trying to get his actuators to

test, and he kept talking to me and talking to me, and I ... Then finally I called him, and I said, "I'm not ... I don't need your actuation anymore. I'm going to Germany for a year and if you want to send them, great." And so, what I didn't know is, every time I talked to him, he was interviewing me because he wanted to hire me. So, when I said, "Hey, I'm going to Germany for a year," His comment was, "Send me your resume 6 months out, and I hope I have a position for you." So anyway, about 6 months out, sent the resume, and he said, "Yep, I'm going to hire you."

And so, I started working for him, and he was an adaptive optics company, but he used SBIRs to really grow his company. And so, during the 7 years of working with him, I learned all about the SBIR program, mostly DOD and Air Force and different agencies like that. Anyway, and so I really learned about the SBIR program and learned how you can grow a company. And so probably about 7 ... After working for about 7 years, my thesis advisor, who was at Penn State, he called me up, and he said, "I want to start a company. I'd like you to be Director of R&D."

And so, I said, "Okay, that's great." So, I moved all the way back to Pennsylvania, and so I was working for him for about 2 years. So, I was learning small-business management, hiring, all the things you need to do. I always joke it's like a small business MBA I got in process. But anyway, making this really long, but anyway, so I was talking to a doctor, and he was saying, "Maureen, I don't need the motion devices. I need the entire system FDA-approved," And I went back to my boss, and I said, "We need to make medical systems or something we can do here." And he goes, "That's not what I want to do." And I said, "Well, that's something I want to do." And so that was the idea of starting Actuated Medical, motion devices, right?

But anyway, starting Actuated, is we're using motion to improve patient outcomes, and that was about 18 years ago. So that's kind of how I got to where I'm at.

Adam Sorkin: Fantastic. Thanks so much for sharing and next I will ask her Anna Lisa to introduce herself and tell us a little bit about her background.

Anna Lisa Somera: Thank you, Adam. Good afternoon, everyone. I'm Anna Lisa Somera, CEO of RHAEOS, zooming in from Chicago, Illinois. Academically, I have a three master's in public health, cell biology and business. It wasn't after until my cell biology master's I decided that after all this schooling that I didn't want to continue working in a lab. That I wanted to understand the business side of bringing technology to the market, so then I went to business school, and then I got ... I took a class in technology commercialization, and that's where I started my first business in the dental space where I did the whole business plan circuit, that sort of thing.

So, it was that small taste of being in a startup that eventually went on to a about 20-plus year career so far in working with startups. So, after that I worked in venture capital like comanage a life science portfolio. I worked in tech transfer, and then I also worked in several startups, primarily medical devices, a couple of therapeutics here and there but primarily medical devices, which is my sweet spot. And I led functional areas including regulatory affairs, clinical quality finance operations.

Basically, I did whatever the startup needed me to do, and I did it. And it was through those different experiences which led me to my current role as CEO of RHAEOS. I never thought I would be a CEO, and it was one of those kind of movie moments. Back in 2019 I was approached by a world-renowned wearables professor, material science, Dr. Rogers at Northwestern University, who said, "You might want to take a look at this technology that I'm working on. I'd like you to review grants." At that time, I've also worked on a lot of SBIRs.

I worked on SBIRs since 2004, and after I read that grant, I got so into it. I stopped what I was doing. I dropped all of my clients because I was consulting, and I asked him, "Who's leading this company?" And he said, "No one right now because it's academically founded." And I said, "Well, I want to lead it." So, I dropped all of what I was doing and decided to leave the company. And at that time, I had my second child. I also closed on a house, so it was a great idea to jump into a company that had no money, no employees. I was employee number one, so that was 2019, so fast forward to 2024.

We have 20 people, over 20 million in financing and bringing our first device to the market, so it was one of those entrepreneurial movie moment leaps that I took, and I'm so glad that I did, and if you guys have a chance to do that, and that's something that I would be encouraging of.

Adam Sorkin: Fantastic, and hopefully our attendees are starting to see some common themes emerge. So, we've got a lot of people in our audience who, generally diversity supplement scholars who have joined an NIH-funded project. Some of them are getting their first taste of working with an SBIR project right now. A lot of them are working as investigators on more traditional research projects. So, if they're kind of deciding that maybe a career in academia is not for them, and they really want to get into entrepreneurship, what are some good options to engage with potential employers or maybe partners and cofounders? Where are some good resources they might look into leveraging to see if this is really for them and get their first opportunity to jump in? And I see Maureen is off mic, so I will pick on her first.

Maureen L. Mulvihill: Yeah. So, I would say if you look at the NIH RePORTER, and you see what entrepreneurs are working on, and you see a project that you're interested in, then I would just contact the PI on that project and say, "Are you looking for any people? I would love to get involved in your work." I think that's one of the best things to do. The other one is, if there's an SBIR meeting, and you can go there and just talk to the entrepreneurs and see if they're looking for somebody with your expertise. Right now, I can tell you, if you have any brain research, any neuroscience research under your belt, then call me because we're looking for someone. So, there's always people that are needed, and so just look at RePORTER and see if you could find a good place that you can find some interest.

Adam Sorkin: Great ...

Anna Lisa Somera: Wait, I ...

Adam Sorkin: ... and I will ...

Anna Lisa Somera: [Indistinct] Oh, sorry, I was going to say ...

Adam Sorkin: Sorry, [Indistinct]

Anna Lisa Somera: ... could jump into that.

Adam Sorkin: Absolutely, I just wanted to piggyback on that real quick. I think we actually do have a link on our diversity supplement Web page that will give you a list of all of the projects that are currently ongoing, so great way to take a look and get into some potential matchmaking, but, yeah, Anna Lisa, please.

Anna Lisa Somera: Yeah, I just want to add to Maureen's great comments. I think I would also look locally, I know many of you are affiliated, whether other ... in some capacity affiliated with universities and just kind of see what startups are in the area and look them up. And one way to kind of dip your toe into startups is just to intern. And if you are recent PhD, that's okay. You have ... A lot of startups are always looking for talents, and startups are always looking for people that are flexible. So, if you can be in person, you are up for all sorts of projects, you could be very valuable, and I think above all it's to come across as very hungry and eager to learn as much as you can and to contribute as much as you can. So, we have several interns at my company, many of whom we've converted to full-time. So, I think this route is possible.

Adam Sorkin: Fantastic, great, thank you so much. And that actually ... Alwyn, happy to hear from you if you've got anything to add, but ...

Alwyn Johnson: Yeah, so in in my case, one other ... A simple thing which I don't know how popular it is nowadays, but I was just a member of my mechanical engineering society, and I went there, and I met people who were working in different-sized businesses, and that was a good way to network and kind of to ask questions, and I got to understand what it was like to work in an organization that had 10,000 people and one that had 99 people.

And that was great perspective for me to know, to get a better understanding of what I kind of was curious about and what I would be jumping into. So that was extremely useful for me, and of course I

have always had a leaning towards prosthetics and wearable devices, so I was constantly scanning media reports at a time just to kind of see what was happening. And I got super lucky at the time to see this new company that was funded by an SBIR firm, and it worked out to be a good match for me. So, it was ... If you're curious, it's always good to connect with people either in person or online. This would be my suggestion.

Adam Sorkin: And I hope that everybody's also kind of picking up that entrepreneurs are usually very happy to talk about their work and really discuss things with you, so don't be shy about trying to engage people whose work you're excited about. And I think you really never know what kind of opportunities you're going to, I think, find your way into. So that actually does lead into my next question a little bit. So, we specifically got a lot of very early-stage PhDs, graduate students, maybe postdocs, junior investigators. What kind of skills do they typically bring to a startup or a small business that are valued? Or what kind of skills might they want to develop and shore up so they can really succeed in this kind of environment?

Anna Lisa Somera: I can start. They can bring many skills. Obviously, there's the technical, especially if their technical background is relevant to the company, and if it's not, that might be okay, too because what's great about students, especially graduate students, is that they're able to, for the most part, grasp technical information quickly and help to problem-solve. So, they can help us think through different projects. One thing I like about doctoral students and postdocs in particular is that a lot of them can write, so a lot of them also help us on our SBIRs because they have to write for their dissertations, et cetera, and they carry that skill set. So, we had a recent PhD grad who interned with us for the summer, and I asked her to help me write a significant section, and it was like poetry. So, I think they bring that skill set to the table. At least they did for us.

Adam Sorkin: Absolutely, and I know I got my first opportunity in part because I knew what an RO1 was and knew how to put that together, and my boss said, "That's great. With that, I can teach you how to write an SBIR and hopefully get some funding in the door." So always very important to new

and fledgling businesses, Maureen?

Maureen L. Mulvihill: Yeah, I would say exactly what Anna Lisa said. The idea of having somebody come in with a little expertise, you've been really focused on a certain area, and that's an area that the company doesn't have, is perfect. Right? It fits in really well, or it complements. One case in point is when we were starting a company early on, we had the resume of an assistant professor who didn't get tenure. Right? He was like. "Okay, what do I do now?" And he could do animal surgeries, and he was really good at it. Well, that's not something I can do, and I never learned. Right? So, he really complimented what we were trying to do here, so it's really just looking for people that have complementary skills, and so, yeah, the internships work well.

Alwyn Johnson: For me, graduate students are typically well-read because at some point they had to do a recent literature review, and that's been super-useful because they probably might know a few things, more recent things going on in the field than a technologist who's been developing a particular type of device for a while. So it's always good to have a bit of a resource whose can say, "Well, someone did something, published a paper recently on a particular topic," which is super-useful at times, and also I think grad students, when you have someone who's been working on a particular type of device for, say, 10 years, it's kind of like the beginner's mind sometimes is a little bit open to new ideas or kind of suggests new thoughts which someone who's seen something a particular way for a long time, maybe it's not always available to them, so it's always good to have that perspective and that energy of a grad student on a project that you're working on.

Adam Sorkin: Absolutely, absolutely, great, thanks, and any other particular skills you think it's helpful for them to brush on up on, seek out if they think entrepreneurship is going to be for them?

Alwyn Johnson: Just to jump in, I'd say teamwork is super-critical. We've had sometimes team-building exercises where sometimes when you want the problem solved, people will go through their computers first, and then they'll discuss it as a group. And then we've had people who are actually able

to sit down and communicate before you go to the computer and brainstorm. So, it's always great to have that people capacity to be able to work with someone else and brainstorm, so that's like a strength I've seen with grad students who've been able to do that at a high level, essentially.

Adam Sorkin: Absolutely, and that does lead in pretty well to kind of the next set of topics that I really wanted to get into was how working in a small business is going to really differ but what one of the big areas is really the flexibility and the ability to choose and prioritize specific research goals, investigate specific kinds of problems. So, in your experience, what's really driving your R&D priorities and you're really specific goals at a small business? And how much independence would say a new investigator joining your company have to set them and explore them?

Maureen L. Mulvihill: That's a great question, and I think that a small company offers the ability for you to pursue topics that you want to work on. Maybe in academia you're kind of in a lab, and you're kind of focused in that one area, where in a small company you can do a lot of things. We're still focused on a strategic plan, and we need to make sure that people are working on projects that are moving that strategic plan forward. But I think there's a little bit of area that you can expand your knowledge, but you can also learn the business skills. You can learn the regulatory skills. You can learn the quality assurance skills, and you can of course do the technical piece. So, there's lots of different hats that you can wear at a small company, and you can learn a lot of things so that you broaden your experience.

Adam Sorkin: Great, thanks so much, Maureen. Anna Lisa or Alwyn, anything you care to ...

Anna Lisa Somera: Yeah, I can answer that. I think one of the biggest changes, and I've noticed this in a couple of folks that we brought in from academia Is that we train them to take their great ideas and bring that timeline in like this. So, for some projects, we had one recent PhD who had kind of wanted this project, and that was a 6-month project that could answer one of our scientific questions. That's great, but I need you to cut it down in half because in a startup especially, especially pre-revenue, time

is money. Right? So, we don't have 6 months to spend on that. You need to do it in 3, so I think that's something that a lot of them that we brought in have appreciated because they're able to kind of trim

some of their ideas out and kind of get to the point while being cost-efficient but also enabling them to meet our research goals.

Adam Sorkin: Yeah, absolutely, and certainly in my experience always found a lot of flexibility. That timeline, particularly early on, was killer. I all of a sudden had a CEO who expected results and expected them yesterday, so not always different than working with a PI in academia, but certainly the environment was always a little bit more urgent.

Maureen L. Mulvihill: And to that note, sometimes you can't do that because you're so used to the larger timeline that it's just not a good fit, so that internship or whatever you're doing with that company might not last long, so there's a risk that you have to be willing to take, and to really try to push things into that shorter timeline, she's totally right. We are on a much shorter timeline.

Adam Sorkin: Absolutely, and I guess that does actually lead in pretty nicely to one of my next questions. Who do you want to work for? Who should our supplement scholars be looking for in potential leadership of a small business or potential partners or cofounders if they don't have really a lot of experience working in this kind of environment? Any red flags that they should watch out for as well?

Maureen L. Mulvihill: I think it's about risk, so an entrepreneur takes risks. And so, if you're not willing to take a risk, but you want to go into a small business, then you probably want to work for somebody, so that CEOs is taking the risk, and you're just doing the job. But if you like the risk, and you want to develop something on your own, then you start your own company, but it's not for the faint of heart. Doing the company, making sure you make payroll, making sure you're paying all the bills, there's a lot more than just the technical piece when you start running the company, so you've got to decide. Do you want to do a lot of things? Or you just want to do your technical? And that's how you figure out

where you fit.

Adam Sorkin: Absolutely and, Anna Lisa, please.

Anna Lisa Somera: Sure, I can add to that. I think one great thing about working in a startup is that for the most part, these teams are operationally lean, which will afford the opportunity to interact with people in different functional areas who are often in multiple functional areas, so while you may report to a single individual, as an intern, I couldn't stress enough for folks here on Zoom to take the opportunity to get to know the other folks at the company, even if you catch them for coffee. I had an intern this summer who did just that. He was great where he was solely working in the lab, but he would pop into my office and say, "Hey, do you want to grab some coffee? I want to learn a little bit on your reimbursement strategy."

I really like that, and he just kind of took that opportunity, and we had coffee. It was quick. He got some information, and then I got a chance to learn about what he wants to do when he wants to run a startup someday. So, I think the bottom line is just kind of, if the opportunity is there for you to interact with different people, even if it's for coffee, definitely take that.

Adam Sorkin: Absolutely, and, Alwyn, please.

Alwyn Johnson: I would definitely echo what Maureen and Anna Lisa said, [Indistinct] great. But the thing that I ... If you're looking to see who you want to work with or who you want to work for, it's always good to kind of get a sense of what you think that person might be when a fire comes. Right? And that no matter ... If you set sail on a ship for the first time, and it's a brand-new ship, likely there's going to be some kind of unpredictable events, and so that's something that you ... It's never smooth sailing is what I'm trying to get at, so it's always good to kind of get a sense of, was this someone that you would want it to be?

How are you going to manage that unknown situation? That's a little bit uncomfortable at times, so it's good to have that kind of sense of who you're working with in that sense, I think that's super. It's very important, especially in a lean environment where there are five people. You'll get to know them fairly well, or you'll have to work with them quite a bit.

Adam Sorkin: Absolutely, and you're going to have those high-stress situations for sure, and I had a CSO who used to like to be really upfront about it, would usually ... A week rarely went by where I didn't get the story about how they were having trouble keeping the lights on and 5 minutes away from closing the doors before that SBIR grant rolled in, and they were able to ramp things up again and really kind of move things forward but, yeah, absolutely. You're going to see, I think, your partners at their best but often at their worst.

So, I think that's really, really great advice. Let's see, and I do see we're getting a couple of questions in the Q and A window as well. Please keep sending those in. We've got a couple of topics that we do want to get through but if we have extra time, very happy to get into those questions as well. And so, I did want to touch a little bit on a couple of topics I think that tend to be in everybody's mind. For the investigators particularly who are I think less familiar with the small-business world and industry, what does compensation look like? What trade-offs are people working in a small business, particularly a startup or very lean environment, making versus working in academia or even in more established industry? How does salary compare? Is equity really worth it? Is it all it's cracked up to be?

Maureen L. Mulvihill: I hope so.
Adam Sorkin: Right?

Maureen L. Mulvihill: Yeah, I'm not sure I can answer on the academic side, but I think salaries are pretty comparable. Maybe the industry is a little bit higher. The benefits package of a small company is probably a little bit less than a benefits package of a large university, but we still have the 401(k) match. We still have the health insurance. We still have the vacation days or PTO or sick days now that

we had COVID. We added sick days in there, so I would say that there's those and then the company holidays. Right?

So, we still have benefits that you would see somewhere else at a large company, maybe not as big, but we still have them. So, in the sense of flexibility, I really feel like academics have more flexibility, but there's a lot of flexibility in a small company, too. If somebody says, "I have to go to a doctor's appointment," or, "I have to go take care of one of my kids," or I got ... And it's always, yes, yes, go right ahead and do that. There's a trust. So, I would say one thing back to the other question, too, is corporate culture. So, when you're looking at different companies to work for, read their website and try to figure out what their corporate culture is and see if you fit. But that was just part of I thought of after I stopped talking before.

Adam Sorkin: No, absolutely, and really always great questions to ask when you're interviewing or even just reaching out to a lot of these companies. Just they should be pretty happy to discuss those topics with you, absolutely, Anna Lisa?

Anna Lisa Somera: Yeah, for us we get pretty creative on compensation. So, there's the cash equity split for full-timers, and we have the traditional benefits like Maureen said, 401(k) match, I even have commuter benefits, that sort of thing. But the other thing that I also add in for my full-timers are bonuses, and those bonuses are reflective of value inflection milestones. So, if they win, everyone else wins, and that will be paid out once that that milestone is achieved. So, all my full-timers have milestones, and that is typically a percentage. It ranges between 10 to 20 percent of salary depending on the level of the individual. And like I said, those bonuses, when they win, we win, and the payout for that are things that really incentivize beyond the scientific interest obviously. It keeps the team motivated.

Adam Sorkin: Would you mind talking a little bit about what some of those milestones might be?

Anna Lisa Somera: Sure, so if it's ... Let's see, for my regulatory people, so it's if they submit regulatory application or approval, there's bonus payouts on that. For my technical folks, let's say for my software engineers, if an app is deployed, and it's tested successfully in X number of subjects. Right? And then there's few bugs or that's and then they get like a bonus. So, everything is tied to success, and I have my bonuses catered to each individual.

Adam Sorkin: Great, so, yeah, not all one-size-fits-all kind of, yeah.
Anna Lisa Somera: That's right.

Adam Sorkin: We're not, yeah, that makes a lot of sense. Thanks very much for sharing that. Alwyn, do you have anything else that you ... Yeah.

Alwyn Johnson: Not much. I'll just kind of reiterate that we ... If you can figure out something patentable, if you come up with a novel idea, there's benefit in that, too. And equity, of course, is the risk-reward part of the small business, right? If you actually ... If we are all as a team able to accomplish certain goals and you're crucial to that, and we can probably increase ... We've had times we've increased equity because of how much they've moved the needle [Indistinct] are advanced to where the tech was, so yeah.

Adam Sorkin: Great. So, looking at the flip side a little bit, what flags do you think new scientists should look out for? What sends a signal that maybe you've got a company that might not have their best interest in heart or really just kind of looking to maybe take advantage of their time and effort? Any ... or just warning signs in general that it's ...

Maureen L. Mulvihill: Yeah, I would say you have the vision for yourself. You know what you're striving for. Are you striving to improve patient outcomes? Are you striving to make money? You've got to know yourself what you want, and then I think you look at a company's website, and you look at their postings, their press releases, all those things, and see if what they're doing will make you happy, whether that's making a lot of money or helping patients or whatever drives you. I think that's where it

is. And then you talk to people that work there. So, in the interview process, have the list of questions of, do they get days off if you need time off? What's important to you? And ask those questions to make sure that you fit in that corporate culture.

Adam Sorkin: Great, very insightful. Yes, Anna Lisa?

Anna Lisa Somera: I agree. Maureen is right. I think especially with this management team, you should feel that they have passion in what they're doing, that they're very mission driven. If they're not, it might not be the right fit because there's so much sacrifice that goes into start-ups. And for the management team, it's like big part of your heart has to be in it because that'll just help the company be successful. Beyond that, as you're looking into full-time positions, it is okay to ask about the financial position of the company because you are giving up ... If you join them, you're giving up ... You may be giving up other opportunities.

You want to see what their runway is, when their next raise is, what their next milestones are, that sort of thing. You might be able to bring that up during the interview. I've had several of my full-timers ask, and I like that. I like it when they ask that question because these are important things to know because start-ups in and of themselves are very risky. And so, it's important to get that information at the get-go instead of wondering or being shocked later on that they have to close doors.
Adam Sorkin: Absolutely, completely agree. It's ... There ... Particularly for new companies, there are no guarantees. So, you really want to make sure that, I think, your leaders are engaged as you are. And, Maureen, you ...

Maureen L. Mulvihill: I think there's no guarantees with a large company either ...
Adam Sorkin: Well, that's true.

Maureen L. Mulvihill: ... or a research lab, right? If the funding runs out in the least ... research lab, they're going to let everybody go. And if the funding runs out in a large company, they're going to cancel that program. Whether or not they let you go, that depends, right?

Adam Sorkin: True.

Maureen L. Mulvihill: But, yeah, there's risk in everything you do.

Adam Sorkin: Yeah.

Maureen L. Mulvihill: So, you just have to be willing to take the risk.

Adam Sorkin: Very astute point. I guess it's a question of being familiar with the specific kinds of risk that you're really engaging with. Yeah. So, I guess ... So, tying in with the competition, we see with career progression in academia, is pretty well established. We kind of know what that looks like. We know it in most ... There's no one-size-fits-all career path, but we have a pretty good idea of what moving forward in your career looks like. It's a little bit different in a small business or an entrepreneurial setting. You want to [Indistinct] talk a little bit just about what career progression might look like. I know they've touched around ... touched on their own specific pathways, but what can a new PhD kind of look forward to in the small business environment about 10, 15 years in the future?

Maureen L. Mulvihill: Yeah, I guess I can start. So, at a small company, you can wear lots of hats, right? So, I had a PhD come in, and they knew how to do certain animal studies. But it turns out they're really good in statistics, and it turns out that they're really good in organization and keeping track. So, they moved up to program managing, right? Another PhD, good at the technical part but also really enjoyed reading FDA documents. I don't know who enjoys that, but somebody does. Anyway, so moved up to being Director of Regulatory. It took a little bit. It wasn't a smooth thing, but the steps went on, and that's ... They became Director of Regulatory.

Same with quality, right? So, they did good doing project management. They did great in the technical. But they really enjoyed managing that entire quality management system, so they became director of that. So, it really depends on what you want to do. There's lots of hats in a company, and you can move around. I hear from others that in a large company, you kind of get pigeonholed, and so you're in a silo, and it's hard to get out of the silo, where in a small business you can move all over the place if

you want, and you take the initiative.

Adam Sorkin: Absolutely, but ... Alwyn?

Alwyn Johnson: Oh, I was just going to add that you can ... We're actually ... Recupero right now is super small, and I'm reflecting on my past experiences and how that ... we grew there. So, it was ... What happened was sometimes you might enter as a research engineer, and then you become specific, focused on our products, and that's your ... That's kind of your, your expertise or your area, and then you end up moving on to lead a group. And so that was ... That's a typical progression that I've kind of been a part of, and that's what we're trying to do at Recupero also. So, you'll start ... kind of get a feel for the environment and how things are running in that particular business, and then you move towards more responsibility, and then potentially you end up leading a smaller group and then maybe PI eventually. So that's the path that we're trying to create that Recupero.

Adam Sorkin: Great, and Anna Lisa?

Anna Lisa Somera: I just want to add, I think, while there's opportunity to grow within the start-up, I think there's even more opportunity to grow through start-ups. So, I always tell people to think long-game. We want to turn in terms of their careers. So, I also tell them to focus on winning, just being a part of really big milestones. So, whether it's being part of patent filing and eventually issues being part of a grant that gets funded, being part of a regulatory application that gets awarded, focus on those wins because you can put those on your resume, and you take it to the next company.

And that's what I did early in my career. I did whatever the start-up wanted me to do, and I just focused on hitting those wins and playing a significant role in them when I took that to the next start-up. That made me even more valuable. So, like I said, while there's opportunity to grow within, I think it's ... There's an even bigger opportunity to grow through multiple start-ups.

Adam Sorkin: Yeah, I could not agree more. I certainly I found myself, particularly early in my career in start-ups, not saying "No" a lot and found some of my ... definitely my best opportunities to grow and eventually got to the point where I wasn't growing any more, and I think that was when I knew it was really time to maybe set my sights somewhere else and figure out what was next. But yeah, do very much completely agree. And I guess, tying into that topic, the environment in small businesses can change very dramatically over time and sometimes very quickly as they achieve different milestones or sometimes if they don't. How have you seen your jobs and your roles change as the company grows? Do you have any experiences that you'd like to share, positive or negative, about sort of the impact of maybe rapid growth or the opposite on your career or just your experience?

Anna Lisa Somera: Maybe I'll start just with RHAEOS, how much you've grown over the past 5 years. I remember our first office. It was this little office, and I was so proud of it. I think it maxed out at like three people, but we fit five people in there really snugly, and I was just so proud of it. I just remember taking pictures and that sort of thing. But then eventually we hit more milestones, got more money in, and then our space grew so much bigger.

So, we got more offices and then eventually our own lab and office. So, I think that was nice to physically see growth, and obviously there's growth within our research and our platform, et cetera. But to go from this little closet of an office that I was super proud of, and I thought it was the greatest thing. Sometimes I look at it. I'm like, "Oh, my God." I feel like we violated fire code by just squeezing all of our ... in there. And we didn't have HR at the time, and I think it would have been a problem. But it's nice to see the growth physically.

Adam Sorkin: Absolutely, and I remember my first office, very much the same, no windows, may have been a closet for all I know.

Anna Lisa Somera: Yeah.

Adam Sorkin: Half the time, I was sharing it with the CEO, who traveled a lot, but ... and telecommuted from out of town. But, yeah, I was super proud of it and, yeah, very much the same experience. Maureen?

Maureen L. Mulvihill: Yeah, I would say probably very similar. We started with two people. Now, we have 22. Went from actually probably a 2,000-square-foot facility. Now, we have a 20,000-square-foot facility, and everyone's space, when we were back at 6,000, things were on people's file cabinets, in their file cabinets. You can't ... couldn't find anything. And so now, we have an area I call the archives. It's, we'll say, in the basement, right, where everything is organized, and you can find things, and so it's a much better flow. But back when it was people in that 2,000 square foot, it was kind of a cool time, too. So, I guess there's cool times all along the road.

Adam Sorkin: Absolutely, and certainly just speaking from my experience working at a company with five people versus 20 people versus 75 or 80, certainly look a whole lot different and love different things about all of those different stages. But, yeah, definitely got to a point where I found we've grown, I think, too large for ... Not that it was uncomfortable, but I really preferred that smaller environment. So just because it's great to see a company grow doesn't necessarily mean it's ... that's always going to be right for you.

So always options out there, and, really, kind of as you move through your journey, I think want to make sure that ... Understand what you love and what's great about that, and make sure that you're keeping that sort of front and center.

Maureen L. Mulvihill: And one comment to that, so one of the things I think is between ... different between academics and companies is we see the patient experience in the sense of, the first patient we ever helped was a 27-year-old soldier at Walter Reed. Oh, my gosh. We helped the human being, and we helped a soldier. It was like, that was emotional. And then during COVID, they ... Our first device is cleared for adults but not kids, and there was an off-label use. And so, there was a child who hadn't ... either feeding tube been clogged for 8 days, so they hadn't ... How were they getting their

medication? How are they getting their nutrition? How are they getting their hydration? And within 2 hours, the doctor e-mailed and said, "You cleared ... We cleared the tube. You saved the child from surgery." That's one of the great points of being in a small business. You get those stories.

Adam Sorkin: Absolutely. Yeah, Alwyn?
Alwyn Johnson: So, I'll just add something, a small thing, to that.
Adam Sorkin: Please.

Alwyn Johnson: So right now, we're not as large as Maureen or Anna Lisa's companies. We're still that small, small business. We're still in the closet office, essentially, right now. And at the same time, we're running a clinical trial on our robotic therapy device. So, you get to have those experiences where you're working in a small group in a tight space. And then you get to see what it's like for someone to use your device and say, "Oh, this has changed my life in this way permanently. I can now ... I'm able to do this particular activity that I couldn't before using the technology."

That's super cool. And then maybe next week, I had to step in, and I had to do some manufacturing on the shop floor. So, I was using a CNC rotor and 3D-printing parts and then going into the C-Suite meeting and trying to say, "Well, we have to be strategic in this way because of fabrication that we're moving toward." So, it's cool to wear multiple hats, and also, as Maureen highlighted, you actually get to see someone, how the thing that you're creating might impact someone's life permanently at times, and that's such a cool feeling, a good thing to be a part of.

Adam Sorkin: Yeah, could not agree more. Certainly, that was my experience, not something I saw a whole lot when I was working in ... at the university where I was certainly in the company. And particularly as we grew and had a larger sales apparatus that we were working with and had the support, spent a lot more time in operating rooms and working with clinicians just to really get that kind of exposure, which I think made me a better engineer and researcher, as well.

So, I always thought that was a great opportunity. Let's see. Getting close to the end of our hour, and I am seeing a couple of questions popping into the question-and-answer window. Let's see. It looks like a handful of questions about reaching out to companies. We do have a question about websites or platforms specifically defined ... designed to find internship opportunities. I don't know in my experience if there are a lot of great specific platforms for internship opportunities. I certainly rely on LinkedIn a lot for that kind of thing. I don't know. Do you any of you have any particular hints or insights about platforms our scholars might leverage to engage with people like you?

Maureen L. Mulvihill: Yeah, it could be LinkedIn. I would say that's probably the best of all the social medias. I would say if you see a company like ... Send ... They usually have a careers ad or info ad or something. Send a resume and a cover letter. Don't forget the cover letter, and in the cover letter, don't forget to say how you're going to help grow that company and how your expertise can help grow that company. All right.

Adam Sorkin: Right. Anna Lisa?

Anna Lisa Somera: I think in addition to LinkedIn and maybe websites, that sort of thing, I love meeting potential candidates at networking events. There's so many across the country, and a lot of entrepreneurial groups even like scientific groups have these events, happy hours, that sort of thing, and I think that's a great way to meet companies, get some face time with them, especially if you know what's on the agenda, who's going to be there, that sort of thing.

That's a great place. So, for instance, I judged this Women in Bio Startup Challenge last Thursday, and two recent grads came up to me and said, "Oh" ... They were prepared. They knew. They're like, "Oh, we know about RHAEOS. You're doing this. I'm current ... I recently graduated data science," and blah, blah, blah. And it was just ... They were doing their pitch to me on site, so that was nice. And I think those types of opportunities are our goal because it's like, that's memorable, that kind of ... The live interaction is hard, but if you have the opportunity to do that, should do it.

Adam Sorkin: Right, very insightful. And here is a hint to everybody in the audience. We have an events page that talks about all of the outreach that we're doing on our end going forward. And it as it turns out, we have a lot of money to invest in small businesses, so they do come out to see us.
So, it never hurts to see where me and my colleagues in the SEED office and across NIH and the other federal agencies are going to be. We're really specifically ... We're all here to work specifically with small businesses and help support them, so...

Maureen L. Mulvihill: Yeah, the other parts of that, too, is there's organizations, just like Anna Lisa said. You can go to AdvaMed Accel and join those ... them. Or if you're doing therapeutics, you could go to bio. And in those, those, those organizations always have big meetings, and in those meetings, you could meet a lot of people. So, I would say it's all about networking.

Adam Sorkin: Absolutely. And let's ... I do see another question in the chat. If I was interested in joining a business feature today, do I just introduce myself and send my resume via e-mail? Is that common? And I think certainly it sounds like, yeah.

Maureen L. Mulvihill: Yeah, it would be, and I would say the resume and the cover letter, just e-mail it. You can e-mail it to me. I've put my info into chat. But, yeah, just send it and see what happens.
Adam Sorkin: Great. And we are.

Anna Lisa Somera: Yeah, and I think we can all be found on LinkedIn, too. So, you see our names here. So should connect with us on LinkedIn.

Adam Sorkin: By all means, and certainly that goes for any of us at SEED, as well. Always happy to connect with people who are interested in our programs or just interested in learning about the kinds of programs and projects that I've worked in. So certainly, please do reach out. But we are getting pretty close to the end of the hour. I did want to give each of my panelists just the opportunity to kind of make their pitch, talk a little bit just about what they're excited about, what's kind of kept them in

this environment rather than pursuing other opportunities and different kinds of environments over the years. And any final words of advice or wisdom for the scholars in our audience who are trying to figure out if this is all kind of something that makes sense for them?

Maureen L. Mulvihill: I guess I can start here. Okay. On my screen, I'm on the top, so I guess I'll start. But ... So, I think Stephanie said in our talk, right, persistence, being an entrepreneur at a start-up is a roller coaster. There's good days. There's bad days, and you just hope there's more good days than bad. And I would say anybody that likes a little bit of risk, start your own company. Anybody who doesn't like the risk but really wants the challenge of trying new things that apply at a small company, we're always looking for great talent to move our companies forward.

Yeah, and I would say interns are awesome. We use a lot of interns, and we've converted a lot of those interns into full-time people. And IHS on the SBIR has a lot of diversity supplements. We actually take advantage of those, and they actually ... Those students, when they leave us, they do quite well in their follow-on careers. And we actually just applied for one of those young investigators, so we just hired a PhD out of Texas, and he just applied for one of those entrepreneurial grants that Stephanie also mentioned, so ...

Adam Sorkin: Oh, fantastic.
Maureen L. Mulvihill: Anyway, it's just a journey, right?
Adam Sorkin: Absolutely. Alwyn?

Alwyn Johnson: Yeah. I'll say resilience is super important, right? So, when you're faced with risk, there can be all sorts of outcomes, but it's good to be resilient. And there will be times when you might slide or you might trip or you might fall, but you just have to say, "All right," and "We're going in, and we're going to tackle the ... probably that blue-sky problem," and then the solution will come. And one of the encouraging things about being in a small business for me, especially on a lot of people I've worked with, is that we're solving ... We're doing things that are super important, and maybe it's not going to

be that immediate translation from ... You have a seed, and all of a sudden you have a crop. But it takes time to kind of grow and become that, go from the ripple to a wave, essentially. And I think I've been ... You will get that opportunity if you're lucky enough and if you're resilient enough, of course, that you'll see how you started with a blank piece of paper, and you're able to see people using your device or your technology, and you're contributing to this thing we call civilization. And that's a good reason to jump in and give it a shot.

Adam Sorkin: Fantastic, and Anna Lisa?

Anna Lisa Somera: A couple of things: First of all, it is possible to start as an intern and move to CEO. I did that. I interned a person this summer in venture capital then transitioned to full time, and then years later became the CEO. I think through my experiences, I want to share three things. First of all, stay hungry. Learn as much as you can. Take every opportunity that you have available to you. The second thing I want you to do is to focus on winning. I said that earlier, but I really mean it. Focus on, what are these really good wins that will get attention, being an author on a paper, being an author on a patent, being part of a regulatory filing, something? Focus on those wins that you can put in your pocket and on your resume.

And then the last thing is just, and I said this previously, play the long game. Don't come in to you the start of thinking that you're going to have this director position because you have a PhD. News flash: That's probably not going to happen. You have to earn that. So, kind of get experiences under your belt, and focus on those wins, and just play that long game because just through those experiences, that'll just gain respect and gain knowledge so that you can maybe one day lead your own company. Adam Sorkin: Very insightful, and certainly a lot of that sounds very familiar to me, as well.

Certainly, know I started as an intern, and one of the great things about working in this kind of environment was found myself leading a pretty good-sized team in just a couple of years after that. So just want to thank all three of you, Alwyn, Anna Lisa, and Maureen, so much for joining us today. I

think it was a really great conversation. To all of you in the audience, certainly if you've got further questions about this topic, please feel free to reach out to me. Sounds like all of my panelists are very happy to hear from you, as well. And just thanks so much ... joining us today. I think with that, we are kind of right on time to transition to the next topic. So, I will say goodbye to you all and hand things over to my colleague, Anna, to lead the next discussion. Thanks so much, everybody.

Alwyn Johnson: Thanks.

The Opportunities (and Challenges) of Entrepreneurship Panel

Anna Zornosa-Heymann: Hello, everyone. Hello, everyone. We're going to be waiting for my panelists to turn on their cameras and get ready. I just want to say thank you. That was such a great panel. I thought that was such a lively conversation with so many really practical pieces of advice and actionable perspectives, so thank you so much. We are rolling into the next panel, and the title of this panel is "The Opportunities (and Challenges) of Entrepreneurships." And we have four very, very inspirational CEOs and founders. I'm really, really excited for you to meet these people who are doing things that are truly going to change some very important sectors. As a way to get started, I'll introduce myself. My name is Anna Zornosa.

I'm an entrepreneur in residence in the SEED office, which is putting on this workshop. And just a little bit about myself, this for me is the post-retirement part of my career. I'm a contractor to the SEED office. I've been doing this for the last 2 years. I'm part of the resources that this office offers to entrepreneurs as they move their companies towards commercialization, as they move to raising their first funds from VCs. During my career, I was a serial entrepreneur. All told, I was part of five different start-ups. I was CEO of three of them. One of them actually was able to IPO. Another was acquired.

So, I took companies from idea to exit. And so, I'm kind of at the other end of the spectrum of many of the people that you'll hear from, and we'll tease out their experience a little bit. Very relevant to the

conversation we're about to have is that with my first start-ups in the late '90s, I was out there raising money, which, at that point of time, and it has changed, looked like this. You got in your car. You drove down to Sand Hill Road. You made appointments with VCs and knocked on doors. And I want to tell you, at that point in time, I was one of the youngest people doing that. I was the only woman doing it, and I was certainly the only Latina doing it. So, I had the experience of really doing something that had the extra burden of doing it as someone who didn't look like the other people who were doing it and didn't necessarily sound or come from those same backgrounds.

Things have changed a little bit, but the prism that we're going to use today is very much one of what it's like to be an entrepreneur who also comes from a diverse community, who is a Latina, is a Black, a doing this in a way that is forging some boundaries. I'm about to turn things over and get some introductions from these exciting panelists. But before I do that, I want to really emphasize that this is a place where you can ask questions. We're in a group of people where the entire audience is coming because they have access or will access diversity supplements, so if you are thinking about joining startups, starting a company, if you're in the middle of a launch.

This is a place where you can ask questions. So, I'm going to be looking regularly into the question box as we speak and bringing your questions into this because I think that's some of the true value that we can bring is to make it real for you. So, with that all said, let me turn things. I'm going to ask each of our panelists to introduce themselves, to introduce their company and its area of innovation and then share a little bit about where they are at. Which institute did you get your SBIR funds? How much? What kinds of SBIR funds have you gotten? So, because I have this experience a lot, I'll start with the as so, Ana Moreno, do you mind kicking us off? And then I'm going to go alphabetically.

Ana Moreno: Thank you, Anna. Hi, everyone. I'm Ana Moreno. I'm the CEO and founder of Navega Therapeutics. I did my PhD in bioengineering at the University of California San Diego, and there I was focused on developing a platform to enable epigenetic gene therapies, which means that we don't edit or nick the genome, but we can up and down ... Right, can you hear me?

Anna Zornosa-Heymann: You bubbled out a little bit ...

Ana Moreno: [Indistinct]

Anna Zornosa-Heymann: We can hear you now.

Ana Moreno: I'm by the airport. There's a military planes. That's why. We're in San Diego. If you ever saw ... What's that Tom Cruise movie? "Top Gun," "Top Gun," "Top Gun," that's where it happened. So, yes, I did my PhD in bioengineering, focus on epigenetic gene therapies, and I actually started working on a project. I mentioned this. I was really bored on a Sunday night, had nothing to do, so I started reading papers, and I came across a paper about patients that have loss of function mutations that don't feel any pain. So, I emailed my advisor and told him, "Let's apply this platform to this gene called NaV1.7 to develop a non-addictive therapy for pain."

Thankfully he was very open-minded, and that's how this whole journey started. Once I started seeing efficacy in animal models, I decided to start the company. So, where we are, we are at right now really gunning towards the clinic. The next stages for us are manufacturing and finalizing talk studies, and we've been really lucky. Most of our funding has been non-dilutive sources because just as a side note, investors don't love pain. So, I've been really lucky with non-dilutive sources. We've gotten grants from NINDS and NCI Phase I, new 44 collaborative grants. That was a 4-year grant that really enabled us to continue moving along our project and then also from the California Institute of Regenerative Medicine so thanks for having me, and I'm really looking forward to the conversation.

Anna Zornosa-Heymann: Excellent, thank you, Ellington, can you take us next? Are you having trouble unmuting? So, then I'm going to go to Maria, and I'll come back to you.

Maria Artunduaga: Sure, no problem, hi, everybody. I'm Maria Artunduaga. I'm a [Indistinct] decision scientists turned CEO of Samay, which means to breathe deeply and catch [Indistinct]. You can notice I have an accent. I'm from Columbia originally. We are building an AI-powered home-based management platform for respiratory health, and we are studying with the condition that is called

chronic obstructive pulmonary disease. Some people know it as emphysema or chronic bronchitis or the abbreviation, which is COPD. The inspiration behind the company was personal. I lost my grandmother to a COPD crisis and exacerbation back in the day, a couple of years ago, and I decided to found the company based on what the clinical need was and more importantly trying to repurpose DNA technology. We use the speakers on microphones. We send signals, broadband signals through the chest, and we make the lungs resonate, and by understanding acoustic resonance and making profiles out of it, we are able to tell you the pulmonary function parameters that are coming out from a big body box machine that cost about $80,000, and it's in the hospital.

So, so far, we have already reached accuracies. It's called area under the curve, 98 percent for COPD detection or diagnosis, asthma exacerbation biomarkers. We can even see changes of pulmonary function after medication and inhalers. It's very exciting, especially for me as a clinician. We've almost 5 million. More than half is coming from SBIR. We've done much more on NSF National Science Foundation, all the way up to all the supplements, 1.8 million. Phase I is with NIH, NHLBI, and we are expecting, hopefully, $3 million grants from NHLBI probably in the next month so, yeah, that's it so far.

Anna Zornosa-Heymann: Excellent, excellent, and I think that Ellington is still having trouble unmuting. Nope, she's got it. Okay, we're going to TJ. We'll come back to you, Ellington.

Tokunbo Falohun: Hello, I'm TJ Falohun. I have a background in biomedical engineering. I got my bachelor's from the University of Maryland, and I worked for Pfizer for a bit doing R and D on their drug delivery devices, and then I started my graduate education at Texas A&M University, got my master's and was halfway through my PhD when I started the company that I'm going to speak about today, Olera, and what we do at Olera is, we connect families with an elder loved one with some health issue that prevents them from being independent. We connect those families to local care resources, and we guide them through the process. Our company has raised something around $5 million all from non-dilutive funding sources, specifically the SBIR program from the National Institute on Aging. We received the Fast Track grant, which is a combination of Phase I and Phase II, and recently we received a Phase IIB grant in which we're really focusing on what we think is the largest

issue in the space, which is the affordability crisis. Senior care is incredibly expensive, and the vast majority of Americans are just priced out, and we don't have a great solutions, so we're really tackling that issue. We're excited to do that in the next stretch of our company. So that's me. That's the company and excited to share my experience.

Ellington West: Awesome, we figured it out.
Anna Zornosa-Heymann: Oh, excellent.

Ellington West: As an acoustic-based company, you would think that this is us solving for a challenge today. So, hi, I'm so excited to be on this panel because I think there's such a powerful theme of everyone here that's just, how can we make healthcare better? How can we create bridges where there otherwise haven't been? So, I'm Ellington West. I am the CEO and founder of Sonavi Labs, so Sonavi Labs is a medical device and software company that's really looking at one of the oldest and widest broadly used technologies of the stethoscope. Right? How can we update that? How can we bring that to an accessible space that builds a bridge between patients that are so desperately in need for a physician to hear and listen to the sounds of their body but are limited to the access to that position.

So, we've developed a device and algorithms that listen to the sound of your body, analyze those sounds, and then really share directive next steps for that patient and for the clinical team. So, when we think about our rural patients that are hours away from a provider, how can we build that bridge? How can we listen to the sound of your heart, the sound of your lungs and any environment? And we really distilled it down from just something so broad as all body sounds to really lung sounds, and we're specifically focusing on our pediatric patients. We kind of bookend it. Right? The youngest and the oldest are the most important to us because they're the most vulnerable, so our partner, Maria, focusing on COPD and thinking through that other bookend is so important, so I'm particularly excited about this because I think that we represent that full continuum of care across the board for all of our patients in need. And so, we have been the fortunate recipients of much and many NIH-sponsored

grants that have really allowed us to take this from bench to commercialization. We have been the recipient of grants from the Lung and Blood Institute, also from the Minority Health and Health Disparities Institute. So, we've seen about. $4 million in non-diluted funding from NIH support and then another $5 million in support from our investors from traditional sources of funding. So, it's been a wonderful process and journey of really spinning this out from Hopkins and utilizing them as tremendous partners as we navigate all of the next steps to really bringing this device to market.

Anna Zornosa-Heymann: Terrific, I heard a lot of little things, little themes that we're going to come back to a lot over the course of this conversation. Thank you each for kicking us off. I'm going to once again ask a question where I'd love to hear each of you tell your story a little bit. So, I'd like you to think about that moment when you decided to create a commercial company and the decision making around that for you personally. I'd love to hear about that moment, and I'd love to hear what made you decide to pull the trigger. I'm going to go the opposite way as I went last time so, Ellington, we'll start with you. We'll go to TJ. Then we'll go to Maria and then to Anna.

Ellington West: Wonderful, so my story is a little unconventional and I think different from a lot of the other panelists in that they were coming from academia and then commercializing this. I was coming from corporate in partnership with an academic institution, so at the time that I decided to jump off of this entrepreneurial diving board with zero experience, I was the Director of Sales for a national healthcare company and my father, who's a serial entrepreneur and inventor ... He has currently, the most patents of any professor at Johns Hopkins, grew up in the Jim Crow South so just wanting to really home in on that, of there are limitations of our surroundings, but there's nothing that we can't do. Right? So, he had been approached in his lab by the Bill & Melinda Gates Foundation.

They were looking for a way to reduce infant mortality as it relates to pneumonia. So, there was one child every 36 seconds dying from pneumonia, and the team at Hopkins said, "Well, hey, wait a second. If the issue, is we know pneumonia is detectable. We know that it's treatable, so what's going on here?"

And the reality was that in these markets that they were focusing on, and these emerging and underserved markets was that the patients were there, but there wasn't a trained clinician's ear to listen, to analyze and to help make a determination of what needed to happen next. So, the team at Hopkins said, "Hey, wait a second, what if we rig up a digital stethoscope that can transmit these body sounds to transpositions and a panelist of physicians back at Hopkins?"

Well, that worked, but it still took 72 hours. So, we all know those of us that have worked in emerging markets is that you're lucky if you get that patient once. You're going to be extremely lucky, chance in a million to get access to that patient again, so these decisions need to be made effectively, and they need to be made quickly. So, if the physician's decision- making was the bottleneck, that's where they pulled in the AIML team and said, "Well, wait a second, can they or can we develop an algorithm that can identify these abnormalities in an equally meaningful way?" Because not to minimize what a physician is doing, but if they're listening for patterns, right, they're training their human ear to listen to patterns, why can't we train an algorithm to do the same thing?

And so that's when the team said, "Well, let's validate it. Let's prove it out." It was proven out with a 97 percent accuracy in identifying pneumonia specifically. And so, at the time, I was the director of sales of this national healthcare company. I just bought my first house. I had just got married. I didn't need to do. I didn't want to do this. The life, the path, the strategy was good, and then when you have someone that comes to you and says, "Look, here are the options, either this device is going to sit in a basement at Hopkins and never see the light of day, or you can take this to a team, build a team, find funding and make it happen." And when you have that energy, when you recognize that if it's not me, then who? There is no question that you have to take the risk, and you have to take the leap.

We had no idea what we were doing. We were coming with the team of 90 percent academics and 10 percent business strategists who have also only come from a world where they already had a known device and product to sell. So, this was about building. This was about developing. This was about regulatory approval. And here's what I'll say to answer your question, Anna. Had I known then what I

know now, would I have made the same decision? Tough to answer, I would say yes, 100 percent, but the days that I've cried in my closet asking myself why, that's a totally different story. But what I will say is that when you know that there is something that you can do if you just give it a shot, if you just give it a shot that can change, change the world, that trajectory, or save even one life, then it's worth it. And so, 7 years later, as we look in this rearview mirror, it was the best decision that I could have ever made not only because of what I've learned but the relationships that we've been able to build but also the proof of what our concept means to expanding and growing even more companies that are working and driving to solve equally challenging solutions.

Anna Zornosa-Heymann: I appreciate that candor, Ellington, because anyone who has been part of growing any company will tell you that it is hard, and it's likely to be the hardest thing you've ever done. So, we're going to dig even a little bit more into that, that why it's hard, why it's rewarding. But we're going to go back first and ask TJ to tell us a little bit about that moment of decision for him, what you were weighing. What made you pull the trigger?

Tokunbo Falohun: Absolutely, there's so many ways I can take this question, but I think one that comes to mind is, I worked in industry after my bachelor's, and I got the feel for what it's like in a large company executing in high-level. It was very insightful, but I also saw the limitations of that. There's a lot of structure. You have entry-level engineer. You have engineer level two. You have manager, senior manager. You have [Indistinct], and some folks have worked there for decades, and that's good. If. If entrepreneurship didn't work out, I'd probably do that. I'd probably be working my way up in a company like that. But I also saw that I wanted to do other things. I wanted to exercise my creativity, communication skills, form friendships and just have fun along the way and also have a direct impact on the trajectory of the technology, the company and so forth, so that was really my goal with coming back to grad school, it was primarily to do something different, and the degree of secondary.

So that was one reason, and then in grad school I found that it's it was relatively ... The risk of starting entrepreneurship in an academic setting is lower because if you totally fail, you still get your degree,

and no one's going to judge you. Right? But if you leave grad school, and not to say you shouldn't leave grad school and do entrepreneurship then. People do that, and that works out, but the stakes are much higher if you're forgoing a job. Maybe you have other life responsibilities, and now you have to contend with the risk of medical technology entrepreneurship. That's tough. Right? So, I actually started multiple companies in grad school, and I found that it was a really good way to meet people. It's a really good way to have access to brilliant minds and resources. So that was the tactical reason why it was a good time in my life to do so, and it also was the intersection of many, let's say, luck factors: the people, the problem, the team and so forth.

All of those things aligned, and my cofounder was a huge part. We were both compelled by this problem in senior care and specifically dementia and Alzheimer's. We both had personal ties to that and meeting each other, it was like one plus one equals five type of thing. We brought things out of each other that we really hadn't experienced. So, it was when we clicked, we figured we'd take it all the way, and we started the company.

Anna Zornosa-Heymann: Excellent, excellent, thank you, thank you, and, Maria, tell us about that decision for you.

Maria Artunduaga: Yeah, I decided to become an entrepreneur out of frustration. I have done a lot of things in my life from a genetics researcher at the heart of [Indistinct] residency for a while, then working [Indistinct] public health with Gates, and I just was frustrated with the same thing what, TJ, you were mentioning about bureaucracy so mainly the ladder. Right? You needed to climb and do a lot of things and please a lot of people. I'm still very type A personality, and that's the reason probably [Indistinct] in the past for some time. I really like to have outcomes that I can see quickly.

I'm a doer, and as a Latina, [Indistinct] minority person. Right? I'm Latina, and I have an accent. I realized that it was going to be very, very hard for me to fulfill my full potential, right, if I just kept doing the same thing that everybody was doing. So, I highly recommend entrepreneurship for anyone

who is tired of the status quo, who just wants to rebel and just be your own. I'm my own boss. I get to call everything, all the shots in my company. I'm building a company with a culture that I would love to have in the past and I never had the opportunity to belong to because the reality is that, for example, medicine really sucks. It's very toxic. And yeah, it was that [Indistinct] that obviously the fact that, again, similarly to what TJ and Ellington mentioned, there was a personal connection.

My grandmother had died. a lot of life decisions that I've made are based on my family. I came to this country thinking of becoming a reconstructed pediatric surgeon because my little sister, she has cerebral palsy and she underwent through several reconstructive surgeries in the past, and we don't have orthopedic surgeons or reconstructive surgeons doing that in my country, Colombia. So it was that plus also the fact that I'm married to a guy who happens to be one of the world leaders in all things audio. He worked for Google.

He's been talking about [Indistinct] inspired by his work, and we've been working together for the past couple of years, so he has taught me everything and everything about engineering, and I'm super-happy. I would do this again and again and again despite of all the challenges. It's just normal life. Life is difficult. That's just how it's supposed to be, so, yeah.

Anna Zornosa-Heymann: Thank you, thank you, now, Ana, tell us the same thing. Tell us about your moment of decision, what you were weighing. What triggered it?

Ana Moreno: Yeah, I'll give a little background. So, I was born in Mexico, moved to the US in high school, and in Mexico in general ... I don't know about other countries. My parents were architects, There's engineers. There's medical doctors, but people usually don't make enough money with your college career, so you have to go into entrepreneurship. So, I saw my parents have two jobs all the time. My dad had his full-time job, but then on the side he would ask for loans, design buildings, and rent them out. So that kind of just comes from that family.

To side, my brother has a start-up in robotics, and when I was doing my PhD, my dad was always pushing me like, okay you're doing bioengineering. Why don't you think about starting a company? And I told him, "Look, let me finish my PhD, it's hard enough, and then we can talk about the next step," right? One thing at a time, but the kind of ... It just clicked for me, actually, and it wasn't ... Maybe it was his voice a little bit there where I started seeing data and seeing that we were able to prevent and reverse chronic pain in multiple animal models.

And my thought was that I don't want to just publish and move on to the next project and move on to the next project. I want to take it to the clinic, so my dream was to take this dream and actually get it to the patients, and that really was what inspired me to start the company. So, I went from PhD to start up really... I was applying for SBIR my last year of my PhD, and I graduated in April, and then I got my SBIRs in September. So, I spent a few months as a postdoc, but that was really the initiation. And it's been amazing in the sense that how much knowledge I've gained, how many things I've been exposed to in such a short amount of time.

Right? Everything from IP regulatory, talking to investors, thinking about financial strategy, even thinking about as a woman, how do you pitch to investors, and how do you represent yourself? Because, again, you mentioned, Anna, that when you started, you were probably the only one, and we haven't come that far yet, actually. There's a group, biotech sisterhood, for CEOs just because of how rare we are. And actually in J.P. Morgan, which is the biggest biotech conference, it was said that there were more Michaels that were presenting than female CEOs, so there you go. It's one of those things where I'm so happy to be here. And I'm really happy to go through these challenges, and there's a lot of days where it's really tough, like we all say. But one of my ... The best advice I've been given is, you have to get thick skin, thick skin, so that's what I'm trying to build.

Anna Zornosa-Heymann: Yes, I ... Thick skin, the big piece of advice, thick skin, I ...
Ana Moreno: Thick skin.

Anna Zornosa-Heymann: Absolutely, so it's interesting. TJ, you spoke about how doing your innovation and starting your company within an academic setting reduced some of the risk for you, and that touches on something I wanted to ask this panel about. So, I think that we've got almost everybody who's listening on this call right now comes from an academic background, and as we go from an academic background to starting a company, we often sort of think, oh, well, you could take the path of risk, i.e., starting a company, or you could take the path of not-risk, staying in academia.

And I wanted to ask each of you to reflect a little bit about whether or not you agree that it's that dichotomy, risk, business, non-risk, academia. Do you think that's true? And do you think it's a clear fork in the road? Or do you find yourself kind of blending spheres a little bit? So, I'm going to throw that out there, and just, TJ, because you started. You sort of broached that. Do you have anything else you'd like to sort of share about that? Do you buy into that dichotomy? How do you look at it?

Tokunbo Falohun: Yeah, I think it's an interesting question. I think the initial impression that one has might be the total opposite, so the idea that entrepreneurship is high-risk, and it is. Don't get me wrong, I'm not naive here. It is, and the impression that industry job is safe, it's true from one perspective, but it's also false on the other perspective because with entrepreneurship, you learn very valuable skills that I think will be increasingly important in the future. Many specialists are so narrow that if for some reason that lane they're in gets disrupted, which has happened more and more so because of the emergence of AI. If that lane gets disrupted, they're kind of stuck.

This is very dangerous if you're really deep into your career, but with entrepreneurship you learn the process of creating something of value in society, knowing how to find the right audience to sell to, the mechanics of marketing and sales. Those skills are valuable even as an employee. If an employee understands those ideas, and they speak to their manager, speak to their boss, they add tons of value. So that's somewhat of a deviation from the question you asked, but that idea kind of shows that having some experience in entrepreneurship, even if it's super risky, is de-risking to a career. I believe.

Anna Zornosa-Heymann: [Indistinct]

Tokunbo Falohun: And then to the other side of that question, though, as far as academia versus entrepreneurship, I think there's a phase in your life where you should just go for it because you're young, and even if it totally fails, you can still find a job. You have an advanced degree, so I think that's one way to think about it. And there's also the idea of you should sort of expect failure with entrepreneurship. It would be very naive to that it's a risk-free deal. It's something that it comes with high degree of risk.

However, there are ways to mitigate this What I said with starting in academia and working on multiple projects, this enabled me to basically give myself a chance to fail and succeed and fail in some and find a niche that works. So that's how I think about it. I don't think it's one versus the other. I think that they both are risky in certain senses, and they're both also valuable in other ways, and if you have the opportunity to, I think entrepreneurship could be beneficial to almost anyone just from the skills you develop.

Anna Zornosa-Heymann: Excellent. What anything else like to comment about the ... Yes?

Ellington West: I would love to add to it because I think that I have ... I'm bringing a bit of a different perspective that perhaps might help offset some of that risk because I think that it can be both. Right? But for me, my cofounder was completing his PhD in this lab. Right? And so, it's sometimes if you can find a partner outside of academia who says, "I'm ready to do this with you in a meaningful way," it kind of balances the scale in a really unique way that allows you to derisk it but still explore. And I think that that's the value of partnership and finding the right people to help you navigate all of these things because if you're in that silo, and all you've known thus far is your academic career, there has to be some battle testing that has to exist, and the best way to lift you and to give you stamina when you're feeling exhausted, and you're going through to defend your thesis, and you just don't have time to do all the things that a company requires or needs or asks of you.
You need that partnership, and you need someone that is willing to help you carry that weight in a meaningful way, and I think that, that allows you to oftentimes do both. That's not always the case,

and that might not be the solution for everyone, but I do think that it's certainly something to explore of you know your strengths. You know what the walls of your academic institution can provide and support but also what's missing, and what do you need to be an extension of yourself and your credibility to really grow in a meaningful way.

Ana Moreno: So ...

Anna Zornosa-Heymann: Terrific.

Ana Moreno: My perspective is, I never wanted to go into academia, just to be blunt. I was always interested in industry or, more of a biotech environment. So that was never really a thought in my head. But I want to just kind of turn it into a little bit more of learnings that I've had. When I started the company, in terms of there's a lot of ... I guess right before the pandemic, there was a lot of investment going into biotech. It was a good time to actually have a biotech, but fundraising goes in waves, as we all know. This past couple of years have been really, really difficult. So, I would say the risk of starting a company these last 2 years has really increased. And I'm, Ana, maybe in 2008 it was the same thing, right, for fundraising back then?

So, I would say, if you can, reach out to people that are entrepreneurs or that understand the space that either have gone through it before, so you can maybe even pitch your idea. Is it something that's investable? Is it an actual medical need? What about commercialization, the buyer? So, there's a lot of different things. It's not just, "How cool is the science?" There's a lot of things that investors think about on risk and how can you derisk it so that ... Maybe you are, yourself, derisking your own idea before you start. So that's something I would think that could be a way to kind of gauge is, it makes sense to jump into this now. And the other point, too, is that investment goes in waves, in the sense that I think I mentioned earlier that investors don't like pain.

Now they're all about pain again. So, investment goes in waves. It used to be about platform technologies, a platform you can do 20 different programs in your therapeutics pipeline. And it become all asset focused as there's less money. So, all these things going waves, and understanding

how you fit into that space I think will make a lot of sense. So just try to find someone that is in that field right now and that you can just maybe bounce ideas off or get some advice on. I think it would be important to derisk it.

Anna Zornosa-Heymann: Excellent. Maria, did you want to weigh in on this one?

Maria Artunduaga: Yeah. And I totally agree with you. Before making any other jump, I did customer discovery. I took the iCore program, the regional one on interviews and then I had interviews with the national one. And then when I convinced myself that there was a clinical need that people were willing to write the letters of support for Phase I, that is when I told my husband, "I need you to support me for about a year. Let's see if I can make this grant a reality," and yeah. "Let's take a chance, and it's risky. Who knows, right?" [Indistinct]. But I needed to convince myself. I'm a scientist. I'm very pragmatic. The doctor in me, right? I needed to be convinced that this was worth going after, so yeah.

Anna Zornosa-Heymann: Excellent. Great, great. I'm going to turn attention to a question that we got. And this question, as you'll hear because I'm going to read it to you, has to do with sort of a psychology of fundraising. After this question, I'm going to ask those of you who have attempted or who have gotten nondilutive funding, i.e., funding from investors, early-stage VC, et cetera, we're going to talk a little bit about your experiences with that. But the question that Brian is asking is that he's heard that incorporating too early before you've built anything or hired anyone or it's just an idea can be problematic for investors who see that time has passed without you having anything to show for it.

"For potential founders like myself at this early stage, does incorporating for the purposes of applying to STTR/SBIR without a guarantee of getting funding outweigh the cons?" Would anyone like to address that? I do. I have something I can share about this as well but let me first ask our panelists.

Ellington West: So, I'll give you my opinion. Obviously, it would be great to hear your thoughts as well. There are different types of investors, right? There's company builders, the ones that go into academia. They like to license IP, and then they build around it, and they own most of the company. And then there's founder-started companies like a lot of us on this call. The reason that you might have heard that is because maybe investors like a different structure in terms of equity structure in the company.

However, that could always be restructured after financing. So, I personally don't think it's a bad idea. I think it's better to get your money in, start proving out the concept and build out the data. Investors will have a call with you, and then the next time you have a call, they would like to see progress.

So, for me, it's all about, "Get started. Get going and get progress." And you can show investors how you're building because, again, investors don't give you money the first time they speak with you. They like to build a relationship and, again, get to know you and how you're growing and how you're actually fulfilling what you said you would do. So that would be my thoughts around this. And, yeah, go apply for grants. I incorporated when I was in grad school, again, so that's just my experience.

Maria Artunduaga: Did you do an LLC or a C Corp?
Ellington West: C Corp, which is what they prefer for ...
Maria Artunduaga: Brave.
Ellington West: ... therapeutics companies.
Maria Artunduaga: [Indistinct]. You're different.

Ellington West: Yes, we are different, and with therapeutics company, we need a lot ... It's very expensive, too.

Maria Artunduaga: Big money, yeah.
Ellington West: Gene therapy is super expensive, so yeah.
Maria Artunduaga: Yeah. What I did was, we incorporated as an LLC so that I didn't have to worry too much about taxing, back taxes, et cetera, et cetera. Once I got the first grant, I think I went about 2 years when I was ready to ... And I had some data to show to actual investors, and we converted from an LLC to a C corp. Depending on, obviously, the lawyer, it could cost up to $5,000. But I know that right now there are many other boutique firms or even so forth companies that are helping companies convert for as little as $1,000. So set up, it's not an issue really.

Ellington West: Yeah.

Anna Zornosa-Heymann: Yeah. And adding to that, I would say that you're correct to be attuned to all the signals that show momentum. And if you say, "Hey. I started in 2009," and you're here in 2023 and you haven't gotten any investment yet, that's an extreme example, but that would convey lack of momentum. But I would say that the story that you build can be different than the year that you became an LLC or a C corp. So even if you become an LLC and you take a couple of years to actually build something, you, in your story, can signal that the true start happened with a different event.

So, in your story, you totally ... The people are going to be less interested in when you became an LLC than your own story about what you consider the starting point to be. I'd also say that already you've heard in this dialogue some pros and cons of starting as an LLC or starting as a C corp. If you are starting a company and you know that the investor path is proximate, if you know you're going to be going out to investors, you will have to be a C corp. Investors can't ... They don't want the paperwork associated with being an LLC.

So, the pros and cons are, if you're an LLC, you can take your own business' expenses against your taxes, but what you really have a much harder time doing is assigning percentage ownership of the company under an LLC Corp structure. So, you will eventually have to do a C Corp, and if you do that C Corp conversion too late, there will be problems associated with that as well. So, this is a finer topic, but that's sort of twofer answer in that we went to the C Corp-LLC direction. This is a great segue to actually talking about what I suspect a lot of people are asking themselves. So, you've all gotten SBIRs. You've all gotten success with it. Tell us a little bit about your journey, if it's started, to get the first dilutive funds, the first investments from outside investors, and maybe share a few pieces of advice about what you learned in that journey. Any volunteers to take to kick us off on that one?

Ellington West: I'm happy to start because it's it is what I live, breathe, have nightmares about, dream about. It's the all-consuming element, right, of at least my role and I think the role of most CEOs, no matter what, no matter who you think you can kind of outsource this to, whatever partners you think

that you can have, at the end of the day, if anyone is looking at how investable your company is or looking at how investable you are, your leadership and what you're bringing to the table. I think that Ana hit it right on the head when she said, "Look. If you are a person of color, if you are a woman, there's already this deeply unbalanced scale that we are up against, but we are here to tell you, you can do it. It is possible, but damn it, it's hard."

Okay? And so, here's the deal. For us, our very first check was a $25,000 check from a city, state-funded organization of angel investors. We had no idea what we were doing. We had just really set up our C Corp, and we were just trying to figure out, "How do you even crawl?" Do you know what I mean? We know nothing. And so, the best and initial funding that we were able to find was through local accelerators and folks that just were introducing you to the network. There's also a concept of accelerator fatigue. Okay? Because you don't want 7 years later for you to be signing up for an accelerator. That's not going to work for you. Right? But in those infant stages, Phase I, propelling yourself into a network and an environment of entrepreneurs, of people that know more than you, surround yourself with them, by them. And the social capital is just as valuable, if not more in early stages, than the actual hardcore capital.

Because for us, and also just talking about people of color and women, it's that statistically our network isn't as deep. Those pockets aren't as deep. So, the notion of a friends-and-family round that Seth doing in the Bay is not what I'm doing in Baltimore. They're different worlds. Okay? So, it's about recognizing, though, that the people that are willing to take the risk on you, that they also have

networks or abilities to leverage themselves on your behalf and as advocates for you. Because at the beginning, a $100,000 check feels good, and it's going to take you places, and it's going to check boxes. But if you don't have that money being replenished, you're finding yourself stuck and not building, but searching for more money. And so, for us, it was really Phase I out of the gate was an accelerator that just helped us shape our story, helped us shape our commercialization strategy and introduced us to networks that ultimately, we were able to leverage.

That then introduced us to a whole new level of investors, and I think that the most important thing for me and for our team was understanding who we were talking to. I'm covering what their motivation was because you could have a list of 1,000 investors, but of that thousand, only five might be in alignment with your vision, your goal, and the stage that you are at. So, it's really about doing research and making sure that you're managing your time really well, understanding that these folks that you're talking to really do have capital. The best advice that I got is, "A quick no is sometimes just as good as a yes," because you don't want to rack your brain trying to knock down a door that's never going to open for you. So how I learned and ... Look. I'm an elevator, not a stairs person. I want to know the fastest way to get to where I'm going, and the only way to do that is to learn from people who have already done it.

So, I spent the first year of me developing our fundraising strategy deeply obsessed with ... a concerning level of stalking people who were three steps ahead of me because I needed to say, "Hey. Help me understand how you got here, and who in your network could you introduce me to that has a risk tolerance that they were willing to invest in you to get you here? And you're a success story." So, they feel good about that investment. "How can I be in that room with them?" And it was never about me asking. It was, "Can I pitch? Can I share my story with you? I'm not really up front asking you for anything. I'm just in the first phases asking you to help me build my strategy so that then I can hit the ground running." And I wish that I could sit here and say that "My greatest competitor right now is ECHO Health. They just closed another $150 million of financing." And we won't be critical, but it's just, again, that is the best reflection of the power of network. Right?

And right now, we're playing offense in the space of there are so many successful people that look like us, that are engaged with our mission and passion, and I'm talking about everyone on this call, that are rising, that are saying, "Hey. Our doors are open, too, and how can we help you?" So, Phase I for me is angel investors, all day, every day, because what's true and what Ana said about this market today, is that a seed investor is really looking for a Series A company. They're really looking for people that have revenue and that have all of this traction. And if we're in life sciences, and if we're coming out of

academia or bench, the reality is, is that we're just not there yet. So, we've got to dig deep into those angel investors, those folks, and learning from our peers who have already successfully accomplished the things that you're seeking to accomplish as it relates to fundraising.

And one last thing that I'll just share is the notion of credibility. Right? Because you're still working through your commercialization strategy. You've just proven that, yes, there probably is through iCore a market that we believe can make it work, but you need credibility. You need people around you who have done this before on your team because that will garner the confidence that these folks need to believe in you. They can like you all you want, but what's the strategy? What does it look like, and how has it been battle-tested with experts that have done it? And the number one question that comes back to me after that is, "But how do I pay for those people? How do I pay for the that expertise?"

You've got to convince them to drink the Kool-Aid, to be as passionate as you are and put some skin in the game. I had some of the best teammates and employees in my first year of this company, and I was able to pay them a fraction of what they were worth at market value, but it was because I pulled their thoughts, their ideas and allowed them to recognize that they were just as much a part of this founding team as our original founders and that we were going to build it together. And that's what leveraged a lot of networks that I, myself, wouldn't have had access to. I pulled the right people in who also had those networks that then opened the door. So sorry, I'm super passionate about this. I'm sure you guys can tell, so I'm going to pause, put myself on mute, but that that's just my two cents.

Anna Zornosa-Heymann: And we're going to ask others to share their experiences in this regard, but I'm going to put a little commercial in here right now. There are probably people sitting here listening who are struggling with this right now. This is the place where you can ask your questions, so if you've got a question there in the back of your head, "But what about blah, blah, blah?" go ahead. Put it up. We'll try to answer it for you. Who else would share their experiences going out with dilutive investors, good, bad, ugly? Anyone else want to share?

Ana Moreno: Yeah, I guess I'll get us going. So, we've been able to raise on a convertible note from a group called Good Ventures out of San Francisco, and it's been really helpful because their mission really is to invest in the problems that are you really ... like hunger, pain, chronic pain, really big issues that might be underinvested, really, at the end of the day. I would say fundraising, especially in training environments, especially as a first-time entrepreneur is really difficult. And 100 percent I align with Ellington on some of the biggest feedback we've gotten is the team, team, team, team, and it's ... You take it personally.

"Okay, but I'm the scientist, but I've done ... I understand the science. I know how to do this." But it's really about, again, someone that's been there, done that, that can look at problems before they even appear, that if you have the same problem, they've gone through it before. So, what's really helped us in terms of the type of investors we're speaking to right now is just the people we want to attract as part of our, we call them, board of advisors. So, there's two people on there that have 40 years' experience in gene therapy from proof of concept to commercialization. There's a person that used to be in big pharma as Head of Global Innovation. Right? So obviously well connected. If they like your science, you can see that they're coming from somewhere. Another person that is actually a limited partner in investments, in biotech investments.

And so, all these people, they show up on the calls with you. By the way, they're not just on your deck. They have to show up or else they're not really part of the team, and how we've been able to attract them has been with equity. They're well off. They've sold companies. One has been CEO of five companies. They have done really well with their lives. They don't care about cash.
They care about equity because they believe in you, and they buy into you. And so, when I show up to investor conversations with these people, they don't really speak. It's me speaking the whole time, but they're there to support the company and me as a CEO. Because in the past I've been told, "Hey. We want to invest, but you're not going to be the CEO." And I said, "No thank you." I've gotten that

multiple times, right? So, I'm still at it. Some days I'll be like, "Okay, maybe if someone wants to take over," but at the same time, I'm so passionate, and there's not gonna be anyone more passionate than what we're doing than me and my cofounders. So, I think that's just, "Stay in your course." And you're going to find people that believe in you.

Again, as long as you build the team around you that's been there, done that, that gives you all the credibility, in my opinion. And again, and just being really capital efficient is another, I think, I would mention. We've raised a lot of nondilutive funding, but we've gotten a lot with that nondilutive funding. We have Humanly candidate. We've got toxicology data where people that raise 80 million haven't gotten that data. That's my point, is it's really about being smart with how you utilize this cash so when you speak to investors you have that credibility.

"Look at my data, and I've been doing this with nondilutive, mostly nondilutive sources, and I'll be taking care of your capital as well and taking it to the next level." The last thing I'll mention is, raise money to get you towards a milestone that actually increases value of the company. Don't go in between. Don't be stuck in the middle, really, because you really want to get to a milestone that, again, adds value to everyone, including the company. So, I think that's going to make you more attractive the next time you're trying to raise.

Anna Zornosa-Heymann: Excellent.

Maria Artunduaga: I have two things. For me personally, I've raised dilutive bonds. [Indistinct] or investors in general do pattern matching. I'm trying to do the same only reverse. So, I've gone through my network, people who knows me since I was a little girl back in Colombia, so I have a bunch of international investors, a lot of physicians, my own money, my mom, everybody, And investors from, VC funds, from South America because it's our reality. It's super hard, and I'm happy to make an introduction by the way. It's just very hard, as a Latina, to raise here in the US. So, what I've done is. I've gone through all the Latin American VC funds. I've talked to them. We are in a lot of conversations.

Some of them are already committed, so they don't know much. They are not sophisticated in medical technology, but just like Ana is doing, I am surrounding myself with hardcore people who have done it before. I'm derisking myself as the founder. And more importantly, I'm the heart of the company. I'm

the passion. I'm the heart, the head, the feet, everything in between, and they are betting on me as a founder, so it has worked out.

Anna Zornosa-Heymann: We have a question I want to get to. I think very quickly I would say, you guys have sort of mentioned some allies. You've mentioned some ways that you found things. For instance, Ellington, you talked about regionally focused funds, which I think are usually some of the best ones to go to first. We've talked about allies. There are groups out there. Ana, you mentioned Good Ventures, but there's many now that are mission-focused or sometimes they're focused on female founders. Sometimes they're focused on founders of colors. There are groups that are very specifically focused on people who have migrated to this country.

So, there are allies today, and they're a very, very good thing to look at. Have any of you ... Another group I'm going to give a plug for is MedTech Color. I was a judge at their pitch competition this year. I would encourage founders to really look to that group. It, of course, has a life-sciences perspective, and it's a great ... not just because there's cash prizes on the table, but the number of resources they turn founders onto is really, really great. I'm going to simultaneously ask this next question just to make sure we don't run out of time, and then invite, after we've answered it, if there's any other topics that you'd like to just make sure it gets heard in this hour, now would be a good time to do it. But the question is, "How did you find your cofounders? Is there anything you looked for?" Such a great question. Would anyone like to take that on?

Tokunbo Falohun: I can share my experience here. I found my cofounder through a student organization on campus, and I found that it's probably one of the best ways to do this, whether it's specific to the domain you're in ... let's say ... I know someone shared an experience about mechanical

engineering. The student group that I was involved in is called Sling Health. It's basically an accelerator. But there were also these hackathons, these weekend events that were focused on either solving a problem and so forth. That's how I met my cofounder, and we never would have met if this was not the case because he was an MD/MBA, and I'm a biomedical engineer, PhD student.

We just don't walk the same halls. Right? So that was how I did it. But I would say in general, take advantage of your network and in the university you're in, and that might be one of the best ways to find people.

Anna Zornosa-Heymann: And a very good trick is if you find someone who you suspect is of like mind, don't necessarily ask them to be a cofounder. Ask them if they'd be willing to be part of your kitchen cabinet. Ask them if they'd be willing to bounce ideas with you, iterate with you, spend some time. Get to know them. That cofounder decision, it is so painful if you get it wrong, and this is another topic, but take your time. Make sure you're completely aligned in the ways that are going to prove to be important over a journey of a few years. So other tips, guys? So let me just wrap up maybe by just saying, if you could give one piece of advice ... just anything. You can look across your whole spectrum of experience, but one final thing that you'd want to share here with the people who's given us their time this the day, what would it be, and who would like to go first?

Ellington West: I can kick it off because it's super succinct, and I just learned it 6 months ago, and it's been life changing. For me, it's that your company is not you, that there are two separate entities: your success, you are a person, and you are starting a company. And that company's success or failure is not your success or failure, and when you can decouple those things and also understand that there are variables that you simply cannot control and you let go of those, it allows you to move forward.

It allows you to continue. It allows you to stay whole in a space where you're going to get punched in the throat or lifted up. It goes both ways, the ebbs, and the flows that you have to understand that this company and what you're creating is not the full definition of who you are, but what you're bringing is something only you can bring. That's all.

Anna Zornosa-Heymann: Excellent.

Ana Moreno: I will go back to the thick skin comment because I am very much a person that respects others, and in general I'm easygoing. And anyway, I think this whole journey has been a lot of ups and downs and bumps along the road and taking a lot of things personally, thinking things are about you as a person and as a founder and how good you are, so just build thick skin and know that you're going to get there and be resilient.

Anna Zornosa-Heymann: Excellent.

Maria Artunduaga: I think there is no ... I'm sorry, TJ. Go. You go. Should I go?
Tokunbo Falohun: No, no, no, no, no. Go ahead. You started.

Maria Artunduaga: Good. So, I'm 44, and I don't think there is a better way to create legacy than building a business of everlasting product services that make a real impact on people. When I went back in my life as an academician, it was all about research papers and grants. Now I can do that, plus many other things. So, I highly recommend it, even though, yeah, it's hard. Same thing, Ana. Of course, [Indistinct] take things personally. Every time I get out a lot of criticism or feedback, kind of however you want to say that in the American English way, I use that as an opportunity to prove people that they are wrong, and that fuels me. All of my frustration and anger, right? It's like, "I'm going to prove you're wrong."

For example, we just made the [Indistinct] after applying three times today. Nobody for real thought that we would make it, and we did, so we are top five start-ups out of 65 in a cohort that ... worldwide. It was a lot of work, but we pulled it through. Yeah. Just be resilient. Be very stubborn. That's my superpower.

Anna Zornosa-Heymann: Excellent.

Tokunbo Falohun: Yeah, yeah. As far as ... I agree with everything that was said. If they hadn't said it, I would have said the same thing. But since that's been said, something I would recommend or just something comes to mind for me is finding something that you're incredibly passionate about because if it's difficult to wake up and get fired up about the topic, you're eventually going to stop. It's going to be too hard. There's going to be enough obstacles to throw you off. Other life options are going to seem more tempting. But if you love it, it's much easier to persevere than the hard times, so don't get, let's say, enticed by things that might look good in the short-term, but you really don't have deep conviction. I would say go for high conviction, even if it seems like a harder path, because you're going to stick with it. And in the long-term you're going to not waste your time.

Anna Zornosa-Heymann: Wow. Well, that is an awesome note to wrap up on. I want to thank you. I want to thank our four panelists. It's really, for me, it's been an inspiring hour, and hopefully we've given some help to some people on the phone. Thank you, Stephanie. Thank you for inviting us, and I'll pass it over to you.

Stephanie Fertig: Excellent. Thank you so much to all of our panelists today. I think the last 2 hours have been just incredible. It's been great to hear from everyone and really take some of these ... the experience and the knowledge of our panelists and really hear from them about the whole entrepreneurial journey and what that's like. So, I want to thank everyone again. We really appreciate you coming and sharing your experience and sharing your knowledge with us. And again, thank everyone who has come today and participated with your great questions. We really do appreciate it.