Lauren Ullrich: So thank you for joining this session, planning your career path, NIH experts share their perspectives. My name is Lauren Ullrich, and I'm one of the speakers and hopefully our moderator will be joining us shortly. So I'm going to have us all introduce ourselves, our speakers introduce ourselves as we start our presentations. So we'll have just a short presentation, about 5 minutes each, and then we'll just go into questions.

David Saslowsky: Dr. Ullrich, this is David Saslowsky, can you hear me?

Lauren Ullrich: There you are. Yes.

David Saslowsky: And can you see me?

Lauren Ullrich: Yes.

David Saslowsky: Sorry, everybody, and thank you for filling in superbly. So you've already given all the information, we're ready to get going, this is a planning your career path, and the heart of this is really going to lie at your questions, and hopefully we can answer them or send you in the right direction to where you can find answers. And as Dr. Ullrich indicated, there are going to be three brief presentations. The first is going to be from Dr. Gondre-lewis, who's at the National Institute of Allergy and Infectious Diseases. The second is going to be from Dr. Alison Lin, who's at the National Cancer Institute, and then the third is from Dr. Ullrich, Dr. Lauren Ullrich, who you've already heard from today already. And she is at the National Institute of Neurological Disorders and Stroke. So with that, Dr. Gondre-lewis, would you like to start off? Oh, I'm sorry, Dr. Ullrich, you're going to go first. Sorry.

Lauren Ullrich: Yeah. So, first we have a poll because we just wanted to get a sense of who is in the room and who we're talking to so we can better tailor our advice. So if you could ... Yeah, there we go. If you could just hit the response that best describes your career stage, and we'll just give it about 60 seconds for you to give your response. You should see a poll has popped up. All right, so if we could close the poll and show the results. All right, we have a good mix here today of graduate students, postdocs, faculty and other, mysterious other. So thank you all for joining us today. So I'm actually going to start and I think all three of us, we decided that we would give you a little bit of a background on our journey so that you knew where we were coming from when we're giving you this career advice. So while I was doing my PhD in neuroscience at Georgetown I actually started working full time for my scientific society, the Society for Neuroscience in the policy and advocacy, and then later neuroscience education and training departments. And after I finished my PhD, I then started in the AAAS Science and Technology Policy fellowship at NINDS, actually in my current office, which is the office of programs to enhance neuroscience workforce diversity. So I've worked my way up to program director, and I've been there for 6 years now. So when it's laid out on this slide like this it looks so linear and bland and straightforward, but I can tell you that living this career path was anything but, so I definitely relate if anyone out there is feeling lost or confused or just at sea. So I'm going to start giving more general advice and career resources, and then my colleagues are going to dive a little deeper into NIH specific resources. So my main take homes for navigating your career path is one, try to focus your career exploration. So instead of these big existential questions like what do I want to with the rest of my life, try to think about questions that will help you narrow things down, such as what do I enjoy doing? So things like ... The example that I always give is like what is that work that when you have this long list of tasks is the one thing that you always use to procrastinate from the other work you don't like doing. So maybe that's writing, maybe that's gathering data, planning new experiments or working with collaborators, and whatever that is, then you can start narrowing down and see well, what careers contain a lot of this, this activity that really gives me life. And then do informational interviews and various things like that to learn more. And so for me that was really program management. That's what I loved doing at Society for Neuroscience, it's what I love in my current job, and also just working with and helping people, which is a big part of my job. Then also be really proactive in seeking out resources and opportunities in your career. I'll just say many skills are transferable no matter what you want to do, so thinking about if you're in student government or other leadership positions, if you're supervising an undergraduate or a graduate student, all of those things are going to help you whether you stay in academia or continue into something down the bench. And then lastly develop your network, and be really intentional about this. And when people said networking I used to think okay, I'm going into a room of 200 people that I've never met before, I don't know anyone there, and I just have to strike up a conversation with them, and that was pretty terrifying to me and I wasn't very good at it. But what I realized is that networking can actually be useful and fun if you're doing it in different ways. So thinking about going to a poster session and meeting other graduate students working in your area, even working with collaborators that you don't know very well. That sort of one-on-one or small group networking was something that I realized that I like and I'm better at, and it's only going to help you with your career, right? That's how you find out about new opportunities, it raises your profile as a scientist, and just in general, we're social animals, so it's going to be useful for you. And then lastly I just end with some resources so scientific societies are a great source of career planning, especially the National Postdoctoral Association and I'm sure you are all familiar with the individual development plans. But there's also other resources like job simulations, which is where you say okay, what does it actually mean to be a science writer, and you can go to this website and they'll say okay, well you have to develop a pitch, here's how you would do it, then you have to write the article. Here's the kinds of things that the magazine you're writing for would be looking for, you can actually see what the day-to-day work is like and if you would enjoy it. NIH has an annual career symposium that has been virtual for the past couple of years, and they have a lot of recordings and resources available on their website, and then the extramural diversity website at NIH also has a huge list of career resources. And then finally I'll just give a shout-out to our pod cast, building up the nerve. So if you're staying in the academic space, the first season is all about the NIH grant cycle, so taking you behind the scenes, and then the second season is about putting together a fellowship or career development award, and it's got NINDS spin, but I think it would be useful for pretty much anyone applying for NIH grants. So now I will turn it over to Tim.

David Saslowsky: Thank you very much, Dr. Ullrich. So we're going to go right onto Dr. Gondre-Lewis, but I will say if you have any questions you can put them for Dr. Ullrich or any of the other panelists or myself, you can put those in the Q and A, and we'll get to those at the end of the presentations. So now, Dr. Gondre-Lewis, the floor is yours.

Dr. Gondre-Lewis: All right, well thank you very much. It's a pleasure to be here with everyone today. I just want to give you a little bit of my path towards becoming a program officer. I grew up in New York and did my undergraduate at Oberlin before starting my doctoral degree at Medical College of Virginia. I ended up doing a postdoc at the Trudeau Institute in Saranac Lake, New York. So your career path is sort of your path, too. When I went up to the Trudeau, my goal was to really delve into the science and become the best scientist I could. What was unexpected was actually getting engaged and married while I was a postdoctoral fellow, and so that changed my career trajectory because now it wasn't just about my career, it was about me and my partner, and so she happened to be living in New York and so I looked for a faculty position in New York, and that's how I came to my faculty position at York College. She's also a scientist, and so we needed to have a place where we could both do our science, and we're pretty much east coast based. And so nothing's permanent, we thought about where can we both do our science, and it could either be Boston, New York, in the DC area, or in Research Triangle Park, and she got a postdoc at National Institute of Child Health and I got a position at NIAID, and so that's how we got to where we are. Lauren, can I have the next slide? Thanks, Lauren. So I want to point you now to a few resources that NIAID has that you might be able to utilize as you're thinking about your careers and what you want to do. On the NIAID page there's a whole section on grants and contracts. In the apply for a grant section there's sample applications, there's information on how to submit the application and prepare your application, there's a whole section for new investigators who are new to the NIH system or new to their first R1 or application, and Lauren, if you can go to the next slide. There's also a section specifically for post doctoral fellows. So if you follow the path from grants and contracts through to our training and career development grants, you'll find a section on postdoc's guide to gaining independence, and it really is a ...

David Saslowsky: Dr. Gondre-Lewis, I think we lost your audio. No. It might be a bandwidth issue. You might try turning off your video for a second, and see if audio comes back.

Lauren Ullrich: You could call in on your phone, too.

David Saslowsky: Okay. Well, we can move and we'll come back and Dr. Gondre-Lewis will hopefully get back on with audio and can help with answering some of your questions. So okay, next slide. Perfect. So thank you, Dr. Gondre-Lewis, now we'll move onto the last brief presentation from Dr. Alison Lin who's the acting chief of the diversity training branch at the Center to Reduce Cancer Health Disparities at the NCI. Dr. Lin?

Alison Lin: Thank you. Thank you for the introduction. The title that you see is acting chief of the diversity training branch at the NCI Center to Reduce Cancer Health Disparities, but my official government title here of the position that I'm in is called supervisory health scientist administrator, and if you don't know what that is you're not alone. I had no idea what it was, and I had never to this day met anyone who said to me when I was little I said when I grow up I'm going to be a health scientist administrator. That just doesn't roll of the tongue, but as with most government documents, you'll find that even though the language may not be the most straightforward, the easiest to roll of the tongue, it tends to be accurate in describing exactly what it is, and so I like to take this title apart a little bit. There are four words to it, and we're going to look at the word scientist first. So starting from high school undergraduate, which I did in Minnesota, and then moving onto California, Santa Barbara, California for graduate school. That was my path kind of getting trained and getting educated to become a scientist. And the .. This kind of a start, it's fairly straightforward, from high school I took some college classes that saved me time in college to then do a lot of random ... That seemed random at time, but it was really helpful later on in graduate school to know. So to Lauren's point of transferable skills, it really is, it's everywhere. So no matter what your interest is and what you're doing, as long as you're learning, those things that you're learning will eventually turn out to be useful somewhere, as long as you keep your eyes open and you continue to engage with your environment around you. So after that scientist one, we brought the word health into my career path in my postdoc time. So from a physics, biophysics type of PhD degree I went on to do a postdoc and then instructor, which is the initial [Indistinct] position at Harvard Medical School and Brigham and Women's Hospital in Boston, Massachusetts. There we moved on from when I was in graduate school I did DNA, and then we moved onto proteins, and then cells, tissues, animal, and before I moved onto people and I got recruited over here to NIH, which is probably a good thing all around. So that moving on from health, brought me to administrator. The administrator part is when I left the bench behind and now moved to NIH, the NCI, and became a program director. And after being a program director for a few years then moved into a supervisory position. So like Lauren said, I don't think anybody's path is particularly linear, there's a lot of choices that really weren't planned for. Very rarely do you meet someone who wanted to be something when they were three and ended up being exactly that thing when they grew up. It is very confusing sometimes because of the options that you have, but it's also exciting at the same time when you have those options. When I think about it, one of the quotes that I like is from Pope John Paul II, and he said "Through research each scientist grows as a human being and helps others to do likewise." To me, that is part of my motivation to be in science, to be a scientist, and now to help other people become scientists. Because research is not ever only about your experiment, your lab space, the intervention, the particular intervention you're talking about in behavioral science, any sort of data that you process within epi, it's never only about that. It's really about understanding the people and the world around you, and you put your spin and your interpretation on it and you see where you can contribute. Next please. So I've put down a few building blocks of a career path, and this is really, it's not all inclusive, it's certainly not exhaustive. Any of us including you, every one of you can probably add to this. This is just kind of a starting place to think about, and some of this, Lauren and Timothy have already covered earlier. Maybe in a slightly different way, but first and foremost, there's the motivation, the inspiration. In other words, what keeps you going? When you wake up and you get excited, what is that? What excites you? This is not about being happy all the time. It's not about, you know, that something is just going well every day. That doesn't happen to anybody. But it is about that thing that when your experiment doesn't work, when your mice died, when your trying to wait and wait and wait for that IRB that's not going to come through. When those frustrations come through, what keeps you going? And that's really important to kind of help us orient ourselves and determine what the next step is. And having a goal is important. You don't have to have a goal 500 years down the road, all you need is a goal for your next year. If it becomes a big thing, too big, a little overwhelming to think 5, 10 years, then think about next year. What do you want to be by next year, right? Once you have that goal and you find your inspiration of the thing that keeps you going, you need to follow through. So for me that means building up the skills and the knowledge. Some of those are hard skills, some of those are soft skills, but those need hard work. And then flexibility. This, I think everyone knows. I mean, after the last couple of years I think all of us have gone to many things where we are just not expecting this to happen, what are we going to do? On all levels, you, your PIs, your sponsors, your peers, your kids, everyone around you, that the entire world kind of had to deal with this all at once. So things change. What is important about it is how you deal with those changes. We encourage you to think about being open to changes, but being open to changes doesn't mean you start something and you hop to something else and you hop to something else. You want to finish what you start and then part of that flexibility is the transferable skills that Lauren talked about. Persistence is important. It's okay to fail. It's always okay to fail, but it's not okay to fail again and again and again on the same thing. So as long as you don't stop there and you keep going that's good. Support network is important. This partly is the networking of professional network, but a lot of it is also your support network. Who do you go to when you're feeling down? Do you have a support network? How do you build that? Your family, your community, your friends, where is your support network? We are not alone. You are not alone, and we can't do it alone. And then lastly is the opportunity part. Opportunities sometimes are good. It's like in sessions like this, Tim told you something, Lauren told you something, and I'm going to tell you a few links to go to, these are opportunities. These are kind of the obvious, you're going to be fed these, but more often what you're going to find is opportunities are disguised as challenges. Something didn't work out, yeah, it didn't work out, it didn't work out, but if you change the angle of looking at it, that might be your opportunity to do something new that other people have not had a chance to do. Next, please. So to get you started on a few easy opportunities, I am from the Center to Reduce Cancer Health Disparities, our center handles all of the diversity focused research training opportunities at NCI. This includes both extramural, it's the program called continued umbrella of research experiences, and they have a collection of mechanisms like the diversity supplements, F31, KORs, R21, diversity focus and R25s. It also has an intramural program that's inward facing if anyone wants to come to NCI and conduct research, that's the iCURE program.

David Saslowsky: Dr. Lin, I'm going to just break in really quick, sorry. So I think everyone will have access to these slides with these hyperlinks, so they'll be able to follow that, but I think we should now jump to answering the questions, and we have a number in the Q and A sessions. So thank you very much, Dr. Lin. It was a great presentation, and the other presenters for some really valuable advice and also resources you can see. So getting to the question and answer. So again, we just had a few here in the Q and A section, but if you have any questions just post them and we will look at these and answer them real time. So we have one question. So let's see, everyone's on. Okay, it's for Dr. Ullrich. The question is from Bethany Almeda, and it as such. As new faculty, getting the first grant is a big step towards promotion and tenure. It's also essential in order to support our students. So her question is about planning for student support over the years, presumably in these early phases, since the grant process takes a long time, up to a year or longer, and the potential for success can be low, there's concern about getting her own grant to support her early career students and mentees. And if you have any tips or advice for how to get support for them as Dr. Almeda is trying to get tenure and get her own independent program off the ground.

Lauren Ullrich: Sure, yeah. This is a real struggle I think for a lot of junior faculty, and that's one of the reasons why NIH has this early stage investigator policy. So as long as you're within 10 years from completing your PhD, you will get a bump in your RO1 submissions. So we always recommend that early career investigators submit the RO1 and the R21, and I know sometimes people get advice to apply for the R21, but actually I think it's the NIAID that has a great explainer on their website about why the RO1 is usually the better choice. So even if you no longer qualify for the ESI extension. But make sure that you go into ERA comments and check that the date is right. If you had children, if you had other critical life events, if you took time off to care for an ailing parent, all of these things can help extend your ESI status, but you have to request them. So that is very key to make sure that that data is correct so that you can take advantage of this policy. And then otherwise I think it's really important to be in a conversation with your department, and how are they going to support you in putting together your applications and providing the resources and bridge funding and all of these other things that are available to them to make sure that you are succeeding. So I'll turn it over and let the other panelists respond as well.

David Saslowsky: Any other input? It's a great answer.

Dr. Gondre-Lewis: Yeah, I'd just add that in addition to NIH, think about the foundations, think about other funding sources as well, and your students, your postdocs, they can also apply for funding. But Lauren made a lot of great points, but think about other funding sources as well.

David Saslowsky: Thank you.

Alison Lin: Both of those I agree with ...

David Saslowsky: Oh, go ahead, Alison.

Alison Lin: But if I can just add one more thing, in addition to just looking for that first grant for yourself while you're building up your lab, look for collaborations with more senior people with already established RO1 or PO1 and such, and what you can do is you can apply for a diversity supplement to support whatever, postdoc, graduate student, whoever you can recruit on the project that that more senior person has already. That way you get people, you can build it, you can certainly continue to be the primary mentor of that person while the PI of the supplement can be part of the, like a co-mentor. That way you're building up yourself and you have a little briefing space, and you can also use supplements to get your own research program going as well.

David Saslowsky: Thank you, Dr. Lin, and that's a good segue to another question we have, which is how do you network as a junior faculty? Pull on senior investigators as you just said, that could land, and even reach out beyond your institution and get collaborations going. Dr. Gondre-Lewis, you want to briefly touch on that?

Dr. Gondre-Lewis: Sure. Some things are easier when there's not COVID, because you can actually meet people at conferences and you can do other things like that. In our current state, I think we have to reach out to individuals and set up the Zoom meeting, send your manuscripts, send your papers and say this is what I'm doing, this is where I think we have an intersection, and you can meet people that way. Certainly within your departments and within your universities it becomes a lot easier because you do have that proximity, but if you're trying to work with individuals who are not where you are, not directly at your university, I think you really do have to reach out and try to reach them that way. There's also the six degrees of separation. If you know someone who knows someone, utilize that contact, utilize your network to get to the people that you would really like to work with.

David Saslowsky: Great, thank you. Okay, there's question here, there's a few about ESI status, and I think I can handle those in one fell swoop. So the question is ESI a status does not apply to RFA funding, and is it because there's a fixed budget and only or two awards might be funded through an RFA? And there's another question about using ESI status for other non-RO1 mechanisms, like Amira, or some of the directors of awards. And so at NIH ESI status is defined as 10 years post PhD or post fellowship if you're a physician scientist, and that's a status that gives you your both new investigator status as well as early stage investigator status, and depending on the institute, that might get you different advantages, but any advantage at an institute at NIH is only applicable to the parent RO1 So ad NIDDK for example, instead of for last year, for FY21, the established pay line for RO1s if you're an established investigator was 16th percentile, just an example. If you're ESI that would bump it up to 25th percentile, and that's not an uncommon differential across NIH. But you've got to know it's only applicable to the parent investigator initiated RO1, not through RFA RO1s, or any other mechanism, okay? So another question, from Fwong Hong, if you are a new investigator, is it absolutely a must that you have a published manuscript in the subject that you're applying for prior to submitting an RO1? Dr. Lin, do you want to handle that? Any comments or advice?

Dr. Alison Lin: Sure. So really nothing is an absolute must, but it certainly will be helpful. If you do not have any publication, you need some other way to show your experience, your expertise and your ability to carry out the project that you're proposing successfully. So that if you are ... So I think the three of us implied but haven't said it directly, if you are in doubt of any of this, I encourage you to contact the program director. If that's the program that you're applying to, find the program director and contact them and talk to them, and say for this initiative it's asking for this. What exactly does it mean? What makes it a competitive application? And I have this and this and this, this is my specific case, what's the best way to present this? And that would help you put your best foot forward.

David Saslowsky: Great, thanks, Dr. Lin. Any other comments? We'll get to another question. Oh, this is an interesting one. It could be very open ended, but from Melony Trauber, do you have any advice for mid career investigators transitioning from industry back to academia? Dr. Ullrich, or anyone?

Dr. Lauren Ullrich: That is a great question. So I'm assuming that you already have a job in academia and now you're looking for funding, because I think that's what we could speak to as opposed to trying to get a job in academia, which we have less experience in.

David Saslowsky: I think thats, yeah, that's right.

Dr. Lauren Ullrich. Yeah. So I think NIH, at least at NINDS, I'll speak for our institute, we have a lot of translational focused programs, and clinical focused programs that they might not be part of the parent RO1, but they're very specialized. So I think getting in touch with the translational division or department that is at the institute that your research would best fit, it would be a great first step. Just like Alison said, we often are a lot more fluent in the different programs and the different jargon of NIH, so I think that would be a great first step. Just to find out what's out there, and then there's also, there's SBIR programs and other more small business type of industry focused programs that might be worth looking into.

David Saslowsky: Great, thank you. Okay, so that ... Let's see, we've got a lot of questions that are coming in .. interest. Question here from Tigrum McHunt. Is a faculty position a prerequisite for grant applications for K and R early career grants? Should I apply as a project scientist? Well, I don't know if you're talking about an RO1, Tigrum, but for K awards typically you want to be elevated above postdoctoral research position. Not true for many of the NRSA awards like the F32s for example, you really need to be a postdoc or equivalent, but for K awards there's an expectation that you are going to be elevated. Your institution thinks you're great, they're trying to develop you as internal talent, bring you up to their faculty ranks, and that is a commitment that needs to be ironclad. Doesn't necessarily have to be at the time of application. It's okay if you're still a postdoc when you apply for say, a KO1 or a KO8, but there needs to be a clear commitment that that process is going forward and it's not contingent on you getting that K award. Now if you're talking about an RO1, you actually at time of application you would have to be faculty, and that's really a hard cutoff because your institution typically will only let you apply for RO1s with certain faculty titles. So that's something you should check with internally with your office of sponsored research or your department or division chief. Okay, next question. Oh, this is good. It's an off ramp kind of question. Maybe not staying in research, but the question from Nathan Fritz is what skills for postdocs and grad students would you need to develop to be able to do careers outside of NIH? And here specifically I think looking at like adjunct faculty, teaching positions. Dr. Gondre-Lewis, any points on that?

Dr. Gondre-Lewis: Yeah, so that's an interesting question. I think, this might even go back to something that Lauren said in terms of pursuing your passion. So if you really are interested in teaching and you want to delve into that, there are often opportunities at your university, but you can certainly look at adjunct faculty positions with other organizations, right? And some of that can be in person, some of that can be virtual, it just depends on what you're really interested in. In terms of building your skill set, again, if you're within a postdoctoral position there's going to be certain limitations based on where you are, who you're working with. So you have to work within constraints there, but you can certainly, if there are courses offered, they're offering courses, where you can build skills in genetic and genomic interpretation of data, big data interpretation, that's always going to be important. So it just really depends on what you're trying to do, and I can defer to my colleagues to answer some of the other pieces of that.

David Saslowsky: Other points? We have about 4 or 5 minutes, we need to wrap up pretty soon, but go ahead, Dr. Lin.

Dr. Alison Lin: If you want to look at career path outside of becoming investigator eventually there are programs, the AAAS program, that Lauren mentioned that's a program that's science, technology and policy. You need a PhD. There's also the presidential management fellow program, so there are these programs that you can look for and feel free to e-mail any of us and we can point you in a couple of ways. They're competitive, but once you're in you get to kind of rotate through different governmental offices and agencies and kind of find a fit for yourself, and there's a lot of training that's involved in that. If you just are curious to see what's out there you can go to USAJobs.gov and that's where all of the federal jobs are listed. So you can kind of put in some words, scientist or what not to see what shows up, that'll give you an idea. And then in general, just I have a colleague who really loves informational interviews. If there are things that you find interesting, oh, so and so, like us, Lauren was here, I want to really talk to Lauren afterwards [Indistinct] got me. So e-mail her afterwards and say can I have half an hour of your time, I heard your talk, I really want to find out you do everyday and find out a little more. So reach out to the jobs that you think are interesting, and then ask for a half hour of their time and have a chat and see if that's the way it goes.

David Saslowsky: Thank you, Dr. Lin. So there's one question about, again, ESI status. Does receiving ENSF or private funding eliminate ESI status? Not necessarily. So it just depends on the size of the award. If it's an RO1 equivalent from a private foundation or another federal agency it might eradicate your ESI status. So that's just a question to pose to a program director that you might be in touch with. And we've not said that, but I'll say it right now before we end, because unfortunately we don't have a few hours, which I would love to spend answering questions. But you really want to reach out to program officers across NIH. There's a number of ways to find those. There was a lot of resources that each of the presenters showed, but one way ... There's many ways, there's no one way, but you can look at, let's say you think your research is in NIAID space, go to their website, their landing page, and go to ... Every single institute virtually has a career and training section, very high profile, right at the top. And that will get you very quickly to a number of program officers. And you should reach out to us in advance with your questions or comments, or even if trying to figure out what the right institute is for your research. So we're here, shoot us an e-mail, that's our jobs. This is what we love to do, to help you. So I think unfortunately we didn't get to get to all the questions, but we do need to wrap up. So I would like to thank all the presenters and you, the participants, for this really informative session, or we hope it was informative. And again, we didn't get to all of your questions, but shoot us e-mails. Find the right program officer, and we're happy to talk offline. If you do have additional questions you also can during this meeting visit the exhibit hall for chat and one-on-one opportunities, and there's a number of those over the coming days. You always can find contact information in the help section of our grants.NIH.gov site. Your feedback is really important, so please take a moment to let us know what you thought of this session, and the other sessions, by clicking on the session feedback button located with the descriptions and presenters on the auditorium list of sessions. And when you're completely done with this whole seminar towards the end of the week, please also complete the overall survey form in a navigation bar at the top of the page. This is really going to help us tweak future iterations of this so that we can tailor in the bes way possible. So again, thank you so much, and have a great day and rest of this meeting, and hopefully your research careers are going to take off. Bring any questions you have to us, we're happy to help. Thank you.