Navigating Early Career Opportunities

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Dr. Ericka Boone: Thank you for joining today's webinar, focused on navigating early career funding opportunities. My name is Dr. Ericka Boone, I'm the director of the NIH Division of Biomedical Research Workforce, which was initiated in 2017, with the mission to develop, maintain and assess, as well as enhance, NIH policies and programs, supporting innovative training, career development and educational opportunities to support a more diverse biomedical research workforce. I will be serving as the main moderator for today's event, and I'm pleased to share the format of today's topics.

Experts representing various NIH institutions and centers and offices here at NIH have joined DBRW staff to help provide you with a better understanding of how to navigate the black box of NIH and its available programs. There are four different, but related topics that will be discussed during today's webinar; fellowships and career development opportunities, navigating NIH diversity programs, advancing your career through networking and mentoring, and finally, resources to help you in your pathway to success. Following each presentation, we will be addressing as many questions as possible before moving on to our next topic and segment.

So why don't we get started? I'll be leading our first discussion, focusing on fellowships and career development opportunities, essential tips and other helpful suggestions for a successful application. The purpose of this portion of today's webinar is to provide investigators at earlier stages in their career with helpful suggestions about how to find a scientific home, who and when to talk to when applying for F's and K's, or fellowships and career development awards, and other important information. I'm joined during this session by three of my esteemed colleagues, Dr. Amanda Boyce, program director from the National Institute of Arthritis, Musculoskeletal and Skin Diseases, or NIAM; Dr. Lauren Hill, deputy director for the Office of Disparities, Research and Workforce Diversity from the National Institute of Mental Health, or NIMH; and following the presentations is a Q and A that will be moderated by none other than Dr. Teraya Donaldson, Research Training policy officer with the Office of Extramural Research here within the Division of Biomedical Research Workforce.

So we're going to start off today's webinar with a session focused on essential information and tips on fellowships and career development awards for first time applicants, and others that are newer to the world of NIH. I mention the word "tips" here, and I want to highlight that any information in orange text in the following slides, or highlighted in orange text, is considered to be significant tip or information that early career investigators should take note of.

As I stated earlier, I will be serving as presenter as well as moderator for this session. And also as I mentioned, I will be joined by my esteemed colleagues, Dr. Amanda Boyce, Dr. Lauren Hill, and serving as an additional moderator for this session, Dr. Teraya Donaldson.

So this shows the agenda for this session, which again is focusing on first-time and other early career investigators that are relatively new to the world of NIH. We'll start off with helpful tips on how to find a scientific home, and deciphering the NIH alphabet soup. This will be followed by discussion of things that are important to know when applying for fellowship awards. And then we will end the session with the discussion on important things, or things that you don't know can't really help you when applying for career development awards. And then we will follow up with a Q and A.

So NIH is the largest public funder of biomedical research in the world, investing billions of dollars each and every year in pursuit of our mission, which is to enhance health, lengthen life, reduce illness as well as disability. In FY '21, NIH invested just under $43 billion in medical research. Most of NIH's funding is awarded for Extramural Research, largely through more than 50,000 competitive grants to more than 300,000 researchers at more than 2500 institutions in every state. As you can see in FY '21, NIH invested almost $2 billion in Research Training and Career Development opportunities.

NIH is made up of 27 different institutes and centers, of which 24 received funding directly from Congress to administer research programs. The Office of the Director is the central office responsible for setting policy for NIH, and for planning, managing and coordinating programs and activities across the NIH. And of course, you see the Division of Biomedical Research Workforce, highlighted in the green box to the top left, is located within the Office of Extramural Research, which is also a part of the Office of the Director.

While there is one NIH, there are 27 different institutes and centers and offices, which means there are 27 different cultures. Each has its own mission, has its own activities, and its own way of doing business. So how does one know where to get started? So most early investigators, including myself when I was at that phase of my research career, are a bit anxious about talking with an NIH staff member. You're worried about saying the wrong thing, or not sounding like you're knowledgeable. But here's a little primer on key players that you'll be speaking with for the rest of your research career, actually. So we have program officers, scientific review officers, and grants management officers. So program officers are scientists and administrators. They help to identify priority scientific areas. They communicate this information to their peers, to leadership, to extramural investigators. They also manage grant portfolios. Next are scientific review officers, or SROs. These can also be scientists and administrators. They manage grant reviews. They prepare summary statements as well. And then you have grants management officers, again, who can be scientists and administrators. They help to implement the funding process. They oversee budgets, and they ensure grantee compliance with NIH policies and regulations as it pertains to budgets within applications or grants, rather.

So who should you talk to? So, when, rather, should you talk to these individuals? Well, you speak with program officers well before submitting a grant application, because they can help you to better understand the institutional research priorities, which funding mechanisms may be most appropriate for you at this particular research phase. And also once your application is submitted and reviewed, they can discuss next steps with you if you're not funded, or even if you are funded. You can speak to an SRO after your application has been assigned to a review committee. You can, for example, if there is some information that you found is missing within your application, or you need to resubmit or submit supplementary information, you talk to your SRO. Next is the grants management officer. You can speak with them before or after review of your application to discuss new budgetary issues. Let's just say you change institutions after your application is submitted, etcetera, you talk to your GMO.

One of the things that I like to get across to this audience, especially earlier career investigators, is the idea of normalizing reaching out. Contact your program officer well before the application deadline. Don't be afraid to talk to them. But what do you do when you do want to reach out to them? You have to give them something, right? So submit maybe a one to two page concept. So what should you include in this concept? You should give information about the background for your research and your own background, the significance of the problem, or the question that your research will address, specific aims. If you are submitting a training or a fellowship or career development award, talk about your training goals, your mentoring team, etcetera. Also remember that follow-up is needed, emails get deep, and it's not that we're ignoring you or we don't want to speak with you, it's just that sometimes people get busy. Don't think that you're bothering us by reaching out to us again. We're here to help you. It's our job.

So now that you're aware of who to talk to and when, how do you find the right program officer and the right scientific home? Well, these are some resources to help you. So one, first talk to your mentors and your colleagues. They've been in this research game for a long time. So based on your research areas of interest, they probably understand who you should be speaking with, and when. Next is the NIH Reporter tool for funded projects. This can show you lots of information about the types of projects, and trends in funding for NIH grants and applications. Next, you can utilize the NIH Matchmaker tool. This is a fantastic tool; I call this the Plenty of Fish for researchers who are looking to find research funding, right? Why do I say that? Because if you insert your specific aims or you insert search terms that are relevant to your research, what pops up will be information that's relevant for you. So, like, for example, you can find out what other institutes here at NIH support similar types of research that you're currently performing, the program officers who have those types of research and their portfolios, review panels, etcetera. It just gives you a lot of information that can help you with planning your research career. Also check out review IC webpages, mission statements and also research priorities. Also review funding opportunity announcements. You can find those on Grants.gov, and in the NIH Guide for Grants and Contracts.

So now let's dig into that just a wee bit more. Speaking of funding opportunity announcements, this is how NIH announces to the public about the availability for funding for research in specific areas. You can use information within funding opportunity announcements, or FOAs, to learn about research areas of interest, which ICs are participating, and how to apply for grants, etcetera. A helpful tip here for you is to make sure you subscribe and sign up for a weekly email to receive a listing of all grants and contracts that are available at the NIH.

So there are different types of funding opportunity announcements, and we'll go through this really quickly. So there are program announcements, requests for applications and parent announcements. So program announcements highlight specific high priority areas of scientific interest that are usually ongoing for at least three years, and there are standard receipt dates. Most, but not all, ICs participate in program announcements. There're also requests for applications. These identify specific research areas. There are specific set-aside amounts, specific numbers of awards that are also anticipated to be awarded. There's usually a single receipt date. Parent announcements -- this is typically the way that most NIH applications are submitted. They're usually ongoing for three years, and there are standard receipt dates.

What are key elements within a funding opportunity announcement, or FOA? Again, it states the purpose of the program, its goals, the type of award or activity codes, which IC will participate in that FOA, due dates, description of the funding opportunity, award information, etcetera. Another important resource is the NIH Research Training website, and this curates information specific to types of grants. Okay? So this is a place where you can find types of grants or funding mechanisms according to career stage. So if you're at earlier stages of your career, there are certain types of individual, fellowships or career development awards that are available. If you're at later stages, there are different types of [INAUDIBLE], so you can find so much information on this Research Training website. We hope that you will visit it.

So as I wrap up, and my time is nigh, what are my tips? What are my three most important tips -- well, according to this page, maybe four or five -- that I would like to give to you as I leave? The first thing is to review IC priorities and goals. They will differ according to ICs. The one thing you do not want to do is to submit a grant application or a fellowship application to an institute or a center that is not interested in funding the type of work that you're interested in performing. Learn the NIH application and review process, and study successful grant applications. This will give you an idea of how individuals format their research ideas, how they structure their grants, etcetera. Normalize reaching out for help. You are not an island. You don't have to do this on your own. Make sure you contact your program officers early, and stay in contact with your mentors. Also, sign up for guide FOA alerts.

I said this was the last thing -- the funding opportunity announcement information would be the last thing that I would give you, but I wanted to make sure that I showed you this schematic of funding opportunities, according to career stage. This is a resource that will be available to you in the Research Training group, so please don't think that you're going to miss out on finding out more information about this.

Actually, this is my last slide. Thank you all for your participation. Now I will hand this over to Dr. Amanda Boyce.

Dr. Amanda Boyce: Okay, I need to get control of the slides here. There it is, thank you. Hi, everyone. Thank you, Ericka, for your introduction to the NIH. And hello to all of our attendees. So I'm going to spend about 10 minutes introducing the four most relevant F, fellowship, awards offered across the NIH, and offer some grant writing advice that aligns with the NIH peer review criteria associated with those FOAs.

So I'll start with the Kirschstein NRSA awards. You might hear these called "NRSAs," NRSAs, or this is the majority of our F-awards. And I'm specifically going to be talking about the F30, the F31 and the F32. These are awarded to predoc or postdoc fellows working with mentors. Training can be done at domestic or foreign institutions, but the awardees must be citizens, non-citizen nationals, or have permanent residence in the U.S. You can perform basic or clinical research on these awards, but you're not allowed to lead an independent clinical trial. Please note, as Ericka said, that not all NIH institutes participate in all fellowship announcements, so it's imperative that you contact the program officer before applying. Allowable costs for these awards, including the stipend levels, are released in a yearly notice.

So I'm going to dig just a little bit deeper into each of the F-awards. This particular slide covers the three programs targeted to predoctoral students. Starting at the top, the F30 is intended for individuals enrolled in a formal dual degree program. This is thought of mostly as MD/PhD programs, but we know there are other dual degree programs as well, including veterinary programs and dental programs. For this award, you can apply for up to six years of support, 50 percent of which must be used to do research. Please note that there are two F30 parent FOAs; one for institutions with NIH-funded MSTP programs and one for institutions without MSTP programs. Like I said, not all institutes participate in these, so make sure that you reach out to us. This is something you're going to hear frequently as the slides progress here, but please do contact us before you apply.

The F31 is intended for individuals enrolled in a formal PhD program, and you can ask for up to five years of support. The third bullet here is the NIH F31 fellowship to promote diversity. This can actually be used for individuals in either a PhD or a dual degree program, and the same timelines apply to these, if you are in a PhD program you can ask for five years, and if you're in a dual degree program, you can ask for six. All of these require a full-time research commitment, that's considered 40 hours a week by Congressional language, and they all include a stipend, an institutional allowance, and some tuition reimbursement.

There are two programs targeted to postdocs; the F32 and the F99. The F32 allows up to three years of support, while the F99 actually covers the final predoc years, and then transitions into a K00, which will cover the first few years of postdoc time. The F99 is not an NRSA program, so the details concerning the length of the award and eligibility are going to vary by funding announcement. So for instance, some F99 announcements allow non-citizens with valid visas to apply, but you'll need to look specifically at the announcement for those details.

So I won't walk you through the details of this slide, I'll just give you the take-home message here. And that is, fellowship applications have multiple components. They almost complement and parallel each other. And it has to be done in very few pages. So look at all of the areas, all the sections of the application that you can use, and I'm going to go through all of the review criteria, which will specifically tell you what you'll need to put in each of these particular components.

So listed here are the five core review criteria for F-applications. The fellowship applicant themselves; your sponsors, collaborators and consultants; the research training plan; training potential; and the institutional environment and commitment to training. In the next few slides, I'll give you some general advice about how to approach each of these criteria.

So starting with the fellowship applicant -- this section demonstrates your potential based on your academic achievements, your research productivity and your letters of reference. While there's no magic number, in general, the more publications you have, the better -- that's not surprising, especially if they're related to your F-application. However, make sure to include all of your publications, including ones that you may have had as an undergraduate student, as this will show commitment and trajectory. In addition, describe any podium or poster presentations. Include all relevant awards and achievements, and keep in mind that your letters of reference should be enthusiastic, personal and clearly detailing your intelligence, creativity, drive, and commitment to scientific research. This is hard, but this is not the time to be modest with your achievements; you really want to sell yourself here.

And moving on to sponsors, collaborators and consultants -- this is your team. So together, they must have expertise in the scientific topic area proposed in your research project, and expert experience and success in training scientists. You actually may need a mentoring team to make sure all expectations of a mentor are filled. You'll need a topic area expert with an extensive publication record, someone with success in obtaining peer-reviewed grants, a mentor with experience training people who go on to become independent scientists. In addition, if you're a clinician working with a PhD, you may want a clinician- scientist as a career mentor. The letters of support with these individuals should clearly define the roles of everyone; it's nice to have a very famous person on there, but make sure that that person has a very specific role.

Next is the research training plan. The goal is to develop a project that will result in publications, provide you with new skills, advance the scientific field, and launch your career -- so we're not asking for much here. You want to develop a strong, coherent training plan with your mentor, making sure that it's related to, but independent from your mentor's funded grants -- we don't want copy-pastes here, we want your brain going into this. The plan should be appropriate to your level of experience and your career goals. You want to propose a clear hypothesis based on a solid rationale with supportive preliminary data. Make sure to include pitfalls, alternative approaches, data interpretation, statistical analysis and future studies. Just as a helpful tip -- there are no expectations that the research can be particularly innovative or risky, but because reviewers would really rather see a plan that's likely to succeed and lead to publications. And finally, in this section, make sure that you state specific, realistic milestones and associated timelines.

Next I'll cover training potential. So the goal here is to acquire new skills and training that will expand upon your previous training. The activities should match your career goals and make you competitive for the next phase of your career. So we'd ask that you describe individualized training that addresses your specific training needs, so that may include additional coursework, opportunities for written and oral communications through courses, workshops and presentations at the local and national level, and since many people will be going on to running their own labs or teaching, also include opportunities to train more junior scientists. It often helps to also include a formal mentoring committee, even if you are a postdoc. Obviously, if you're a predoc, you should already have this committee, but it's really nice to have a group of peoples to help monitor your progress.

And finally, institutional environment and commitment to training -- here you'll describe the resources and facilities available at your institution to successfully complete the proposed experiments. But in addition, we would like to hear what kind of seminar series that bring in external leaders in the field are happening at your institution, opportunities for collaborations and interactions with faculty and students across your institution, and any seminars or workshops that focus on things like career development, grant writing, starting a lab, running a lab, etcetera.

There are also additional fellowship review criteria and considerations. Some of these contribute to the score of the application, like human subjects and vertebrate animals. Others in theories don't contribute to the score necessarily, but they can actually delay funding if there are any issues. And I say "in theory" because failure to follow instructions looks like a lack of attention to detail. Number one thing you need to do is follow the instructions.

So Ericka asked that we provide three take-home tips. As you saw earlier, she wasn't able to hold to three, and neither am I. So here are my five take-home tips: Number one, start months in advance. Don't rush this. The NIH review process, once you submit your application, is going to take six months. Once it's submitted, you're in for a wait, so give yourself enough time before that wait to put in an application that you're proud of, where all the I's are dotted and all the T's are crossed, and it tells the story that you want to tell. And that leads to point number two -- make sure that the application tells one cohesive story. Your training plan has to align with your training goals. Your mentor team must cover all of your training needs, etcetera. It's one story. Thirdly -- and I mentioned this in the previous slide -- pay attention to details. So this is an example of a few things; things like fonts and error bars and spelling. The goal here is, you want to make the application both pretty and easy to read, because that sets the stage for the reviewers, but it also reflects on how meticulous you are, which is obviously something important when you're doing science.

Fourth, we ask that you write the application yourself, of course with the guidance of your mentor. This is your opportunity to experience applying for NIH funding, from reading the FOA all the way up to responding to reviewer critiques. Really absorb this process, because it's going to be a key component of your research career. And finally, you want to ask to see successful F-awards. As around within your lab, ask around within your department. You may also have a predoc or postdoc group at your institution that's already accumulated these, and they can help out. If you want to start off with the links below, I've included links for sample applications and reviewer critiques to get you started. And with that, I will turn things over to Lauren. Thanks, everyone.

Dr. Lauren Hill: Thank you, Dr. Boyce, that was great! Okay, good afternoon, everybody. I am Dr. Lauren Hill from NIMH, and I am going to talk about career development awards, or what we often refer to as K-awards. And Dr. Boyce has teed this up wonderfully for me, because much of what she just spoke about with respect to the different review criteria for fellowships, a lot of that is very, very similar when you're writing a K-award. So let's get going.

So career development awards, or also known as K-awards, are designed for individuals with a doctoral degree who have demonstrated some potential or some interest in having an independent research career award, but who need additional experience to establish or sustain an independent research program. So K-awards provide three to five years of salary support, and importantly, they guarantee some substantial period of protected time for you to engage in research and research-related activities to make that transition to research independence. So not every NIH IC, or institute and center, participates in every available K mechanism. So as we've already said many, many times today already, it's important to look at the website, do your homework ahead of time, and make sure that your scientific home, the institute to which you plan to apply, will support the K mechanism to which you plan to apply. And ICs may have, and do have, different specific policies pertaining to different K-awards. And you can view the K funding opportunities ahead of time.

K-awards are intended for those who are in an initial phase of a research career, so people typically apply at the very, very late postdoc, or typically the early faculty phase, assistant professor phase. Certain institutes and centers have restrictions on how much postdoc experience you can have to be eligible for a K; not all of them do. I'm from NIMH, and at NIMH we have a restriction of no more than six years of postdoctoral experience before your K eligibility runs out. Therefore, people who require additional supervised or mentored career development beyond the postdoctoral period, in order to make that transition to research independence. And they really are for people who want a career as an independent scientific investigator; these are not for clinicians who want to do a little bit of research on the side. These are for people who really want research careers.

K's come in many flavors. NIH supports K's for mid-career people. I saw some questions in the Q and A about institutional K-awards, like KL2s and K12s -- these are sort of the standard mentor career, or K-awards. The K01, the K08, the K23, we also have a K25, which is a quantitative award. The K01 are for folks who have PhDs that are not clinical. The K08 and the K23 are for people who have clinical doctorates. So what you want to do is, you want to go onto our K kiosk and see which one is appropriate for you and for the type of doctorate you have, and also the type of science that you want to pursue in your research career. The K99 is technically a postdoc award. As Dr. Boyce said, it transitions you from the postdoc into an R00. One thing to be mindful of with the K99-R00 is that transition is not automatic. Different institutes and centers have different ways of reviewing the adequacy of the package that you're offered. When you get the job offer for the R00 at RIC, that review is quite rigorous because we want to see you get a very competitive package. You're coming with money, and we want to make sure that you're poised well for success. So the take-home message there is, it's not automatic that there is an internal review process between a K99 and the R00, but it can be a great mechanism to push you forward to independence.

In terms of eligibility for K-awards, you must be a U.S. citizen, non-citizen or permanent resident, except the K99. In many instances there is not a citizenship requirement -- again, check to make sure. You must have a research doctoral degree for the K01, clinical doctoral degrees for the K01, K08 and K23, or rather, the K08 and the K23 you can apply. If you have a clinical doctorate, you can apply for all three. As I mentioned earlier, the K25 is a quantitative mechanism. We at NIH don't support that, but other ICs do. You are ineligible for a mentor K if you are a current or former principal investigator of essentially an R01 equivalent, or some kind of major research project grant.

Characteristics of mentored K-awards -- they are three to five years in duration. Different institutes and centers have a default -- I have here that four is the default for NIMH -- that is not necessarily the case any longer, and again, it varies from IC to IC, and depends upon what your scientific focus is. The minimum research effort -- and this is true -- is 75 percent effort. They are not renewable. Salary support varies by institutes and center, the maximum is $100,000. And research support -- you also get research support, and that is up to $50,000. As you can tell, that's not a lot of money. It is a mentored award, so we expect your institution and your mentors or your sponsors, actually, to help with the cost of conducting your research. The K99 duration is for up to two years, plus additional independent years, up to three years for the R00 phase. The support during the K99 salary is up to $75,000, research support up to $20,000, etcetera. And the take-home message here is that K's can and do differ by institute -- please, please reach out and speak to your program officer before applying.

Dr. Boyce walked through these review criteria for fellowships. They're very, very similar for K-awards. Again, as Dr. Boyce said, the K-award should really hang together cohesively for the candidate. The reviewers are looking for your previous training, your productivity, your letters of recommendation, the potential for independent research career, your research plan, your career development plan -- all of that should hang together and tell a cohesive picture. Your mentoring team should have complementary skillsets, so you shouldn’t have all mentors with one area of expertise and none of your mentors in another area in which you want training. Your mentors should not only have outstanding track records as scientists, they should also have very strong track records as mentors at the phase of the career development, when you're applying. And the institutional commitment also should be strong. A K-award should never be -- or let me say this again. A faculty appointment should never be contingent upon a K -- that should be something that you have that's a given as you're getting a K.

Here are - I only have three tips, so evidently I'm the only one who's following directions here. What I do want to say, and it is, as I said before, is to make sure that your K application, your K story, is a cohesive one, one that hangs together. All the pieces, the plan, the mentors, the actual research, the applied research you're getting, the didactics that you're proposing, the conferences you plan to attend -- they should all fit together. I have a sample table in the bottom right; sometimes when people ask for technical assistance, I say, "Well, put it together in a table and start with your career development goals, maybe your three to five goals that you're planning for your K. And make sure that whatever you're planning, whoever your mentors are, whatever courses you're going to take, whatever conferences you're going to go to, whatever papers you're going to write -- and be specific -- make sure they align with those career development goals. You shouldn't have something dangling out here. You know, check box -- and you can see where you may have gaps or where you may have too many things. Also, turn your training gaps into training opportunities; if you don't have as many publications as you might want, or that would position you well to write an independent R -- make that part of your training goals. Be specific about what papers you're going to write. Where are you going to get the data? Make that part of -- you know, because they're going to see the gaps, so don't try to hide the gaps. Fill them in. Turn those gaps into opportunities. And your mentors should be mentoring. The expertise that your mentors bring to your K should be evident. Reviewers will pick up on that, if certain publications are missing, certain areas of the literature are missing from your background, they're going to go, "Where was Dr. So-and-So? Why didn't they catch that?" And you're going to get dinged for that. So although you are writing it yourself, your mentor's expertise should be evident, their commitment to you should be evident.

So that's all I have to say. Thank you for your attention. I'm going to turn it back over to Ericka.

Dr. Erica Boone: Thank you so much. So this brings us to the Q and A portion of today's -- portion of our webinar for fellowships and career development awards. So we're going to ask for Dr. Teraya Donaldson to come up on camera as well. And we have received many, many, many, many questions. So if we do not get to your question, please do not be offended. We've got probably about five minutes or so for Q and A, at this point.

Dr. Teraya Donaldson: Thank you, Ericka. So I would like to start off with the questions that were uploaded from the audience. And one question in particular, for K-level applications, how important is it to have mentors at your institution, rather than external mentors who may have more appropriate- matched context expertise? Is there any general rule on what the blend of intramural versus extramural mentors should look like?

Dr. Ericka Boone: Lauren, you want to take that first? Look at Amanda. Amanda looks like she's chomping at the bit.

Dr. Amanda Boyce: No.

Dr. Ericka Boone: How about you start, Amanda?

Dr. Amanda Boyce: No, I was going to let Lauren go. No, I'm happy to talk about it. And I will tell you, this is just based on all of the reviews of K-awards that we've heard over the years, just to give you an idea. It doesn't happen frequently, but sometimes it does happen. And I always say that, like I said, you're building a team here, whether it's an F or a K. So sometimes you do have to reach outside of your institute to get the right kind of expertise. However, you definitely want someone locally who can take care of you, right? You're going to need somebody who's got funding and lab space, and wants you working in their lab, right? So you have to have that local person. But I would encourage you to reach out. The only issue there is, make sure that they put it in their letters that they are committed to the relationship; that they have a very specific role. Maybe build in travel if you can, and time of Zoom -- no, I'm not sure that's totally necessary anymore, unless you need to learn some wet skills, some wet lab skills. I'll let Lauren go.

Dr. Lauren Hill: Ditto to what you said. And I think it's an opportunity to sort of distinguish between a mentor and a sponsor, right? So the person who is providing that kind of infrastructure and those types of resources, space, money, animals, access to a clinic, etcetera -- that's your sponsor. And oftentimes, that sponsor really needs to be local. It's unlikely that you would have access to those resources from somebody who's at another institution. And you want to be set up for success.

Dr. Ericka Boone. Exactly. And just to catch on to the tail end of that, as my eight-year-old niece always says, make it make sense, right? So any component with -- she says that all the time -- any component within your application should make sense, or be in alignment with what you state are your research and your career-related goals. So if you have to have a mentor that is located at a different institution -- just say that you changed institutions, but you have a major mentor that is at your previous institution, just speak about that plainly and directly within your application. Why is that person there? What do they contribute to your career growth and trajectory? You bring people in, mentors and sponsors -- a lot of times people like to bring people in with big names because they think that it's going to help them to get funded, right? I think that the better applications are the ones where they make it make sense. Why are these people a part of your research team? Why are they on your team supporting your growth, because this is your application. It's not necessarily about them. They're adding to what you are indicating are your research and your career-related goals or dreams.

Dr. Teraya Donaldson: Thank you all. So the next question, is it possible to break down the K-awards and talk about which mechanism is best for which position/stage of postdoctoral training, and what career goals each mechanism is best-suited for?

Dr. Lauren Hill: I'm not sure I understand the question, but perhaps the best answer to that is referring to a website, or the K kiosk where you can look at -- I think the dimensions there are what type of doctoral degree that you have and the type of research you want to conduct. Am I getting nods?

Dr. Ericka Boone: Yes.

Dr. Lauren Hill: And then it's in the chat there. I think that's the best place to start.

Dr. Ericka Boone: I think that that is the best place to start. And thank you very much, Dr. Lauren Ullrich, for providing the link to the Research Training website, because it can provide you with information on the different types of activity codes that are available at NIH. And they're also broken out according to career stage. So I think as one of the resources in the booth, and also as part of my part of the presentation, I included that schematic of mechanisms that are available at NIH, and they're broken across career stage. Really and truly as, like Lauren said, you take a look at each one of those and you see what your -- or you think about what your own career goals are, what your own research goals are, and then you move on from there.

Another thing, too, is -- talk to your mentor. Talk to your program officer, or use Matchmaker to find out who might be your likely program officer to kind of give you guidance with regards to the type of activity code, or type of career development award that you might want to apply.

Dr. Amanda Boyce: Yeah, and I just want to reiterate, I think the first thing you do is run your names through Matchmaker to get your program match. Because right now, every FOA -- let's take the K01 specifically -- has a table that has all of the institute-specific eligibility criteria, salaries, etcetera, in it. And the K01 is the most broadly-used thing that I think I have ever seen. Some people have time limits, some don't. Some require you to be junior faculty, others won't let you if you're junior faculty. So you really should -- I mean, start with, I think I want to do a K01, and then just reach out to the program officers.

Dr. Lauren Hill: Some ICs use the K01 as a diversity mechanism, and others don't as well. So really, the best bet is to get into those tables, and see what will work for you.

Dr. Ericka Boone: Yes, and what Amanda and both Lauren really were speaking to as well is those IC-specific tables that gives you all of the, I'll say, special sauce, or secret sauce with regards to what institutes and centers are really looking for, when they're looking for individuals that they feel might be the best match or candidate for the mechanism that they're seeking to find.

Dr. Teraya Donaldson: Okay, thank you. So next question: Are three-year K applications often successful, or do they risk being perceived as low-impact or lower-priority than five-year applications?

Dr. Lauren Hill: I can take a stab at that one, and then turn it back over to Amanda. I'm going to quote Ericka's niece. "Make it make sense."

Dr. Ericka Boone: You stole my line. I was going to say that, you have to make it make sense.

Dr. Lauren Hill: Make it make sense. No, in all seriousness, mentor K's are really, really tailored for the applicant. So if you need three years, and you can launch into an independent research career in three years, that is fantastic. Write for three years, and go for it. Don't just linger on. And the same thing is true, if you need five years, write five years, justify the five years. Don't write four years and then sit around saying you're going to write papers for the fifth year -- that's not good. So Amanda, you may have a different perspective, but I think it just really needs to fit.

Dr. Amanda Boyce: Yeah, I always encourage people to think of a K as one person's work, it's you, for a full-time effort, essentially, for a year. So still the science has to fit in there. And then, of course, it takes a certain amount of time to do the experiments, write the papers and get going. So make it make sense.

Dr. Lauren Hill: Absolutely.

Dr. Ericka Boone: I would also like to point out -- don't fudge. Don't try to fudge it. Don't try to stretch it out because you think that you'll be more of a priority if you write four or five-year K, as opposed to a three-year K. Our reviewer is going to be able to see through that just like a clear glass, right? They're going to see that this person doesn't really need five years for that.

Dr. Lauren Hill: Right.

Dr. Ericka Boone: They probably only need three years for that. So speak to what you actually need to support your own research trajectory and growth.

Dr. Lauren Hill: Absolutely.

Dr. Ericka Boone: And talk to a program officer. Did we put that as one of our top three tips? That should be number one.

Dr. Lauren Hill: Oh my gosh, that should be, like -- you know, when I give these talks --

Dr Ericka Boone: [INAUDIBLE] my forehead.

Dr. Lauren Hill: -- when I give these talks normally in real life, I go to the podium, and I say, okay, so if you guys want to start texting, doing email, whatever, just listen to this one thing, and then you can do that. Contact a program officer early and often -- now you don't have to listen to the rest of the talk. Because that is really the most important takeaway message from any of these talks.

Dr. Ericka Boone: I did see within the Q and A box, though, because I was kind of snooping as you guys were talking -- what do you do when your program officer is not responsive?

Dr. Lauren Hill: That's a great question. Be persistent, right, because we are busy. And the other thing is, we're people, so some people are more responsive than others. Some people are more warm and fuzzy than others, but it is our job. And then you can try pinging other people, you know, other pinging at the IC, other people in the division. Hey, I haven't heard from So-and-So, are they out sick? Who can I talk to? That would be my suggestion -- I don't know if you all have other ideas.

Dr. Amanda Boyce: No, I agree. I mean, I'm not a part of a muscle team, so we can always reach out to a teammate. Most institutes have training officers or training divisions sometimes, and they could certainly answer questions about the mechanisms, maybe not the science so much. But there's usually, depending on your question. And if you're saying, "I'm not hearing back," likely that person will just be able to answer all your questions.

Dr. Ericka Boone: Yeah. I'll also say this is an opportunity for portfolio or funding diversity, right? So we've been talking about Matchmaker, Matchmaker, Matchmaker -- I think that most people say, I'm a NIAMS researcher, I'm an NIMH researcher -- you're a researcher that has various research interests and career goals, right? So just like we don't invest all of our money in just McDonald's, what if people stop eating meat, right? Our investment's going to tank. So just like that, in our financial portfolios, we should be thinking about our funding portfolios in the same way. There are so many different other institution centers that are funding research that has some sort of similar vein in line of what your research is. So this is an opportunity for you to utilize Matchmaker and see who else is out there that might have the ability to fund you.

Dr. Teraya Donaldson: So next question, so what is the difference between a mentor and an advisory committee in terms of K application, and responsibilities during the award period? Should I repeat that?

Dr. Ericka Boone: I think that in two sessions, they're going to talk about mentorship and sponsorship, so should we kind of put a pin in that one until then? We don't want to steal some of their thunder.

Dr. Teraya Donaldson: Sure. Sure. So let's move on to a question about -- that's interesting. If you apply for a K-award during your postdoc and are fortunate enough to receive that award, do you need to stay with that university? Are they obligated to take you on as faculty? How does that work?

Dr. Amanda Boyce: All of us are shaking our heads -- no. I mean, what your university does and what the NIH does are totally independent things. I mean, we have some rules, but they're free to hire or not hire as they see fit. I mean, other than that, I don't know -- where was this --

Dr. Lauren Hill: Yeah, I would not recommend doing that, because the institutional commitment is a review criterion -- it's so important. So I would wait to get to where you're going to land, right? I would wait until you get that faculty appointment, and then apply for the K. I wouldn't apply as a postdoc planning to go somewhere else.

Dr. Ericka Boone: Yes. If life happens to you, though, and you find yourself in a situation where you must leave your current position, this is a great opportunity for you to work closely with your mentor, possible, but also with your program officer. So while there are some hard and fast rules here at NIH, sometimes there is that wiggle room. And we do understand that sometimes life dictates your career choices. So if you don't remember anything else that we say -- talk to your program officer. They really are your research best friend.

Dr. Teraya Donaldson: So I think that this is the close of our session, so we can move to the next. I would like to thank the presenters today. And for those who -- questions that we have not answered or addressed, we will have a booth today starting at, I believe, 3:35 into 4:30, if you have additional questions. Also, you can reach us at nihtraining@nih.gov, and that is our training mailbox for other questions in regards to training. Thank you.

Dr. Ericka Boone: And we'll put that in the box, too. Thank you all so much.

So now we will move on to our next session. Thank you all. Thank all of the presenters, our moderators, and thank you, attendees, for participating in the session. This was really a great conversation. And I'd like to introduce our next topic and our next expert staff.

So this presentation will focus on navigating NIH diversity programs. So during this session, they will discuss, our experts will discuss how diversity supports the NIH mission, the evidence-based supporting, the designation of certain groups as nationally underrepresented in science, the NIH programs design to increase or enhance diversity, and where you can find additional information about diversity programs. The current session on navigating NIH diversity programs will be led by Lisa Evans, Scientific Workforce Diversity officer in the Division of Biomedical Research Workforce in the Office of Extramural Research, and Dr. Lauren Ullrich, program director, Office of Programs to Enhance Neuroscience Diversity, or OPEN, with the National Institute of Neurological Diseases and Stroke, or NINDS. Lauren, Lisa?

Lisa Evans: So on behalf of myself and Lauren, we want to welcome you to this session. I also want to acknowledge Drs. Allison Lynne and Desiree Salazar, who you will not see on the screen today, but they are behind the scenes helping us to answer questions in the Q and A box. In some respects, they are the sheroes or "she-roes" of this session.

Before we get started, we want to acknowledge that this is a lot of material to cover, and we may not get to each question during this brief timeframe. If your question is not answered here, there are two sources of information that can help; the NIH Extramural Diversity website, which is extramural- diversity.nih.gov. And as was previously discussed in the last section, the NIH Research Training and Career Development website, which provides many FAQs on diversity.

So I'd like to take a moment to tell you how this session will be handled. I will start out by giving an overview about why diversity matters and its relevance to the NIH mission; the groups, as Dr. Boone said, that have been identified as nationally underrepresented in the scientific workforce, and how underrepresentation is determined at the national level. Lauren will give you an overview of select diversity programs by career level, and identify some of the criteria that you need to meet for each of them. I will then come back and very briefly talk to you a little bit about the resources that are available to answer additional questions. We will not be responding -- at least Lauren and I will not be responding to questions until the end of the presentation, but you can certainly enter your questions in the Q and A box as we go along. Allison and Desiree will answer these questions as we go, in an effort to save time.

So let's get started. So why is it that NIH is interested in diversity? In some respects, we should start with the last bullet, because our agency's mission is focused on science, and we are always interested in producing the best and most innovative science. You should know that there's quite a bit of research about how diversity improves educational environments, and how diversity results in better and more innovative products. And that's the team science approach. So NIH stands at the Nexus of both considerations; education and science.

This slide reflects an excerpt from the Notice of Interest in Diversity, which talks about the NIH mission and why diversity is important, as well as the groups that NIH has identified as nationally underrepresented in science, based on a rigorous labor market analysis. And I have to stop for a moment and say one of the first questions that we get about the Notice of Interest in Diversity is, why other groups, like sexual and gender minorities or individuals who may identify as Middle Eastern or North African, or MENA, are not specifically mentioned in the notice? The intent of the notice is to simply identify the groups that we have a robust evidence base to support the designation. That does not mean that there are not other groups that might be underrepresented nationally, or at the institutional level. This slide reflects a biannual report that is published by the National Science Foundation, which conducts a labor market analysis to determine the groups that are underrepresented in the science and engineering workforce. And just one caveat I would like to mention is that when we talk about underrepresentation, we're not talking about low numbers of certain groups, either at the national level or at the institutional level. The concept of underrepresentation, again, reflects a labor market analysis that goes beyond that consideration.

As I mentioned, we have an Extramural Diversity website. But we put this slide in to remind you that everything that I have covered in this part of the presentation can be found under the Diversity Matters tile, which is on the far right of the screen in red. So you can find all of this information there; literature about the groups that are underrepresented, etcetera.

So now I'm going to turn it over to Lauren, and Lauren will talk to you about a few diversity programs that we have at the NIH. Remember, if you have questions, put them in the Q and A box, and we will have them answered behind the scenes, to the extent that we have time to do so. After Lauren concludes, we will have a few of the frequently asked questions that we found in the Q and A Box, and we will try to address those. So Lauren, are you ready to take it?

Dr. Lauren Ullrich: Yep, I'm ready, thank you. So today I'm going to cover selected NIH Diversity Awards. And, so I have listed here a schematic of our potential awards from the K through 12, all the way through junior faculty. And it's important to note that just because an activity code is on this list, it doesn't mean that every NIH institute participates, it may just be one that has this. It also doesn't mean that every single one of these programs that have this activity code are diversity targeted. So you have to check both the institute that you're interested in, and whether this particular flavor of the funding opportunity announcement is diversity targeted, or not. But if it's on this list, then there is a diversity version of the program somewhere out there that at least one IC supports at this moment. But this is always in flux, as you heard. You have to reach out to the program officer at the institute that you're interested in applying to in order to be sure that what you're applying to is appropriate for you and your situation. So at the very bottom, you can see that we have our institutional, R25 awards, and then we go up through the supplements. We have some individual awards for graduate students, transitional awards, postdoc, all the way to junior faculty. So I'm going to go through each of these, one by one.

Really, the most famous diversity program that we have at NIH, and certainly the most flexible program, is the Research Supplements to Promote Diversity. These are additional funds that are added to an active NIH grant, so usually it'll be an R01, but there is a whole list of grants that the mentor can hold that are eligible for a supplement. So check the FOA if you don't necessarily have an R01, and the mentor will put in an application to support a diverse trainee in their lab. And this can support everyone from high school through junior faculty, and it is administratively reviewed. So unlike most NIH grants, this doesn't go to a study section, this is reviewed by the program officers at the NIH institute. And every institute -- I think every institute participates in this program, if not, the vast majority of them do. But they all implement it just a little bit differently. So some have specific deadlines, some have a rolling deadline. Some want to see specific things in the application -- it really varies a lot. So definitely check out the specific IC that holds the grant that you want to add the supplement to.

Next we have the Diversity F31, which was mentioned earlier. And this is a fellowship to support graduate students from diverse backgrounds. And I think it was also mentioned earlier that individuals can receive up to five years of aggregate NRSA support at the predoctoral level. Okay, I'm getting a request to speak a little louder, so let me -- apologies. Is that better? Zoom turned down my mic for some reason.

Okay, so individuals can receive up to five years of NRSA support at the predoctoral level. So this would be your T32 if you're appointed to one of those, plus the F31 time can be up to five years for the F31.

The R36 is an R grant, but it is for graduate students. It is the Dissertation Research Award. There are just a few ICs that support this, but it is to support doctoral candidates for up to two years for the completion of the doctoral dissertation research project, and it actually provides some funds for the completion of the dissertation research, and not just the funding to support your stipend.

The F99-K00 was also mentioned earlier. And this provides funds for the last one to two years of graduate school, and four years of postdoc. So it's an F to K bridge program. And it also, like the K99-R00 that I'll talk about later, requires the submission of a transition application. So the F99 phase is reviewed in a study section, same as any other NIH grant. And once you reach your PhD defense, then you submit a new application that is reviewed by the program officers, and that will outline the four years of the K00 research. And you'll have more information, you'll have chosen your postdoctoral mentor, and you'll have more information about the research project that you're proposing. Then once that's administratively reviewed, then the second phase of the K00 is awarded.

The K99-R00 -- so this is a transition from postdoc to tenure track faculty. And there's quite a few of diversity-focused versions of this program. It supports the last one to two years of postdoctoral training, and three years of faculty through the R00 phase, so a K to an R bridge program.

The K22 is very similar to the K99-R00; it's a mentor transition award. It will help postdocs transition to assistant professor, and initiate an independent research career. So it also has Phase I and a Phase II. Some institutions use this as a diversity targeted transition award instead of the K99.

And we've had a lot of talk about the K01 so far this session. The shorter version is that it's used very differently by the different ICs. For all of them, it's going to be a mentored career development award that's going to provide protected time for three to five years of research career development. But other than that, the eligibility varies a lot by IC. Some use them mostly to support postdocs, and some it's more of a transitional type of award, and some it's really you apply as a junior faculty. So it really varies a lot.

Then lastly, I want to mention our research awards to promote workforce diversity. We have R01 and R21 awards that are specifically to enhance the diversity of investigators conducting research within the different NIH institute and centers' missions. So there's several ICs now that have these diversity R01s and diversity R21, so I highly encourage you to look for those and see if the institute that you're interested in participates.

Then we also have institutional awards that are focused on diversity. The R25 is a Research Education Award, another activity code that comes in many, many, many flavors. So the diversity version of this really span everything from K through 12, all the way through junior faculty. Of course different ICs are going to support different career stages, but in general, these are institutional awards that support educational activities to complement or enhance the training of the workforce. A lot of times these are going to be mentoring activities, professional development activities, research experiences and things like that, that they're not going to replace a T32 or a grant like that, but they're going to complement those awards. And these can be local, they can be national. But because they're institutional, you don't apply as a trainee to NIH to get on these awards, you would apply to the people, the TIs who were awarded the awards. So they're all managed locally.

Now I'm going to turn it over to Lisa to tell you about a few resources that are available.

>> You're muted, Lisa.

Lisa Evans: Thank you. We're going to just hammer again on this Extramural Diversity website, simply because it has a lot of information. Not only the tile that I mentioned earlier, which explains about why diversity is important, it also contains a lot of information about how to navigate your career pathway. It also, in the blue tile, talks about building participation, some strategies the PIs may use. And also we have a section on reports and data. So it is a wonderful resource that you might want to take a look at.

In addition to that, it's been mentioned, as in the previous part of this webinar, that the Research Training and Career Development website is also a resource that's available. Please note that the Research Training and Career Development website has a set of FAQ's that you can see at the upper right hand corner of the website. There are specific FAQs that have to do with diversity, so if you have any questions about that, you may want to refer to those diversity FAQs.

In addition, it was also mentioned by Ericka that there is a place where not only can you sign up to receive notification of published grants and contracts, but you can also search through our website and identify those opportunities as well. And in addition to that, I think it was Dr. Boone who talked about Matchmaker, and all of this functionality Matchmaker -- searching for NIH grants by location and topic -- is located on Reporter, which is a public database that contains a lot of information about NIH and our awards. And that's located at reporter.nih.gov.

So that ends our resource portion of the presentation. So I'm going to turn it back over to Lauren, and she's going to pull up some of the more frequently asked questions in the chat. I've been answering as well, which was how I was a little distracted when we started this. But anyway, Lauren, go right on ahead.

Dr. Lauren Ullrich: Sure. So we have a couple of questions specifically asking about who qualifies for diversity awards. So do you want to take that, Lisa?

Lisa Evans: Yes. So as I had explained in the Q and A box, someone was asking a question about, what are diversity programs? So diversity programs are programs that are designed in terms of their intentionality, to make sure that NIH is recruiting individuals from those groups that are identified in the Notice of Interest and Diversity for these particular programs. So NIH is interested broadly in diversity, but when you see a diversity -- what is called a "diversity program," we are really interested in the recruitment of those individuals from underrepresented backgrounds. So I think that's how I would answer that question.

Dr. Lauren Ullrich: Yeah, and so I think kind of similar questions, maybe there's some confusion around sort of how you would know if it's a diversity program, or what is meant. So if it's on top of another funding mechanism, is there's separate programs, or how does that work?

Lisa Evans: So this may sound just intuitive, but if it says "diversity" in the title, it's a diversity program. We do have institutes and centers that have, for example, a K01 or an R01, as Lauren mentioned, that focuses on diversity. But I would suggest that you read the funding opportunity announcement, particularly the section of the announcement that talks about the purpose for the grant. That will really tell you what it is, what type of candidates that are being solicited for that particular announcement.

Dr. Lauren Ullrich: Yeah, so just to sort of restate what you already said, maybe in some different words in case it's not clear, there usually is, for all of these programs, what we call a parent announcement. You might hear us talking about the parent K01 or the parent K99, and what this means is, it's sort of the general, generic one. And sometimes ICs will sign on to that one. And they'll have maybe another version that has something specific to them. And it doesn't have to be diversity, it can be pretty much anything. So for example, NINDS -- we don't participate in the parent F32. We have our own special F32 because we have certain things that we want to emphasize, or certain review criteria that we're interested in. And diversity always acts very similarly. So there's a parent K01 that an IC may or may not sign on to, but then there will also be a diversity K01 that an IC might issue. So they're separate programs. It's not just something attached on top of the parent, it's going to be a completely separate FOA. When you're searching, you can put "diversity" into the grants search box that Lisa talked about earlier, and that will pop up all the different diversity awards. But certainly it will be in the purpose, and usually the title as well. That's how you can tell if it's a specific diversity targeted award.

Let's see, so we have a question, does the review or funding process differ for the diversity awards from these parent awards, or the general awards? And I'll say -- yeah, go ahead, Lisa.

Lisa Evans: No, go ahead. No, go ahead.

Dr. Lauren Ullrich: Oh. I'll say that it kind of depends; the general process is going to be the same, so they're sent out to the study section for review, and that whole process is the same. But there may be different review criteria within the FOA. For example, for the Mosaic K99-R00, which is a diversity targeted program that's run by NIGMS, organized by NIGMS, but a lot of different ICs participate -- there are quite a few specific review criteria related to diversity and diversity efforts that the candidate may or may not have participated in. So in that sense, the review is a little different, because reviewers are answering different questions about your application than they would with a parent. But that's the case pretty much for all FOAs, there's the potential to have different review criteria in that section. Lisa, did you want to add anything?

Lisa Evans: No, just that this is the reason why it's so important to carefully read the funding opportunity announcement, and if you have questions to reach out to the program official who is normally identified at the back end of the announcement, so you can directly find out what that institution is looking for in their programs.

Dr. Lauren Ullrich: Okay, so there's another question about, what is the difference or the benefit of applying to a diversity award versus a parent award? Do you want to take that, Lisa, or do you want me to do it?

Lisa Evans: You can do it.

Dr. Lauren Ullrich: Okay. So I think it really depends on the FOA. Sometimes the diversity award is very different than the parent; there just isn't a parallel award offered by the IC. So it's really a no-brainer. If you fit what the FOA is asking for, then why not apply, because there isn't sort of two different options. Sometimes there is, sort of, but you can choose one or the other, so for example, the diversity F31 and the parent F31 -- they're pretty much identical, and the only difference is, one is diversity targeted, and the other is not. And in that case, it's really up to you, if you identify with the mission of increasing diversity, if that's something that appeals to you, that's one way for you to sort of identify to the IC that you fall into this category. Different ICs will use that information very differently. At NINDS, for example, we may try to give you additional information about other opportunities that you may be eligible for; so for example, the diversity F99 that we participate in -- we might email that information out to all of our diversity F31 applicants, just to say, hey, this is something you might also be eligible for and interested in. And if you apply to the parent, we might not know that you're eligible or interested in, so you wouldn't get that information. Other ICs may use that information very differently.

Lisa Evans: Yeah, and I just wanted to point out, too, there was a question in the Q and A Box, and it was sort of along the lines of whether the competition for diversity awards is different. They are all reviewed, rigorously reviewed, by reviewers. So in that respect, the review is different, it's just that perhaps the criteria that's being used is a little different between a parent award and a diversity award. But they are all rigorously reviewed within the IC.

Dr. Lauren Ullrich: Yes. And I think different ICs will approach these things differently. But at least at NINDS, for most of our training awards, we don't have a set budget, so we always say, you're not competing with other people, because if you get a good score, we'll bond you. So I try to discourage people from thinking about it in terms of the competitiveness generically, but really focusing on you putting together the best application that you can -- that is the best way for you to get funded, and not really think about it in terms of how many other people are applying, or how many other people might be funded, because that, in the abstract, might be something to consider. But when it comes to your specific situation, that's out of your control. So the best thing to do is to just put together the best application you can. Let's see. Another question. So there's a question about citizenship requirements for diversity programs. Do you want to talk about the reasoning behind that?

Lisa Evans: Yeah, that's not -- I don't believe that's within our control. So for the most part, you either have to be a citizen, a U.S. citizen, or someone who has a green card. And that comes out, I believe -- and I could be wrong, Lauren -- that that comes from out of our funding authorities. So that's why you will see that limitation. Even in some of the training programs, they will say that unless it's an extraordinary circumstance, the individuals who are identified for these programs should be U.S. citizens, or have what's commonly called a "green card." I don't know if you have something you want to add to that, Lauren.

Dr. Lauren Ullrich: Yeah, I mean, the other thing I'll say, that when it comes to diversity programs, the underrepresentation data that we use, that Lisa was talking about with NSF, is measured relative to U.S. citizens and U.S. population, and also sort of the U.S. educational system. So a lot of times when we're talking about diversity programs, that's another reason for the citizenship requirements.

Lisa Evans: Yes, that's true. I wasn't thinking of it from that perspective, but you're absolutely correct. We also frequently get corrections about subpopulation, is my subpopulation underrepresented within the biomedical workforce? But if you go to that NSF report that I was talking about, it does not break out the groups. So for example, under the Racial and Ethnic category, it doesn't go into subpopulations, for example, of Hispanics; it's not asking about or reporting on the presence of Cubans or Mexican Americans in the scientific or engineering workforce. And we also at NIH do not have the capacity currently to collect that kind of information, subpopulation information, so we really wouldn't know if a subpopulation is underrepresented or not.

Dr. Lauren Ullrich: Another question, does the K22 require you to already have a faculty position to apply? I can take that one. It really depends on the FOA. I feel like a broken record. But I'm going to say probably not -- so for both the K22 and the K99-R00, these are transition awards, right? They're taking you from postdoc to faculty. Normally, with these transition awards, it's not expected that you have identified where that faculty position is going to be, that you're coming in with a strong postdoc project that you're finishing up, and a plan for going in the job market and identifying your future research, and then you have some aims about what you'll do when you get to that faculty position. But it's sort of expected that you're going to be applying for the job after you've gotten the Phase I of the K22 or the K99 phase. But of course all of that depends on the specific FOA that you're applying to, so I would always recommend that you find that and read it, and reach out to the program officer about FOA if you have any question.

Lisa Evans: I also saw another question in the Q and A that I thought was very interesting, and it is the question about whether we have diversity programs that focus on not only individuals, but organizations. It's interesting to note, if you look in the NIH Guide prior to, I think, maybe last year or the year before, we didn't have programs that specified, for example, that they were interested in funding minorities serving institutions. That has been a recent phenomenon. But you will see in some of the funding opportunity announcements that particular -- instead of using the term "minorities serving institutions," you will see some FOAs that talk about institutions that have a historical or current mission to educate individuals from underrepresented backgrounds. Obviously minorities serving institutions fall under that umbrella. So there are programs that are looking to increase diversity within the institutional setting.

Dr. Lauren Ullrich: Exactly. Let's see, there's, Lisa, is there one last question that you see in here that you think would be good to answer?

Lisa Evans: Well, I don't really see one that would not require us going into a whole lot of detail. But again, if you have questions, I would strongly suggest that you look at our FAQs, and also reach out to the program officials. And one other thing I do want to point out, if you go to the Extramural Diversity website, there's a Contact Us link at the bottom of the page, and you can send an email question there, as well as to the Research Training and Career Development mailbox.

Dr. Lauren Ullrich: Okay, so I'll just take this one last one that I think I can do quickly. It says that, it seems that the K22 and the K99-R00 are very similar, and can I summarize the high-level differences? The short answer is no, I'm sorry. It really depends on the FOA, because there are so many different versions of the K99, there's so many -- I think maybe there's only one K22 left. But the best thing to do is to just look and find the FOA and read it and reach out to the program officer, and they can guide you on your exact situation.

So we can wrap it up there.

Lisa Evans: Thank you all so much for attending this part of the presentation, and definitely if you have additional questions that were not answered in the Q and A, feel free to contact us through the Extramural Diversity website, or the Research Training and Career Development website. Thank you.

Dr. Ericka Boone: I am muted. Now I'm unmuted. So thank you, Lisa, thank you, Lauren, for an informative discussion on NIH diversity programs. I would now like to introduce our next topic on advancing your career through networking and mentoring. I've very much been looking forward to this portion of the webinar, so I hope that you're going to join as well.

So during this session, our presenters will break down some important points about mentoring, what you should know before beginning a mentoring relationship, best practices for finding and keeping a good mentor, and how to develop your networking skills. This informative session will be led by Rosalina Bray, extramural staff training officer within the NIH Office of Extramural Research, and Lynn Morin, Evaluation and Research Training policy officer within the NIH Division of Biomedical Research Workforce, which is located in the Office of Extramural Research. I think that they are raring to go. They've got their uniforms together, their headpieces and a great presentation, so I hope that you all enjoy.

Rosalina Bray: Thank you so much, Ericka, and yes, my name is Rosalina Bray, and joining me today, appreciating this game, is Ms. Lynn Morin. Hi, Lynn. Are you excited to get this game started? [LYNN NODS] So in this session we're going to talk about advancing your career through networking and mentoring. I'll tell you somewhat about the game plan. On today, we're going to talk about self-assessments, we're going to talk about developing your plan for advancing your career. We're going to share a little bit about mentoring versus sponsorship, which you've heard a lot about already on today, but we're going to break it down even further. And we're going to talk to you about how to network with intentionality. I'm going to leave you with some great takeaways for your next game.

And now I'm going to turn it over to Lynn to talk about self-assessment.

Lynn Morin: Thank you, Bray, and welcome, everybody, and thank you for joining us. I want to start off this session by talking about something that we feel is an often overlooked step to being successfully mentored -- that of the self-assessment. So I wish I had thought about this as a poll question, but it's going to have to be rhetorical and more reflective. So how many of you have taken the self-assessment? Why did you take that self-assessment? Was it mandatory, required for a class? And what did you do with that information after you took it? Did you use it to plan your career goals? If not, why not?

So self-assessments are tools, and they help you identify growth opportunities. They provide you information about your career interests, your values, your aptitudes, and behavioral tendencies. I think one good example of a self-assessment that a lot of people know about is the Myers-Briggs. For those of you who don't know, the Myers-Briggs is an introspective questionnaire that gives you information about, how do you perceive the world, and how do you make decisions? So we'll touch briefly in a resource section at the end about some other examples, but you can really Google this term and find the myriad of different types of self-assessments out there. So find one that fits your needs, and maybe not as expensive, or you can take advantage of anything your institution might offer.

So I've said before, the self-assessment can help you identify skills and competencies you may want to acquire, and can identify development needs. And I want to be intentional and say, this is more than just those skills and capabilities that are involved in your day-to-day being in a lab. This also includes those soft skills, like how to manage people, how to have difficult conversations. So it not only benefits you to determine, say, your preferred communication style, or whether you prefer to work in teams versus independently -- it really help you gain a greater appreciation for your authentic self. And the self-assessment will enhance what will be your relationship with a mentor. And those identified development needs will give you a starting point to developing the mentoring contract, which is something we'll also talk about later on in the talk. So the self-assessment is your first step in developing your game plan.

Rosalina Bray: Now we're going to share a little bit about developing that game plan. This is going to help you set a course. First, specifically, we want to talk about your plan development and the parts of that plan development. It's going to begin with listing your specific goals. Then, after you have these goals, you want to develop a pitch to describe what you want. You want to also identify people, places. And lastly, you want to be able to assess your strategy. So at this time, we're going to talk about your goals, and I'm going to turn it back over to Lynn.

Lynn Morin: Sorry, I can't multi-task, I was muted. So, identifying goals -- as I mentioned, self-assessment is the good first step in helping you identify those goals. It can help you identify where do you want to be in three, five or even ten years. Two, where do you want to be as an adult? So the self-assessment can be used to develop the individual development plan, or IDP. Now a lot of you probably already know what an IDP is, you've seen them; NIH strongly encouraged them for trainees and fellowships. So it's basically set up to help you identify those short, mid and long-term goals. It can be used to establish the partnership that you create with your mentor. It gives you both the goals to work towards, and the starting point. So some institutions have sample -- a lot of them do, actually -- have sample IDP's on their website. Some institutions even require IDPs as part of their programs. But again, you can always Google the term, "Individual Development Plans" -- don't Google "IDP," because you'll get something completely different -- to find one that suits your needs, as there's honestly very different types and variety out there. The important thing to keep in mind about the IDP is that it's by no means a static document; it should be reviewed at least yearly, but more often as you face challenges. And you need to make course corrections. It's a dynamic living, breathing guide.

So now let's look at the other components of your plan development.

Rosalina Bray: Now once you have identified your goals, you'll want to begin think strategically about how to describe your plan, and then to implement your plan. And that is where the strategic components, like people who you're associating with, or that you hope to meet or to network with, your pitch and places matters. What people? Well, these are individuals in your field both nationally and internationally; you need to know who they are. In addition, you can find people through the centers and ICs here at the NIH, so just program officers, program directors. In addition, individuals who have received grants in your field or your discipline -- know them. If there are individuals who have received faculty and research awards, you want to know their names as well. And lastly, you can find out the names of individuals who are on agency grants and-or program officers or grants from different agencies, foundations and roots.

Next let's talk about your pitch. Your pitch is what you want to deliver as a message about who you are to others. Often people refer to this as an elevator pitch. In this pitch, you want to be very, very clear about your vision. You want to provide a succinct intro to who you are, and you want to narrow down your why, or your ask, of the individual you're pitching to. And finally, before you end the conversation, you want to have a closing that includes a follow-up. Indeed, it's also important to show gratitude when you're delivering this pitch, and after you've delivered the pitch. So remember to say things like "thank you," or to send a follow-up message if you shared contact information.

Next we'll talk about places. So along your strategic journey of trying to move forward your career, you'll want to think about what professional conferences you want to attend, and utilize them to share information and to gain information and knowledge in your field. You also want to attend seminars, exhibitions, special sessions -- and these can be involved in your career and outside of your career, field of interest. In addition scientific meetings, scientific discussions -- not to just know that these things exist, but that you are actively deciding which ones to attend and mapping it out as a part of your strategic plan. So I hope these strategies will help you and you become more intentional about incorporating this into your ultimate course plan for moving forward your career.

So we're excited about this next topic -- Mentorship versus Sponsorship. Please know that you'll meet others on this journey, and it begins here with your mentors. So we have a polling opportunity coming up -- we want to know a little bit about you. How many mentors do you currently have? The poll is up, and those of you who see the poll, would you please share your answer? You have a few seconds.

Lynn Morin: Thank you, Bray. While we're waiting for the poll answers, there was a question that came up between -- a question about multiple mentors and advisory committees, and it's actually gotten quite a few hits. And I'll just address that quickly. There was one question specific to the K01 -- so multiple mentors are allowed, and they're even encouraged. And to go back what Ericka said earlier, you need to make it make sense. You want to find mentors that are going to meet your needs. If you want to be that R01 researcher, you need to find mentors that have those R01 grants, that can guide you on that career. If you know that you're going to have to take a teaching load, and that's something you feel daunted about, find mentors who can help you. But don't just focus on those pieces. Think about mentors who, if you're a woman in science trying to have a family and trying to figure out how to balance all of those different aspects of your life, find someone that you feel has been successful in that. So by all means, please look forward multiple mentors as you see fit, and we'll help you achieve those goals. Also, the question asked about the advisory committees -- I would say if you think about it as mentors are personal to you, advisory committees tend to be those associated with programs that can help programs succeed, but your mentors will be personal to you. So I don't know, did we finish the poll here? I don't see results.

Rosalina Bray: Let's see the poll results. Well, I hope that most of you have more than one mentor. Lynn has already identified reasons why. One mentor may not be able to help you with all of your goals. So we're going to talk in just a moment about the difference between mentorship versus sponsorship, but we're going to first learn about the quality of your mentorship. How would you describe the quality of your mentorship? Is it high, good, moderate, poor or bad? We're going to give you an opportunity to answer that question, and then we're going to see what your results are.

It may be rhetorical for us for now, I think there's something happening with the polls that we're going to continue. Thank you so much. So from our question on how would you describe the quality of your mentorship, it seems that the majority of you -- no, this was a previous question -- that the majority of you have more than one mentor. So the previous question was about how many mentors do you have, the majority of you have more than one mentor, one to two, which is great. So we're going to go ahead and close that poll.

And instead of doing the next poll which we said was just rhetorical to think about, we're going to go on to the next topic, which is mentorship versus sponsorship. So again, we want to be very specific in explaining to you the difference between mentor and sponsorship. Your mentors are individuals who have knowledge about your field, and-or whatever you contacted them for, for helping you along with your goals. They have the experience, they have the expertise, they've been there, they've done that. And they can advise you succinctly on what to do next. These mentors are going to also be supporting you, because they have a value in this relationship as well. You add value to them by giving them an opportunity to share their lessons learned. And of course, they're sharing it back to you -- values you. They can provide you guidance, they can give you feedback on your goals, and sometimes they serve as coaches. Now there are some instances where your mentor may be your sponsor, and we're going to talk about when that happens. But our advice to you is to have a mentoring contract; that mentoring contract is going to help as an exit strategy when this mutual relationship needs to end or has to end, but is also going to set boundaries and expectations about the support that your mentor will give you, and also how you will interact with your mentor. Now sponsorship or sponsors, are individuals who are leaders in an area who can advocate for you because they trust your ability. And we're saying "leaders," but they can also be individuals who sit in a particular position, or have connections in a particular area, and therefore they can advocate for you. This will help you in your next promotion and-or move you into new areas that you have been looking to settle in. These sponsors will help you elevate your visibility with others. They help you to expand your network. They can also champion your work. And lastly, they can recommend your involvement in committees and-or for positions, and-or opportunities. Now Lynn, do you have something to add more concerning mentoring contracts?

Lynn Morin: So basically, I think the important thing about a mentoring contract, and what Bray said is really important is that notion that people tend to see mentors and mentoring relationships as infinite -- they don't have to be. The mentoring contract is important because you can identify exit strategies. One, you should always plan ahead if things don't go well -- and I think that was also a question in the Q and A, is, what if I have a poor mentor? Hopefully these mentoring contracts, if you've thought enough ahead of time will give you places where you can think about your exit strategies. But it doesn't have to be for a poor relationship. The mentors are helping you achieve a goal, and you can create something in the contract that would say, oh, I've reached this goal, so here's my exit strategy, I need to move on. If it's a poor mentor, then I think the person in the Q and A had suggested they leave their institution. That's kind of a huge step, and something that may not be something you can undertake. But finding other mentors within your institution could be something that you do. But I think that mentoring contract is really important. And we do provide some resources and a link that will give you an example of mentoring contracts. But again, you can Google it and find different varieties and flavors and things that will work for you.

Rosalina Bray: And Lynn, where I've found people to go wrong is, they believe that their mentors should be sponsoring, that they should be helping them get their next position, that these individuals should be speaking up for them on their behalf. They can do this; however it's going to be your own individual work, your ability to go out and network, your ability to share good products, to participate in things around your field, to speak up for yourself that are going to bring notice to you from others. And you want people to notice what you're doing from all aspects of what you're delivering to the field that you are a part of, and those individuals are going to begin to see your ability beyond your mentor having to have that responsibility to be the person that not only pushes you forward, but finds you your next opportunity.

So now we're going to talk a little bit about networking.

Lynn Morin: Bray, before you get to networking -- oh, sorry.

Rosalina Bray: Yes?

Lynn Morin: Before you get to networking, there is a question in the Q and A that I'd like to quickly address. It says, if you are applying for a non-mentor K22, do you only include sponsors? What is the difference at NIH between a mentor and a sponsor? Do you need both? Keep in mind that at NIH, the sponsor tends to be the individual who is going to support you in the lab. They can be one and the same person, but they can also be different people. You can be in somebody's lab taking advantage of -- and I don't mean that in the negative connotation -- but getting access to the resources in the lab, some of the funding that's available in that lab, or the models or techniques -- those will be your sponsors. Those will be the ones that are supporting you in your research endeavors. They don't have to be your mentors. Sometimes it's nice if they're a well-funded individual, a PI that's gotten good funding from the NIH -- that's always good mentoring to have. They can help you navigate that black box that is the NIH funding opportunity. So I just wanted to address that really quickly. Thanks.

Rosalina Bray: That was good, Lynn. Thank you so much.

Now, networks by design -- we're talking about being intentional. And your connections do matter. I believe next we are going to be talking about your networks -- and I believe there's another poll. How well do you feel you network within your field? Think about that question, and please participate in the poll. How well do you feel you network within your field? Very well is a 5, well enough is a 4, could be better, only when forced to, and I don't network. A few more seconds.

All right, we're going to close the poll and see what the majority has selected -- could be better. Great, thank you so much.

So now let's talk about it. If your networking could be better, how do you network with intentionality? So Lynn and I are going to discuss with you a few things you need to be mindful of. When you're networking, you do want to be strategic. However, you want to be authentic as well. Recall when we talked about having your pitch -- your pitch may be that you need more mentorship, and you find someone who you believe would be a good mentor -- so have your pitch ready. This is going to help build your network once you add your new mentor into your network. And remember, this was definitely strategic, but it was also a need, a part of your individual development plan, and you went after it. So now your network has expanded. As you build that network, you're going to find other people in places and in positions, and you want to be authentic when you approach them as well. But remember your pitch, which talks about your why, so your ask becomes intentional. And you're building this network because it relates back to the goals that you've had on your individual development plan. And that's the reason why we're going after it, yard after yard.

And last, we want to say this -- you want to value others. You want to esteem them because you admire them and you are inspired, by what they've done and what they will do. And they want to contribute to your success as well. So please don't treat people in your network or those who you approach as though they have no value other than getting you to your next level. Therefore, be authentic, be honest, be truthful, have integrity in your approach, and enjoy your networking experience.

Lynn, do we have any questions about networking?

Lynn Morin: I see nothing specific about networking now. There's still some questions about mentoring, but I think we've addressed those.

Rosalina Bray: Well, that's wonderful, because at this time we're going to take -- give you an opportunity to add more questions, and we're going to leave you with some takeaways.

Lynn Morin: Okay, so keep those questions coming in the Chat. There's a really long one, and I have to -- let me get through this, and then I'll see if it's -- it's about a hard money teaching assistant professor position, planning to apply for a K -- okay, let me address this next session in terms of the timeout takeaways. So as we reach the end of our session, we basically want to summarize what we've been talking about, and some of the points that we've made here right now, and give you some next steps that you're going to be taking away with you and doing, after you leave the session, immediately. So first, we want to say that the first key step is finding and taking the self-assessment, then using that self-assessment to create your individual development plan. So Bray reviewed the importance of developing your pitch, to ready yourself for the introductions you'll be making, to new potential mentors. Being strategic in identifying, where are the best places to find the mentors that you need, and that can help you achieve your goals? Use one of the many examples that may exist on the web to develop a mentoring contract. Keep in mind that not all mentoring relationships have to be infinite; you can have a mentoring contract that will identify an exit strategy when your goal is reached, or if you feel things are not going as well as they could be. Remember to revisit your mentoring contract, your IDP, and even your self-evaluation. As situations change in your life, your goals change. As you achieve goals, you should be setting new goals, so it's really important to keep revisiting all of these things. Increase your visibility. Learn to network strategically and with intentionality, remembering to be your authentic self. And we can't say it enough, but it's important to re-evaluate and assess your strategies and plans along the way.

Rosalina Bray: That was wonderful, Lynn. Now we want to leave you with a quote from Bobby Unser -- "Success is where preparation and opportunity meet." Along that journey, we want to leave you with some resources as well. Those resources are going to be shared with you by Lynn in an upcoming session. She's already shared with you some examples of some assessments, and since you'll have access to this presentation, you can check out some of the links that we shared for possible assessments. Also, we are sharing with you some links through the materials that we shared later for sample mentoring contracts and where you might be able to find them, but of course you could also just Google for those. And the NIH's career development resources you'll learn about shortly.

So Lynn, I'm going to turn it back over to you for any questions coming in the chat, and then to finally close us out for this session.

Lynn Morin: Thank you, Bray. There is a question that I would personally love to hear your answer to. So, how can we network and build meaningful relationships? Any suggestions for people who are not networking-savvy?

Rosalina Bray: To build a meaningful relationship, you have to have something in common, and whatever has brought you and these other individuals, or the individual together, that's your first area where you have something together meaningful that you both share. You can start there with conversation, and-or getting to know more about that person's passion or interest in that area. And so that's one way to build rapport. After you've built this rapport with the individual you hope to network further with, you want to also ensure that they are available and ready to be able to connect with you again, and that is where we shared earlier that you want to have a follow-up. And if that follow-up is non-existent, or it can't happen, then this may end that networking relationship or experience, but you want to keep those individuals in mind for later. And you grow these relationships just like you were watering a plant. So you need to make sure that you're connecting, you're following up, and if you hear something significant about the other person that's happening, you want to send them a thank you, a congratulations message, something to keep them attuned to who you are, and they will recognize that you're attuned to who they are. And this is a method for you being able to cultivate the relationship in your network.

Lynn Morin: Great points, great points. And we do have a follow-up. So, what are some approaches or pitches for finding sponsors? Is it appropriate to email people asking for them to sponsor you?

Rosalina Bray: It's not appropriate to email someone to sponsor you, unless it is that you have been directed to do so, because you can always lead in with, "My mentor has suggested that I contact you." If you need sponsorship and it's a need that you have for someone to involve you in an opportunity such as a committee, that seems appropriate as well, because if they're already a part of what you want to be associated with, that's an entry point. And so that would be appropriate. But if you don't have any relationship and you're not quite sure, I think your email needs to begin with just sharing about who you are first, before you put in an ask to say, "Can you sponsor me?" So there are ways and timings for this, and you'll get the feel of it. But know the why. What's my intention here? Can I get it through others who are closer in my network, or do I really need this individual? And then you plan out a strategy for involving that individual who could potentially be your sponsor.

Lynn Morin: Thank you. So I'll handle this next question, because it's asking, are sponsors considered a formal role, or people in your network who can promote you? So the term "sponsor" has multiple meanings. In a grant relationship, as I mentioned before, the sponsors are the ones who support you with your research. They are the ones whose lab you're in. They can provide you with little seed funding to conduct some research of your own -- that's sort of a more formal sponsor, and it's related to the quote-unquote, "grant world." But there's also the sponsors out there who do tend to put you up for positions. And you may actually not know you have sponsors. You might never know they've put you up for an opportunity. Somebody could be talking with a colleague and say, "You know who you need to think about either hiring or using in this role, or asking to help you out with that?" And they will give them your name, and you may never know that's how that person got your information. So there's two different ways you can look at sponsors, the more formal supported in your lab, and the more informal that you actually may never know that somebody is holding you up for positions or opportunities.

Rosalina Bray: Thank you, Lynn, that's so important. That's really why you need to think about your professional brand, and also being visible with others, and ensuring also that what you produce is of quality, so that others can take interest.

Lynn Morin: So here's an interesting question. Does the NIH host any networking opportunities for early career researchers? And I'll ask my colleagues in DBR and W2 to chime in with this, but the short answer is yes. We have the National Research Mentoring Network that NIH supports. They will often hold mentoring sessions. The seminars that we have on a monthly basis plus the February seminars, there are opportunities for networking. We're hoping, actually Bray and I are hoping that we can take this networking and mentoring session to a longer session, or another session, at the February conference as a lounge, to give people the opportunity to sit and talk with us, and perhaps mentor with some of the people who are in that, and finding people who are at similar levels, or maybe that next level, so that they can get advice from them and how they succeeded in getting their grant application, or other things that they can provide advice on. So keep an eye out for things that NIH does offer. And a lot of times you can look on the NIH websites. And thank you, Dr. Boone, for putting the NRM address on the chat to everybody. But yes, we do often have networking events.

And also, the different institutes and centers, or ICs, will have opportunities at conferences that they support. I actually used to be with the National Institute of on Alcohol Abuse and Alcoholism, and we would hold networking events within the Research Society on Alcoholism meetings. So look for opportunities there as well. I know we're doing a lot of things virtual, but there are still opportunities to do virtual networking events. And also once we start phasing back into in-person and live events, that there be plenty of opportunities as well.

So I also want to remind you that we have the 3:35 to 4:30 session at the booth, that some of us will be there answering questions as well. So if we didn't get to your questions here during this session, then please, definitely visit us at the booth.

Rosalina Bray: A lot of great questions, Lynn. So we're going to adjourn now in just a moment.

Lynn Morin: So yes, so now I want to turn it back over to Ericka Boone, who will close us out with the resources section. I think I can -- I forward the slides. Ericka, thank you very much. And we've got a touchdown for our session.

Dr. Ericka Boone: Well, we are almost finished with today's presentations, but before I wrap up with resources, I would like to give a hearty thank you to Lynn and Rosalina for an awesome and very enthusiastic session, focusing on mentoring and networking.

Now before we end, we all know that we've heard so much information today. And there's been so much to absorb, but I want to leave you with some useful resources that can be important for you as you navigate your research career. And during the next few minutes, I'm going to share some important websites, resources, tools, etcetera, in order to be able to help you to do that.

So here we go -- important resources to help you navigate your early research career. So I'm going to focus on several key issues that you should -- well, there are several key issues that you should be considering before, during and after your application is written. And the resources that I'm going to be sharing with you are going to help you with navigating some of those issues. And I'm also going to point you to other resources for developing your application. So in particular, I'm going to be sharing links and websites to help you navigate your career, finding a scientific home. We've also included links to help you prepare your grant applications. Important sites where we have FAQs written, as well as NIH policies, some policy updates, where we list those here at NIH and how we notify you of those here at NIH. We've also mentioned several resources that I'm going to re-mention again today, but that's just because they bear mentioning again, because they are just so very important. So there are several key areas that we're going to address today, and that includes career guidance, like finding a scientific home and a PO. So again, we're going to go over the NIH Data Book, NIH Reporter, NIH Matchmaker tool, because I want for you to take these resources and utilize them to help you in order to do some planning for your career, or give better clarity with regarding the planning of your research career. We're also going to talk about how to apply, including NIH forms and applications, which ones should I be using and where do I find them? Also, frequently asked questions, and then also NIH policies that are important for your career -- where do we list these?

So once again, we've talked about this, but this is a snapshot of the NIH Data Book. So within the NIH Report tool -- see the link at the top part of the screen there -- you'll find the NIH Data Book, which provides summary information on extramural grants and contract awards, grant applications, the organizations that NIH supports, the trainees and fellows supported through the NIH programs, and the national biomedical research workforce. If you want more information on trends in NIH funding, this is where you should be looking. So as you see, on the left side of the slide, information is shared in a tabular form on research grants, SBIRs. You can find information on success and funding rates, funding trends by career stage, gender, statistics on graduate students that are supported by NIH funding, postdocs, etcetera.

Also on NIH Reporter, you will find the NIH Matchmaker tool. As I said before, I call this the NIH Plenty of Fish for investigators that are looking for NIH funding, because it shows you information on the types of research that NIH funds, who's funding it within the NIH, etcetera. So how do you use it? You enter search terms that are relative to your research interests or your research-specific aims, and up will pop information on which ICs are supporting similar research to your own. So this helps you to see which of the other ICs are also supporting the research that you're interested in by what activity codes it is supporting this type of research, whether it's an R01 or a K08 or a K01, or whatever it might be. But it also gives you additional information on study sections that are reviewing these kinds of applications, program officers who have this kind of research within their portfolios, etcetera. It just has so much good information there for you, and I hope that you're going to take some time to explore the Matchmaker tool.

So this is just another snapshot of the Matchmaker tool. Remember a second ago I said that you can see, this has been an example for ICs that fund research on radio tracer imaging. So here you can see the institutes and centers that are supporting research in that area, by what activity code, the study sections by which these applications, or in which these applications are being reviewed. Then below, it also gives you an indication of the applications that were actually awarded or funded, by which institutes, by what year, etcetera. So how do you use this information? Let's just say that you are conducting research utilizing some sort of specific radio tracer, blah blah blah blah blah, right? If you know that this particular institute and center funded tons of research in this particular area in the last four or five years, you might want to reformulate some of your research ideas so you're not submitting the same old thing to the same old institute -- they're not going to be interested in that. They've already funded a lot of research in that area, right? Unless after you talk to your program officer they say, "No no no, this is a high priority programmatic research area. Please do submit that application." You might want to utilize the information that you're gaining from the Matchmaker tool with the information that you receive from your program officer to better formulate and target your specific aims.

That's another snapshot, Matchmaker -- you've seen it.

All rightie, how to apply grants and funding -- so this is a great site that houses lots of helpful information and suggestions to help you with preparing your grant applications. Also, it gives information on how to find the right forms, because you don't want to utilize the wrong forms. So I think we're going into Forms G at this stage, so you don't want to utilize Form D in order to submit your applications. But if you go to this site here -- the link is at the top right of the page -- you will always know what are the right forms that you should be utilizing in order to prepare, and then write and submit your application. There are also helpful videos and FAQs to assist you. And you can see our friend here in the middle of the screen. You can click on that link How to Apply, you can watch that video, you can also click on the FAQs to find really important information or frequently ask questions that folks ask when they are trying to submit their applications.

All right, we already talked about how to submit your application before, or how to apply, and talked about the forms -- again, this screen shot here is really focusing on NIH application forms. So if you see on the right hand side, you see the kinds of forms that you should be submitting to submit -- let's just say, for example, a career development award, a fellowship application, a research project grant, etcetera. So this application form site, or library, rather, has really helpful information on which current forms, the instructions you should be utilizing in order to apply for any application -- I'm sorry, for any funding opportunity. There are also, again, helpful videos and FAQs on this site.

As discussed earlier, you should really -- I strongly urge you to subscribe to the weekly email digest from the NIH Guide, so that you can receive weekly updates on current NIH funding opportunity announcements. Remember, funding opportunity announcements are the means by which NIH announces the areas of research that they're going to be supporting within the extramural community. So you'd want to make sure that you're getting up-to-date information on a regular basis, so make sure that you use this link here that you see here on this slide, in order to subscribe to those weekly updates on funding opportunity announcements from the guide. You can also get them on grants.nih.gov, that's it.

Next, the NIH Extramural provides regular updates on NIH grants policies, as well as activities that impact the grants community. So in addition to providing news, in addition to providing events and resources, the Nexus is also the home of the Open Mike Blog, which is published by Dr. Michael Lauer, who serves as the deputy director for Extramural Research here at the NIH. You can find a myriad of blog posts from Dr. Lauer, whether it's on early stage investigators and funding trends, or whether it's on DSMP, whether it's on -- whatever it might be. Whatever's on the mind of researchers, he's probably got a blog that's out there to address it. So make sure that you stay on top of the hottest news coming out of NIH by subscribing to the Extramural Nexus and the Open Mike Blog.

All right, next I'll tell you a bit more information about other important items that you should know, including about early stage investigator policies, published NIH notices, our Extramural Diversity website and diversity programs, Research Training and Career Development programs, the Loan Repayment Programs, and also giving you a tip on a really awesome NIH podcast that I know about.

So who are ESIs or early stage investigators? Early stage investigators are individuals who have completed their terminal research degree, or the end of their post-graduate clinical training, whichever date is later, within the past 10 years, and have not successfully competed for a PD or as a PD for a substantial NIH independent research award. So that's the vast majority of you individuals that are on the call today. So NIH is committed to addressing challenges faced by researchers as they begin their research careers, and have developed several policies to assist early career investigators in transitioning into their independent research careers. So there are several different benefits to being an early stage investigator, or ESI. First, NIH has developed several funding opportunities that are specifically targeting early stage investigators, like the DP5, the DP2, as well as several R01s that are targeting early stage investigators. Second, ESI R01 equivalent applications that receive meritorious scores are prioritized for funding by institute and center receiving those applications, so you get a little bit of a bump-up. And lastly, ESIs that experience a lapse in their research or research training periods, or periods of less than full-time research efforts during their ESI period may apply to receive an extension of their ESI period so they can link in that timeframe when they're eligible to apply for specific awards from NIH that are targeting early career investigators. And you see in the screenshot here, we have one of our websites is devoted to describing policies that impact early stage investigators, so you should definitely click on the link that's at the top right of the screen, and you will be led to policies that are relevant for early stage investigators. And I do want to take a moment to say that this slide deck is available to all attendees as a part of the Research Training booth, so if you don't have it yet, go to the booth and get this; this is a part of the resources that are available for you, so you don't have to worry about writing things down. And I know that that is probably frustrating for you, because you've spent all this time taking notes, and now you found out that you didn't have to do that, right?

All right, NIH regularly publishes policy notices that are of relevance to the NIH community. For example, what's the latest on K99-R00 extension eligibility due to COVID? What are the newest grant application forms? What's the latest on COVID flexibility on bio-sketches, etcetera? You can find this out by receiving the notices that are published on a regular basis from NIH. So NIH communicates all of this information in various ways, including via notices that are published within the NIH Guide. You can also subscribe to receive the latest notices each and every week. So you can subscribe to receive information on almost any topic relevant to the NIH community, via the NIH Guide.

Again, the NIH Research Training website -- you've seen this ten thousand times today -- that's because it's very important that you check out all of the resources. So you can use the NIH training website to find information on career development awards, fellowships, Extramural Diversity, and more. It's got helpful infographics on different research trajectories, funding opportunity announcements according to career stage, helpful FAQs, information on ESIs, etcetera -- it's a really great website that's of significant value for early career investigators. I'm expecting that we're going to have a bump-up in our visits to the site after today. At least I hope so.

So this, again, is a snapshot of the NIH Extramural Diversity website. You've seen this presented during the NIH diversity programs portion of the webinar today, but it really bears another mention. Not only does it have helpful information on why diversity is important, but information on how to navigate career pathways, diversity targeted funding opportunities, reports and data, and more, so please check out our Extramural Diversity website when you have a moment. It can be of extreme value to you.

Got questions? You do, because you guys have been asking them for the last two and a half hours. You've got a lot of questions, and we're trying to get to them as much as possible. But if we haven't been able to, some of your questions may already be answered in our FAQs. So as you see here in the top right of the screen, there's a link to -- oh, actually, I didn't put the link in there, it's just got the Research Training, ask questions sentence there, but what we can do is provide in the Q and A the link to the FAQs on our Research Training and Career Development website. So I hope that one of my colleagues will put that link into the Q and A for me.

One last important tip -- you know me by now, I say it's one last important tip, but I'll probably have a couple of them up my sleeve right here. But you're going to love it. I forgot to transition -- here we go, FAQs. One last tip -- there we go. Now we're all caught up. Got student loan debt? Many of us on this call either had it, or we have it currently. Also, are you conducting research at a non-profit institution? Well, the NIH LRPs, or Loan Repayment Programs, are here to help you. So if you are a U.S. citizen or a permanent resident -- I'm getting my two-minute reminder, so I've got to wrap it up here -- but I want to share this information with you about the NIH LRPs. There are six different subcategories for the NIH LRPs, and I wanted to wrap up by saying that there are some really important takeaways with this program. You can receive up to $100,000 in student loan repayment over two years, depending on your debt level. We cover most of the federal taxes that result from getting that NIH LRP, so you don't get this award and then you also get hit by a fantastic tax bill by Uncle Sam. Initial contracts are for two years, but you can apply for one or two-year competitive renewals for as long as you have eligible student loan debt, and as long as an NIH institute or center wants to support you. One of the great things about the NIH LRPs which I can never say enough about is that you don't have to plan additional research aims in order to apply for the NIH LRPs. You literally tell us about what you're already doing in order to advance your career. These applications are reviewed, and then the NIH LRP pays back your student loans to your loan servicers. There's no better bargain. There's no better deal out here. So please take advantage. The link to the NIH LRPs is in the chat.

It is 3:30. They're about to yank my cord here, so I need to hurry up. This, again, is another snapshot of funding opportunities by career phase. Now while we did not hit along all of these research opportunities during today's webinar, please, please, please review this -- take a look at this. Where are you in your research career? Take a look at those mechanisms. Talk about them with your mentor. Talk to a program officer. Talk about your eligibility. Talk about your specific gains -- this document here can help you to understand what mechanisms or what activity codes are relevant for you at this point in your research career, and which ones you can use as you plan the future of your research career.

Now I'd like to leave you with this awesome, awesome podcast that I know about. I'm giving you some secret sauce here. So several NIH ICs have additional awesome resources in addition to their websites. So for example, several have awesome podcasts. So my favorite is the NINDS Building the Nerve podcast, which is cohosted by one of today's webinar speaker, Dr. Lauren Ullrich from NINDS. As the tagline says on the Building the Nerve podcast, we know that navigating your career can be daunting, but we're here to help. It's our job. So Seasons 1, 2 and 3 can be found on podcast on Apple, Google Podcasts, and Spotify. And you see the link there at the bottom left of the screen.

And with that, I will say thank you to our presenters, thank you to our moderators. Thank you to our interpreters -- you guys rock, I've been watching you the whole time. Thank you to everyone who has attended today's webinar -- we sincerely appreciate it. As I said, we are sincerely here to help you. If you have questions, please reach out. I hope that you have found this webinar today to be useful.

And with that, I will say thank you, and good afternoon.