

Primarily Undergraduate Institutions, Jun 8, 2pmET

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Good afternoon and thank you for joining us. Today we're talking about primarily undergraduate institutions, opportunities in biological sciences. I see that we have quite a good crowd and the number still ticking up. We are going to use the Q&A button for questions, which we should have time for at the end. Submit your questions and we will get to those after going through our presentation.

We are lucky enough to have representatives of all four biology divisions in attendance. I am a rotating program officer in the Revolutionary processes cluster. I'm going to ask the other program officers to introduce themselves in the order list it on the slide.

I am Kendra a program officer in the ecosystem science cluster, a division of environmental biology. I went to a small, liberal arts school as an undergrad. That is 100% the reason I became a scientist.

I am Amanda Ingram in the system divide diversity science cluster coming at you from my home institution. Hello, everyone. I had of the post office research Fellowship program and I also do the reach program with some of you who may have heard of or applied to. It is a pleasure to be here.

Hello, everyone. My name is Jean Gao. I am a rotator. This is my second year. My home institution is University of Texas at Arlington. Thank you.

Hello, everyone. Thank you for joining us. This is Sally O'Connor. I am of the division of logical infrastructure. For those of you who have sent an email called 'RUI' it actually goes to me and I respond. My primary program are the sites in the human resources cluster. I am an permanent program office.

Hello, everyone. I am Manju. I am an entomologist in DNA repair mechanisms. I come to you after 20 years at Wesleyan University. I run the graduate institution.

Hello, everyone. I am Phoebe Lostrich. My home institution is Colorado College in Colorado Springs.

I am Michael Mishkind. My main program is and the division of integrative organismal systems.

Thank you, everyone. As always our meeting is being facilitated I our amazing program staff Christina Washington, Bill Lawson, and Megan Lewis. Before we dive into the PUI solicitation we will briefly review some of the open solicitations and fear colleague letters that the directorate has open right now. A reminder at the start of this that a lot of our solicitations nowadays do not have any deadlines. They also do not have any limits on the numbers are proposals that a given PI can submit. That really applies to all of the core programs and solicitations. That includes the division of biological infrastructure, research resources, the DEB division of environmental biology core program. The IOS core programs, and the MCB or division of molecular and cellular biosciences investigator initiative research projects.

We have a deadline coming up for our faculty early career development program or the career awards. That is July 26. Distilled after we have another deadline of August 2 for opportunities for promoting understanding through synthesis. We have already had a mention of the research experience for undergrads or REU sites awards. We also have research experience for teachers with a deadline of August 2. We have a new solicitation research experiences for postbaccalaureate students. The target date is July 2, target dates work a little differently from deadlines. We have our career life balance supplements and if you are interested in serving as a rotating program officer, you should check out this solicitation. You can Google any if you just type in NSF and then the solicitation number, that will tell you how to apply. We do these office hours pretty regularly. DBI schedule them when they feel they are appropriate. MCB does there's the second Wednesday of each month from 2-3. IOS is the third Thursday of each month from 1-to -- 1-2. a few of the upcoming topics for various office hours, tomorrow MCB will talk about how to write a grant proposal, a really useful office hours. DEB will talk about writing a great proposal as well. On June 17 IOS will talk about supplements. And you can find out about all of these things on the blogs for the various divisions. DEB is there. That will not only list the upcoming office hours, it will also recap previous office hours and the Q&A's that went along with those. Even if you've missed one of these you can always get the general just by going to the various divisional blogs. And later in the presentation we will have a URL for all of them. As I mentioned earlier, we asked that you submit your questions using the Q&A box. I see that we already have a couple of those. We prefer that you send them anonymously, it is not mandatory.

Because we have so many participants, we are going to try to answer questions that are general in nature and might be relevant for a lot of people. If you have questions specifically about a proposal that you are thinking about or some very niche question about your particular situation we ask that you contact one of us. Email one of the program officers, either the one here or you can look at the appropriate programs on NSF.gov. we will be happy to talk with you and help you in any way we can. We mentioned that you can check out recently asked questions and teacher office hours topics at the various divisional blogs. I guess I've already said that last bullet point. I think at this point I am going to hand it over to another program officer. And I think it is me. We are here to talk about funding for undergraduate institutions. These have awarded 20 or

fewer PhD's or Doctor of science degrees in all NSF deals in the combined two previous academic years. These are a key component of training and workforce development and people who are scientists at PUI's are eligible for almost all solicitations in BIO . Next program officer.

We are not sure your level of preliminary preliminary -- I think it's pretty helpful to always go back to these two essential documents that everyone submitting or writing a proposal to us can use as a resource. The first document is on the left. It is the proposal and award policy and procedures guide. We call it the PAC G. Essentially this is an overarching document that the National Science Foundation puts out on a almost annual basis. The one that we have that is currently active if you Google PAPPG 20-1 that will show you the current years active transfer document PAPPG. It has helpful tips about preparing the proposal, checklists, all sorts of resources that tell you what kind of documents you need to be putting into your proposal and in some cases how they will be reviewed in terms of merit review criteria. The document on the right is an example of an solicitation so you are always submitting a proposal. We have put our as an example our court solicitation. It will have these digits like NSF 21 and then - and three digits that are randomly assigned. That was a different set up and instructions about what that program is and what the estimated budget size of that whole program is. More about solicitation review criteria. I would always suggest every PI look at these documents when submitting to the NSF. 's and submitting a proposal, the only thing you need to submit a proposal is an DUNS number. It is really easy to get one of these. If you Google NSF DUNS it will get you to the appropriate website. Most institution have one. They submit regularly and they also have a sponsor project office, but you don't necessarily need one of those either. There are fellowships which are made directly to individuals and those individuals function as their own sponsor project office. What you do need is a signoff by an authorized organization representative for these submissions. If you have a sponsor project office you have an ALR. If this is a direct fellowship you yourself act as the AR. Most buyer programs do not have a deadline. If there is, it will be in the solicitation. By looking at that solicitation you should be able to see those deadlines regularly. A lot of human resource clusters still have deadlines associated with them. For the core programs you can submit your proposals at any time. When people ask when should I submit? The answer we typically give is when you think that proposal is ready for submission. For submissions in BIO they are now handled through [research.gov](https://www.research.gov). It is pretty user-friendly with a lot of compliance checks that we hope will help facilitate a lot of the submissions you will have moving forward. Manju, over to you. It is my job to go over the scary stuff, which is how NSF reviews the proposals that you submit. NSF has two review criteria that define and serve as a basis for review and submission making. The national science board has set these two criteria and they are intellectual merit and product impacts. They are both given for consideration and neither is sufficient by itself. For both of these reviewers and the NSF staff, we consider what is it that the applicants want to do? Why do they want to do it? Is it important, exciting? How do they plan to do it? How will they know if they succeed and what will be the benefits if successful. These kinds of questions, what do you want to do? Why, etc. are best answered by proposals that have characteristics listed over here. For intellectual merit that is the research component. The project should have the potential to advance knowledge rather it is within a particular field or across fields. It should be created, original, and sometimes we even get transformative concepts, which are always welcome. It should be well organized and contain well organized ideas and experiments. It should demonstrate the investigators are qualified to do what they are supposed to do and demonstrate that there are adequate resources available to do the work. The next merit review, we know NSF supports broader impacts as a way to advance its mission to benefit society. That means you have the opportunity to develop an impact for educational or outreach programs and ask NSF to pay. This is a great opportunity, especially for PUI's. Your project should have the potential to benefit society the aunt the outcomes of the research itself. It should include one or more of the goals listed. It can promote student training and education, enhance infrastructure and resources for target communities. The target community can be your department, your neighborhood, regional, countrywide, worldwide, whatever you decide. You can engage in outreach. We would like to emphasize NSF prioritizes diversity, equity and inclusion. We place high value on underrepresented groups in stem. I want to leave you with a couple specific messages. NSF does not prescribe Rotter impact activities. We do not prescribe the broader impacts you conduct. We ask that you demonstrate a good faith effort when you submit your proposal. The other message, and this is really important is that we are very careful about considering the scale and the scope of the research that is proposed with respect to the type of institution, that is where this proposal is coming from. For PUI's we will take the resources that are available and the workload investigators have into account. Our review process takes that into account very carefully. That is all I wanted to say.

After the panel review, if you hear the congratulations email from your program officer, that is great. If the program decides it's the first message that you will hear. Your program officer is going to tell you the additional documents that you may need. The initial email will tell you how are you going to prepare and get an updated, current and pending support. Your program officer may discuss with you a issue with your

budget. After the program officer makes the admission of -- initial investigation your program will go through a administrative process. The official award is going to be made from the division of the grant then agreement office. You will hear our own announcement not from your program officer but the division of grants and agreements. By that time you should be Greenwich -- congratulated. If your institution is new, which means if it hasn't had an org before or during the past 60 months since the update, in that case the division of grants an agreement office is going to go through an additional their vacation process that includes the -- the NSF wants to say that your institution does have the financial management which can support or meet the requirement of the federal requirement. Do not worry about this. The NSF and the division of grants will work with your university to go through the verification process. With that I will pass the next slide to Amanda.

I want to talk about a particular census cessation -- solicitation aimed at faculties at undergraduate institutions. I want to be clear that you are not required to solicit those submit through the solicitation. The number is there. You can search using that and you should always start reading the solicitation. You will need to submit your proposal in addition to choosing one of these options. If I decided I wanted to submit a proposal I was started the bio website and find my program by looking first at the division that sounds most appropriate. Then I might go to the other programs and find the one that is the best fit for me. From there you will want to read the core program elicitation to find out all of the requirements and the program that this you.

The advantage of the solicitation mentioned on this slide is that you get additional space to talk about what you might do at your undergraduate institution. You will hear more about that in just a moment. Regardless of how this sorts out, you will need to follow the rules for submission deadlines in the core program solicitation. You might include an acronym, depending on the type you are submitting. From there I will let Sally talk to you about the our UI. -- RUI.

As mentioned, this solicitation combines two programs. The RUI and the ROA. This lot refers to RUI proposals . As mentioned, it is submitting to whatever program your research idea lands or is the best fit. How do you know it will be a best fit for a particular program? How do you do for the program that is the best fit? That is what you do prior to submission. You can either email the email and I will connect you to the appropriate program that can handle your idea. From then on it will be a back-and-forth between you and a program officer to help and guide you in your submission.

RUI proposals support P UI faculty. There is some expectation that your research program should also support the integration of training and adaptation at your institution. You are not just doing the research in isolation. You really want to engage the students that are at your institution. In a lot of ways you are building capacity for research at your own institution. The RUI proposal may be submitted as part of a collaborative set of proposals. This means that you can get together with one other institution, two others or so, but just make sure the group of collaborative researchers complements each other. You do not want to add someone who will pretty much duplicate what you are already contributing. You will want to ask someone who can fill in a gap in expertise that you need to be competitive in your submission. Your partners will be non-P UI's at these institutions. The solicitation and the spirit of it is that the R1 institutions do not take advantage of UIs and submit something just to get funding. We want the P UI lead institution to be the driver. Remember that when you are putting it together. So why would you submit to any of the programs that will receive your idea? There is an advantage. The certification and the fact that you are a predominantly undergraduate institution is a self certification. Your institution certifies you are a UI. NSF does not do that. You include that certification as a part of your submission under other supplementing documents. The advantage of these is that you are proud of the five pages of what we call the our UI impact statement. In that statement you brag about the impact of an award to you as an individual in your career or as a faculty. Most proposals have a limit of 15 pages. This allows you to detail into your personal situation.

What this does is provide hunting for faculty to go to a research lab and the support can be for a summer, semester, even a whole academic or calendar year. The way to pursue these is the first identify a lab that you would like to collaborate with and then talking to the PI of that particular proposal to discuss the kind of interaction that could be set up. Once that has been set up the two of you could contact the program director who is managing the award whose lab you are working in, and find out what is available and what they are looking for. Another way to get started is to contact the program director and ask about what sort of labs are doing the kind of work you are interested in and where would be convenient for you to spend some time.

I definitely encourage people interested to look into the ROA and don't hesitate it all to contact the program director to get more information.

I want to echo what Mike said. ROA's can be critical when you are not quite ready to do a full-blown ROI. It allows you to go to a slap and learn how to run instruments. In terms of the ROA, they can be short or up to a year. This slide is a new program. It is a supplement program. This is the response to a situation caused

by a pandemic where a lot of our undergrads never had an opportunity to do research. Labs are closed, sites got canceled, and so for those of you interested or who have students let them know. You may not have the award right now. The student can affiliate with someone that they are interested in working in and get supported for this. We want the proposal to be received by July 2. Just to let you know we are already receiving proposals. We are already making decisions as they come in, because the PIs who have applied and the individuals who want to start right now, and this summer. It is a very short application and there are two parts. The summary opposed work, which is just a statement of what the supplement request is about and what the award is. All of these bullets mentioned how many are going to apply, if the reps program is on campus or where it will be. This is really important, a statement of programming at a minimum we expect the ethics and responsible conduct research and code of conduct section will be public. The second part of a submission is a bit longer. This is called the justification for supplements. It is typically two or three pages for one individual. We really want to know the student eligibility, the demographic information known. We want to know if the student graduated and win. We want to know the citizenship status if you are a Edison or permanent resident. Remember, DACA students are not eligible. And why is the student appropriate? What was the impact caused on the students ability to do research. What is the participant cold to go to graduate stool and be more competitive with the application. If possible we want to see a resume of the student that can be uploaded in the supplementary document section. The research plan should be about half a page to describe the specific products does may project the student will tackle and who will mentor the student. The mentoring plan talks about how the student will be mentor throughout the program and what additional programming for skills building, what exercises the student will be trained on. For assessment the easiest way is to mention a student can participate in an online tool used by all RE site students. There are a lot of questions on reps. If you have collaborative proposals, each of the collaborating institutions can apply for one student, at most two. That way we limit the number of reps to two. Please contact your program officer. The funds that support this will only fund once today. If you have two students, make sure there is money left somewhere else that will cover the second student.

Thanks, Sally. That is more or less the end of our presentation. We have quite a few questions. We are going to try to get through those fairly quickly. I will just remind you that you can find a lot of useful information on the division of blogs. If you have specific questions you can always contact one of us or another program officer. I'm going to leave all of our names here. It also has our email addresses. Any of us will be happy to talk to you. I am going to jump right in here. Sadly, you've already started to answer this first question about collaborative are UIs with multiple institutions. In the case where each PI has their own grants, can each submit a rep supplement request? Do you suggest that only one submit this request?

Each grant has a grant number. For each grant number there is a limit of one rep supplement. That supplement can include up to two students.

Kendra, are the proposals submitted by primarily undergraduate institutions ranked equally against research institutions or as a separate unit?

My understanding is it is about the review process. If that is not accurate, please, type back another question. We do have several questions that have been submitted like how was the review of AP UI institution evaluated? It may differ across NSF. At least in BIO we tend to not have enough undergraduate institution proposals to have their own panels. They are being reviewed in a panel with many other types of proposals. We will be mixing proposals from all sorts of different institutions in a single panel. Sometimes we will be mixing proposals to different solicitations. If you do choose to go the route of putting in the RUI designation and using those extra five pages, then that is its own solicitation. We will be reviewing that perhaps along side career proposals or core proposals. I think the main thing to keep in mind here is the slide that Manju was talking about. All proposals are evaluated on intellectual merit and broader impacts. Panelists are not looking for any particular type or quality document quantity of intellectual merit or broader impacts. If you can make the case that the research that you are going to be doing, even if it is what you perceive is a relatively slow pace or thinking about training as your main broader impact component, that is if you can convince the reviewers of that, you will be fine. In summary all and I will say is that proposals from primarily undergraduate institutions are reviewed alongside all other proposals. They tend to do relatively well as long as those things are articulated. That is the answer to that.

Sadly, if you don't mind going to hand you one more question. How long will the reps program be in place? Is it only a Covid thing or can we expect it to be in place for future years?

That is a really good question and we don't have a crystal ball. Let me tell you what the circumstances are. The DCL is a response to the pandemic. We are finding out a few things about BIO graduates. We will take the lessons that we have learned from this and might launch a program more permanently as a supplement. For those of you who do not know one of the advantages of sending your proposal to NSF and getting an award is that the door opens for several supplements that you can add the original grant. You can ask a

teacher or high school students. If you have an award you might be able to get a rep supplement in the future we decide to make the program stay longer than our response to the pandemic. I guess the short answer would be if you find that it is successful and the community is benefiting from it, I don't see a reason senior management will not consider. I hope this answers it.

I think so. There is a question about where the websites are that you can find this information. I believe Kendra has put a link in the chat that should be visible to everyone that has the links to all of these divisional blocks and recaps to the virtual office hours. I'm going to hand this question to Amanda. If you are seeking funding and at a primarily undergraduate institution are the different considerations for the post office been part of the time teaching? Of course in addition to their research role there is an argument here for why that is important for future faculty jobs at PUI's.

I think that is a great question and those are great reasons. Something reviewers will look for is to make sure the workload is reasonable. You need to make sure it is clear what their responsibilities will be. Certainly this could be an attractive component for many attentional components.

I'm going to have to ask you to define what this means. The question is can URI grants beyond a health-related research project? I don't know what that stands for.

I'm going to assume the writer meant to say RUI.

Oh.

Hopefully that is a correct assumption. The question was about health-related. I think that I scanned through a couple questions about this. The bio directory does not accept proposals that are explicitly focused on medical, human health or therapeutic interventions. The bio directory, that's all of the programs, it does not accept proposals like that. However, the research is basic. Someone asks us about biochemistry research on mutants that are linked to or enzymes that are linked to human disease and maybe in the future there will be some information pertinent. That kind of research is okay. You have to make sure that the questions you are asking are fundamental and if there is some medical implication or biomedical implication in the future that is part of your broader impacts on society. I hope that answers the question. Maybe someone else wants to elaborate.

We have so many abbreviations here that it never surprises me to learn a new one. I am glad that you saw through that. Amanda, many faculty have high teaching loads and may not be able to tame a release, leaving most of our research time limited to summer. How does this affect how our proposals are evacuated -- evaluated? Do you have suggestions for navigating this?

Another great question. I want to assure you everyone in this meeting are probably facing the same challenge. I think there are lots of challenges for dealing with this. First off, think about the scope of the project. Make sure it is manageable and well described so that a reviewer can be convinced you can get the work done. That is the most important thing. You may also think about ways to research could be integrated into courses. It can be challenging and doesn't work for everyone or may not work for the type of courseload that you have, but that could be another approach. Another thing that lets a PR faculty do is form collaborations. That can be a great way to have a team of people working on this project. There may be people who can keep it going. You might consider what kind of staff can help. I had a technician that really helped to keep things going while teaching. A postdoc could be another approach. Just know that when these proposals come to a panel, we make sure to explain and make sure that the reviewers are factoring in limitations of time that many faculties at primarily undergraduate institutions have to help make sure the evaluation is there an realistic.

Kendra, we have a quick question. Do ED doctorate degrees count toward the RUI classification?

I read the solicitation just now and it says have awarded 20 or fewer PhD or D-SI degrees during the combined previous two academic years. I do not see that on there, maybe someone who works more closely with the program has a different answer.

I think that is a situation which I would definitely contact the program officer to get a really clear answer.

If you notice the numbers 14. That means it was crafted in 2014. At that time NSF was not offering research programs in education. Since then we've had four programs. I would take the solicitation as it is and go buy it.

How should we worn eight applications for the same or overlapping research?

If you want to submit a proposal for the funding, we do have a joint program. Those are the two programs. Usually the program officers from both sides will participate and the final funding decision is going to be either picked up by NSF or NIH or both. If you submit the same proposal to both two totally separate programs. For example if NIH decides to fund the proposal you have to waste your submission to NIH. Only when NSF gets the letter from your site of withdrawal can they make the [ Indiscernible ]. Hopefully that answers your question.

I can add a bit to that. The director does not allowed to get proposals to be submitted to the NIH or other federal agencies with the exception of the investigators. These are people who have not yet had major federal funding. You've had a special path, you are not yet funded. You really cannot have dual proposals. Back to you again. We have a question about the expectations for an RUI proposal. Specifically how many and what quality of publication is expected .

For our program when we made the RUI we did not put the specific expectation in terms of the number of publications. The scientific impact of the award depends on the project itself. The impact here it cannot be in terms of numbers. It also -- for example, if you show the development toward the infrastructure or the software where it is widely used or adapted by the research committee, that is also a another way of intellectual merit. No specific number of the publications will be required from NSF for the program aspect.

All right, thanks. Manju, if one collaborative grant with two institutions, the submitting institution is a PR and the other is not, does this qualify for submission?

I think Sally gave the argument. In this situation it clearly must be seen to be the driver. Yes, you can submit collaborative proposals if they are set in each institution and they are submitting their own proposal. Yes, submit them together and internally NSF will remove the label from the noneligible institution. The RUI institution must supply its certification and letter of eligibility and the impact statement. If you have more specific questions you can contact your program director.

The next couple of questions have already been answered. Can our UIs incorporate things like years? I believe that has been mentioned. It can be part of the broader impact. Are there specific review panels? No, they typically get reviewed in panels with other applications. They do have their own or they get identified as our UIs and the expectations are pointed out to the panelists.

Can we request a full year salary for a postdoc as part of an RUI? With that also address broader impacts? Yes, you can request this report. With respect to whether or not this is going to be brought impact, just remember the support here is listed as a senior participate. It's doing the job itself. The broader impacts for supporting the postdoc is kind of the limit here.

Amanda, can our ways be requested to support our way activity even if the host lab does not have an NSF award?

I hope that I can answer this. The short answer is no. These are ways, well it depends. Our ways are typically supplements to existing awards. That means the person needs to have an NSF funded award in order for you to apply. There is a mechanism by which opportunities can be filled into the proposal from the start in which case they do not need to have an existing award. It will still need to be an NSF type of science. Did that answer the question?

It seemed to.

New proposals can have an ROA component?

Yes.

I'm just going to grab this one quickly. What is the typical length of time it takes for a proposal to be review? It is variable with an agencywide goal of 75% should get an answer within six months. We have generally been meeting that. That is a rough guide for how long it typically takes. If anybody wants to correct me on that, feel free. And must ROA labs be in the US?

The lab has the or has to give the letter of eligibility and certification. I'm pretty sure in most cases if the institution is outside the US it will not be allowed. In such cases NSF to support her funding outside of the US. You need to contact your program officer and that program officer can communicate with the office of international science and engineering to find out if that particular case or the hoops that you will need to jump through, if they are about. Do contact your program director. In most cases the answer will likely be no. There is another related question about broader impacts. Absolutely your outreach programs can span across the globe. If you want to support international travel by students or other personnel in your institution, you can ask for funding in your budget. NSF does not normally fund institutions or personnel who are located outside of the US. If you have a very compelling reason to ask for money such as a field site, you must have to work at that site. Contact your PO with that specific question.

Sally, I have another reps question here. A student who tried to carve out some research project during summer 2020 and the 2021 calendar year still appropriate for reps are only students who had no research at all? What about a student with some but reduce research progress due to the pandemic?

That is a really good question. We have been seeing a lot of scenarios. My recommendation would be that student would be eligible. I think that it is up to you to justify what you think and why that good -- student is a good fit. We don't know all of the circumstances. I know summer 2020 there are hardly any opportunities to do research. It's up to you to justify why you think such a student will be a good fit.

That sounded good to me. Can I get a volunteer? Can a professor request funding for course relief and summer funding? Is there a maximum for salary items?

I guess I can give it a shot. That is a little tricky. NSF does not pay for course releases. It's not something that we do. If your institution is allowing you to seek support for the academic year months, that is really between you and your institution. Three months is typical summer, nine months is the typical academic year. Many institutions will allow investigators.

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