Transcript to accompany RCN-UBE webinar 10-31-22 (edited in some places for clarity)

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Let me introduce myself - I'm Mandy Simcox. I'm a program officer in the Division of Biological Infrastructure. And I work on this program RCN-UBE, Research Coordination Networks in Undergraduate Biology Education, also with Postdoctoral fellowships and another program you may have heard of, REU, which is Research Experiences for Undergraduates, and then a brand new program called Building Research Capacity for New Faculty, which is for new faculty at non-R1 institutions - to try and diversify the pool of investigators who receive support from NSF.

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Amanda Simcox: Mary.

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Mary Crowe: Sure, hi, everyone, I'm Mary Crowe. I'm a program officer within the Division of Undergraduate Education, and, like Mandy, RCN-UBE, is just one of the programs that I'm involved in. I can tell you RCN-UBE holds a very special place in my heart. So we're excited to see you here. But the other programs I've worked on with ATE, INCLUDES within the division of undergraduate education and a new program called ExLENT, IUSE, the HSI program, and also S-STEM.

Welcome to our Webinar. It's the first kind of outreach that we're doing related to the solicitation and proposals that'll be due in January, and Mandy is going to kick us off.

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Amanda Simcox: Very good. Thank you, Mary. This is one of a number of events, including some virtual office hours that we hope you will be able come to as well.

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Mary and I represent the two directorates that co-manage this program. It's actually a long-standing cooperation between the now newly renamed STEM education (EDU) directorate. So that's the breaking news! And then the Directorate that I'm from, which is Biological Sciences. This collaboration started in 2005, so quite a long-standing program between these two directorates.

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Amanda Simcox: This slide is the program overview. So if I say it in a different way, it's the idea that a network is more than just the sum of its parts. If we bring together groups of participants to coordinate their activities around improving biology education, the network will generate new ideas, best practices, that would be sustainable and also scalable. You may have heard of CURE-net, which had its origins in RCN-UBE

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Amanda Simcox: When these new education resources are developed, the hope is, of course, that they'll improve biology learning experiences for a big diversity of students. A guiding principle that all of you will be aware of the influential document, Vision and Change. RCN-UBE projects are both responsive to Vision and Change, and also actually contribute to it. That's a sort of brief overview.

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Amanda Simcox: This is the What, When and How slide--two different funding mechanisms, and I'll show one more slide that will make that a little bit clearer.

Incubator awards: These are for seventy-five thousand, and they last just a year. The idea is that this support could be used to fund the formation of new teams and the beginning of the network.

The full awards: These are up to five hundred thousand, and can last as long as five years, and these are to grow networks that are already much more mature. As Mary mentioned, our deadline is January 24th 2023. Who knew that was only a couple of months away!

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Amanda Simcox: When you write your proposal, you submit them through either Research.Gov or Grants.Gov. From our experience at the receiving end of these proposals, and hearing from investigators, Research.gov is the easier to use platform. So you might consider that one first.

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Amanda Simcox: This really illustrates how you would get started. Develop a plan--use your expertise, involve people are already collaborating with, make new connections, and then generate a network that improves biology education.

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Amanda Simcox: So that blanket statement (on the slide) represents the fact that there are many different kinds of networks, and if you want to see just how diverse they are, you can browse them (through public abstracts). We have link from the program page of current awards

and all have a public abstract. So you can see the diversity of the type of networks that this program supported.

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Amanda Simcox: Perhaps, if you would like to start a network, it could be that an incubator would be the mechanism to get you started-forming a nascent network. If you already have such a network, then you can consider going straight to a full proposal and growing it into a larger network. Just note that if you already have a very well established network, this mechanism (RCN-UBE) is not appropriate to support something that's already up and running.

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Amanda Simcox: All these colored dots represent the kinds of (network) activities, you will see if you look in those same abstracts I was just describing and analyze the kind of activities that investigators propose. You'll see all of these things active learning, quantitative skills, broadening participation CURES (research in courses), transitioning from a two year to four year institution (etc.). All of them have assessment. You'll see all of these activities in the current portfolio of awards. When you read the solicitation, these ones in gold are other kinds of ideas, you might think about-technology training or using a field station (etc.) So this is just to give you an idea of the breadth and diversity of activities that these networks are involved in.

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Amanda Simcox: And then a question might be so, How does an RCN-UBE award differ from a regular award? And you can really think of it, because of its very network property, that builds communities--so it's 'We' instead of 'I'. And again as mentioned, it's more than the sum of its parts. You can solve a problem that might be too big for any one person or institution, and making a network, connecting people and institutions, can really tackle some of these big activities, these big issues.

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Amanda Simcox: What could you use an RCN-UBE for? What sort of things do you could you propose? Networking activities could be attending conferences, workshops, exchanges between faculty and students and different institutions in the network. So all of these kinds of activities, but what it doesn't do is directly support laboratory or field research. It's not a 'Mini Grants program' -- to give the money and then farm it out to students.

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00:08:52.540 --> 00:08:54.260 Amanda Simcox: This is you Mary. 36

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Mary Crowe: I'm ready. Thanks Mandy. We have three things to talk about when we're talking about your RCN-UBE.

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Mary Crowe: proposal. I'm going to go over the seven guidance items—there's a little bit more on the next slide. But first one of the things that Mandy talked about was how we have the incubator networks, and then the full networks

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Mary Crowe: And in both cases, with the networks we're interested in how you are going to grow your network.

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Mary Crowe: We want to know how you're going to grow it, how you're going to sustain the network activities, how you're going to assess the activities and the products which you develop. You might be part of an existing network of researchers, and you now know that you need to develop really great tools to get undergraduate students involved in the work that you're doing. What products might you make from an educational standpoint to transform what you're doing in the classroom. And so in your RCB-UBE it's all about the network. It's all about how you going to share information and best practices with your network, and then outside of your network.

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Mary Crowe: And so, when we talk about these guidance items - what I want to do is take a little bit of time right now to talk about what the seven guidance items are, and these are found on page five of the solicitation. And when you're putting your RCN-UBE project and proposal together, there are seven parts that you need to be thinking about, and you need to have a good plan for it.

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Mary Crowe: Mandy shared a slide That shows some of the themes that people have used as she mentioned you can go to our website, and you can look at some of the focuses of our current awardees by looking at the current abstracts.

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Mary Crowe: You want to have a topic or a focus for your RCN-UBE. You need to have a theme. You can't just bring a network together for the sake of bringing the network together.

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Mary Crowe: One thing that is different about RCN-UBEs is that there are no Collaborative proposals, even though the research coordination network is a collaboration-a whole bunch of different people contributing information. The award itself is a single award to a principal investigator. There are no collaborative awards, So the mechanism, is that you can support other people through sub-awards. We're more than happy to answer questions that you have about this once.

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Mary Crowe: The big thing about a network is that you'll have a PI and Then you'll also have a steering committee, and you can think of your steering committee as your leadership team. And your leadership team or your steering community is made up of the PI And because of NSF limitations you can only have four other Co-PIs, You, and then four people on your leadership team, and then you're going to have a much broader network outside of there. But your steering committee are the ones who are going to be taking on the bulk of the work, the bulk of the coordination, the bulk of deciding what it is your network is going to do.

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Mary Crowe: So you're going to identify, for each person who's part of your steering committee, what's their leadership or their management role? Maybe somebody's responsible for the website, while another person is in charge of your faculty network, a mentoring network, and the third one might be responsible for social media outreach, right? These are the types of things that you were going to explain in your proposal. So we have an idea of how your network is going work, and how your steering committee is going to help you do the activities - the work of your network

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In addition to the steering committee, we anticipate that your network will have participants.

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Mary Crowe: Your network should be comprised of individuals from diverse different types of institutions across the geographical area. Although it that's not a requirement, as you'll see in some of our current awards, we have some networks that are regional that are really strong, and are doing some really good stuff. Your participants- you can think about them also in terms of the career level. So you might have some tenured faculty members. You might have some teaching faculty. You might have folks who are just fresh out of their postdoc. These are all

ways in which you can make sure that your network is reaching a diverse audience, and the things that you're creating with your network are resonating with people.

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00:13:59.790 --> 00:14:13.770

Mary Crowe: We want to make sure that whatever you produce for your network is open access as much as possible, so that your network can share with other networks and can live on.

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Mary Crowe: As I mentioned earlier, when we talked a little bit about the management roles, and what people might be responsible for in your narrative. You will also talk about the coordination of your network. You need a management plan.

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Mary Crowe: How often are you going to communicate. What types of things are you going to communicate? Will you use teams or slack, or will you use quarterly phone calls or monthly phone calls? How is it exactly that you're going to coordinate the work and manage the work of your network? You need to outline that in your proposal.

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Mary Crowe: We also are interested in finding out ways in which you're going to share the information that your network and your steering committee might create.

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Mary Crowe: So you need to think about - will you network with other networks? Will you network within professional societies? You need to explain a little bit about how you're going to share information about what your network has developed with external constituents, so that you can help build and maintain your network as time goes on.

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Mary Crowe: If it is appropriate. We'd like to see international participation within the network. One thing that you need to be aware of, though, is that you can use international partners, the RCN-UBE does not fund for them to come to or from the United States, so they would have to come themselves by a using a different funding mechanism. But once they're here in the United States, the network can support their travel within the United States, and so it's something to think about.

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Mary Crowe: You don't have to have international collaborators if these are not required for the network. And also know that you can integrate international collaborators using all the tools that we have because of the pandemic next slide.

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Mary Crowe: I'm going to talk a little bit about the RCN-UBE-specific review criteria after these two slides. But I want to remind you that our RCN-UBEs are like every other proposal that comes into NSF - every proposal and every project that comes into NSF is reviewed for both the intellectual merit and also the broader impacts. And so we're interested in how you're going to advance knowledge and understanding.

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Mary Crowe: And how your network might be potentially transformative to biology, education. So how is it that you might take what's happening in your field, and use that to ignite the passion of undergraduate students in a way that is engaging and supportive at the undergraduate level.

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Mary Crowe: next slide.

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Mary Crowe: And again, every network we look at in terms of broader impacts. How is it promoting, teaching and training and learning?

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Mary Crowe: How is it that it's broadening the participation of individuals from new institutions that maybe have never been supported by NSF before, or in helping to form collaborations between individuals from different institutional types. So we're interested in the broader impact. How is this going to enhance the infrastructure for research and education? Maybe you've got data science and you'll be sharing resources that way? Maybe you're creating an online repository. That's a broader impact. Those things are really important in biology education nowadays.

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Mary Crowe: We're again interested in making sure that you're going to disseminate your results broadly. So when you're thinking about your dissemination plan, it's not just about writing papers, but it can be about a website. It can be about social media. It can be a number

of different ways in which you can disseminate the results of your network really, really, broadly. And we want to benefit all of society next slide.

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Mary Crowe: So there are some review criteria that are specific to the RCN-UBE: So we're going to be asking you about how you're going to grow, sustain and evaluate the network. We are looking for networks that are creative that are innovative, and that they have the potential to advance and transform biology, education. And so this might be with just in biology, using those vision and change competencies.

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Mary Crowe: But we also have our RCN-UBEs that are interdisciplinary. So know that you can involve the interdisciplinary partners within your RCN network.

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Mary Crowe: We are also going to, when we are reviewing your proposal, look at the network to see if you're including individuals who have not previously worked together. So, as Mandy, I think, pointed out on slide number two, and then mentioned a couple of times: the RCN-UBE mechanism isn't to support an existing network.

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Mary Crowe: What we're here to do is to help you grow and expand your network, and to bring in stakeholders and new PIs that have not previously worked together. And the reviewers take this really, seriously, we want to make sure that you're bringing new individuals into your research and educational plans.

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Mary Crowe: And then for those proposals that involve international collaborations: The reviewers will consider the intellectual collaboration that those international partners are bringing to the network. So what kind of specialized expertise and skills might they be bringing to the network that you don't necessarily fulfill with somebody from the domestic area.

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Mary Crowe: And again, one of the things that's really cool, that we've seen come out of our some of our RCN-UBEs, is the involvement of early career researchers in those networks. It's a great way to kind of help get them set up to be mentored both in their education and research.

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Mary Crowe: I wanted to kick off our Q&A with telling you a little bit about some of the frequently asked questions that we get as program officers. So the solicitation that we're accepting proposals from right now is NSF 22-522. This solicitation is about a year old, and one of the things that when we were reworking the previous solicitation is, we wanted to put a focus on equitable support for network participant, rather than necessarily equal.

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Mary Crowe: We know that individuals come from a wide variety of different types of institutions, some of which are well resourced, and some of which were not well resourced.

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Mary Crowe: And what we want to make sure when you're talking about your budget, and when you're dealing with your budget justification, and when you're talking about supporting your steering committee and your network participants, we want to make sure that, however you support them, it means that all those network members can fully participate. So that might be that somebody who's at a high resource institution doesn't necessarily get a stipend, or maybe doesn't get supplies to integrate some of the work into an undergraduate classroom. But maybe a lower resource institution does. That's what we mean by equitable support.

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Mary Crowe: Biology, education, doesn't mean majors only. So the work that you're doing in your network does not just have to focus on or impacting students that are taking your courses, who are majoring in biology. We have networks that support educators, teacher educators, and those folks who have some interdisciplinary networks, involving courses in other departments, so that biology can be intergrated into engineering, or mathematics, or other STEM or even non-STEM disciplines even in the arts. Those are types of things that are supported by RCN-UBE networks.

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Mary Crowe: Another question that we get is, whether or not Steering Committee members are ever considered to be network members, and absolutely they are.

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Mary Crowe: If you and your steering committee are putting together a workshop and let's say you guys are experts on CRISPR, and your workshop is on CRISPR. Then you guys are the leaders. You're not network members. But let's say you think that it's going to be really important for everybody in your network to undergo DEI training as part of your activities, and you're bringing in some experts from the outside, whether it's from your institution's diversity

and inclusion offices, or consultants, or whoever it is, to hold a workshop related to DEI training or creating culturally relevant pedagogies. In that case, steering committee members are also going to be network members in this case, because you're all going to go through that training together, and we can again talk more about this once we're done with our presentation. But hopefully, that gives you an idea of when steering committee members might also be network members.

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Mary Crowe: Prior to the pandemic, a lot of our networks met face to face and in person, and a lot of the participants support costs were used to support travel for participants to meet face to face.

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Mary Crowe: As a result of the pandemic we recognize that sometimes virtual meetings are just as effective as in-person meetings. And so people have said, Well, if all our meetings are going to be virtual or we don't, we're going to have maybe one face to face meeting in year three. What do we need network funds for?

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Mary Crowe: number one? As a program officer? I know I probably never have to tell you what we need funds for. You guys are really good at coming up with things that you need money for. But just in case - you can pay a stipend for somebody. So rather than pay their airfare and their transportation costs and their hotels to attend the face to face meeting, you can provide them a stipend for the day that they're going to set aside to collaborate on network activities. Again, supplies for classroom activities are another great example of how you might use RCN-UBE funds.

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Mary Crowe: And again, external experts. Maybe they're going to help you design your curricular materials. Maybe they're going to help you design your website. These are all different types of things that people have used RCN-UBE resources for.

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Mary Crowe: next slide.

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Mary Crowe: So this is our last slide. We want to make sure that you know that the current solicitation it's not going to change between now and the January deadline. The due date for

proposals this year for the incubator, and the full proposals is January 24<sup>th</sup> 2023. And that both Mandy and I are here- we're available via email by a phone. We will look at your one pagers and provide you feedback.