NIH Peer Review Live Mock Study Section

Alexander Politis: Welcome, everybody, to the mock study section, our SRO, Brian Hoshaw, will start with introductions, and then we can get started.

Brian Hoshaw: Great. Thank you, everyone, for participating in this mock study section. We appreciate ... Sorry, in this study section. We appreciate the work all the reviewers are doing before the meeting and during the meeting. My name is Brian Hoshaw. I am the scientific review officer and designated federal official for this meeting. Most of my work is done before the meeting, arranging logistics, recruiting and preparing reviewers, but at the meeting I make sure that NIH regulations and procedures are followed and take notes for the final summary statement. We can start with introductions of the reviewers and other guests. When I introduce you, please give your name, your university and a very brief description of your area of expertise. We will start with our chair, Jessica.

Jessica McKlveen: Thanks, Brian. My name is Jessica McKlveen. I'm from the University of Cincinnati, and my expertise is in neuroscience, and I will be the chair for this meeting. My job today is to guide the discussion and ensure that it stays on topic. I will introduce each application and the assigned reviewers and direct the committee when it's time to discuss specific topics, such as budget or to give final scores.

Brian Hoshaw: Okay. Thank you, and, Lana.

Lana Shekim: Hi, everyone. My name is Lana Shekim. I'm from the University of Florida, and my expertise is in pharmacology.

Brian Hoshaw: Okay. Grace?

Grace Shen: Hi. My name is Grace Shen. I'm from St. Louis University, and my expertise is in biochemistry and I studied the role of [Indistinct] and opiate addiction.

Brian Hoshaw: Okay. David?

David Jett: Hi, everyone. Thank you, Brian. My name is Dave Jett. I'm from Howard University College of Medicine, and my expertise is behavioral neuroscience.

Brian Hoshaw: Okay. Nishadi?

Nishadi Rajapakse: Hello, everyone. I'm Nishadi Rajapakse from Duke University. My area of expertise is in chemistry.

Brian Hoshaw: Okay. Faye?

Faye Chen: Hey. Good afternoon. I'm Faye Chen. I'm joining from UCLA, and my expertise is in alternative medicine.

Brian Hoshaw: Thank you. Anil?

Anil Wali: Hi. My name is Anil Wali, and I'm from Wayne State University Karmanos Cancer Center, and my expertise is ... oncology.

Brian Hoshaw: Okay. Thank you. Danielle?

Danielle Carlin: Hi. My name is Danielle Carlin, and I am Kansas State University, and my expertise is in psychiatry and mental health.

Brian Hoshaw: Okay. We also have an NIH staff who is observing the meeting. If you'd like to introduce yourself, Shawn?

Shawn Gaillard: Yes. Hi, everyone. My name is Shawn Gaillard, and I'm the program official from the National Institute of Drug Abuse or NIDA, N-I-D-A. I wrote the request for applications, also called a RFA, that you will be reviewing. Before the discussion starts, the SRO has agreed to allow me to give you a description of the RFA and answer any general questions. My main role at the meeting is to observe and to take notes on the discussion, and I will available for the duration of the meeting to address any questions about the RFA if the SRO finds it appropriate.

Brian Hoshaw: Thank you, Shawn. Before I turn the meeting over to the chair, I'd like to go over some legal issues involving ...

Alexander Politis: Before you do that, Brian. Let me introduce the whole topic of this mock study section. I am your master of ceremonies. My name is Alex Politis. In real life I am an IRG chief for the infectious diseases and immunology A integrated review group at CSR, Center for Scientific Review. And you should know that CSR as well as the institutes have booths set up with SROs available to answers questions using the Zoom webinar and the hours of 1 p.m. to 5 p.m. each day. We also have a number of other resources located in this system for peer review. Also, please make sure you get an idea from CSR about the Early Career Reviewer Program or ECR program. The eligibility requirements can be found on the CSR website. Now this is a mock study section. We're going to look at three applications. They are fake. The discussions are abbreviated. We included a few situations that you might see at a study section. The purpose is to give you an idea about how the discussion takes place, what happens in the black box of study section. Most RO1 applications are reviewed in standing study sections at the Center for Scientific Review, other applications are reviewed in special-emphasis panels or SEPs. This means our reviewers are recruited after the applications arrive. The other thing I wanted to tell you is that we are going to stop the review at specific time points and ask questions, and you will have the ability to answer those questions via the poll. So the poll is only going to last about 30 seconds per question. So as soon as the poll comes in, please answer it, and we'll show everybody what the results were. In addition, if you have questions about the peer review process that come up as a result of seeing this mock study section, go to the Q and A section in the Zoom screen at the bottom, not the chat. I'm not going to look at the chat. I am going to look at the Q and A, and I will try to answer questions in real time at the Q and A and then a few of them I may actually bring up to the panel verbally so we can get an answer from Brian and his team. If you don't get the answers because there's going to be too many of them to get, go to one of the booths and get your answers there. Let's get started.

Brian Hoshaw: Okay, so before I turn this meeting over to our chair, I'd like to go over a couple legal issues involved in the review. Confidentiality, everything we discuss about the applications is confidential. So everything we discuss here must stay in this review meeting. Please don't discuss with anyone back at your labs, back at your homes or even outside the hallway or breakout rooms or virtual meetings. Conflict of interest, thank you, everyone, for identifying your conflict of interest ahead of time. If you are in conflict with an application, we will have you leave the room, or in this case we will put you in a waiting room so you are not present for the discussion. So when we go to other applications, please don't refer to previous or future applications because people might be in conflict with those. And finally, scientific misconduct. If you suspect any misconduct from the application, please contact me privately before the discussion. We want to make sure we give the PIs the benefit of the doubt before the topic comes up during the discussion and the application might have to be deferred. So here is a brief summary of the review format for this meeting, and this is typically how all applications are reviewed. First the chair, Jessica, will introduce the application and assign reviewers. Then the assigned reviewers will give their preliminary overall score. Next we ask reviewer one to give a brief overview of the application, maybe two to three sentences describing the aims. Each reviewer will ... Sorry. Next is ... Lost my space there. Then the reviewer will give the ... will have the strengths and weaknesses of each criteria. We move on to the other reviewers. You can say anything that was left out or something you might disagree with different reviewer. After the assigned reviewer speaks, the discussion is open to the whole panel. Now, you can participate in this discussion of any applications of which you're not in conflict. After discussion, reviewers will state if there are issues with protecting human subjects, inclusion of women, minority or participants across a lifestyle, then or use of vertebrate animals if these are applicable for the application. Then the assigned reviewers will give their final scores. If you're voting outside the range, we'll ask you to raise your hand at that point to let myself and Sharon know you're voting outside the range. After final scoring, we'll discuss any issues with the budget, resource-sharing plan or authentication of key biological or chemical weapons. So before we begin, do we have any questions from the reviewers?

Danielle Carlin: Yes. I have a question about scoring. What is the cutoff for funding? That is, can you tell me what score I should give an application if I want it to be funded?

Alexander Politis: Stop the review. So the first polling question is here. And the question is, should the SRO let reviewers know what score to give if they want the application to be funded? Answer the poll. We'll give you 30 seconds, and we won't sing the "Jeopardy" song in between. And the answer is ... We're not going to actually see the answer, right? I'm just going to say it?

Brian Hoshaw: We can see it.

Alexander Politis: You can see it. Okay.

Brian Hoshaw: Ninety two percent said no.

Alexander Politis: So what's the answer?

Brian Hoshaw: So thank you for asking that. So in a review meeting we do not discuss the F word, funding. We are here to assess and score the scientific and technical merit of the applications and we do not make funding decisions. This is very important. At the second level of review, the advisory council for each institute ... The advisory council considers recommendations and scores in light of the institute goal and priorities to make funding decisions. The two stages of the review are a cornerstone of the NIH peer review system. So before we start the review, I would like to ask the program officer if she would like to make a few comments about the RFA since she was involved in writing the RFA.

Shawn Gaillard: Yes. Thank you so much. So we will be reviewing applications from a RFA from NIDA, N-I-D-A, named "Discovery of Novel Treatments for Opioid Use Disorders." The RFA is meant to support research on novel therapies that have not been approved for clinical use. The applications can focus on pharmacological, behavioral or alternative treatments. At NIDA, we decided to allow a very broad range of applications. So this RFA is clinical trial optional. That means that the RFA will accept applications that either involve or do not involve clinical trials.

Brian Hoshaw: Thank you for that summary, Shawn. So I'd like to remind all the reviewers that there are separate review criteria listed in the RFA for clinical trials. So for these applications, please be sure to address the correct review criteria during the discussion. So I will now turn the meeting over to our chair, Jessica, who will guide the discussion from here on out.

Jessica McKlveen: All right. Thank you, Brian. Before we start the discussion, I wanted to remind everyone to focus on the review criteria that are listed in the RFA. So when presenting your evaluation, please focus your discussions on the score-driving issues with your assigned applications. So we'll start with our first application. We do have one reviewer who is in conflict, so we'll have them go into a virtual holding room. And so this is an application from Jane Johnson, and she's an early stage investigator. The title of application is "IGF1 as a Potential Treatment for Opioid Use Disorders." And so Dr. Wali was in conflict, so they have stepped out of the room, and so the assigned reviewers are Dr. Shekim, Shen, and Jett. Can the assigned reviewers please give your preliminary impact scores?

Lana Shekim: Thank you. I gave it a sore of two.

Grace Shen: And I give an initial score of three.

David Jett: Well, actually I gave it an initial score of five, but I did read the preliminary critique, so I'll most likely adjust my score based on the comments from the other reviewers.

Jessica McKlveen: Okay. Dr. Shekim, can you please start with your review?

Lana Shekim: Sure. So this is an application that proposes to leverage some recent and really exciting discoveries with insulin-like growth factor, IGF1, mostly to see if it can used for treatment for opioid use disorder. The first two aims involve biochemistry and pharmacology experiments to develop IGF1 as a therapeutic. And the third aim will examine the effects of IGF1 in preclinical studies. I'm really excited about the potential impact of this study. The application clearly addresses the rigor of the prior research by pointing out the strengths and the weaknesses of the published research that support this project. In addition, the use of male and female rodents in animal models of aim three as a strength. The approach section is detailed and all the necessary needed to assess the experiment is clearly presented. Therefore, the scientific rigor is strong as well. The application is innovative and the environment is stellar. I had some concerns with the design of the one of the aims, but these concerns are minor. I also gave the PI the benefit of the doubt on the strength of her publication record because she's an early stage investigator. That's all I have.

Grace Shen: All right. I agree with the first reviewer's comments, so I won't repeat all the strengths that she has listed. I just want to add that I'm very impressed that all the expertise required for the aims proposed, such as biochemistry and pharmacology, is well represented on the research team. This increases my confidence that the PI will be able to accomplish the aims.

David Jett: Well, of course my focus was on the preclinical and behavioral tests in aim three. This aspect of the application has some flaws in the design. I personally do not agree with the control the PI chose. For the one aim this is an issue, but hearing the comments from other reviewers on the potential impact of the research, I will adjust my final score so it reflects the whole application.

Jessica McKlveen: All right. Now that we've heard from the assigned reviewers, the discussion is now open to the rest of the panel.

Nishadi Rajapakse: I have a question about the pharmacology expertise. Does the application have expertise working with this specific load factor because it can be tricky to work with.

Shawn Gaillard: Oh, I'm the program officer. Can I please address that issue since I've been advising the applicant on this application?

Alexander Politis: Stop the review. Here is your second polling question. So can the program officer jump into the conversation to answer this question? Is that of a benefit to the panel? Please vote your conscience. Vote early, vote often, and it's not rigged. And it's somewhere of a mixture, Brian. So why don't you go through that?

Brian Hoshaw: Okay, so thank you for asking, but no. Shawn, this would not be appropriate. Program staff are here to observe the discussion, and they can answer general questions about the RFA is the SRO finds it appropriate, but they should not be involved in the discussion of a specific application. It is very important that we keep it two levels of peer review separate.

Grace Shen: So I just, in response to the question raised about the expertise, there is a co-investigator with extensive experience with insulin-like growth factor. So I believe that that area is covered.

Jessica McKlveen: This application involves the use of vertebrae animals, so we will discuss this before final scoring since it's a scorable issue. Could the assigned reviewers please address this topic?

David Jett: Ah, yes. The PI has adequately addressed the questions the related to the use of vertebrae animals.

Grace Shen: I agree.

Lana Shekim: I agree.

Jessica McKlveen: Okay. I will now summarize this discussion. This application is from an early stage investigator. The goal of this experiment is to explore the potential for IGF1 to be used a therapy for opioid use disorder. The application addresses a clear need in the field, and the reviewers agreed that the potential impact was high. Both rigor of the prior research as well as scientific rigor have been addressed. There was some concern about the control selected for the behavioral studies in aim three, but this was considered a minor point. We are now ready to hear final scores. Can we start with reviewer one?

Lana Shekim: Yeah. I remain at two.

Grace Shen: I'll just move up to the two as well.

David Jett: Yes, and I'll go to a three.

Jessica McKlveen: So we have a range of two to three. Does anyone wish to vote outside that range? All right. Hearing none. We can continue, and all reviewers may now submit their final scores. Are there any budgetary comments?

Grace Shen: I think the budget is appropriate for the proposed work in the grant application.

Lana Shekim: I agree.

David Jett: I agree as well.

Jessica McKlveen: What about the resource-sharing plan?

Lana Shekim: The resource sharing is very detailed, and all the appointment areas have been addressed.

Grace Shen: I agree.

David Jett: Yep. I agree.

Jessica McKlveen: And finally, has the authentication of key biological and chemical resources been addressed?

David Jett: Authentication plans for the growth factor are appropriate.

Grace Shen: I agree.

Lana Shekim: I concur.

Jessica McKlveen: All right. Thank you. So we now may bring back our conflicted reviewer back into the conversation.

Alexander Politis: So let me make a few comments before we go to the next one. The first comment is, thank you for all the questions. I am typing as fast as I can, and I'm probably not even coming close to answering all the questions. And the questions that I am answering, I'm doing so briefly. For those of you who know me, I can talk for hours, so I had to just quickly go through and try to give you the gist. The answers won't be maybe satisfying completely, but I'm trying to give you the answers that I have. So I wanted to tell you that in this case, at least three reviewers are assigned to each application, and sometimes more depending on the complexity. Many applications are multidisciplinary, so reviewers might need to be assigned to an application really for one or two of the aims or of the types of things that are in the project. That is why the discussion is so important and it's really part our federal guidelines. ESI applications or early stage investigators are clustered, and they are given some considerations. In fact, this one person asked, "Do they consider ESIs for non-RO1s?" And we don't. So for R21, for example, we don't mention that it's a new investigator, and we don't look at them in the same way as we do for RO1s. There are certain times when a program officer can answer a question about a RFA or a programmatic issue, but it's always with the approval of the SRO. In fact, the SRO usually asks the program officer to speak on some aspect of it. There are two levels of review, and the merit review is focused here. So as Brian said, the program officer should not be interrupting and giving information that's not in the application. The review panel discusses and scores the applications. They don't make funding decisions. So the funding decisions are made in that second level of review at the institute level. Now some aspects of these things, whether they talk about effective scores and others don't, and usually it's made pretty clear with respect to which things are not score-driving, such as budget. When they get to budget, as an example, that is not included in the score. I'll keep typing, Brian.

Jessica McKlveen: All right. We'll now move on to the next application. The title of the next application is from ... The next application is from Tom Wilson, and the title is "Novel Alternative Treatments for Opioid Use." There are no conflicts. The assigned reviewers are doctors Rajapakse, Chen and Wali. Will the assigned reviewers please give their preliminary impact scores?

Nishadi Rajapakse: Two.

Faye Chen: Two for me as well.

Anil Wali: One.

Jessica McKlveen: All right. The scores are very close and indicate that there are many strengths with this application. And so the reviewers should emphasize the strengths of the application, specifically what favors led to such favorable scores. Dr. Rajapakse, could you please start with your review?

Nishadi Rajapakse: Yes. Thank you. So this application proposes to test alternative treatments, specifically plant extracts as a novel form of treatment for opioid use disorders. The PI is a renowned medicinal chemist who has experience developing plant-based medications. The rigor of the prior research is addressed based on the review of the literature in this field. A weakness, that he does not have access to the plant extracts that they propose to use, and it does not appear they will have access any time soon. Overall, even though there are a number of weaknesses with the approach and the level of innovation is marginal at best, the PI has a good working knowledge in the field, that I'm sure he can figure out how to solve any potential design flaw and overcome any technical challenges as the study gets underway. Overall, I really like the application, and I'm really confident of the PI's ability to get the job done.

Faye Chen: Okay. do I'm the second reviewer, and I agree that the PI is very talented, but he hasn't published in the past 2 years and maybe, you know, the past decade or so. In addition, I'm not sure they have the resources and personnel to conduct the experiments. So I have another concern about novelty that, you know, the plant-based medications, they're now, you know, the novelty is low because they are similar to the ones that are already being tested in clinical studies. Therefore, for me the innovation is low, but overall, I agree with the first reviewer. This is a good application.

Anil Wali: Hi, this is reviewer three. The PI is very well known. When I was in graduate school, he was really well published, but not so much lately. I have another concern the approach will utilize animal models, and in the application they will only be using male mice. So however, I do not agree with the rationale for excluding female mice in the design. And I have a question for the SRO, should this effect my score?

Brian Hoshaw: Yes. Good question. So according to the guideline for rigor and reproducibility, sex as a biological variable should be addressed the approached section of the application. The PI will not be using both sexes, whether that's human subjects or vertebrae animals. They need to provide a justification, and this issue can affect the score.

Anil Wali: Well, in that case I considered this another weakness with the application.

Jessica McKlveen: All right. Since we've heard from all the assigned reviewers, the discussion is now opened to the rest of the panel.

Lana Shekim: I'm not one of the assigned reviewers, and I did not read the application. Can I comment on the discussion?

Alexander Politis: Stop the review. Our next polling question, can this reviewer participate in the discussion if they have not read the application? Vote in 30 seconds, please. And our survey says, very mixed, very mixed. This is very useful. So, Brian, tell us about how this works.

Brian Hoshaw: It surprises a lot of people. So yes. Anyone who is not in conflict with an application can participate in the discussion. Since everyone will be submitting final votes, you can also participate in the discussion. So only the assigned reviewers are required to read the application. As you know, all the other reviewers not in conflict have access to the application. They sometimes do, but anybody who is not conflict can participate in the discussion.

Lana Shekim: I just want to say that I'm hearing a number of weaknesses, lack of access to the compound, little current work by the PI and failure to address sex as a biological variable. That seems inconsistent with the scores and the high-impact range that the assigned reviewers gave. Perhaps the assigned reviewers could speak a little bit more about what ... how they came up with these scores?

Brian Hoshaw: So I would like to ... Thank you for pointing that out. I would just like to say that for the reviewers, your assessment scores should be based on what is presented in the application, not what the PI did years ago. In addition, the qualifications of the applicant are only one of the five reviewed criteria of which your overall scores give. If there are weaknesses in the approach, we should not assume they would be fixed based on the comments in the summary statement.

Jessica McKlveen: Can the assigned reviewers address this question?

Nishadi Rajapakse: Yes, so you make a valid point. The application does have issues in the research plan, and the PI has not done a good job in discussing potential pitfalls and giving alternative approaches. After hearing additional weaknesses from the other reviewers and realizing that my score might not reflect the number of weaknesses, I think I'm going to adjust my score.

Faye Chen: Yeah. I agree with the first reviewer, and I will also recalibrate my scoring.

Anil Wali: And as the third reviewer, sorry. This is my first meeting, so I'm still calibrating my scores. I now see there are a number of weaknesses, so I will adjust to my score accordingly.

Jessica McKlveen: Are there any concerns with the use of vertebrae animals, aside from the issues with the justification of the sex?

Nishadi Rajapakse: This aspect is acceptable. All points have been addressed.

Faye Chen: I agree.

Anil Wali: I also agree.

Jessica McKlveen: Okay. Here is a summary of the discussion. The goal of this application is to develop new plant-based therapies for the treatment of opioid use disorders. The reviewers acknowledge that the PI has in-depth knowledge of the topic, although he has not published in almost a decade. There were also concerns about the availability of resources and personnel to conduct the experiments, the novelty of the approach, the use of only male mice without an adequate justification for excluding female mice as well as a lack of discussion on potential pitfalls as well as alternative approaches. Can we now have final scores?

Nishadi Rajapakse: Based on the discussion, I will raise my score to four.

Faye Chen: Yeah. I will change my score to a four as well.

Anil Wali: And I will move to four as well.

Jessica McKlveen: We have a range of four to four. Will anybody be voting outside the range? All right. Hearing no one. You can now submit final scores. Are there are comments on the budget?

Anil Wali: The budget is acceptable.

Nishadi Rajapakse: I agree.

Faye Chen: I agree.

Jessica McKlveen: What about authentication of resources?

Nishadi Rajapakse: So this topic has been addressed and also the resources-sharing plan is thorough and acceptable.

Faye Chen: Yeah. I agree on both topics.

Anil Wali: I agree as well.

Alexander Politis: So let's go over a few things before we go to the third application, and this was asked in some of the questions that only the assigned reviewers, which is typically three for something like a RO1 application that we've been doing, have to read the application and give it a focused critique. Everyone else not involved and not in conflict can participate in the discussion, and they can also read the application, but they don't have to read the application in order to have opinion, ask a question. It's a really a fundamental concept of peer review at NIH that the committee plays an important role in the scoring. It's not just the assigned reviewers. That's why we have meetings. That's why we have the discussions. We also want to mention that enhancing reproducibility through rigor and transparency is an ongoing topic at NIH, and we're doing it. I'll keep typing.

Jessica McKlveen: All right. We'll now move on to the third application. We have no conflicts on this application.

Faye Chen: Well, actually I just realized that I have provided a reagent to the PI for this application. So I only charged him for shipping the reagent, and I make this available to any investigators who request it. Will that put me in conflict with the application?

Alexander Politis: So stop the review. Our fourth polling question, is this reviewer in conflict with the application if she provided the reagent to the investigator? So please vote. And our survey says, again, it's a mixture. So, Brian, you have to straighten these people out.

Brian Hoshaw: Thank you. That was a very good question. This is a bit of a nuanced part of review. So if you're providing a reagent and only charging for shipping, it is not a conflict as long as it is something that you would provide to any researcher, and most importantly, you're not engaged in the collaboration in any way with the PI.

Faye Chen: Okay. Thank you for the clarification. So in this case I'm not in conflict, but I just wanted to be sure. Thank you.

Jessica McKlveen: The next application is from George McFee, and the title is "A Clinical Trial Examining cognitive Behavioral Therapy for Opioid Use Disorder." The assigned reviewers are doctors Carlin, Marmillot and Jett. Can the assigned reviewers please give their preliminary scores?

Danielle Carlin: Yes. I gave this a three.

Philippe Marmillot: I gave a six.

David Jett: I gave it a three.

Jessica McKlveen: Dr. Carlin, can you please start with your review?

Danielle Carlin: I'd be glad to. So this application proposes what I consider to be a highly novel use of cognitive behavioral therapy to treat opioid use disorders. In the design of this cognitive behavioral therapy or a sham treatment will be administered to participants at a single clinical site who meet the DSM-5 criteria for opioid use disorder. The participants will have follow-up interviews at 6 months and 1 year to assess opioid use. There have been other studies that have examine the effects of this application on opioid use, but this application proposes a novel treatment plan that is based on a recent paper that has some exciting results. The paper indicates that longer CBD sessions may be have a longer lasting effect on opioid use. The application is clearly written and the PI is a leader in the field. All of the review criteria in the RFA that are specific to clinical trials have been addressed, and the study protocol has been included, and it is clearly written. The study time line is feasible and well justified. Challenges and proposed solutions are adequately discussed. The experiments are sufficiently powered, including detection of sex-based differences. My score would have been better, but I have some concerns with the control sham procedure that they will be using, and I thought they could've included more information on the training of personnel at the clinical site.

Philippe Marmillot: Right, so I agree with most of the strengths and weaknesses given by the primary reviewer. However, I gave a less favorable score because I believe the investigators have misinterpreted the results from the key paper that was cited. My concern deals with the rigor of the prior research. The investigators interpret the results to show that the new treatment has a longer lasting effect. However, I do not agree with this interpretation. Therefore, this leads to a flawed hypothesis because I do not think that the new treatment procedure will have any added benefit. This was a major score-driving issue for my review.

David Jett: Yes. I agree with the first reviewer, but I think I'd have to disagree with the comments of the second reviewer. I actually believe the rigor of the prior research is solid.

Jessica McKlveen: All right. Now that we've heard from the assigned reviewers, the discussion is now open to the rest of the panel.

Lana Shekim: Okay, so I wasn't an assigned reviewers for this application. I did go ahead and read it out of curiosity. I actually agree with Dr. Marmillot. The intellectual foundation of this application is extraordinarily weak. The PI did not understand the results and the implications of this paper.

Jessica McKlveen: It sounds like we have a range of scores here. Would the assigned reviewers like to address the issue of rigor of prior research?

Danielle Carlin: Well, I saw the comments and the critiques and went back to look those papers. I think the PI's hypothesis is still based on scientifically rigorous arguments. Even if there are some concerns, this experienced PI team will be able to address the issues and move forward based upon the pitfalls and backup strategies.

Philippe Marmillot: Well, I have to say that I respectfully disagree with your assessment.

Jessica McKlveen: Well, I appears that the reviewers could not come to a consensus, which they absolutely do not have to do. Can the reviewers please comment on the protection of human subjects as well as inclusion plans?

David Jett: Yes. Trained therapists will implement the CBD protocol, and all necessary precautions are in place to ensure the safety of the participants. They plan to recruit an equal number of men and women, and the projected minority recruitment is also acceptable. Children will not be included in this study, and their plan to recruit participants from ages 18 to 85 is also acceptable.

Jessica McKlveen: Okay. I'll now summarize the discussion. This application aims to study the effects of cognitive behavioral treatment on opioid use disorders. The application proposes a randomized clinical trial for participants over the age of 18. All the clinical trial review criteria listed in the RFA have been addressed. The rationale for this study is based on a recent paper that may indicate beneficial effects of a longer therapy session. However, the reviewers do not all agree on the interpretation of the results of this paper and how much they support the hypothesis of this application. Thus, the enthusiasm of the assigned reviewers appears to vary widely for this application. Can we have final scores?

Danielle Carlin: Yes. I'll stick with my three.

Philippe Marmillot: Well, I still have major concern with the concept of a flawed hypothesis, in my opinion. Therefore, I am still at six.

David Jett: Yes, and I think I'm going to stay at three.

Jessica McKlveen: Does anyone wish to vote outside the range of three to six? Hearing none. We have, it seems, two differing opinions on this application, so the reviewers can vote their conscience, but you do not have to score the average of the range. Rather, you can score with whomever you're convinced the most by. Are there any comments on the budget?

Philippe Marmillot: Yes. So I feel that the budget is excessive for the amount of work proposed. The [Indistinct] afford for the [Indistinct] is too high, and they overestimated the costs. Can we lower the budget in the application?

Brian Hoshaw: Yes, Philippe, good question, so yes. You can make recommendations on the budget for NIH staff. Do you have any specific recommendations that you'd like to make?

Philippe Marmillot: Yes. I would like to recommend that the personnel requests for one of the technicians be eliminated and that the supply budget be reduced by $50,000 a year.

Brian Hoshaw: So do the other assigned reviewers agree with these comments?

Danielle Carlin: Yes.

David Jett: Yes.

Brian Hoshaw: Okay, great. So I'll make a note of this in the final summary statement, and please make sure those comments are in your final critiques as well so that the applicant will see them.

Jessica McKlveen: What about the authentication of chemical and biological resources?

David Jett: Well, actually this topic is not applicable for this application since there are no biological or chemical resources that need authentication.

Jessica McKlveen: Finally, can the reviewers address the resource-sharing plan?

Philippe Marmillot: Yes. The application does not address this topic, so it's not acceptable.

Jessica McKlveen: Do the other assigned reviewers agree?

David Jett: Yes. It was not addressed in the application.

Danielle Carlin: And, yes, I agree with the other two reviewers.

Brian Hoshaw: Great. Thank you for that. I'll make a note of this in the final summary statement, and again make sure, even though it isn't an effective score, make sure these comments are in your final critique. Great, so that concludes our meeting. Thank you to the chair and thank you to the reviewers. One final thing, you will have 3 days to edit your final critiques and criterion scores. This is very important if your score has changed as a result of this discussion. We want to make sure that the final summary statement that the PI receives will reflect the final score and all the discussion at the meeting. Thank you.

Alexander Politis: So we have a few things to wrap this up. The first is that it's clear that the reviewers are not required to come to consensus. We don't, as SROs, push the reviewers into thinking the same way. That would defeat the purpose of the review. They are welcome to be ... to have a disagreement. In fact, one of the questions was, "They seem so agreeable, is that typical?" And I think professional is typical, but agreeing is not always so typical. People do disagree on topics, and there's nothing wrong with that. So conflict of interest is very important. It's a complex topic. There have been several questions about conflict of interest. Some are very obvious. Others look at the appearance of conflict. We always want a thorough and fair review, and so we have to ... The SROs are trained sort of ongoing and we continually think about how to determine whether something is a conflict. We tell our reviewers to be conservative and let us know if they think that something is a conflict. Most of them are very concerned about not being in a position where they would be conflicted. Rigor of the prior research has always been really a part of the review. It used to be called more recently premised, but it's been more brought to the forefront recently along with rigor, which is an age-old component of review, but it's now given a name. So now we have only a couple of minutes left. I've been typing answers as fast as I could, and I think I'm about a 20th, 10th in to the list, so I apologize. I didn't get your questions answered, and most of them are pretty straightforward. This last one, it says, "Please explain in more detail about the 15-to-25-minute average reviewer time spent on each application." That's during the meeting, 15 minutes during the meeting. Someone else asked me about, "How long does a reviewer take to prepare for the meeting per application?" Maybe Brian has a different view. I thought for RO1s it varies rather dramatically, but that I would think something like 8 hours for RO1. Do you guys that's a reasonable rough guess? So it's not 15 minutes. They don't spend 15 minutes looking at the application. They spend many hours looking at the application, coming up with their critiques, and then they go to the meeting and they talk about it in something like this mock study section, maybe a little longer, but not much longer. It's a 15-minute average is what I shoot for for RO1s. Anyway, I'm sorry I could not answer all these questions. We're pretty much out of time, are we not, Brian?

Brian Hoshaw: Yeah, just about. I'll just say there were a lot of questions about scoring. So the assigned reviewers set the ... They give their scores to set the voting range. People are able to vote outside the range. We ask them to raise their hand, mostly so we can make a note of it, to make sure it's not a typo because they're all submitting their scores online. We do say, "You know, is there a reason you're giving outside?" Sometimes it's just because the comments were more negative than the scores or more positive scores, but everyone else votes privately. So all those scores are typically are private, but the assigned reviewers will just set the range so everyone is in the same ballpark.

Alexander Politis: Well, you know, this is much more tiring to do it this way. I had to try to make sure I followed you guys and didn't mess up on the next questions, but meanwhile my fingers are score.

Brian Hoshaw: And there were a lot of questions about ESI status. So ESI status only applies to RO1s. Even though you're in an early stage of your career, only an RO1 application is eligible for that. They're typically clustered at CSR, so they'll all be reviewed together and they tend to get a bit of a break or consideration on publications and preliminary data.

Alexander Politis: So here is a good one. "Why is the score so high despite several points of weaknesses?" And we do see that occasionally. There's some sympathy somewhere, and we don't know where that it is. We really want the merit to reflect the score, and that's what we, as SROs, try to encourage our reviewers not to inflate scores, but it can happen.