

Mechanisms Underlying Cardiovascular Consequences Associated with COVID-19 and Long COVID

Program Information, Peer Review, and Lessons Learned

Rachel Cruthirds
Research Pre-Award Manager
American Heart Association



American
Heart
Association®



Mechanisms Underlying Cardiovascular Consequences Associated with COVID-19 and Long COVID

- **October 2021 Board of Directors meeting – allocate \$10M to study mechanisms that underly cardiovascular and cerebrovascular effects of COVID-19 and/or Long COVID**
- **RFA Published: December 10, 2021**
- **Proposal Deadline: February 1, 2022**
- **Distributed Peer Review: February 7 – March 7, 2022**
- **Award Start Date: April 1, 2022**

Distributed Peer Review

- Peer review for this program was conducted using a [distributed peer review approach \(PDF\) \(Merrifield and Saari, Astronomy and Geophysics, 50, 4.2, 2009\)](#). This is also known as the [Mechanism Design Proposal Review Process](#).
- As opposed to traditional peer review, distributed peer review capitalizes on the expertise of the applicant pool and incentivizes timely review in fairness to all applicants.
- RFA explicitly described the requirements of the peer review process and informational webinars were held prior to deadline date
- All applicants who submitted a proposal were required to serve as a peer reviewer within this program and assigned eight (8) proposals for review.
- Principal investigators declared conflicts of interest and were only assigned proposals for which they did not have an institutional or individual conflict
- Only peer reviewers who complete their assigned reviews and recorded their scores in a timely fashion in turn had their own proposal evaluated for advancement.



Distributed Peer Review

- 109 proposals received; only scores (1-9 whole number) required, critiques optional
- All PI's affirmed participation in the process at the time of proposal submission (via a required affirmation in the proposal) and additionally via email confirmation prior to peer reviewer assignment
- Four weeks for review, three (3) email reminders sent, all scores submitted on time
- Staff conducted an administrative review of all proposals concurrently to check formatting and other program adherence specifically around incorporation of trainees and early career investigators
- **Funding recommendations took into consideration:**
 - **Original Score and Rank (average of all 8 scores)**
 - **Removal of poorest and best score (truncated mean) and updated rank**
 - **How each applicant scored their assigned proposals (range)**
 - **Adherence to program requirements**



Survey Questions

- 1. This program utilized a distributed peer review process; applicants agreed to serve as peer reviewers at the time of proposal submission. Was this process clear in the funding announcement?**
Y/N
- 2. Did you or your research administration staff attend one of the informational webinars?**
Y/N
- 3. From the reviewer perspective, how satisfied were you with the distributed peer review process?**
Likert scale – extremely satisfied to extremely dissatisfied, 7 choices
- 4. Would you apply/participate in future research programs that utilize distributed peer review?**
Likert scale – extremely likely to extremely unlikely, 7 choices
- 5. We welcome additional suggestions with respect to the distributed peer review process and future AHA research programming.**
Text box



Survey Questions – 64 responses (59%)

1. This program utilized a distributed peer review process; applicants agreed to serve as peer reviewers at the time of proposal submission. Was this process clear in the funding announcement?

87.5% Yes

8% No

2. Did you or your research administration staff attend one of the informational webinars?

64% Yes

36% No

3. From the reviewer perspective, how satisfied were you with the distributed peer review process?

Extremely Satisfied: 20%

Moderately Satisfied: 36%

Slightly Satisfied: 14%

Neither Satisfied nor Dissatisfied: 13%

Slightly Dissatisfied: 9%

Moderately Dissatisfied: 6%

Extremely Dissatisfied: 2%



Survey Questions

4. Would you apply/participate in future research programs that utilize distributed peer review?

Strongly Agree: 30%

Agree: 31%

Somewhat Agree: 17%

Neither Agree nor Disagree: 8%

Somewhat Disagree: 8%

Disagree: 5%

Strongly Disagree: 2%

5. We welcome additional suggestions with respect to the distributed peer review process and future AHA research programming.

Text box

Survey Questions

5. We welcome additional suggestions with respect to the distributed peer review process and future AHA research programming (36 comments):

- Great system.
- This process puts immediate demands on applicants who just barely carved out enough time away from clinical duties to submit the grant itself.
- I think for the most part this process worked well. One consideration may be that with the diversity of the applications and in particular, proposed methods, expertise may be lacking that may negatively impact scoring of some applications.
- Reviewer comments should be required. Making the written review minimal (such as with a single score) is key.
- I think it needs to be made clear that those who do not follow the proper formatting rules will be administratively withdrawn. I think asking people to review those grants that are significantly non-compliant with the formatting rules is not respectful of reviewer time since those applications will be non-competitive for funding.
- Option to reject assigned grant due to not close enough expertise
- I understand the possible benefit of the process (fast turn around, reviewers already in the same field). There may be less of a bias if we were not reviewing grants in the same cycle or same funding opportunity

Survey Questions

5. We welcome additional suggestions with respect to the distributed peer review process and future AHA research programming (36 comments):

- I thought that the distributed peer review was very interesting and at least from my perspective there was not a large difference between the time I spent reviewing each grant and the time I historically spent when reviewing for NIH study sections.
- One way for the AHA to address in the context of distributed peer review would be to send to each reviewer the actual reviews of the other reviewers - but of course anonymized. Alternatively, you might send reviews to individuals whose review was outside the average (eg. two standard deviations from the mean score). This would allow the reviewer to do some homework to learn about what they might have not appreciated when they read the grant.
- In my opinion this is almost the exact opposite of the best way to review grant proposals. It eliminates many key aspects of peer review: (i) lack of vested interest in the outcome, (ii) demonstrated expertise in the area and methods pertinent to the proposal, (iii) promotion of a system that encourages reviewers to use a full range of scores from excellent to downright poor. It is clearly less work for the organization, but it is a deeply flawed system that is likely to end up with almost all grants scoring in a very tight range regardless of quality and awards made on insignificant differences. One would have to really work hard to come up with a peer review process that is more deeply flawed and contrary to good practice than this one.
- Due to research area overlaps, there could be significant conflicts of interest which may impact the peer review. The strength is that reviewers are experts in the field. The weakness is possible over-critical evaluation. Moreover, it's unclear whether the identity of reviewers for each grant can be 100% protected in this format. Nevertheless, this is certainly an interesting and potentially impactful trial.

Survey Questions

- 5. We welcome additional suggestions with respect to the distributed peer review process and future AHA research programming (36 comments):**
- Most comments indicated that applicants wanted to see:
 - How their proposal was scored
 - How their score aligned with others for the proposals they were assigned
 - Written critiques (should be required)
 - Other comments centered on bias and better matching of scientific expertise to grants reviewed
 - Adherence to administrative requirements was also important and it was suggested proposals be screened for non-compliance/withdrawal prior to peer review

Lessons Learned

- **Be prescriptive and specific in the RFA**
 - **Trainees**
 - **Early career investigators**
- **Conduct training webinars to review program and peer review expectations**
- **Provide specific guidance to reviewers regarding applicant instructions and how to adjust scoring based on adherence to administrative requirements**
- **Reiterate how to manage conflicts**
 - **Don't wait until the peer review deadline date to review assigned proposals**
 - **Finding conflicts at that time puts an applicant at a disadvantage since proposals cannot be reassigned and they will have fewer scores to average**
- **Prepare key survey questions for distribution during the peer review process**