CSR News Flash

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CSR Announces Winners of its America COMPETES Challenges to Maximize Fairness in NIH Peer Review

The NIH Center for Scientific Review (CSR) has revealed the winners of its two America COMPETE Act challenges to help identify new methods to detect bias in peer review and identify strategies to strengthen fairness and impartiality in peer review. This effort to study the possibility of bias is part of a much larger NIH effort to respond to the study that showed Black applicants for NIH grants do not fare as well as White applicants after researchers controlled for various factors.

"We are pleased to announce four winners, who submitted ideas that NIH may further develop and pursue," said Dr. Nakamura. "These ideas will strengthen the science for tackling disparities in grant awards. Doing so is critical to moving forward, because you can't fix such a problem if you don't have validated ways to diagnose and address it." He said that three first prize winners will each receive $10,000 for their ideas. There was one second prize winner, who will receive $5,000

"These challenges address a critical need," said Dr. Richard Nakamura, CSR Director. "There are no adequate tools to detect and quantify bias in peer review or to tell us if an intervention to maximize fairness is effective."

"We took care to anonymize each submission, use a two-stage judging process, and assess submissions according to the established review criteria," said Dr. Nakamura. "Many of the entries overlapped approaches that had recently been proposed, which was gratifying. It suggests we are on the right track." He then explained that "The winning entries were recognized for proposing new ideas and creative elements to approaches we are pursuing."

Challenge #1: New Methods to Detect Bias in Peer Review

This challenge sought ideas on how to detect bias among reviewers due to gender, race/ethnicity, institutional affiliation, area of science, and/or amount of research experience of applicants. Prizes are being awarded in two categories:

A. Best Empirically Based Idea for Detection of Bias in Peer Review

First Prize: Measuring the net effect of "identity cues" on the review of NIH applications

David Budescu, Ph.D., Professor of Psychology, Fordham University, with team member, Mia Budescu, Ph.D., Assistant Professor, Lehman College.

They proposed to assess bias in peer review by asking three groups of reviewers to review sections of grant applications that contain cues to a PI's minority status in different orders. The first group would assign criteria scores to the Investigator and Environment sections

before seeing the rest of the application. The second group would give criteria scores for the Significance, Innovation, and Approach sections first. A control group would review grant applications in the usual way.

Second Place Prize: Do Investigator Race and/or Ethnicity of Topic Influence Research Evaluations?

Wendy Williams, Ph.D., Professor of Human Development, Cornell University, with team member Stephen J. Ceci, Ph.D., Professor of Human Development, Cornell University.

They proposed a study that would assess possible reviewer bias related to the minority status of NIH applicants as well as the race/ethnicity of their research topics. To do this, four different groups of reviewers would review an application supposedly submitted by either a Black or White investigator who propose to study a Black or White population. The judges were impressed with the uniqueness of this proposal to study the possible bias related to both the race of the investigator and the race of the target population to be studied.

B. Most Creative Idea for Detection of Bias in Peer Review

First Prize: Identifying Commensuration Bias in Grant Review

Carole J. Lee, Ph.D., Assistant Professor of Philosophy, University of Washington, with team member, Elena A. Erosheva, Ph.D., Associate Professor of Statistics and Social Work, University of Washington

There is scientific data to suggest that converting heterogeneous qualities into a single metric can be influenced by bias. The prize winning researchers suggested that such a commensuration bias might occur in peer reviews when reviewers factor their overall impact scores. To test this hypothesis, they proposed a study to see if Black and White investigators receiving comparable criterion scores received significantly different overall impact scores. Judges were impressed with the uniqueness of this approach.

Challenge #2: Strategies to Strengthen Fairness and Impartiality in Peer Review

This challenge sought ideas on how to strengthen reviewer training methods to enhance fairness and impartiality in peer review.

First Prize: Using Reviewer Pledges and Images of a Diverse Science Workforce to Increase Impartiality and Fairness in the NIH Peer Review Process

Kaury Kucera, Ph.D., Lecturer, Post-Doctoral Associate, Molecular Biophysics and Biochemistry, Yale University, with team members at Yale: Rona Ramos, Ph.D., Technical Support Specialists, Lecturer in Physics; Brett Berke, Ph.D., Associate Research Scientist, Lecturer in Molecular Cellular and Developmental Biology; Helen Caines, Ph.D., Associate Professor, Physics; Shankar Ramamurti, Professor, Physics and Applied Physics.

This team proposed to strengthen fairness and impartiality by keeping the concept fresh in reviewers' minds. NIH would ask reviewers to sign a pledge to be impartial in their reviews when they sign other pledges to abide by laws and rules related to conflicts of interest and confidentiality. Scientific Review Officers also would emphasize the importance of this pledge at the beginning of their meetings. In addition, Dr. Kucera and her team suggested

inserting in reviewers' meeting materials photos of scientists that represent a diverse workforce.

Competition judges were impressed with this entry because the proposed interventions were simple and built on existing practices and principles for keeping reviewers mindful of important concepts to help maximize fairness.

About CSR
CSR organizes the peer review groups that evaluate the majority of grant applications submitted to NIH. These groups include experienced and respected researchers from across the country and abroad. Since 1946, CSR's mission has been to see that NIH grant applications receive fair, independent, expert, and timely reviews — free from inappropriate influences — so NIH can fund the most promising research. CSR also receives all incoming applications and assigns them to the NIH institutes and centers that fund grants. For more information, go to CSR's Web site—http://www.csr.nih.gov—or phone 301-435-1111.

About the National Institutes of Health (NIH)
NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.