CSR Advisory Council Update
March 29, 2021
Noni Byrnes, Ph.D.
Director
Center for Scientific Review
Welcome: CSR Advisory Council Members

Jinming Gao, Ph.D.
Elaine Dewey Sammons Distinguished Chair in Cancer
Harold C. Simmons Comprehensive Cancer Center
University of Texas Southwestern Medical Center

Scott Miller, Ph.D.
Irénée du Pont Professor of Chemistry
Chemistry
Yale University

Julie Price, Ph.D.
Professor and Investigator
Radiology and Biomedical Imaging
Harvard Medical School

Alfred George, M.D.
Magerstadt Professor and Chair
Pharmacology
Northwestern University

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University of Texas Southwestern Medical Center

Tonya Palermo, Ph.D.
Professor And Associate Director
Center for Child Health, Behavior and Development
University of Washington

Elizabeth Villa, Ph.D.
Assistant Professor
Section of Molecular Biology
Division of Biological Sciences
University of California, San Diego

Deanna Kroetz, Ph.D.
Jere E. Goyan Presidential Professor for the Advancement of Pharmacy
Bioengineering and Therapeutic Sciences
University of California, San Francisco

Mark Peifer, Ph.D.
Michael Hooker Distinguished Professor
Biology
University of North Carolina, Chapel Hill

Denise Wilfley, Ph.D.
Scott Rudolph University Professor
Psychiatry, Pediatrics, Psychological and Brain Sciences
Washington University at St. Louis

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Psychiatry, Pediatrics, Psychological and Brain Sciences
Washington University at St. Louis
Welcome...CSR Advisory Council Ad Hocs

Leopoldo Cabassa, Ph.D.
Associate Professor
Brown School of Social Work
Washington University, St Louis

Matthew Carpenter, Ph.D.
Professor
Department of Psychiatry and Behavioral Sciences
Medical University of South Carolina

Christine Hendon, Ph.D.
Associate Professor
Department of Electrical Engineering
Columbia University

Michelle Janslins, Ph.D.
Associate Professor
Department of Surgery, Cancer Control (SMD)
University of Rochester Medical Center

Narasimhan Rajaram, Ph.D.
Associate Professor
Department of Biomedical Engineering
University of Arkansas at Fayetteville
Scientific Leadership/Management Transitions [Since Sept 2020]

**Deputy Director**
Division of Receipt and Referral
B. Duane Price

**Assistant Director**
Division of Receipt and Referral
Marc Boulay

**IRG Chiefs**
- **Musculoskeletal, Oral and Skin Sciences**
  Chee Chew Lim
- **Oncology-Translational Clinical 1 (OTC 1)**
  Lambratu (Bree) Rahman Sesay

**Acting IRG Chiefs**
- Jacinta Bronte-Tinkew
- Gagan Pandya
- Jessica Smith

**CSR Training Coordinator (New SROs)**
Vanessa Boyce

**Retiring**
- IRG Chief
  Risk, Prevention and Health Behavior
  Weijia Ni
NIH’s Two-Stage Peer Review System

1. First Level of Review
   Study Section or SEP (Majority at CSR)
   - Evaluation of scientific merit

2. Second Level of Review
   Advisory Council (Institute/Center)
   - Recommendation for funding, based on scientific merit, programmatic priorities, administrative considerations
CSR’s Mission

To ensure that NIH grant applications receive fair, independent, expert, and timely **scientific** reviews - free from inappropriate influences - so NIH can fund the most promising research.
CSR’s Scope

- ~85,000 NIH applications
- ~65,000 Reviewed by CSR (76%)
- ~250 Scientific Review Officers
- >18,000 Distinct Reviewers
- RPGs: ~50,000 (85%)
- SBIRs/STTRs: ~7500 (96%)
- Fellowship: ~5500 (83%)

A Variety of Special Initiatives:
- HEAL
- INCLUDE
- BRAIN
- All-of-Us
- FIRST
- MIRA
- COMMON FUND HRHR
- RADX PREVAIL
- DSI AFRICA

And much more….
Impact of Covid-19 on Peer Review
R01 Submissions [May 2019 – Jan 2021 Council Rounds]
CSR Zoom Surveys – After Jun/Jul 2020, and Feb/Mar 2021

“Compared to your usual in-person meeting....”

**Personal Experience**
- Did you **contribute to discussion** more or less?
- Were you **confident voicing opinions**?
- Were others **responsive** to your feedback?
- Could you **clearly communicate your opinions**?
- Were you **comfortable voting outside the range**?
- How did your **attention span** compare?

**Impressions of the Meeting**
- Were the **discussions productive**?
- What was the level of **reviewer engagement**?
- How did **meeting management** compare?
- What was the **overall quality of review**?

[Scale for attention span: Much worse - Slightly worse - Same - Slightly better - Much better]
Post-Zoom Meeting Reviewer Surveys: Jun/Jul 2020 vs Feb/Mar 2021
No Significant Change

Personal Experience
(Zoom compared to in-person)

- Contributed to Discussion
- Confident Voicing Opinions
- Others Responsive to My Feedback
- Clearly Communicated Opinions
- Comfort Voting Outside Range
- Attention Span Lasted

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td>Contributed to Discussion</td>
<td></td>
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<tr>
<td>Confident Voicing Opinions</td>
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<tr>
<td>Others Responsive to My Feedback</td>
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<tr>
<td>Clearly Communicated Opinions</td>
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<tr>
<td>Comfort Voting Outside Range</td>
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<tr>
<td>Attention Span Lasted</td>
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</table>
Post-Zoom Meeting Reviewer Surveys: Jun/Jul 2020 vs Feb/Mar 2021
No Significant Change

**Impressions of Meeting**
(Zoom compared to in-person)

- Productive Discussion
- Reviewer Engagement
- Meeting Management
- Overall Quality

**Format Preference**
(Zoom compared to in-person)

- In-person
- Zoom/video
- No preference

---

**Percent**

- Much worse
- Slightly worse
- Same
- Slightly better
- Much better

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**Impressions of Meeting**

- **Productive Discussion**
  - 2020: 10%, 2021: 10%
  - 2020: 30%, 2021: 20%
  - 2020: 40%, 2021: 30%
  - 2020: 10%, 2021: 20%
  - 2020: 10%, 2021: 10%

- **Reviewer Engagement**
  - 2020: 10%, 2021: 10%
  - 2020: 30%, 2021: 20%
  - 2020: 40%, 2021: 30%
  - 2020: 10%, 2021: 20%
  - 2020: 10%, 2021: 10%

- **Meeting Management**
  - 2020: 10%, 2021: 10%
  - 2020: 30%, 2021: 20%
  - 2020: 40%, 2021: 30%
  - 2020: 10%, 2021: 20%
  - 2020: 10%, 2021: 10%

- **Overall Quality**
  - 2020: 10%, 2021: 10%
  - 2020: 30%, 2021: 20%
  - 2020: 40%, 2021: 30%
  - 2020: 10%, 2021: 20%
  - 2020: 10%, 2021: 10%
Score Distributions – No Significant Change
2020 Data

Number of Applications vs. Final Overall Impact Score for In Person and Zoom processes.
<table>
<thead>
<tr>
<th>Meeting Type</th>
<th>Standing Study Sections</th>
<th>All Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Person</td>
<td>Zoom</td>
</tr>
<tr>
<td>Council</td>
<td>107,477</td>
<td>111,713</td>
</tr>
<tr>
<td>N of scores</td>
<td>2.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>% of scores out of range</td>
<td>2.7%</td>
<td>2.7%</td>
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The Effect of COVID-19 on CSR’s Budget

$141M (FY20 allocation) < 0.4% of NIH’s $42B (FY20)

CSR savings: hotel contracts, airfare, reviewer travel, staff travel

CSR costs: more meeting days, Zoom licenses, IT security, equipment for 100% staff telework

Net CSR surplus: ~$22M
All returned to the NIH [Clinical Center, IT security]
Post-pandemic: Future of peer review meetings?

• **Balance** – fiscal, environmental, convenience, time-savings versus group cohesion, reviewer attention span, reviewer preference, networking opportunities, especially for junior faculty

• **Mix of virtual and in-person** (1-2x per year in-person)

• Continue to apply the **best practices for virtual formats** that we’ve been able to develop during this forced experiment.
NIH’s UNITE Initiative

NIH’s Commitment to Ending Structural Racism

- NIH is committed to instituting new ways to support diversity, equity, and inclusion, and identifying and dismantling any policies and practices that may harm our workforce and our science.
- NIH established the UNITE initiative to address structural racism in biomedical research with the goal of ending racial inequity.
- Primary goals of the initiative are:
  - Understanding stakeholder experiences through listening and learning
  - New research on health disparities, minority health, and health equities
  - Improving the NIH culture and structure for equity, inclusion and excellence
  - Transparency, communication, and accountability with our internal and external stakeholders
  - Extramural research ecosystem: changing policy, culture and structure to promote workforce diversity

nih.gov/ending-structural-racism
Two Examples of New NIH-wide Initiatives

**Facility Institutional Recruitment for Sustainable Transformation (FIRST)**

New Funding Opportunities Published

Program Snapshot

The NIH Common Fund’s **Facility Institutional Recruitment for Sustainable Transformation (FIRST)** program aims to enhance and maintain cultures of inclusive excellence in the biomedical research community. “Inclusive excellence” refers to cultures that establish and sustain scientific environments that cultivate and benefit from a full range of talent. NIH aims to facilitate institutions in their building a self-reinforcing community of scientists, through recruitment of a critical mass of early-career faculty who have a demonstrated commitment to inclusive excellence. The program also seeks to have a positive impact on faculty development, retention, progression, and eventual promotion, as well as develop inclusive environments that are sustainable.

Two new funding opportunities from the NIH Common Fund’s Transformative Health Disparities Research initiative

- Transformative Research to Address Health Disparities and Advance Health Equity at Minority Serving Institutions
- Transformative Research to Address Health Disparities and Advance Health Equity

Applications due by Friday, May 28, 2021
A Fair and Rigorous Evaluation of Scientific Merit Requires Equity, Diversity, and Inclusion in the Review Process

- Direct Reporting of Bias in Review
- Bias Awareness Training for Reviewers and Staff
- Diversifying Review Panels
- Blinded Reviews: Decouple Science from Investigator/Environment
- CSR’s Workforce Diversity

Review Matters

CSR’s Commitment to Advancing Equity, Diversity and Inclusion in Peer Review

Noni Byrnes
Director
March 3, 2021

On March 1, NIH Director Francis Collins announced NIH’s broad-based initiative, UNITE, to end structural racism and racial inequities in biomedical science. This is a recognition of the need for urgent, sustained effort on many fronts across the research enterprise. Including in all parts of the NIH’s extramural processes to change culture. While the NIH Institutes and Centers will examine their programmatic priorities and discretionary funding practices, here at CSR, we are committed to pushing ahead with efforts to protect the peer review process from the systemic biases that exist in all areas of the scientific community.

In the June 2020 Review Matters blog, I wrote about some of the steps that CSR is taking to address individual and systemic biases in peer review. Following that, in July 2020, we held three community listening sessions, in which we heard the rightful anger and the call for urgent and specific action around the persistent funding disparity for Black investigators. I shared the report and recommendations from those forums with NIH leadership, with the UNITE E group that is focused on extramural changes, as well as with our own CSR Advisory Council. Since then, I have held a number of individual and small group conversations with investigators, who shared their personal experiences of bias as an applicant or reviewer, which has helped us further refine the strategies we were already pursuing, as well as develop some new approaches. Below are a few of the actions we are taking:

- **Reporting:** Many of you asked for a way to report concerns regarding bias in the peer review process directly to CSR management. Our Associate Director for Diversity & Workforce Development, Dr. Gabriel Fosu, will serve as a reporting avenue for any concerns around fairness in review. Dr. Fosu reports directly to me and I will see all reports. Beginning on March 15, all CSR scientific review officers (SROs) and staff will provide this information in their email signature lines. To report concerns around fairness in review: G.Fosu_AssocDir@csr.nih.gov.

- **“Bias awareness in review” training for SROs, Reviewers, Chairs:** Despite a brief interruption due to an executive order that has since been rescinded, we are forging ahead with the development of an interactive training module on bias. It will include a range of nuanced case studies to raise awareness of potential biases and mitigation strategies and tools for bystanders. We plan to launch the training for all CSR reviewers, chairs and SROs in August 2021.
Direct Reporting Avenue for Extramural Community

Based on requests from community (at listening sessions and more)

• Direct Reporting of Bias in Review
• Bias Awareness Training for Reviewers and Staff
• Diversifying Reviewers
• Blinded Reviews: Decouple Science from Investigator/Environment
• CSR’s Workforce Diversity

For issues related to respectful interactions, bias or anything else that could affect the fairness of the review process, contact your SRO or the CSR Associate Director of Diversity & Workforce Development at G.Fosu_AssocDir@csr.nih.gov.

Gabriel Fosu, Ph.D.

• On every outgoing staff email
• On CSR’s web page
• On every study section page
Multi-media, Interactive Bias Training for Reviewers, SROs

Planned Launch: Fall 2021

- Direct Reporting of Bias in Review
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Current Situation

Two reviewers submit critiques questioning whether the research strategy and future research plans are compromised by the use of task that might be too difficult.

- Bias (including positive bias) awareness
- Case studies in review
- Mitigation and bystander strategies in review
CSR Advisory Council Working Group: Bias Awareness Training Module Development

CSR AC Members

Scott Miller, Ph.D.  
Yale University

Julie Price, Ph.D.  
Harvard Medical School

Narasimhan Rajaram, Ph.D.  
University of Arkansas at Fayetteville

Doug Andres, Ph.D.  
University of Kentucky

Carlos Crespo, Ph.D.  
Portland State University

Germán Rosas-Acosta, Ph.D.  
University of Texas at El Paso

Working Group Ad Hocs

Derek Applewhite, Ph.D.  
Reed College

Karine Gibbs, Ph.D.  
University of California, Berkeley

Steve Varga, Ph.D.  
University of Iowa

Markus Brauer, Ph.D.  
University of Wisconsin-Madison

Xuemei Huang, Ph.D.  
Pennsylvania State University

Rakale Quarells, Ph.D.  
Morehouse College

Elizabeth Cosgriff-Hernandez, Ph.D.  
University of Texas, Austin

NIH Staff

Hope Cummings, Ph.D.  
CSR

Kristin Kramer, Ph.D.  
CSR

Charlene Le Fauve, Ph.D.  
NIH Off. of Sci. Workforce Diversity

Tasmeen Weik, Ph.D.  
CSR

Michael Sesma, Ph.D.  
NIGMS
Diversifying Review Panels

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<th>%F</th>
<th>%URM</th>
<th>%B/AA</th>
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<tbody>
<tr>
<td>CSR Applicants</td>
<td>35.0%</td>
<td>8.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Study Section Members</td>
<td>43.0%</td>
<td>13.0%</td>
<td>4.3%</td>
</tr>
<tr>
<td>All Reviewers</td>
<td>38.5%</td>
<td>8.5%</td>
<td>2.5%</td>
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- Raising collective awareness, setting expectations, sharing panel-level data with management/staff, oversight
- Providing tools for SROs to find “lesser-known” qualified reviewers, building up database sources [Reviewer Finder]
- SRO training, esp. SRO-to-SRO sharing of best practices in broader recruitment strategies
Exploring Blinded Review Processes
Common Fund Transformative R01 Program

• Direct Reporting of Bias in Review
• Bias Awareness Training for Reviewers and Staff
• Diversifying Review Panels
• Blinded Reviews: Decouple Science from Investigator/Environment
• CSR’s Workforce Diversity

Identifiers provided (Investigator/Institution):
• Stage 1: Editorial Board selects top subset
• Stage 2: Subject matter experts assess
• Stage 3: Editorial Board gives preliminary scores, sets discussion order

Ongoing: Study Section Meeting April 2021, evaluation of process by external contractor
Decouple Science from Investigator/Environment

CSRAC Working Groups’ recommendations of decoupled “factors” open the door...

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**CSR’s Workforce Diversity**

- **Race/Ethnicity**
  - 56% White
  - 33% Asian
  - 8% Black
  - 11% Under-represented Minorities

- **Gender**
  - 50% men
  - 50% women

CSR SROs [Sept 2020]
Some Additional News
New Chartered Study Sections for NIGMS MIRA

Three new study sections have been chartered to begin this summer 2021

• **Maximizing Investigators’ Research Award – A Study Section (MRAA):** Genomics, molecular genetics, and prokaryotic cell biology

• **Maximizing Investigators’ Research Award – B Study Section (MRAB):** Biochemistry, chemical biology, chemistry, molecular biophysics and bioengineering

• **Maximizing Investigators’ Research Award – C Study Section (MRAC):** Cell biology and clinical/translational studies in NIGMS-supported areas (e.g., pharmacology, wound healing)
Continuation of ENQUIRE (Evaluating Panel Quality in Review)

Process Overview for Each Cluster of Study Sections

Cluster Formation
How? Determined by science, not management structure - 9-12 study sections in each cluster

External Scientific Evaluation Panel
Who? Scientifically broad, senior scientists provided with:
• current scientific guidelines
• sample abstracts & aims
• data on workload trends, bibliometric output, ESI submission and success rates
Asked: How well does the scope of the study sections align with the current state of the science?

Internal Process Evaluation Panel
Who? NIH extramural staff with broad perspective
• workload data
• scoring trends
• survey feedback from reviewers & program officers
• site-visit information on meeting function
• External Scientific Working Group’s report
Asked: Does the study section function in a way that supports optimal identification of high-impact science?

Approvals
• CSR Advisory Council
• NIH Office of the Director

Implementation by CSR
• Test practicality of new guidelines through mock application referral
• Reassignment of standing study section members to fit guidelines of new study sections
• Publicize new study sections to the community
• Monitor referral & adherence to new guidelines

Completed:
• Healthcare Delivery/Patient Outcomes (11)
• GI, Renal, Endocrine Systems (10)
• Cardiac, Vascular and Hematologic Sciences (8)
• Functional/Cognitive Neuroscience (11)

Ongoing:
• Basic Cellular/Molecular (16)
• Oncology and Cancer Biology (11)

Upcoming:
• Epidemiology and Population Sciences (10)
• Drug Design/Delivery (13)
Targeted Outreach

Webinars

NIH Grants 101 and Early Career Reviewer (ECR) Program Webinar

Hosted by the National Institutes of Health (NIH) Center for Scientific Review (CSR)

Wednesday April 14, 2021

2:00PM Eastern

Register for the webinar here.

Mock study sections

Mock study sections

SBIR outreach

Center for Scientific Review @CSRpeerreview · Mar 24

We’ll have SROs there to meet with people 1:1 - come with your questions!

Extramural Research @NIHgrants · Mar 24

New to the NIH small business grant programs? 🤷‍♀️

Make plans today to learn how to apply for seed funding to support your early-stage biomedical research and grow your small business at this free virtual conference on April 26-30. @nihseed sbir.nih.gov/resources/even...

Navigating the NIH & supporting faculty – for grants staff

HACU 35th Annual Conference

35 Years of Championing Hispanic Higher Education Success

October 30 - November 1, 2021

Gaylord Rockies Resort & Convention Center

Aurora, Colorado

Peer review basics & early career reviewer

AACPD 74TH ANNUAL MEETING

September 23-26, 2020: Live Virtual Meeting

AcademyHealth

13th Annual Conference on the Science of Dissemination and Implementation in Health
Improving the Fellowship Peer Review Process
Discussion