Department of Health and Human Services

National Institutes of Health

National Institute of Nursing Research

Minutes of the National Advisory Council for Nursing Research

September 13, 2022

The 108th meeting of the National Advisory Council for Nursing Research (NACNR) was convened on Tuesday, September 13, 2022, at 11:00 a.m. The open session was held by National Institutes of Health (NIH) videocast, and all observers, including members of the public, attended virtually. The open session adjourned at 3:11 p.m. The closed session of the meeting, which included consideration of grant applications, was convened on Tuesday, September 13, 2022, at 3:16 p.m. and continued until adjournment at 3:30 p.m. Dr. Shannon N. Zenk, Chair, NACNR, presided over both meeting sessions.

OPEN SESSION

I. CALL TO ORDER, OPENING REMARKS, AND COUNCIL PROCEDURES

Dr. Shannon N. Zenk, Director

National Institute of Nursing Research (NINR)

Dr. Zenk called the 108th meeting of the NACNR to order and welcomed all Council members, visitors, and staff. She noted that the open session of the meeting was being videocast live and will be archived on the NIH videocast website. Dr. Zenk welcomed two *ad hoc* Council members: Drs. Guadalupe Ayala and Betty Bekemeier. Dr. Ayala is a Professor at San Diego State University (SDSU) School of Public Health, Director of the Institute for Behavioral and Community Health, Director of the SDSU HealthLINK Endowment, and Co-Director of the SDSU HealthLINK Center for Transdisciplinary Health Disparities Research. Dr. Bekemeier is a Professor at the University of Washington (UW) School of Nursing and Director of the UW School of Public Health's Northwest Center for Public Health Practice. Dr. Zenk acknowledged the attendance at the open session of Colonel Young Yauger, Executive Director of the TriService Nursing Research Program, who has agreed to represent the Department of Defense as an *ex officio* NACNR Council member at future meetings.

Dr. Elizabeth Tarlov, Director, NINR Division of Extramural Science Programs (DESP), and Executive Secretary of NACNR, conducted a roll call of NACNR members and noted for the record that a quorum had been met.

Minutes of the Previous NACNR Meeting

Minutes of the May 24, 2022, NACNR meeting were distributed to Council members through the Electronic Council Book. A motion to accept these minutes was made, seconded, and unanimously approved. The approved minutes of each NACNR meeting become part of the Institute's official record and are posted on the NINR website (www.ninr.nih.gov).

Dates of Future Council Meetings

Dates for future Council meetings were included in the NIH Electronic Council Book. The next Council meeting is scheduled for January 31, 2023 (format to be determined).

Conflict of Interest and Confidentiality Statement

Dr. Tarlov noted that the conflict of interest and confidentiality statements were included in the Council materials; reminded Council members that as special government employees, they may not engage in lobbying activities; and noted that she would provide specific instructions about conflict of interest and confidentiality at the beginning of the Closed Session in the afternoon.

II. REPORT OF THE NINR DIRECTOR

Dr. Shannon N. Zenk, Director, NINR

The Director's report focused on activities and news from NIH and NINR since the May 2022 Council meeting. Highlights of Dr. Zenk's report included:

2022–2026 Strategic Plan—NINR's latest strategic plan was released just before the May Council meeting. Since then, Dr. Zenk has shared the Institute's strategic direction with many nursing and other organizations. Now the focus is on aligning the Institute's science and training programs with the plan. This is being accomplished through development of new grant concepts, release of new Funding Opportunity Announcements (FOAs), conceptualization of new training programs, establishment of processes for identification of strategic imperatives, and identification of new partners within and outside of NIH.

Funding Opportunities—NINR has posted two new FOAs—PAR-22-230 and PAR-22-231—in support of NINR's research interest in optimizing health and achieving health equity under the new strategic plan. These FOAs invite applications for research projects rooted in nursing's holistic, contextualized approach to address pressing and persistent health challenges and that use innovative and rigorous study designs to inform practice and policy, with an emphasis on solutions.

NINR Division of Extramural Science Programs— Dr. Bill Duval has joined NINR as DESP Deputy Director, bringing his experience and expertise in rigor and reproducibility, biomedical workforce development, and internal systems enhancements.

Since the May Council meeting, NINR has signed on to 25 funding opportunities and notices. These include RFA-DK-22-014/015**,** addressing structural racism to reduce health disparities among individuals living with kidney disease; RFA-HD-23-035, 036, and 037, addressing maternal morbidity and mortality; and Small Business Innovation Research and Technology Transfer grants (PA-22-176, 177, 178, 179). In addition, NINR signed on to several efforts related to the NIH Helping End Addiction Long-term® (HEAL) Initiative to speed scientific solutions to stem the national opioid public health crisis. In July, NINR and other Institutes released a Notice of Intent to Publish a FOA for HEAL® (NOT-NR-22-015**)** that aims to accelerate implementation of effective non-opioid interventions for chronic pain management in rural and remote populations; the initiative will require investigators to partner with rural healthcare systems or organizations during planning and implementation phases. Furthermore, NINR has signed on to Notices of Special Interest (NOSIs) in research on hunger, food, and nutrition insecurity; addressing violence to improve health outcomes; screening services; health of sexual and gender minority populations; and Alzheimer's disease.

Additional information is available on the NINR funding opportunities web page and grants.nih.gov.

NINR Division of Intramural Research—Dr. Sabrina Wong has joined NINR as Scientific Director of the Division of Intramural Research (DIR). She has a longstanding commitment to health and healthcare inequities, particularly in primary healthcare, and has focused on identifying, developing, and using novel information sources to improve health and quality of life of individuals, families, and communities.

In June, the Phase I Open-Label Dose-Escalation trial was completed. This trial was a collaboration between NINR and the National Institute of Neurological Disorders and Stroke (NINDS) that tested safety and tolerability of a calcium channel stabilizer designed for treatment of patients with RYR1-related myopathy. The trial demonstrated that the medication was well tolerated in this patient population.

NINR is piloting the use of SciNote electronic lab notebooks for lab activities to inform selection of the best platform toward fully digitizing all federal records.

Recent DIR research publications include Designing Immersive Virtual Reality Environments for Supporting Patients at Home (P. Brennan), A Transcultural Perspective of Systemic Lupus Erythematosus (SLE)-Related Fatigue (L. Saligan), and "Unmute Us: The Power of Diverse Voices in Nursing & Leadership" in *The Power of Ten: A Conversational Approach to Tackling the Top Ten Health Equity Priorities in Nursing* (in press) (P. Joseph).

Dr. Paule Joseph, who holds a joint appointment in NINR DIR and the National Institute on Alcohol Abuse and Alcoholism, recently received several awards: the National Association of Hispanic Nurses Janie Menchaca Wilson Leadership Award for her contributions to the Association and the Hispanic community; the inaugural American Academy of Nursing Fellow at the National Academy of Medicine; and the Brilliant New Investigator award from the Council for the Advancement of Nursing Science.

Diversity, Equity, Inclusion, and Accessibility (DEIA)—Dr. Zenk shared updates on NINR activities in the essential DEIA priority area. In August, Dr. Mia Rochelle Lowden joined the Institute as Chief Scientific Diversity Officer. She is a leader in multiple NIH-wide groups focused on DEIA, including the NIH UNITE Initiative for Ending Structural Racism, NIH Committee on Women of Color in Biomedical Careers, Special Populations Research Forum, and Eight Changes for Racial Equity (8CRE) at NIH.

NINR signed on to PAR-22-181 that supports new and at-risk investigators from diverse backgrounds, including groups underrepresented in the health-related sciences.

In August, Dr. Zenk and Acting Deputy Director Dr. John Grason met with NINR-funded diversity supplement scholars at the NIH Diversity Supplement Professional Development and Networking Workshop. Dr. Zenk also met with faculty scholars in the NIH Distinguished Scholars Program, which was designed to promote inclusive excellence in the NIH Intramural Research Program by recruiting an annual cohort of principal investigators (PIs) who have demonstrated commitment to promoting diversity and inclusion.

The NINR Racial and Ethnic Equity Plan (REEP) has been approved. This internal document is required for all NIH Institutes, Centers, and Offices (ICOs) and provides a framework for addressing potential racial and ethnic disparities and enhancing diversity of the NINR workforce.

NINR Partnerships and Collaborations—Dr. Zenk provided an update on partnerships and collaborations in which NINR engages across NIH, the Department of Health and Human Services (DHHS), and beyond. The recently launched NIH Common Fund Community Partnerships to Advance Science for Society (ComPASS) Program aims to catalyze, develop, and assess community-led health equity structural interventions that leverage multisectoral partnerships to advance health equity and develop a new health equity research model for research in this area. NINR is a founding co-chair and will serve as the managing Institute for the coordination center. Several notices of funding opportunities (NOT-RM-23-001 and NOT-RM-23-002) have been published. Recently, the Common Fund released a FOA (NOT-22-007) soliciting applications from community organizations in support of the Community-Led, Health Equity Structural Intervention Initiative (CHESI).

NINR is serving on the executive committee for the NIH-wide Climate Change and Health Initiative, which supports research to understand the potential health benefits of actions to prevent, mitigate, and adapt to climate change. One of the Initiative's first awards was a supplement to an NINR parent grant.

Additional NINR partnerships include the NIH-wide Social Determinants of Health (SDOH) Research Coordinating Committee, SDOH Interagency Policy Committee, and DHHS SDOH Workgroup; Implementing a Maternal health and Pregnancy Outcomes Vision for Everyone (IMPROVE); Social, Behavioral, and Economic Health Impacts of COVID-19; Basic-Behavioral and Social Sciences Research, Transformative Health Disparities Research Program; and DHHS Initiative to Strengthen Primary Health Care.

NINR News and Announcements—NINR is reviewing and restructuring all events, outreach activities, and training to align with the new strategic plan. For example, NINR is hosting a series of webinars focused on each of the Institute's strategic plan research lenses. Led by science, practice, and policy experts, the series is designed to inform nurse scientists of possibilities for research under the new lenses and provide a forum for discussion on how research can inform policy. In July, Drs. Vincent Guilamo-Ramos and Brian Castrucci presented on research priorities and practice and policy implications of nursing research through the social determinants of health lens (available at https://www.youtube.com/watch?v=X5CLaakozg8). On October 11, Dr. Chandra Ford, Professor and Founding Director of the Center for the Study of Racism, Social Justice & Health at the University of California, Los Angeles, Fielding School of Public Health, and Dr. Suzanne Miyamoto, Chief Executive Officer of the American Academy of Nursing, will discuss research priorities and the practice and policy implications of nursing research through the health equity lens. As NINR finalizes plans for future events, the Institute will reach out to long-term and potential new partners to ensure engagement of broad and diverse groups across the nursing research community.

Several new staff have joined NINR in addition to Drs. Duval, Wong, and Lowden. These include NINR Chief Information Officer Mark Schaff; Cheryl Howard, Assistant to Dr. Tarlov; and Carielle Joy V. Rio, a Visiting Fellow, Intramural Research Symptom Biology Unit. Dr. Zenk acknowledged Helen Johnson and Nikhil Pradeep, Summer Intramural Research Training Awardees who trained in the Advanced Visualization Branch.

NINR is looking for additional nursing scientists to join the team. Positions include a Health Science Administrator / Program Officer (PO). POs help shape the NINR research portfolio to support the strongest, highest-impact science and stimulate, plan, direct, and evaluate activities for a portfolio of research projects, research programs, and other grants and awards, cooperative agreements, and contracts. Job announcements are posted on jobs.NIH.gov.

Dr. Zenk and National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Director Dr. Griffin Rodgers recorded spots for the NIDDK Healthy Moments radio broadcast, a weekly series that provides health education in plain language and airs during popular morning talk shows in DC, Maryland, Texas, Georgia, and Ohio. In these spots, Dr. Zenk discussed the role of nurses in care teams, nursing at the intersection of community health challenges, nursing across the lifespan, and unlocking equity through nursing research.

NIH News and Announcements—President Biden has appointed Dr. Monica Bertagnolli as the 16th and first female Director of the National Cancer Institute; she is a Professor of Surgery at Harvard Medical School, a surgeon at Brigham and Women's Hospital, and a member of the Gastrointestinal Cancer and Sarcoma Disease Centers at Dana-Farber Cancer Institute. President Biden just announced his intent to appoint biologist and former government scientist Dr. Renee Wegrzyn as the first Director of the newly established Advanced Research Projects Agency for Health (ARPA-H), which aims to improve the U.S. government's ability to speed biomedical and health research advances. Dr. Anthony Fauci has announced his plans to step down as Director of the National Institute of Allergy and Infectious Diseases (NIAID) at the end of 2022.

Fiscal Year 2022 Budget—NIH and NINR budgets for Fiscal Year (FY) 2022 were finalized in March. NINR will share information about the FY 2023 budget when it becomes available.

Discussion

A Council member asked how information about the ComPASS and HEAL® funding opportunities will be disseminated to community-based organizations. Dr. Zenk noted that feedback obtained from listening sessions with potential partners had informed the design of ComPASS; for example, time for planning at the beginning, relationship building for multisectoral partnerships, and building of sustainability. Having the community organization lead the study and manage resources is a dramatic shift for NIH. Dr. Shalanda Bynum encouraged Council members to suggest networks and platforms that can be tapped for outreach to community groups; the goal is to cast a wide net.

III. REPORT FROM COUNCIL WORKGROUPS—Dr. Dionne Godette-Greer, Program Director, DESP, NINR; Dr. Christopher Lee, NACNR Member, Professor and Associate Dean for Research, Boston College, William F. Connell School of Nursing; Dr. Cindy Munro, NACNR Member, Dean and Professor, University of Miami School of Nursing and Health Studies

Recognizing that nursing science and NINR need to increase inclusion in NINR-funded research of populations that bear a disproportionate burden of disease and risk, and support a diverse workforce, two working groups were formed in January 2022. Drs. Munro (Council) and Godette-Greer (NINR) co-chair the Working Group on Strategies to Strengthen Inclusion in NINR-Supported Studies (IWG). Drs. Lee (Council) and Bynum (NINR) co-chair the Working Group on Diversity in the NINR-Supported Scientific

Workforce (DWG). For the past 8 months, these two groups have engaged in thoughtful, robust discussions and prepared final recommendations for presentation to the Council.

Dr. Godette-Greer introduced the principle guiding the work of the IWG and DWG: all NINR-supported research should advance equity by removing structural barriers from research, cultivating diversity in perspectives and ideas, and fostering inclusion and accessibility in designing, conducting, and participating in research. Working Group discussions were framed by considering the scope of the problem (the why), actionable strategies to address barriers to inclusion and diversity (the what), and implementation approaches to advance workforce diversity and participant inclusion in NINR-supported studies (the how).

Dr. Munro presented on behalf of the IWG, which was charged with reviewing participant inclusion in NINR-supported studies and considering factors that may affect it—PI and research team expertise, research topic, study design, inclusion and exclusion criteria, recruitment strategies, NINR policies and practices—and developing actionable recommendations for NINR. Inclusion-related legislation and policies include the NIH Revitalization Act of 1993; the 21st Century CURES Act; and the 2019 policy on inclusion across the lifespan. These policies require inclusion of women, minorities, and individuals of all ages in research and reporting of enrollment and analyses by sex/gender, race, and ethnicity. The IWG reviewed data on diversity and inclusion of NINR research participants compared with NIH; who is conducting research supported by NINR; NINR support of health disparities, minority health and/or rural health studies; active funding opportunity collaborations with other ICs; and shared published resources on participant inclusion in health research. In addition, the IWG considered new inclusion table requirements for *Journal of the American Medical Association (JAMA)* publications.

Dr. Munro presented the following recommendations from the IWG:

Recommendation A: Promote engagement with underrepresented populations.

NINR must maximize inclusion of populations underrepresented in biomedical research to promote translation, implementation, and dissemination in NINR-supported research.

Context

- Investigators often fail to focus their research on topics that are important to the community or that meet community needs (i.e., individual, geographic, organizational, racial/ethnic, etc.).
- NINR studies might not allow investigators sufficient time to engage the diverse communities that they aim to include in their research.

Strategies

- NINR should use phased funding opportunities to allow investigators opportunities to incorporate an engagement phase in their research.

- NINR can partner with other NIH ICOs to develop and implement trainings and webinars on the benefits of research participation and programs designed to address special issues related to inclusion of diverse populations.
- NINR should create a category in the funding opportunity or application that allows the applicant to identify a community-based co-PI.
- The FOAs should require a recruitment plan that includes a mid-point status check at which point grantees restructure the plan if the initial strategy does not produce adequate recruitment.

Recommendation B: Incentivize inclusion through responsiveness to funding initiatives and scientific review.

NINR should prioritize investigator efforts to include populations often not represented in NINR-supported research—through investigator training opportunities, funding opportunity responsiveness, and application review.

Context

- NIH policies that serve as guardrails for inclusion do not include requirements for investigators to provide scientific rationale for inclusion/exclusion of potential participant groups.
- Guardrail policies do not require inclusion of a comparison group.
- Diverse participant inclusion in studies may be more successful when a member of the investigator team is from the target community.
- Investigators are required to propose sub-group analyses, but the requirement is often not explicitly scored in review. There is no clear policy for tracking this after award.

Strategies

- NINR should develop and execute applicant webinars that provide potential applicants with specific information about IC expectations for scorable inclusion criteria that are scientifically relevant.
- NINR FOAs should encourage a diverse investigative team (e.g., members of the target community, training opportunities for researchers from diverse backgrounds, MPI/Co-PIs from diverse backgrounds) as a responsiveness criterion where scientifically relevant. NINR should require diverse study participant inclusion as a responsiveness criterion on funding opportunities where scientifically relevant. NINR should partner with CSR [NIH Center for Scientific Review] to pilot additional review criteria that make inclusion of diverse study participants scoreable.

Recommendation C: Improve the health of underrepresented populations included in NINR studies through training and education on translation, implementation, and dissemination.

NINR should promote rigorous study designs that incorporate engagement, inclusion, and retention of participants from underrepresented, understudied, or small population groups.

Context

- Health equity work often involves research with populations that are small.

- These population groups are often overlooked because they are small and geographically dispersed.
- When small population groups are recruited, NINR must encourage investigators to use methodologically innovative solutions to the challenges in research design and analytics so that meaningful inferences can be made.

Strategies

- NINR should partner with other NIH ICOs and other funding agencies to support initiatives that encourage the development of innovative research methods that are applicable to studies of underrepresented and understudied populations (especially small subpopulations). NINR should provide training for potential PIs with topics such as engagement, inclusion, and retention of study participants from small populations; what constitutes a small sample; research design and analytic considerations; and evaluation of intervention studies with small samples.

Dr. Lee presented on behalf of the DWG, which was charged with advising NACNR on effective strategies to enhance diversity of the NINR-supported nursing science workforce and providing recommendations for improving success rates of groups underrepresented nationally in biomedical and health research who apply for NINR grant and training funding. The DWG developed 16 recommendations supported by 53 proposed strategies under 9 focus areas.

Dr. Lee presented the following recommendations from the DWG:

<u>Focus Area 1</u>: Increase awareness of NINR research lenses, especially those focused on health equity.

Context

- There is an enduring perception that NINR does not support health equity and/or that its research focal areas do not resonate with a diverse workforce.

Recommendation A: Broadcast NINR's new Strategic Plan and research lenses across multiple communication channels.

Strategies

- Use multiple strategies to announce NINR's research lenses, including local and state public broadcasting and social media.
- Highlight research activities across each Research Lens through promotional videos and/or vignettes that highlight diverse investigators.

Recommendation B: Create funding and training opportunities that increase awareness of the importance of health equity research to NINR's mission.

Strategies

- Develop notices of special interest (NOSIs) that highlight NINR's focus on achieving health equity.
- Create PAs that address health equity to promote awareness on its scope as well as NINR's commitment to addressing health equity.

- Provide specific examples of funded studies that represent the broad scope of health equity research, are synchronous with NINR's Strategic Plan, and are led by investigators from diverse backgrounds.
- Commit to actively fund health equity research.

<u>Focus Area 2</u>: Increase awareness of nursing science.

Context

- Nursing may not be viewed as a research career trajectory and underrepresented students may be unaware of nursing science careers.

Recommendation C: Promote nursing science as a career through partnerships and collaborations.

Strategies

- Partner with foundations and professional organizations (e.g., the National Coalition of Ethnic and Minority Nursing Association among many others) that support racial/ethnic underrepresented groups.
- Develop partnerships with Schools of Nursing and other academic institutions to create science pathway programs and student visits at NIH.
- Create a Speaker's Roundtable on the role of the nurse scientist that includes NINR-funded investigators from diverse backgrounds.

Recommendation D: Promote nursing science as a career through culturally and linguistically appropriate multimedia communications and other technology-driven channels.

Strategies

- Create and distribute flyers, bulletins, and announcements to academic, community, and industry organizations.
- Engage NACNR members and other NINR investigators from diverse backgrounds in multimedia imaging of nursing science.
- Include families in outreach efforts to broaden their understanding of nursing science as a valued career trajectory that is advantageous and lucrative for all students, including high-performing students, families, and communities in addition to potential nurse scientists.

Recommendation E: Promote nursing science as a career through funding.

Strategies

- Fund research supplements that include a stipend and living expenses for diverse undergraduate students to join a research team.
- Fund research supplements for P grants that include a stipend, living expenses, and travel for undergraduate students from minority-serving institutions (MSIs) to attend an intensive summer research experience at a host institution.
- Direct funding opportunities specific to nursing science to academic faculty in both minority-serving institutions and other institutions.

Focus Area 3: Expand the underrepresented nursing science applicant pool.

Context

- At the institutional level, there is insufficient proactivity and accountability to promote diversity in the research workforce.
- More direct support is needed to expand the nursing science applicant pool, especially investigators from racial/ethnic underrepresented groups.

Recommendation F: Partner with minority-serving institutions and organizations as well as NINR-funded investigators to promote nursing science.

Strategies

- Identify minority-serving institutions that offer science tracts and engage with them through outreach and in-person visits from NINR leadership to promote nursing science.
- Partner to develop resources to help future applicants from diverse backgrounds discern between terminal degrees of the practice versus terminal degrees of the discipline.
- Provide tuition support to students from diverse backgrounds seeking to become nurse scientists.

Focus Area 4: Enhance the structure of research grants.

Context

- Existing mechanisms do not foster durability and sustainability for underresourced minority serving institutions.
- Grant funding cycles are too short, causing unrealistic expectations for success.
- Current mechanisms favor R1 institutions and/or those with existing collaborative arrangements.

Recommendation G: Ensure adequate timelines between funding opportunity announcements and due dates to promote applications from investigators at MSIs.

Strategies

- Ensure that timelines are adequate from proposal release to submission deadline.
- Ensure that timelines provide longer lead time for FOAs that include community engagement.
- Provide training and workshops on upcoming grants well in advance of the funding opportunity deadline.

Recommendation H: Create new funding mechanisms to support underresourced institutions and underrepresented investigators.

Strategies

- Pilot a new tiered grant mechanism in which the first 4-5 year phase focuses on building capacity and the second 4-5 year phase focuses on developing the science.
- Invite reviewers from MSIs and organizations to provide input on grant mechanisms and review processes.

Focus Area 5: Leverage diversity initiatives.

Context

- NINR does not sufficiently leverage diversity initiatives that other Institutes participate in and has not developed diversity-specific funding opportunities.

Recommendation I: Champion new diversity initiatives aligned with the new NINR research lenses.

Strategies

- Identify three best practices in diversity and pilot these at NINR.
- Take part in existing initiatives that aim to support diverse scientists.

Recommendation J: Conduct ongoing evaluation of NINR diversity initiatives.

Strategies

- Develop a workgroup that includes representation from MSIs to evaluate the successes of diversity initiatives.
- Develop an evaluation tool to measure the success of each diversity initiative.
- Develop benchmarks and track metrics for guiding future decisions.

Focus Area 6: Ensure sufficient diversity in training programs.

Context

- Training programs may currently perpetuate disparities by favoring grantees from resourced institutions.
- Underresourced institutions may lack the necessary research infrastructure and capacity to be competitive for training awards, especially Institutional National Research Service Awards.

Recommendation K: Enhance the T32 program to support a balanced portfolio that adequately represents underrepresented racial and ethnic minorities.

Strategies

- Dedicate one T32 program to a training program for an underresourced MSI and reallocate a training slot to an external and experienced mentor to provide support for the first 5-year cycle.
- Partner with an MSI to fund a T32 that is focused entirely on underrepresented trainees and provide sufficient funding for protected time for faculty at MSIs.
- Develop a new funding mechanism to help MSIs prepare to be competitive in the T32 stream (e.g., preparation for T32 readiness mechanism).
- Invite reviewers from MSIs and organizations to participate in the grant review process and to inform ongoing support of training initiatives.
- Create a stepped approach to training program to enhance the building of research programs within non-R1 MSIs.

Focus Area 7: Enhance mentorship for underrepresented scientists.

Context

- There is a lack of strong mentorship that disadvantages racial/ethnic underrepresented scientists and disconnects them from the competitive grant process.

Recommendation L: Incentivize effective mentorship.

Strategies

- Provide opportunities for mentorships through a rotation of training at NINR.
- Develop new mechanisms that support mentorship from institutions beyond investigator's parent institution.
- Mentor MSI research staff on NINR grant submission policies and procedures.
- Fund sponsor effort on Fs, Ks, and Ts.
- Partner with four regional research societies to conduct grant writing bootcamps for MSIs and non R1 institutions with diverse faculty. Fund these societies to perform mock reviews with full-NIH-level critique and provide guidance for strengthening applications.
- Provide annual training for researchers who are new to NIH/NINR.

Focus Area 8: Mitigate bias in the grant peer review process.

Context

- There is a lack of diversity across both scientific discipline and demographic characteristics on review panels.
- Reviewer biases impact the review process.

Recommendation M: Partner with the NIH Center for Scientific Review (CSR) to diversify study sections.

Strategies

- Advocate that CSR review and evaluate bias in the review of applications from MSIs and investigators from diverse backgrounds.
- Advocate that CSR create a transparent system for how individuals are invited to serve on review panels and to examine the diversity of panels.
- Advocate for the evaluation of a random sample of reviews after completion of each review cycle to rigorously assess for bias and to provide empirical data needed to inform intervention.

Recommendation N: Provide training on diversity and bias in the grant review process.

Strategies

- Train reviewers and SROs [Scientific Review Officers] in how implicit and explicit biases can affect the review process and scientific rigor.

- Lead by example through diversity and bias training of NRRC [NINR Initial Review Group] membership.
- Invite reviewers from MSIs and organizations to participate in the development of training, evaluation, and other initiatives to promote diversity in the review process.
- Add a diversity officer to the scientific review panels and/or Council.
- Fund reviewers who have experience conducting health equity research to help train existing reviewers.

Focus Area 9: Optimize experiences with NINR Program Directors.

Context

- There are numerous strengths of existing NINR programs and resources that can be built upon to optimize diverse investigator interactions with NINR Program Officers and help diversify the NINR-supported workforce.

Recommendation O: Develop tools and/or resources to guide interactions between Program Directors and principal investigators from diverse racial and ethnic backgrounds during the application submission, pre-award, and post-award phases.

Strategies

- Create an assistant navigator role for grant inquiries.
- Develop guides and FAQs on the role of the Program Officer, what investigators can expect in their interactions with Program Officers, and/or how to maximize the value of meetings with Program Officers. Ensure that these tools are developed using an algorithm to help guide investigators from diverse backgrounds through the system based on their needs.
- Provide a timely and efficient call-back mechanism.

Recommendation P: Provide guidance to Program Directors to equitably support grant applicants and awardees.

Strategies

- Provide training for Program Officers to help navigate investigators to alternate Institutes if there is poor fit with NINR.
- Provide training for Program Officers to support new and early-stage investigators in framing their applications to synchronize with NINR Research Lenses and Guiding Principles.
- Provide training for Program Officers on delivering equitable support (i.e., the diverse settings in which applicants are based, strategies to move forward in the application process after rejection).

Next steps will include incorporating Council feedback, finalizing the recommendations, and submitting a final report of recommendations.

Discussion

Council members were enthusiastic and hopeful about the recommendations and proposed strategies presented and described them as bold and innovative. There was discussion around tracking outcomes, which Drs. Lee and Munro agreed will be critical. Both groups had considered metrics. The IWG focused on what can be accomplished in 6 to 12 months versus the next 2 years. NINR can institute some of the recommendations on its own, and others require working with other ICOs and funding agencies. The DWG focused on NINR's leadership role as a champion, advocate, and partner.

IV. CLIMATE CHANGE AND HEALTH INITIATIVE STRATEGIC FRAMEWORK—Dr. Gwen Collman, Director, Office of Scientific Coordination, Planning, and Evaluation, National Institute of Environmental Health Sciences (NIEHS)

Dr. Collman presented an overview of the NIH Climate Change and Health (CCH) Initiative. She highlighted recent severe weather events and disasters (e.g., severe drought, locusts, floods, wildfires, hurricanes, and rising temperatures) across the United States and the world. These events have cost billions of dollars in terms of their impact on the economy, health outcomes, and environmental effects. Underresourced and marginalized populations at most risk for exposure to climate-related health threats include children, older adults, communities of color, and low-income communities.

Biden Administration Executive Orders in 2021 and 2022 on climate change and health equity provided the impetus for enhanced focus on climate change across all federal agencies, and the President's budget targeted NIEHS as a lead agency to address these concerns. The Inflation Reduction Bill included unprecedented funding for climate change-related infrastructure projects and created an Office of Climate Change and Health Equity in DHHS. NIH developed a strategic framework for the Initiative, informed by a request for information (RFI) from the extramural community on priority areas related to climate change and health; a portfolio analysis of NIH CCH research; a landscape report on federal and international CCH research funding; and an ICO data call of potentially relevant NIH programs. The Initiative will generate opportunities for new and sustained engagement with policymakers, industry and technology leaders, diverse communities, and other stakeholders, leading to collaborative and transformative science focused on health effects research, health equity, intervention science, and training and capacity building.

The work on climate change and health equity is keenly important to NINR and the nursing community. The initiative is interested in how people with disabilities will be able to thrive in the face of climate change, individuals in employment with outdoor exposures, people with chronic disease whose care may be interrupted, and health resources and care delivery in the face of climate threats across the lifespan. Direct climate change effects on physical and mental health include heat-related illness; respiratory and heart disease; food-, water-, and vector-borne diseases; and maternal and birth outcomes. Indirect effects include chemical releases into the

environment; changes in air, water, and food quality and quantity; population displacement; disruption of infrastructure and supply chain; and economic impacts.

The CCH Initiative governance structure includes an executive committee (EC) comprising NIEHS, NINR, the Fogarty International Center, National Institute on Minority Health and Health Disparities (NIMHD), National Institute of Mental Health (NIMH), Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), and National Heart, Lung, and Blood Institute (NHLBI); a steering committee comprising representatives from each EC IC as well as the NIAID; and the Climate Change and Health Working Group made up of 150 members from 22 ICOs.

The Initiative aims to reduce health threats across the lifespan and build health resilience in individuals, communities, and nations around the world, especially among those at highest risk. Objectives include identifying risks and optimizing benefits to the health of individuals, communities, and populations from actions to mitigate and adapt to climate change; developing research infrastructure and workforce across biomedical disciplines to enable generation of timely, relevant knowledge; leveraging partnerships to achieve impactful results; and innovating across the research translation continuum to ensure findings are credible, accessible, and actionable for achieving these goals. The Initiative's vision emphasizes addressing the climate crisis with urgency, foresight, innovation, and collaborative spirit; strengthening capacity in the U.S. and abroad to promote the best science and most impactful interventions with emphasis on health equity and community-engaged research; and developing a sustainable model to support a pipeline of needed health researchers and research and promote collaborations with other federal agencies and research organizations. Combined, these efforts will empower transdisciplinary solutions toward advancing human health in a rapidly changing world. Core elements include health effect research, health equity, intervention research, and training and capacity building achieved through partnerships across nine areas of science.

Although the hoped-for $100 million allocation was not received, the Initiative is moving ahead with funding announcements supported by contributions from the budgets of various ICOs. These include NOT-ES-22-006, a NOSI on Climate Change and Health (signed by 16 ICOs, including NINR); NOT-ES-22-009 and NOT-ES-22-010, NOSIs on innovative technologies for research on climate change and human health (Small Business Technology Transfer [STTR] and Small Business Innovation Research [SBIR], respectively); and RFA-ES-22-003, a U24 award to support a research coordinating center for the Climate Change and Health Community of Practice Research Coordinating Center grant to build a community of practice (10 ICs, including NINR). In addition, NHLBI is leading a Community Engagement Alliance for Climate Change and Health (ACE-CCH) that builds on the NIH community engagement program to address COVID-19 (CEAL), aiming to promote community-engaged research partnerships with academic and translational partners, and focusing on the most vulnerable local populations. NINR and seven other ICOs have signed on to the Alliance. Administrative

supplements totaling nearly $1.9 million have been awarded to NIH grantees to incorporate CCH issues into their current work; the supplements are aimed at building capacity across discipline areas.

The recently launched Climate and Health Scholars Program is a residency program designed to bring established scientists with research records in climate and health from academia, non-government organizations, and other research organizations to share their knowledge with NIH toward building NIH capacity in CCH research. Between November 2022 and September 2023, scholars will present their research to many audiences across NIH via in-person, virtual, and hybrid lectures on methodologies and approaches to study relevant questions on a flexible schedule; engage with intramural and extramural research programs; provide small training sessions; lead journal clubs; and work on state-of-the-science reviews and white papers with NIH staff.

Dr. Collman outlined recent CCH research projects. An NINR-supported scientist received a supplement to build on the BRief intervention to Evaluate Asthma THErapy (BREATHE) program (1R01 R019275-01A1), an intervention to increase understanding of the impact of poor indoor air quality on uncontrolled asthma in low-income black adults in New York City. Black adults have the highest morbidity and mortality from asthma compared with other populations in this area.

Following Hurricane Maria in Puerto Rico, an NIMHD-funded study found that adults have more unhealthy behaviors and chronic conditions than do children. Being less prepared was associated with worse health and higher odds of developing a new, noncommunicable disease after the storm. This work led to a new FOA (PA-20-172): Long-Term Effects of Disasters on Health Care Systems Serving Health Disparity Populations.

Two specific areas in need of further research were highlighted: children's health and healthcare systems. Children's health research is needed to understand how factors such as economic status, diet, living situation, geographic location, and stage of development can impact exposure to health threats due to climate change in the U.S. and internationally. Research on healthcare systems is needed to understand how climate change impacts the healthcare workforce and systems; access to healthcare services; and existing inequities in healthcare services, access, and quality. There is a need to increase climate and health literacy among nurses, community health workers, and other healthcare professionals and map systems that provide services to those under chronic medical treatment (e.g., dialysis, chemotherapy, prenatal care) and assistance for people with disabilities.

The NIEHS Climate Change and Health Literature Portal is an integrated, curated bibliographic database of global peer-reviewed research and gray literature on the science of climate impacts on human health.

Discussion

Dr. Fitzpatrick facilitated the discussion and presented some comments on behalf of Dr. Lewin on the role of NINR in the CCH arena. As first responders, nurses have an intimate knowledge of the needs of affected communities and play an indispensable role in mitigating these effects. NINR is well poised to take a lead in addressing the goals of the Initiative, which align well with NINR's mission, availability to receive and support

NIH Climate and Health Scholars, and capability for providing transdisciplinary solutions. For example, NINR can bridge the gap between patient needs and engineers developing wearable, battery-operated, miniaturized monitoring or treatment devices for use by senior patients or children. Dr. Fitzpatrick indicated that she was struck by the Institute's alignment with NINR's strategic plan, especially related to diversity, equity, and inclusion.

Council members commented on the link between CCH and health equity; crosstalk between traditional intervention researchers, community-based researchers, and environmental health experts; and the need to incorporate CCH into training.

Dr. Collman described the work NIEHS is doing to build infrastructure for academic and community partnerships around environmental justice issues, SDOH, and now CCH. NIH is taking an all-NIH approach to bring everyone to the table and ensuring that the work goes beyond documenting toward action across different sectors. In addition, the support is strongly focused on investigator-initiated research.

Dr. Fitzpatrick pointed out that a focus on climate change as opposed to pollution is a novel opportunity. Dr. Collman noted that there has been interest in climate change for over 10 years; support from the Biden Administration is bringing this interest to the fore.

V. NINR COVID-19 RESEARCH ACTIVITIES—Dr. John Grason, Acting Deputy Director, NINR

Dr. Grason presented highlights of NINR engagement in the COVID-19 response and research. NIH moved quickly to develop new, fast-turnaround grant programs to target every facet of pandemic response. Many of those early efforts involved supplements to existing grants and expanded from there. Although NINR did not directly receive any of the emergency funding, the Institute played an important role in the response. Nurses were, and are, at the forefront of treating COVID patients and implementing preventive measures in hospitals, clinics, schools, and many other settings. The pandemic quickly brought attention to the heroism of nurses and other healthcare workers who devoted themselves to helping patients with a poorly understood illness caused by a new, highly contagious pathogen. The pandemic also exposed deep inequalities in communities and settings across the country that led to significant disparities in COVID outcomes.

NINR supports science that leverages the strengths of nursing and the knowledge and perspectives inherent in the discipline to look beyond individual diseases and conditions to consider people and entire communities in the context of their lives and living conditions. That perspective has been a key component of a robust response to COVID. Furthermore, nursing science has helped increase understanding of the lessons learned from the COVID response and become better prepared for the next epidemic.

An early NIH effort, the Rapid Acceleration of Diagnostics (RADx) program, aimed at rapid development and deployment of diagnostic testing for COVID-19. Under RADx-UP (underserved populations), NINR supported a supplement to an existing P30 center that aimed to develop a visual toolkit to address vaccine hesitancy and uptake

(P30NR016587-05S2). Under RADx-RAD (radical), NINR supported a new project focused on wireless monitoring and infection alerts in populated areas (R01NR020105).

NINR made a strong effort to partner with ICOs that received direct COVID emergency funds—particularly, the Office of the Director (OD)—to ensure that nursing science could contribute to the pandemic response. In addition to RADx-UP (RFA-OD-22-005) and RADx-UP Phase II (NOT-OD-22-006), NINR joined with NIMH, NIMHD, National Institute on Aging (NIA), and the Office of Behavioral and Social Science Research (OBSSR) to lead Social, Behavioral, and Economic (SBE) Health Impacts of COVID-19 to develop FOAs. NINR committed $12 million to the SBE initiative. NINR-supported projects include the following:

- A cooperative agreement at University of Michigan is developing a data resource for creation, integration, and sharing of data on pre- and post-pandemic neighborhood characteristics, which will serve as a resource for assessing risk and resilience factors that lead to inequity in COVID outcomes.
- A cooperative agreement at New York University is examining how significant disruptions to children's health, education, and overall well-being during the COVID-19 pandemic created lasting influence on health, development, and social trajectories through the life course.
- An R01 at the Medical University of South Carolina is examining whether an intervention for African-American COVID-19 survivors with underlying chronic diseases and their informal caregivers is effective in improving health and quality of life for both partners in the dyad. The intervention focuses on overcoming racial- and pandemic-related stressors in the context of community social vulnerability.
- An R01 at the University of Utah is supporting a real-world efficacy study to assess whether a program that identifies patients with social needs (such as housing, food, etc.) for referral to community-based services is effective in preventing COVID-19 transmission and improving related physical and mental health outcomes in underserved populations.

Dr. Grason highlighted ongoing COVID-19 initiatives in which NINR has participated. RFA-NR-22-001 (application period closed; awards pending) supports research to evaluate the ongoing and long-term impacts of pandemic-related food and housing policies and programs on health outcomes in health disparity populations. NOSI NOT-MH 21-330 is focused on SBE intervention impacts in vulnerable and health disparity populations in various healthcare settings. NOSI NOT-MD-22-006 is an initiative focused on addressing vaccine hesitancy and vaccine uptake and implementation among health disparities populations.

Recently published findings from NINR-supported COVID-19 research were summarized. A real-time, wearable alerting system for COVID-19 infection successfully identified 80 percent of presymptomatic/asymptomatic individuals who later tested positive for COVID. A survey of nurses measured nurses' moral distress and mental health in September 2020 when COVID-19 infections were at their peak. A vaccine hesitancy survey of New York City transit workers (considered high-risk, non-healthcare essential employees) found that younger workers were

more likely than older workers to be vaccine hesitant and non-White workers were significantly more likely to be vaccine hesitant than White workers. A study on COVID infections and outcomes among nursing home residents found that those with any number of Black residents had more infections and deaths than nursing homes with no Black residents and found associations between morbidity and mortality figures and factors such as percentage of Medicaid recipients, county-level COVID-19 burden, and local structural factors (rurality, higher proportion of Black residents).

To date, NINR has supported roughly $18.5 million in COVID-related research since 2020, not including co-funding received from other ICOs.

Discussion

Council members asked about potential generalizability of the COVID-19 research findings beyond this pandemic and how the large amount of data amassed from this impressive research—especially the health equity-related studies—will be leveraged through data harmonization and sharing. Dr. Grason commented on the applicability of lessons learned about vaccine efforts in different communities.

VI. NIH POLICY FOR DATA MANAGEMENT AND SHARING—Dr. Michael Lauer, Deputy Director for Extramural Research; Director, Office of Extramural Research, NIH

Dr. Lauer provided an update on implementation of the NIH Data Management and Sharing Policy. Data sharing is of interest at the highest level of government, and related policies have evolved and expanded from the 2003 NIH policy to the policy and guidance released in October 2020 that will be effective for applications with receipt dates from January 25, 2023, onward. Designed to advance rigorous and reproducible research and promote public trust in research, the new policy raises the level, extent, and depth of data sharing.

Recent articles have demonstrated that a lack of access to data inhibits the ability to reproduce research findings. For example, researchers from a study of reproducibility in cancer biology reported being unable to obtain data for 68 percent of 193 experiments published in 53 high-impact papers; a study of researcher compliance with data availability statements found that "Many researchers were not compliant with their published data sharing statement." However, there is also evidence that data sharing is happening and yielding scientific results. For example, a 2017 study on Use of the National Heart, Lung, and Blood Institute Data Repository found that patient-level data from 88 of 100 available clinical trials were requested at least once, and a total of 277 articles were published on the basis of data from 47 trials. Results of a Pew Research Center study indicate that people are more likely to trust scientific research findings if data are openly available to the public and less likely to trust findings from research funded by the federal government or by industry.

The policy includes two requirements: applications must (1) submit a Data Management and Sharing "Plan" for all NIH-funded research and (2) comply with the plan approved by the ICO. Data sharing should be the default practice and maximized; prospectively planned for at all stages of the research process; and responsibly

implemented in a way that protects privacy, rights, and confidentiality and abides by existing laws, regulations, and policies. Legitimate limitations on sharing of data include restrictions imposed by informed consent language; insufficiency of available protections of participant privacy or safety; explicit federal, state, local, or tribal law, regulation, or policy; restrictions by existing or anticipated agreements with other parties; and impracticability of digitizing datasets with reasonable efforts.

All data should be managed, but not all data need to be shared. Scientific data refers to published or unpublished "factual material…of sufficient quality to validate and replicate research findings." Data should be accessible as soon as possible; that is, no later than publication or end of award.

The sharing.nih.gov website is the central source for guidance on data management and sharing, understanding the policy, applicability of the policy, and data repositories, as well as planning and budget resources.

Elements of a data management and sharing plan include data type; related tools, software, and code; data standards; data storage (e.g., which repository); data preservation, access, and timelines; access, distribution, and reuse considerations; and data management oversight (i.e., how plan compliance will be monitored and by whom). Investigators are encouraged to use established repositories; a list is available on the website.

Allowable costs include reasonable costs for data curation, development of supporting documentation, local data management, and preserving/sharing of data through repositories. By contrast, infrastructure costs typically included in indirect costs and costs associated with routine conduct of research are not allowable costs.

The extramural plan submission and review process includes submission, assessment, and compliance. The data management and sharing plan should be no more than two pages long; an optional format page will be available on the NIH Forms and Applications Examples web page. Peer reviewers comment on but do not score the budget; plans are assessed by NIH program staff and can be revised. Compliance with the plan is incorporated into Terms and Conditions, is monitored at regular reporting intervals, and may factor into future funding decisions.

Discussion

Dr. Wolfe and Mr. Dawes facilitated discussion. Dr. Wolfe opined that acceptance of data sharing as a scientific value will require a culture shift in how faculty are evaluated and perceived opportunities for advancement. Dr. Lauer noted that digital markers (e.g., digital object identifiers, or DOIs) applied to datasets in a repository would allow for tracking how the data are used in analyses and publications and could be a proxy measure for a dataset's influence and, by extension, scientific success and productivity of a grant, institution, or individual scientist.

The timing of data sharing was discussed, given investigator concerns that someone else might publish using their data before they do. Dr. Lauer noted that many journals now require sharing of supporting data at time of publication, and he expects this soon will become the norm.

Dr. Wolfe expressed concern about the impact of data sharing costs on smaller grants where research costs are growing but funding is not. She emphasized the need for broad dissemination of cost guidelines to investigators who are submitting grants; sample budgets, for example, would be helpful. Dr. Lauer responded that given the wide variety of data across types of studies (e.g., basic science versus a survey), sample budgets are not available. After a few cycles of seeing thousands of these plans and budgets, it will become clear what works well. In terms of investment and cost-effectiveness, studies on clinical trial data sharing indicate that data from most trials are viewed and lead to substantial academic output. Similarly, data from the database of Genotypes and Phenotypes (dbGaP) are being used extensively to publish a wide variety of work that is gaining academic acceptance.

Mr. Dawes asked how the implementation guidelines address questions around data sovereignty when working with American Indiana/Alaskan Native populations. Historically, some academic grantees have not taken this seriously. Dr. Lauer responded that tribal sovereignty is a priority when considering what data can be shared; detailed guidance notices have been issued.

Mr. Dawes asked how repositories listed on the NIH data sharing website were vetted. Dr. Lauer noted that NIH does not endorse repositories, although some initiatives and FOAs designate a repository. Characteristics of a high-quality repository are spelled out on the Selecting a Data Repository web page.

Mr. Dawes asked about efforts to develop or expand data sharing capacity for community-based organizations engaged in research. Dr. Zenk commented that this topic is under discussion in relation to ComPASS.

In response to a question about sharing data obtained from electronic health records, Medicare, and other sources, Dr. Lauer indicated that the policy is focused on data generated by research; for example, aggregate results channeled through a central coordinating center.

VII. COUNCIL OPEN DISCUSSION

There was no additional discussion.

Adjournment

Dr. Zenk thanked the meeting attendees and adjourned the open session of the meeting at 3:11 p.m.

VIII. CLOSED SESSION

This portion of the meeting was closed to the public in accordance with the determination that this session concerned matters exempt from mandatory disclosure under Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S. Code and Section 10(d) of the Federal Advisory Committee Act, as amended (5, USC Appendix 2).

Dr. Tarlov reminded members of the requirement to leave the room prior to discussion and voting on any application with which they are in conflict and instructed them to speak up if they are in conflict and have not already been identified by staff as in conflict, staff will move them to a virtual waiting room. Members were asked to sign and submit a statement to this effect.

Review of Applications

Council members considered 117 research and training grant applications on which NINR was the primary Institute; these applications requested a total of $31,357,054 (direct costs year 01). The Council also considered 68 applications on which another Institute/Center was primary and NINR was secondary.

These applications requested a total of $25,321,825 (direct costs year 01). The Council concurred with the Institutional Review Group recommendations on these 185 applications.

ADJOURNMENT

The 108th meeting of the NACNR was adjourned at 3:30 p.m. on Tuesday, September 13, 2022.

CERTIFICATION

I hereby certify that the foregoing minutes are accurate and complete.

Shannon N. Zenk -S

Digitally signed by Shannon N. Zenk -S
Date: 2023.02.10 11:27:11 -06'00'

Shannon N. Zenk, PhD, MPH, RN

Chair

National Advisory Council for Nursing Research

Elizabeth C. Tarlov -S

Digitally signed by Elizabeth C. Tarlov -S
Date: 2023.02.12 08:27:57 -06'00'

Elizabeth Tarlov, PhD, RN

Executive Secretary

National Advisory Council for Nursing Research

COUNCIL MEMBERS PRESENT

Dr. Shannon N. Zenk, Council Chair

Dr. Elizabeth Tarlov, Executive Secretary

Dr. Guadalupe X. Ayala (*ad hoc*)

Dr. Betty Bekemeier (*ad hoc*)

Mr. Daniel E. Dawes

Dr. Anne M. Fitzpatrick

Dr. Grayson N. Holmbeck

Dr. Mallory O. Johnson

Dr. Christopher Lee

Dr. John Lowe

Dr. Cindy L. Munro

Dr. Patricia W. Stone

Dr. Sheila Cox Sullivan, *Ex Officio*

Dr. Joanne Wolfe

NIH STAFF PRESENT at OPEN SESSION

Amanda Price

Anita Ambs

Bill Duval

Cheryl Howard

Darius Bickham

David Banks

David Higgins

David Tilley

Deborah Jennings

Debra Thangarajah

Demond Gibson

Diana Finegold

Dionne Godette-Greer

Dona Jones

Eddy Boutsady

Edmond Byrnes

Frances Bevington

Gwen Collman

Jessica McIlvane

Joanie Dawson

Jo-Ann Kriebel

John Grason

Karen Huss

Kevin Wilson

Kris Bough

Liz Perruccio

Louise Rosenbaum

Mary Kelly

Mia Rochelle Lowden

Michael Lauer

Michelle Mitchell

Ming Yan

Nicholas Morrow

Olga Acosta

Paula Stonebanks

Rebecca Hawes

Ron Wolff

Sabrina Wong

Samantha Sanchez

Sarah Yoon

Shalanda A. Bynum

Shawn Stocking

Shweta Singh

Weiqun Li

Wendy Pond

GUEST for OPEN SESSION

COL Young John Yauger

NIH STAFF PRESENT at CLOSED SESSION

Amanda Price

Anita Ambs

Bill Duval

Brian Albertini
David Banks
David Tilley
Dionne Godette-Greer
John Grason
Karen Huss
Kevin Wilson
Kris Bough
Liz Perruccio
Lynn Adams
Ming Yan
Olga Acosta
Samantha Sanchez
Sarah Yoon
Shalanda A. Bynum
Shawn Stocking
Shweta Singh
Weiqun Li

The entire meeting was held by NIH videocast, and all observers, including members of the public, attended virtually.