NATIONAL DEAFNESS AND OTHER COMMUNICATION DISORDERS ADVISORY COUNCIL
January 25–26, 2024
National Institutes of Health
Bethesda, Maryland

MINUTES

The National Deafness and Other Communication Disorders Advisory Council (NDCDAC) convened on January 25–26, 2024, via videoconference at the National Institutes of Health (NIH) in Bethesda, Maryland.

Dr. Debara L. Tucci, Director, National Institute on Deafness and Other Communication Disorders (NIDCD), served as Chair.

In accordance with Public Law 92-463, the meeting was closed January 25, 2024, from 10:00 a.m. to 12:22 p.m., for review of individual grant applications, and open January 25, 2024, from 1:00 p.m. to 3:58 p.m., and January 26, 2024, from 10:00 a.m. to 12:28 p.m., for the review and discussion of program development needs and policy.

Council members in attendance:[1]

Ms. Katherine Bouton
Dr. Nirupa Chaudhari
Dr. Carol Espy-Wilson
Dr. Andy Groves
Dr. Anil Lalwani
Ms. Lynne Murphy Breen
Dr. Margaret Wallhagen
Dr. Emily Buss
Ms. Vicki Deal-Williams
Dr. Lisa Goffman
Dr. Argye Hillis
Dr. Daniel Merfeld
Dr. Susan Thibeault

Ex-officio members in attendance:
Dr. Jeremy Nelson
Dr. Judy Schafer
Ms. Christi Themann

Subject Matter Experts in attendance:
Dr. Jay Gottfried
Ms. Kimberly Kuman
Dr. Larry Trussell

The complete Council roster can be found in Appendix 1.
The list of NIDCD staff and other NIH staff in attendance list can be found in Appendix 3.

[1] Members absent themselves from the meeting when the Council is discussing applications (a) from their respective institutions or (b) in which a real or apparent conflict of interest might occur. This procedure applies only to individual discussion of an application and not to "*en bloc*" actions.

CLOSED SESSION January 25, 2024

This portion of the meeting was closed to the public in accordance with the determination that it was concerned with matters exempt from mandatory disclosure under sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., and section 1009(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. §. § 1001-1014)

Call to Order and Opening Remarks ..... Dr. Debara L. Tucci

The meeting was called to order at 10:00 am by Dr. Debara Tucci, Director, NIDCD, who expressed appreciation to the entire Council for their service and advice.

Council Procedures..... Dr. Becky Wagenaar-Miller

Procedural Matters

Dr. Becky Wagenaar-Miller discussed procedural matters, including requirements imposed by the Government in the Sunshine Act and the Federal Advisory Committee Act. The necessity of members to avoid any conflict of interest and even any appearance of a conflict was stressed, as was the need to maintain confidentiality concerning the proceedings and materials related to the closed portion of the meeting. Dr. Wagenaar-Miller announced that the Council meeting would be closed for consideration of grant applications during the morning session and would be open to the public at approximately 1:00 p.m. via Videocast.

Council Consideration of Pending Applications..... Dr. Judith Cooper and Staff

Research Project Grant Awards

Consideration of Applications: On the Council's agenda was a total of 155 investigator-initiated R01 grant applications: 141 applications had primary assignment to NIDCD, in the amount of $62.336 million

first-year direct costs. It is anticipated that, of the applications competing at this Council, NIDCD will be able to award grants to R01 applications scoring up through the 15th percentile.

Special Program Actions

1. NIH Mentored Clinical Scientist Research Career Development Award (K08): The Council recommended support of one application.
2. NIH Mentored Patient-Oriented Research Career Development Award (K23): The Council recommended support of one application.
3. NIH Pathway to Independence Award (K99/R00): The Council recommended support of two applications.
4. Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) (K99/R00): The Council recommended support of one application.
5. Ruth L. Kirschstein Institutional National Research Service Award (T32): The Council recommended support of three applications.
6. Ruth L. Kirschstein NRSA Short-Term Institutional Research Training Grant (T35): The Council recommended support of one application.
7. Enhancing NIDCD's Extramural Workforce Diversity through Research Experiences (R25): The Council recommended support of one application.
8. NIDCD's Mentored Research Pathway for Otolaryngology Residents and Medical Students (R25 - Clinical Trial Not Allowed): The Council recommended support of one application.
9. Research on Autism Spectrum Disorders (R03): The Council recommended support of one application.
10. NIH Support for Conferences and Scientific Meetings (R13): The Council recommended support of five applications and co-fund of one dual application.
11. NIH Research Enhancement Award (R15): The Council recommended support of one application.
12. NIH Exploratory/Development Research Grant Award (R21): The Council recommended support of seven applications.
13. NIDCD Early Career Research (ECR) Award (R21): The Council recommended support of thirteen applications.
14. NIH Small Business Innovation Research Awards (SBIR): The Council recommended support of one Phase II (R44) application.
15. Instrumentation Grant Program for Resource-Limited Institutions (S10): The Council recommended support of one application.
16. Support for Research Excellence (SuRE) Award (R16): The Council recommended support of one application.
17. NIDCD Research Opportunities for New Investigators to Promote Workforce Diversity (R01): The council recommended support of five applications.

Dr. Tucci adjourned the closed session at 12:22 pm.

OPEN SESSION – January 25, 2024

Opening Remarks.....Dr. Debara Tucci

Dr. Tucci called the meeting to order at 1:00 pm and welcomed additional staff and visitors to the open session of the meeting. The meeting is available to the public via the NIH VideoCast website at https://videocast.nih.gov/watch=53927.

Council Introduction

Dr. Tucci invited each Council member to introduce themselves to begin the meeting.

Consideration of Minutes of the Meeting of September 12–13, 2023

Dr. Tucci called the members' attention to the minutes of the September 12–13, 2023, meeting of the NDCDAC. The minutes were approved as written.

Confirmation of Dates for Future Council Meetings

The dates for the 2024 Council meetings are May 16 (in-person) and September 12–13 (in-person).

Council meetings in 2025 will be held on January 23–34 (virtual), May 15–16 (in-person), and September 4–5 (in-person). Members should inform the Council of any major conflicts for any of the dates.

Annual Vote on the NIDCD Council Operating Procedures

Dr. Tucci called the members' attention to the Council Operating Procedures and asked for a motion to accept the procedures, noting that no changes to the Operating Procedures were recommended. The motion was approved.

NIDCD Director's Report.....Dr. Debara Tucci

Dr. Tucci welcomed W. Kimryn Rathmell, M.D., Ph.D., as the 17th Director of the National Cancer Institute. Dr. Rathmell is a physician-scientist, treating patients with kidney cancer while researching ways to advance our understanding of molecular and genetic drivers of kidney disease. Dr. Rathmell is also committed to mentoring and developing the next generation of physician-scientists***,*** and Dr. Tucci looks forward to working with her.

Dr. Tucci also welcomed Monica Bertagnolli, M.D., now serving as the 17th Director of NIH. She is the first surgeon and the second woman to serve as Director. Dr. Bertagnolli was nominated by President Biden***;*** confirmed on November 7, 2023***;*** and sworn in on December 6, 2023. Dr. Bertagnolli replaces Lawrence Tabak, D.D.S., Ph.D., who had served as Acting Director since December 2021, when Francis Collins, M.D., Ph.D., stepped down after more than 12 years in the role of NIH Director.

Dr. Bertagnolli is focused on the rapid and equitable translation of scientific discoveries into clinical care. This priority resonates with Dr. Tucci, as it is also part of the NIDCD Strategic Plan. Another guiding principle of Dr. Bertagnolli's is the priority of considering patients to be partners in discovery. As such, NIH aims to bring more people into the research enterprise as partners. Dr. Tucci indicated that Dr. Bertagnolli articulated that social determinants of health — including income, age, race, ethnicity, geographic location, and disability status — should not be barriers to participating in research or to benefiting from research advances. A signature initiative will therefore be the development of a disease-agnostic, NIH–wide platform focused on primary care, with the goal of improving care for all. Additionally, Dr. Bertagnolli has stated that processes are accelerated when advanced scientific methods are applied to data science. NIH is committed to harnessing the power of artificial intelligence (AI) and machine learning to advance research in diverse fields, diseases, and scientific communities. Dr. Tucci said she looks forward to working with Dr. Bertagnolli and NIH colleagues to accomplish these goals.

Dr. Tucci finished her report with a review of the agenda.

Introduction to the Brain Initiative .....Dr. Merav Sabri

Dr. Merav Sabri introduced The Brain Research Through Advancing Innovative Neurotechnologies® Initiative — or The BRAIN Initiative® which was established by President Barack Obama in 2013 to revolutionize understanding of the human brain by accelerating development of technology. The initiative is collaboratively managed by 10 NIH institutes and centers, including NIDCD, with the goal of developing and applying new tools for understanding how neural circuits underlie complex behaviors in health and disease. To achieve this goal, these institutes and centers will leverage emerging technologies to enable discoveries about neural circuit function, use these discoveries as a foundation for new therapeutic strategies for human brain disorders, and disseminate and democratize technologies for basic discovery and clinical applications.

The BRAIN Initiative also offers funding opportunities, which can be accessed at the Notices of Funding Opportunities webpage. Those interested can email Dr. Sabri (merav.sabri@nih.gov), who can direct interested parties to one of the four program directors at NIDCD. Dr. Sabri also invited members to learn more by visiting the BRAIN Initiative® and the NIDCD webpage.

Neuronal Circuits for Auditory Perception Under Uncertainty .....Dr. Maria Geffen

Dr. Maria Geffen's lab studies neuronal mechanisms of auditory perception and learning, using mice to test hypotheses of auditory perception by recording signals from large numbers of neurons while perturbing those circuits during behavioral tasks. Dr. Geffen presented her work developing a computational framework for her lab's data, which was done in collaboration with Yale Cohen, Ph.D., and Konrad Kording, Ph.D.

Dr. Geffen explained that the different conditions and contexts in which hearing can occur create uncertainty. This uncertainty can make auditory perception challenging, especially during categorization (e.g., hearing whether someone said "beer" or "deer") and perception in the presence of different levels of background noise. Mammals in general have evolved elaborate mechanisms in the brain to manage such uncertainty during hearing and communication by using additional sensory cues to disambiguate sounds.

Dr. Geffen is interested in studying the mechanisms and computations behind disambiguation from the level of the whole brain to microcircuitry, specifically within excitatory-inhibitory circuits. Decades of research have shown inhibitory neurons allow for higher computational complexity of circuits, especially as different types of inhibitory cells have been discovered within the auditory cortex. Dr. Geffen's research has contributed to this computational understanding by studying the function of excitatory-inhibitory ensembles within the brain during biophysical constraints. Studies published in *PLoS Biology* and the *Journal of Neuroscience* have identified distinct roles of parvalbumin-positive (PV) inhibitory neurons within the auditory cortex that are responsible for controlling frequency discrimination (e.g., distinguishing two musical notes).

At the same time, studies in *eLife* and *Cell Reports* have shown that somatostatin-positive (SOM) inhibitory neurons control adaptation to repeated sounds and the perception of sound sequences (e.g., perceiving musical melodies). In an article published in *PLoS Computational Biology*, Dr. Geffen has also constructed a computational model that explains results from her lab and others in the context of a unified circuit across different auditory paradigms.

Through the BRAIN Initiative, Dr. Geffen and her collaborators have been able to study neuronal circuits across temporal and spatial scales during complex behavior and identify inhibitory neurons that facilitate

multiple forms of adaptation. An article published in *Nature Communications* describes an experiment in which Dr. Geffen trained mice to detect sounds in the presence of background noise that changes in contrast to the target sound. Combining computational, behavioral, and electrophysiological techniques, Dr. Geffen's team found that neuronal adaptation could be used to predict the mice's ability to detect a signal in contexts where background noise shifted from high to low contrast, or vice versa. In an article in preprint at bioRxiv, Dr. Geffen described her results recording from populations of SOM and vasoactive intestinal peptide-expressing (VIP) inhibitory neurons to explore their differential encoding of sounds. The two types of neurons exert fundamentally different control over neuronal networks, with SOM neurons driving representations of auditory stimuli toward local, pattern-like representation and VIP neurons shifting representation to more distributed, array-like representation.

Dr. Geffen's team is now inhibiting SOM and PV neurons to explore how these inhibitory cells differentially shape contrast adaptation through changing temporal adaptation and gain of response. They are also training mice to categorize sounds under uncertain conditions and will soon test a model to predict the role of inhibitory neurons while the animals listen for sounds under different perceptual thresholds. Dr. Geffen says she believes this line of investigation will uncover specific cell types that can serve as therapeutic targets for those with hearing loss (especially hidden hearing loss).

Discussion

Dr. Daniel Merfeld led the discussion. He began by expressing that the BRAIN Initiative's goal of accelerating the application of new innovative technology is critically important for the advancement of science. He noted that new tools often lead to new knowledge and enhancements in clinical settings, citing MRIs and functional MRIs as examples. Dr. Merfeld said that Dr. Geffen's work also demonstrates the importance of new technology, and that he looks forward to hearing more results from her in the coming years. Dr. Geffen said there has been an explosion of genetic, computational, and electromechanics tools in neuroscience over the past 10 to 20 years, allowing research teams to amass huge amounts of data at different levels. Multidisciplinary teams are essential to running such experiments and translating those findings into clinical practice.

Ms. Katherine Bouton asked if the term "context" included the use of captions, noting that captions were essential to her understanding of the presentation. Dr. Geffen said that although they are outside the scope of animal studies, she agreed that captions can support hearing by improving estimates of reliability by raising one's confidence in what is being said or interpreted. Dr. Geffen said she believes that some of the mechanisms identified through her research may contribute to future understanding of how captions are used, especially for those with hearing loss.

Dr. Sabri asked what computational insights could be translated to other aspects of sensory processing. Dr Geffen said many technical aspects of her work could be translated to other research areas, including the integration of innervation models, prediction models for understanding behavior, and neuronal models for understanding neural signals. Uncertainty also exists in other sensory modalities, and even in areas of cognition and memory, which all involve the activity of inhibitory neurons.

Dr. Emily Buss noted that there are large age effects in humans' ability to listen under uncertainty. She asked Dr. Geffen whether she was looking for concrete explanations of these effects in her research. Dr. Geffen said she has not begun studying these effects, but her research suggests that with age, even before absolute hearing is impaired, there is hidden hearing loss in the form of reduced ability to hear in noisy environments. Her research suggests that these excitatory-inhibitory circuits are involved in this type of hearing and may be affected by age.

Dr. Merfeld noted that the emphasis on multidisciplinary skills has not been unique to the BRAIN Initiative. He asked Dr. Geffen to share other experiences where discovery came about from collaboration between colleagues of different backgrounds. Dr. Geffen said the two of them had recently devised a psycho-physical study in humans that could inform more targeted animal experiments.

How Longitudinal Functional Imaging of Aphasia Recovery Can Translate into Novel and Individualized Treatments.....Dr. Argye Hillis

Dr. Argye Hillis presented four mechanisms for recovering language after stroke: (1) reperfusion of blood flow to critical areas, (2) resolution of diaschisis, (3) remapping of activity to supplemental areas of the brain, and (4) changes in connectivity within the language network.

After acute stroke, diffusion weighted imaging (DWI) can be used to visualize the ischemic core, which consists of areas of brain tissue that have died. Perfusion weighted imaging (PWI) techniques can also be used to visualize the ischemic penumbra, which is an area of tissue with low blood flow that surrounds the ischemic core. The ischemic penumbra is tissue that has survived but has low functionality. In studies supported by NIDCD, Dr. Hillis has studied structure, function, and language capabilities at different time points after stroke. Voxel-based symptom mapping has shown that the entire area of dysfunction, determined with both DWI and PWI, reveals multiple voxels associated with word comprehension deficits after stroke. These results have been published in *Human Brain Mapping*.

Additional work published in *Annals of Neurology* has shown that the severity of comprehension deficits depend on the severity of blood flow to Wernicke's area, with slower blood flow closely related to higher rates of errors made during a word-picture verification test. Dr. Hillis has continued this exploration by reperfusing critical areas of low blood flow — through thrombolysis, angioplasty or stenting, embolectomy, surgical revascularization, or induced blood pressure elevation — by temporarily increasing systemic blood pressure to ischemic tissue.

In *Brain and Language*, Dr. Hillis demonstrated that induced blood pressure elevation to reperfuse Wernicke's areas was associated with recovery of word comprehension deficits. This was the only region of Brodmann's area to be related to a significant effect on language recovery. Dr. Hillis continued to demonstrate this relationship between reperfusion via induced elevated blood pressure and improved language comprehension after stroke through a pilot study published in *Neurology* and a Dana Foundation–supported clinical trial published in *Cerebrovascular Diseases*. Induced elevated blood pressure has since made it into the American Heart Association's Guidelines for the Early Management of Adults With Ischemic Stroke. Dr. Hillis has additionally demonstrated language improvement by restoring blood flow with stents, as discussed in an article published in *Frontiers of Neurology*.

Dr. Hillis has also found that diaschisis — or dysfunction of a part of cortex remote relative to an area of infarction — can be related to disruptions in language. From published results in *Cognitive Neuropsychology*, she showed that patients who had suffered left hemisphere stroke had reduced language capabilities but higher rates of activation in the right hemisphere. An NIDCD–funded study in the journal *Stroke* demonstrated that stimulation of the left hemisphere with standard language treatment (SLT) and transcranial direct current stimulation (tDCS) corrected diaschisis and improved performance in language tasks.

Additionally, Dr. Hillis has examined remapping over time after severe stroke, as shown in a publication from *Neurocase* that demonstrates a patient using right hemisphere homologs after severe left hemisphere stroke. In an article published in *Restorative Neurology and Neuroscience*, Dr. Hillis

illustrated a relationship between higher connectivity within the language network and improvements in naming tasks.

In studies funded by NIDCD and published in *Frontiers in Human Neuroscience*, Dr. Hillis demonstrated that tDCS combined with language therapy could be used to improve connectivity and performance in language tasks and functional communication.

Concept Clearances .....

Dr. Tucci said there were three concepts for initiatives to bring to the Council's attention. Descriptions of concepts were made available in the Electronic Council Book. After the Council discusses and approves, NIDCD plans to proceed with these research activities. Publication and timing, however, have not yet been determined; both will depend on the availability of sufficient funds.

Dissemination & Implementation (D&I) Science in Communication Disorders — Dr. Holly Storkel

Dr. Holly Storkel noted that this concept is relevant to the strategic plan, specifically "Theme 4: Translate and implement scientific advances into standard clinical care."

NIDCD has a rich research program for evaluation and innovation to improve communication, health, and quality of life. However, these innovations seldom make their way into clinical practice, thereby lessening their impact. This gap in translating innovation to clinical care has led to the development of dissemination and implementation (D&I) science, broken down as a two-part process: (1) disseminating, or sharing, evidence-based innovation, and (2) implementing innovation by ensuring that the skills and resources for innovation are available.

In October 2023, NIDCD held a workshop about D&I science that centered around the following themes: (1) building D&I capacity by giving researchers the ability to learn about and apply D&I science to NIDCD mission areas, (2) identifying what innovations are ready for implementation research and where more innovations are actually needed, (3) supporting and growing the foundation for D&I research by building partnerships with practice sites, professionals, and people with lived experience in D&I, and (4) supporting and growing D&I studies once the pipeline for such work is established.

Potential scope and objectives for this concept include encouraging the NIDCD scientific community and the D&I community to increase the quality and quantity of D&I research in communication disorders, with the ultimate goal of narrowing or closing the gap between research and clinical practice.

Discussion

Dr. Buss emphasized the importance of this research and noted that clinical trials often have D&I built into them. She asked whether this concept would include amplifying these efforts and encouraging those D&I components. Dr. Buss also wondered whether the importance of D&I would be reflected in the reviewer pool. Dr. Storkel noted that both these points were brought up at the workshop.

Dr. Lisa Goffman noted that NIDCD's discipline was relatively young. She asked how Dr. Storkel envisioned incorporating D&I into some of the institute's early ideas. Dr. Storkel acknowledged that some ideas will not be ready for D&I, hence the concept's component of determining which areas are ready for implementation and which require further innovation. NIDCD could also work toward building capacity early in D&I incorporation. Dr. Goffman and Dr. Storkel agreed that community-engaged research could be an especially exciting development in building capacity, given that it could provide early insight into the clinical context of innovations. Dr. Storkel said that the concept team will also look

to what other research fields have done in D&I and capitalize on established successful approaches. Dr. Storkel said she will be interested in integrating D&I principles into existing processes, as opposed to creating a separate D&I mechanism. Dr. Goffman agreed with that approach.

Dr. Buss suggested that the concept include processes for evaluation, so that it is clear when D&I approaches are successful. She also noted that evaluation processes would likely need to differ from intervention to intervention. Dr. Storkel agreed. The concept team has found various measurement metrics and gross coding systems, but will also be looking into finding more D&I evaluation grants. Dr. Storkel noted that there are also processes for measuring the success of a particular project built into D&I science.

Dr. Margaret Wallhagen noted that sustainability may be an issue, especially across sites with significant differences in available resources. She asked whether there are mechanisms designed to address these challenges. Dr. Storkel agreed that site differences represent a core issue within D&I science and said that balance between standardization and adaptation to different sites will be required. Within D&I are areas devoted to identifying appropriate adaptation while maintaining the core functions of an innovation.

Ms. Vicki Deal-Williams said there may need to be changes in management alongside changes in the way research is conducted. Referencing her experiences at the American Speech-Language-Hearing Association (ASHA), she said that D&I awards are available but not widely sought after. At both ASHA and NIDCD, researchers may need to be made aware of both the benefits and necessity of having D&I within their work. Dr. Storkel agreed that there may need to be a psychological shift within the field alongside the changes that the concept presents.

Advancing Research on Augmentative and Alternative Communication (AAC) — Dr. Holly Storkel

Dr. Storkel noted that this concept is relevant to the strategic plan, specifically “Theme 6: Advancing technology for improved diagnosis and treatment.”

More than 5 million people who cannot rely on spoken language could benefit from augmentative and alternative communication (AAC), but there are many barriers to AAC access and use. To learn more about these barriers, the concept team held a workshop in February 2023 and gathered input through a Request for Information (RFI) open from July to September 2023. Invested parties — including researchers, educators, clinical practitioners, and AAC users — presented the following barriers to AAC advancement: (1) bias toward AAC users, (2) ineffective measurement techniques to evaluate AAC efficacy, (3) difficulty using current AAC tools, (4) lack of evidence-based practice in prescribing AAC, (5) lack of research centered on AAC users, and (6) lack of cultural and linguistic diversity in AAC.

Potential scope and objectives for this concept include encouraging the NIDCD scientific community, AAC users, and other invested parties to collaborate in research efforts to promote access to and effective use of robust communication systems that better meet the goals and needs of people who cannot rely on spoken language as their primary means of communication.

Discussion

Dr. Hillis noted the gap between technological advances and effectively teaching AAC users how to use such technology, citing examples from her clinical work. One result of this issue is that AAC users spend money on technology that they ultimately will not be able to use. However, Dr. Hillis praised the concept for its focus on education alongside technology implementation.

Ms. Deal-Williams said this concept could provide NIDCD with an opportunity to modify how the institute works with people from racial and ethnic populations excluded from communications research in the past. However, research needs to be carried out with culturally sensitive policies and expectations for meeting these groups' needs. Research participants from these groups should also be supported regardless of their language or dialect. Ms. Deal-Williams noted that AAC research needs to be conducted with consideration for those who consider themselves culturally deaf and frequently need to fight against the ableist perspective that they lack independence. AAC research should therefore be conducted with the understanding that some users do not actually want or need such devices. This approach can also be supplemented by education that focuses on training the listener to look for cues that can help them interact with AAC users, thereby reducing burdens to those using the technology. Ms. Deal-Williams said these shifts will be important in carrying out the strategic plan to conduct research with the full participation of patients directly affected by the outcomes of such research.

NIDCD Transition to Independence Award for Extramural and Intramural Clinician-Scientists — Dr. Alberto Rivera-Rentas

Dr. Alberto Rivera-Rentas expressed that NIDCD is interested in increasing the number of clinician-scientists conducting research in the institute's mission areas. Several existing programs support clinician-scientists' independence. The NIH Pathway to Independence K99/R00 Award allows for the smoothest transition, but the award has significant limitations regarding its availability and the time constraints it places on the awardee. The concept team is therefore proposing an initiative aimed to support intramural and extramural clinician scientists working in NIDCD mission areas to transition from mentored positions to independent positions and facilitate their transition to mainstream NIH research funding such an R21 or R01 during the independent phase. The program would have two phases for maximum of five years of support: (1) a mentored phase for one to two years and (2) an independent phase for three to four years, depending on the length of the mentored phase.

Discussion

Dr. Goffman was supportive of the enhanced flexibility the program would provide. She asked how the concept team envisioned drawing from a diverse pool of applicants if those accepted needed to be in scientifically rich environments during the independent phase of the program. Dr. Rivera-Rentas explained that the program is not requiring those kinds of connections, but rather is trying to facilitate connections to support someone in their career. The concept team is envisioning that R25 program fellows will come to the program after receiving an offer for faculty positions. These fellows can then receive mentorship through the proposed initiative while they use their own money to start gathering data and establishing their labs.

Dr. Merfeld was also supportive of the concept, especially because the mentorship could potentially extend to a variety of clinical roles and disciplines. He asked how outcomes from this program will be quantified and proposed tracking the number of applicants from different clinical disciplines. Dr. Rivera-Rentas said that the concept team plans on tracking the awards R25 fellows receive from other institutes and centers, and the R01 or R21 awards they receive as they move forward in their careers.

Dr. Susan Thibeault asked how the proposed program would fit in with T32 training grants. She said that she wondered whether it would entail too much training for clinician-scientists looking to start their own labs. Dr. Rivera-Rentas said that program fellows can be on other training grants while they are in the R25, and can then complete the independent phase of the program at the institute where they are

planning to establish their lab. The proposed R25 would therefore avoid competing with existing T32 structures.

Dr. Hillis voiced her support for the concept. Her own institution encourages applications for K99 awards by providing funding to those who apply, regardless of whether the K99 is awarded. This has been successful at reducing the age from the first R01 award. Dr. Hillis said that she thought the one to two years of mentorship would be very helpful to program fellows.

Dr. Larry Trussell asked to compare the flexibility between the proposed R25 and existing K99 awards. Dr. Rivera-Rentas said that K99 awards require three years of independence. Also, clinical training does not always count toward K99 eligibility, making these awards highly competitive and at times inaccessible to clinician-scientists. The proposed R25 would be more accessible and at the same time allow fellows more control over their own training.

Dr. Anil Lalwani noted that clinicians do not have pathways to augment their fellowship training, which he felt that was a weakness of many clinical fellowships. He said he hoped that the proposed R25 would encourage other programs to incorporate additional mentorship for their fellows before they move on to other institutions. Dr. Rivera-Rentas agreed.

New Council Member Presentations .....

Dr. Tucci invited new Council members to give brief presentations about their work.

Dr. Susan Thibeault

Dr. Thibeault specializes in otolaryngology and is trying to establish a department for that discipline at her institution, University of Wisconsin - Madison. She has worked as a speech-language pathology clinician at the master's level; more recently, she served as the medical director for speech-language pathology and audiology at University of Wisconsin Health. Dr. Thibeault studies voice disorders from a biological perspective, with a specific focus on trying to understand laryngeal health and disease. At present, only 5-10 labs in the world study the biology of the larynx.

More specifically, Dr. Thibeault studies the development of tissue in the vocal fold mucosa. She uses mouse models to examine larynx development through fetal stages and has developed artificial human vocal fold mucosa using induced pluripotent stem cells. The engineered tissue, which serves as a functional model of human vocal folds, is used to test a variety of conditions. Dr. Thibeault is currently using the model to study bacterial populations within the vocal folds. She is also developing new cell lines from cadaver donors, though she says that getting donations and developing the cell lines has been challenging.

Dr. Thibeault is also studying the mechanisms of innate immune-microbial interactions involved in vocal fold inflammation. Mice are exposed to specific bacteria from birth through amniotic fluid. The lab then studies tissue response at the single-cell level. These studies have demonstrated the role bacteria play in developing immune cells within the larynx.

Ms. Katherine Bouton

At age 30, Ms. Bouton began losing her hearing in her left ear. She now has profound hearing loss and uses a cochlear implant in her left ear and a hearing aid in her right ear. Because of her condition, she took early retirement from her job as a journalist and an editor and has since published several books on hearing loss with one detailing its emotional impact and two others that have a more practical focus.

Ms. Bouton is now a public speaker, an advocate, and an educator who often works with health professionals. She has also served on the board of the Hearing Loss Association of America and as president of the association's New York City chapter.

Ms. Bouton's hearing loss affects her level of participation in groups; Zoom has proved to be a helpful platform for her because of its captioning capabilities. However, she struggles with uncertainty because of accents, facial hair that prevents lip-reading, and informal conversation in hallways or settings with background noise. If Ms. Bouton misses any part of a conversation, she finds it difficult to catch up. Over time, however, she has gained the confidence to ask people to repeat themselves.

The inability to understand is a major task facing people with hearing loss, and Ms. Bouton expressed frustration that even with all the technology available, it is still difficult to hear. However, she hopes that future technology will better approximate normal hearing. She thanked everyone on the Council for their work.

Dr. Merfeld will introduce himself at the next Council meeting.

Closing Comments.....Dr. Debara Tucci

Dr. Tucci thanked everyone and adjourned the meeting at 3:48 pm.

Open Session – January 26, 2024

Director's Greeting.....Dr. Debara Tucci

Dr. Tucci called the meeting to order at 10:00 am and welcomed additional staff and visitors to the open session of the meeting, which is available to the public from the NIH VideoCast website at https://videocast.nih.gov/watch=53929.

TALKing and Listening: Opportunities for Collaboration Between NIDCD and NICHD.....Dr. Diana Bianchi

Dr. Diana Bianchi, Director of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), presented on programs at NICHD, including its collaborations with NIDCD. In addition, she shared research from her own lab.

Since joining NICHD, in 2016, Dr. Bianchi has worked to develop a strategic plan to oversee the institute's $1.75 billion budget and refine its mission statement. The institute's mission is to lead research and training to understand human development, improve reproductive health, enhance the lives of children and adolescents, and optimize abilities for all. Its strategic plan, set in 2020, includes the following research themes: (1) understanding the molecular, cellular, and structural basis of development; (2) promoting gynecologic, andrologic, and reproductive health; (3) setting the foundation for healthy pregnancies and lifelong wellness; (4) improving child and adolescent health and the transition to adulthood; and (5) advancing safe and effective therapeutics and devices for pregnant and lactating women, children, and people with disabilities. The institute has also allocated its budget with 55% of funds going toward pediatrics, 30% toward reproductive health, and 18% toward intellectual and developmental disabilities and rehabilitation.

Dr. Bianchi then introduced the Tackling Acquisition of Language in Kids (TALK) initiative, which was developed to address late language emergence in children. This initiative is co-led by NIDCD and NICHD, with additional collaborators at the National Center for Advancing Translational

Sciences (NCATS), the National Institute of Mental Health (NIMH), and the National Institute of Neurological Disorders and Stroke (NINDS). The goal of this initiative is to provide parents, teachers, pediatricians, and other caregivers with information to help late-talking children grow and thrive in school and other learning environments. To achieve this goal, the initiative aims to (1) advance understanding of the reasons children with various conditions and/or risk factors start talking later, (2) differentiate developmental trajectories that lead to better versus worse outcomes, and (3) evaluate the effectiveness of clinical approaches to improve outcomes. In fiscal year (FY) 2023, the initiative received $10 million in funding with much of it going to supplement existing research projects. New FY 2024 funding opportunities include (1) Longitudinal Data: Leveraging Extant Data to Understand Developmental Trajectories of Late Talking Children (R21, PAR-24-045); (2) Information and Practice Needs Relevant to Late Talking Children (R21, PAR-24-046); and (3) Notice of Special Interest (NOSI): Tackling Acquisition of Language in Kids (TALK) R01 Research Projects (NOT-DC-24-010). The first receipt date is February 7, 2024.

Dr. Bianchi then pivoted to NICHD's research on autism spectrum disorder (ASD). The institute has established the ASD Research Portfolio, which co-funds research on genetics, neurodevelopment, screening, interventions, and infrastructure with NIMH. Highlighting a publication from *Nature Medicine*, NICHD researchers funded under this portfolio developed a tablet-based application that tracked children's differences in social attention, facial expression, blink rates, and motor skills. The app was able to detect toddlers diagnosed with ASD consistently across different sexes, races, and ethnicities, suggesting its potential to reduce disparities in access to early diagnosis and intervention. NICHD and NIDCD have also co-funded the Autism Centers of Excellence (ACE), alongside NIMH, the National Institute of Environmental Health Sciences (NIEHS), and NINDS. The ACE program supports research on diagnosis, causes, interventions for ASD, and services for people with ASD throughout the lifespan. This substantial portfolio has supported nine awards in 2022 and $100 million worth of research projects over the last five years. ACE–funded institutions are required to collect data using common methods and submit their data to the centralized NIMH Data Archive (NDA), including the National Database for Autism Research (NDAR).

Dr. Bianchi then shared advances in Down syndrome (DS) research through the INvestigation of Co-occurring conditions across the Lifespan to Understand Down syndromE (INCLUDE) Project. This project was launched in 2018 to address the needs of those living with DS by studying the biology of the syndrome and the conditions uniquely affecting individuals with it. The project is also meant to increase the workforce of researchers advancing the health of people with DS and engage with people from diverse backgrounds who have DS, as well as with their families. This project is working to accomplish these goals through three components: (1) conducting targeted high-risk, high-reward basic science studies on chromosome 21; (2) assembling a large study population of individuals with DS across the lifespan; and (3) including individuals with DS in existing and future clinical trials. With $258 million in support from NIH from 2018 to 2022, the INCLUDE Project has conducted studies on a variety of topics, from COVID-19's impact on individuals with DS to identifying biomarkers of neurodegeneration and risk and resilience factors for Alzheimer's disease.

In an area relevant to the work of NIDCD, researchers under this project have also aimed to characterize audiological profiles in children with DS. In a paper published in the *Journal of Speech, Language, and Hearing Research*, researchers studied 18 children with DS to find that 46% exhibited moderate or worse hearing loss and 85% exhibited hearing loss above 8kHz. Another investigator funded by INCLUDE has used a DS mouse model to study auditory function and structural anatomy of the ear. The auditory brainstem responses recorded during the study were consistent with conductive hearing loss reported in humans with DS, suggesting that the model could help uncover underlying reasons for this type of hearing loss in people with DS. These results were published in *Frontiers in Genetics*.

A final achievement of INCLUDE is the INCLUDE Data Coordinating Center (DCC). This free resource serves as a large data source and includes clinical profiles, genomes, transcriptomes, proteomes, and metabolomes to be used for DS research. Animal model data from mice and rats will be added in the future. Those interested in learning more about the INCLUDE Project can visit the project website and the DCC website.

Turning to her own research, Dr. Bianchi's lab in the National Human Genome Research Institute is performing preclinical studies to identify safe drugs that could alleviate trisomy 21 (T21)–associated phenotypes. Dr. Bianchi performs transcriptomic studies and uses public databases to identify U.S. Food and Drug Administration–approved candidate drugs. The drugs are then tested in a DS mouse model for changes in gene expression and behavior. In a study published in the *American Journal of Human Genetics*, mice were prenatally treated with the molecule apigenin — a naturally occurring flavonoid with antioxidant and anti-inflammatory properties. Apigenin was fed to adult mice at the time of mating, and the offspring were then tested for T21-associated phenotypes. Male offspring prenatally treated with apigenin exhibited changes in gene expression and improved performance in tests of hippocampal memory. Dr. Bianchi hopes this work can contribute to the goal of administering safe medications to a pregnant person that can cross the placenta and ameliorate the effects of trisomy 21 on fetal brain development, ultimately improving postnatal cognition. She also noted that fetal therapy is an interest she shares with Dr. Tucci, who envisions someday treating deafness in the womb.

Dr. Bianchi then shared the NIH Clinical Center (CC) Pediatric Research Strategic Plan. The CC offers state-of-the-art care but lacks the capacity to treat patients under the age of 3. As a result, many innovative therapies are not available to the center. In 2022, the CC Pediatric Research Strategic Plan Working Group (WG) was charged by the center's Governing Board with identifying the most impactful areas of pediatric research in which the NIH can play a role in improving pediatric health. This horizon-scanning could then be used to perform long-term strategic planning for intramural trans–NIH clinical pediatric research to occur over the next decade and beyond.

With input from multiple institute directors, including Dr. Tucci, the WG developed the following scientific priorities: (1) supporting natural-history studies on the continuum from diagnosis to treatment; (2) conducting gene therapy, CAR T-cell therapy, and other cell therapy studies; (3) offering precision medicine and other pharmacological interventions in rare nonmalignant diseases; (4) offering pharmacokinetic and pharmacodynamic studies to improve use and dosing; (5) performing metabolic phenotyping across a variety of pediatric conditions; (6) developing a cohort of all pediatric patients at the CC to measure physical and mental health and disease across disorders; (7) deeply phenotyping the pediatric cohort to establish a standard set of control samples; and (8) increasing support for research studies in pregnant and lactating people. These priorities were well received by the Governing Board.

Dr. Bianchi then turned to NICHD's work in rehabilitation research and development of assistive communication technologies. In alignment with its mission statement, NICHD allocates 6% of its budget to a partnership with the National Center for Medical Rehabilitation Research (NCMRR) to fund studies on intellectual disabilities and physical rehabilitation for children. NICHD and NCMRR work with the Medical Rehabilitation Coordinating Committee — an NIH–wide committee that funds rehabilitation research and is co-chaired by Dr. Sabri and Theresa Cruz, Ph.D. In April 2023, it held the Ableism in Medicine and Clinical Research workshop, which discussed ableism as a barrier to care and a contributor to health disparities. NICHD and NCMRR have also partnered in research domestically and globally. Key examples of this partnership include (1) co-funding the Rehabilitation Infrastructure Network from the National Center of Neuromodulation for

Rehabilitation at the Medical University of South Carolina, (2) NCMRR collaborations with ASHA on the Lessons for Success program, (3) speech disorders research representation among NCMRR Advisory Board members, (4) collaboration on the World Health Organization's (WHO's) 2021 World Report on Hearing, and (5) attendance at the WHO Global Rehabilitation 2030 Meeting in July 2023.

Dr. Bianchi closed her talk by informing the members that NICHD will be refreshing its five-year strategic plan, to be released in 2025. Release of a Request for Information (RFI) is expected in August or September 2024. Dr. Bianchi encouraged anyone interested to suggest ideas for future collaborations.

Discussion

Dr. Goffman presented several thoughts to open the discussion. On the subject of D&I, advances in child health need to be implemented with caregiver factors such as poverty and disability in mind. Dr. Goffman also asked whether DS should be considered for model generalization — especially for overlapping areas of study among late talkers and those with ASD. She recognized that investigators submitting applications for funding may have trouble knowing which institute the application should go to, and that making that decision may require new ways of thinking about applications. Application, data sharing, and standard data plans should also be considered across research areas. Dr. Bianchi agreed that caregiver factors are important considerations in pediatric research. As a family-based institute, NICHD considers the family environment in its research. Dr. Bianchi also said that there has been a rise in NIH–wide projects and more collaboration, both formally and informally, that NIH may need to further broadcast. She also agreed that DS is well modeled, but noted that screening for the condition is routinely conducted with highly standardized diagnostic tests. Other conditions, such as ASD, are very complex, and the way they develop can vary from patient to patient. She noted that the *All of Us* Research Program is beginning to enroll pediatric participants, which could allow for better understanding of such conditions. Finally, Dr. Bianchi agreed that data sharing and management represent an important area of focus. Dr. Bertagnolli is also focusing on data sharing in her role as NIH Director.

Addressing a topic related to some of the research Dr. Bianchi presented, Dr. Merfeld said that delayed balance and gait negatively affect outcomes for adolescents and older individuals. He suggested that this understudied area of research could be another opportunity for collaboration between NIDCD and NICHD. Dr. Goffman added that she observes balance issues in her patients. Dr. Bianchi said that she was not aware of any current funding opportunities focused on the development of balance, but agreed that there was potential overlap in study among the portfolios of rehabilitation and intellectual disabilities.

On caregivers, Ms. Lynne Murphy Breen added that parents and caregivers have substantial roles in child development. However, there can be disconnects between the guidance issued to parents and the resources available to them. Guidance also puts all the responsibility of care onto parents who have just learned that their child has a complex condition. Ms. Murphy Breen said she was interested in seeing more research that focuses on caregivers' access to resources. Speaking as a researcher and a former clinician, Dr. Bianchi reaffirmed her agreement on the importance of caregivers. She said that although NICHD is a research institute, other federal agencies are focused on providing service. She said that parents should be more aware of such services, as opposed to being made to find them. Dr. Bianchi recommended the National Organization of Rare

Disorders as a source for resources and added that NICHD established DS-Connect, a platform for parents and caregivers of children with DS. DS-Connect is a research platform, but it also provides resources for parents to find DS specialists in their area.

Dr. Carol Espy-Wilson asked whether there is ongoing work at NICHD to address the issue of maternal death in African American pregnant people. Dr. Espy-Wilson referenced research that shows that Black pregnant people are not listened to when they express issues with their pregnancies; some are even encouraged to deliver babies with midwives, as opposed to at hospitals, in order to receive more attentive care. Dr. Bianchi said that she recognized disparities of increased mortality during pregnancy, during labor, and in the first-year postpartum among Black, American Indian, and Alaska Native populations. She also noted that these groups face racially driven disrespect that contributes to these disparities. One area of focus for the IMPROVE Initiative is to reduce these disparities in mortality, given that four out of five of these deaths can be prevented. The initiative is actively supported by NIH, with $30 million in funding. Those who are interested can learn more about this initiative at IMPROVE's website. The related Centers of Excellence Initiative has also established 10 centers around the country and has issued remote resources to improve knowledge about and access to maternity care in urban and rural health care deserts. Finally, the Centers for Disease Control and Prevention (CDC) Hear Her Campaign is meant to raise awareness of pregnancy-related and postpartum symptoms and encourage listening to all pregnant people — especially those from groups that have historically been disrespected.

Dr. Espy-Wilson said that large databases would also be an important resource for those who work in applying innovation. She encouraged this point be considered as these databases are developed.

Ms. Deal-Williams said that collaboration is important to think about in patient-centered care. She praised the DS initiative for its person-centered approach and its incorporation of many systems of care around the person. She suggested that such holistic approaches could be considered in other applications that address gaps in medical care. Dr. Bianchi agreed, noting that anyone who cares for someone with a chronic disease often visits multiple specialists, each of whom looks at the condition through a very focused lens. She noted that the National Center for Complementary and Integrative Health features a whole-person approach to research and care.

Dr. Jay Gottfried said having one network would be a useful resource for breaking down barriers and having greater collaboration among NIH institutes. Dr. Bianchi agreed, noting that collaboration has been occurring through the *All of Us* Research Program. Dr. Tucci said that she and *All of Us* CEO Joshua Denny, M.D., M.S., are discussing potential ancillary studies between the program and NIDCD.

NIDCD Budget Report ..... Mr. Eric Williams
Dr. DebaraTucci

Dr. Tucci presented the context for the budget process. Transitioning to a new fiscal year requires the budget to be approved by both the U.S. House of Representatives and the U.S. Senate, and to receive final approval by the President of the United States on October 1. If the budget is not approved, Congress can enact a continuing resolution (CR) to provide federal agencies with limited short-term funding based on the year's previous budget — or the government will have a

lapse of funding. The government has run under CRs of varying lengths for 43 of the past 46 fiscal years, with the current CR set to expire on March 8, 2024. While on a CR, funding is allocated on a limited, prorated basis until the new budget is approved. Even if a new budget is approved, however, internal processes to distribute funds can take one to two months after that.

NIDCD and NIH therefore need to manage cash flow in the face of several other challenges — including rising rates of inflation and rising costs of submitted R01s — as reflected by lower rates of grant submissions with modular budgets and increases in R01 costs by $50,000 to $70,000 per grant per year. These costs are outpacing rates of inflation. NIDCD is therefore planning for a "flat budget" with no increases and potential cuts by 10% or more. NIDCD will still work toward the following goals: (1) minimizing the impact to our payline and noncompeting grants, (2) sustaining strong programs, (3) implementing the NIDCD Strategic Plan, (4) bolstering a diverse research workforce through R25s, and (5) supporting early-stage investigators.

Mr. Eric Williams provided additional detail on the budget. In FY 2023, NIDCD lapsed $3,000 of its $500 million budget. Spending across NIDCD mission areas was consistent from FY 2022, with minor changes of a 2% increase in spending for hearing and slight decreases in spending for smell, speech, and balance. For FY 2024, NIDCD is planning on a flat budget. Allocations for noncompeting research projects, competing research projects, Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR), and intramural research will be kept the same. But there will be a slight drop in administrative supplements, and increases for R25 programs and other research, careers and training, and research-and-development contracts. For competing R01s, paylines and High Priority Programs (HPPs) will continue at current levels. Mr. Williams does not expect to implement 10% cuts, though they are possible. NIDCD's budget was submitted to NIH the day of this meeting for inclusion in the President's budget.

Discussion

Dr. Merfeld said the increase in average grant submission costs may be a result of requirements for data sharing and other changes that have been implemented in the research process over the past 10 years. Dr. Tucci said these data preclude data-sharing requirements, but she added that this was a good point. She said that she recognized that research has become more expensive, and that the rising costs are not due to people requesting more than they need.

Dr. Andy Groves added that trainees are facing considerable constraints. Graduate programs and fellowships have increased stipends and postdoctoral salaries, but such increases still do not account for the rising cost of living. At Dr. Groves' institution in Houston, 25% of graduate students report food insecurity and use a free food pantry stocked by college volunteers. Dr. Tucci said that the Advisory Council to the Director has commissioned a working group to examine what trainees need in terms of salary and support, and to make recommended increases in salary. Although it will be a challenge to increase salaries without decreasing support for other work, NIH is actively addressing concern over the salaries and benefits of trainees.

Dr. Nirupa Chaudhari agreed that trainee constraints were part of the challenge in grant costs and noted that postdoctoral fellows and graduate students are usually paid solely through grants. Universities have also begun to transfer larger proportions of faculty salaries to grants. Dr. Chaudhari wondered whether NIH could influence universities to retake responsibility over faculty salaries. Dr. Gottfried confirmed that researchers at his institution are feeling pressured by the

increasing costs required to maintain their labs, and as a result have started to request larger grants. Dr. Tucci agreed that NIH's expectation has been that salaries are set and managed by institutions. Increasing costs of grants will ultimately need to be part of a larger discussion across NIH.

Mentorship Matters: Promoting DEIA in the NIDCD Biomedical Workforce .....Dr. Cendrine Robinson

Dr. Robinson presented on efforts to promote diversity, equity, inclusion, and accessibility (DEIA) in the NIDCD workforce, with a focus on mentorship. The NIDCD Advisory Council Working Group on Diversity and Inclusiveness has provided three general recommendations: (1) Assist potential grantees through expanded communication to diverse audiences, (2) increase opportunities to study health disparities through funding opportunities, and (3) develop a diverse pipeline by leveraging intergenerational mentorship to strengthen pipelines. Dr. Robinson's talk focused on the third recommendation.

The importance of mentorship has been highlighted in the National Academies of Sciences, Engineering, and Medicine's The Science of Effective Mentorship in STEMM and through numerous publications. In 2021, NIDCD announced the Diversity Mentoring Networks and Research Experiences R25 Programs, which expand NIDCD's existing mentorship efforts by supporting the development of researchers from underrepresented backgrounds. The programs have four grants funded to date: (1) Innovative Mentoring and Professional Advancement through Cultural Training (IMPACT): Promoting Diversity and the Success of Underrepresented Minority Students in the Clinical and Research Workforce for Communication Science and Disorders at Hampton University and Case Western Reserve University; (2) the STEMM Opportunities for College Students with Hearing Loss to Engage in Auditory Research (STEMM-HEAR) program at Johns Hopkins University; (3) UMD-REACH (Research Equity and Access in Communication and Hearing) at the University of Maryland; and (4) Summer Health Academic Research Experience in Communication Sciences and Disorders (SHARE-CSD) — an undergraduate summer experience to increase diversity in the CSD research pipeline at New York University.

NIDCD is also supporting providing mentorship through extramural and intramural efforts. The institute provided webinars for extramural Diversity Supplement awardees, grant workshops among NIDCD staff and members of the National Black Association for Speech-Language and Hearing, and additional outreach for NIDCD fellowship applicants from historically Black colleges and universities (HBCUs) and minority-serving institutions (MSIs). These efforts are aligned with extramural trans–NIH initiatives, which include Administrative Supplements to Recognize Excellence in DEIA Mentorship and a panel discussion — titled "How Does Mentoring Impact Diversity in the Biomedical and Behavioral Research Workforce?" — hosted by Marie Bernard, M.D. Applications for the administrative supplements are due February 16, 2024, and the panel discussion is available on the NIH VideoCast page. Intramural mentoring efforts include an NIDCD journal club that promotes inclusive lab culture, a template from the Intramural Training Office on DEIA values for inclusion in lab compacts, and a travel supplement from the Division of Intramural Research for individuals from underrepresented groups. The NIH Office of Intramural Training & Education also provides support for NIDCD trainees and mentors.

Future steps in mentorship will include an NIDCD Diversity Scholar Workshop to bring extramural fellows to the NIH campus for next-stage transitions and career planning and an intramural program to promote cultural awareness and provide education on microaggressions, bystander intervention, and guidelines for mentoring trainees who are deaf or hard of hearing.

Discussion

The members applauded the workgroups efforts and looked forward to more updates in January 2025. Dr. Chaudhari indicated that she has had several diversity scholars in her research group, who have maintained the connections they made in the program and moved on to graduate school. Dr. Espy-Wilson, who said she is part of the UMD-REACH program, added that she hoped to see these mentorship efforts multiplied across universities.

Report of the Division of Scientific Programs .....Dr. Judith Cooper
Dr. Holly Storkel

NIDCD Science and Non–NIDCD Funding

Dr. Judith Cooper presented on funding opportunities from other parts of NIH. Funding can be awarded through special initiatives led by other institutes and centers that NIDCD joins. NIDCD can also respond to requests from NIH and nominate awards for potential funding. Whether a project is partially funded, awarded for the full time requested, or funded as a supplement, these additional funds are advantageous to NIDCD because they allow the institute to focus on other meritorious but unfunded applications within its mission areas.

In FY 2023, NIDCD received $21,749,174 in support, which funded almost 60 different awards. This funding came from institutes and offices across NIH including the National Institute on Aging (NIA), the Office of Data Science Strategy (ODSS), the Office of Behavioral and Social Sciences Research (OBSSR), the Office of Science Policy (OSP), and the Fogarty International Center. Funding also came from NIH programs, including the Institutional Development Award (IDeA) Program, the Common Fund's Transformative Research to Address Health Disparities and Advance Health Equity at Minority Serving Institutions initiative, the Common Fund's NIH Director's Transformative Research Awards, and the BRAIN Initiative. Finally, NIDCD also received support from INCLUDE and TALK, as Dr. Bianchi mentioned. These sources of support highlight the collegial and supportive atmosphere at NIH. NIDCD is appreciative of this support and looks forward to future opportunities to continue working together.

Workshop Report: Dissemination and Implementation (D&I) Science in Communication Disorders

Dr. Holly Storkel shared additional information on the D&I workshop held on October 24–25, 2023. Members were encouraged to visit the workshop website for more information and recordings of the discussions. The goals of the workshop were to (1) bring together NIDCD and D&I scientists to define the current state of D&I research in NIDCD mission areas as a whole, (2) identify research needs and opportunities for individual researchers conducting D&I research across NIDCD mission areas, and (3) understand how to work collectively to build capacity to conduct and sustain D&I research across NIDCD mission areas.

Several themes came forward from the workshop discussions. Researchers need both training and mentoring in D&I for their specific projects. However, there are few existing partnerships either with D&I experts or within the community. The practitioners in these areas are already overburdened, which leads to challenges in both partnerships and mentoring. However, D&I experts were able to offer information on first steps and getting started in D&I work for those interested in such research but unsure of how to start. Finally, workshop attendees said that existing processes around

promotion, tenure, and funding are geared toward traditional research approaches not well suited to D&I research. These systems will ultimately need to change to ensure D&I research is valued and rewarded appropriately.

Dr. Storkel encouraged meeting attendants to visit the workshop website or email her (holly.storkel@nih.gov).

Report of the Division of Extramural Activities.....Dr. Becky Wagenaar-Miller

Dr. Becky Wagenaar-Miller presented several policy updates.

In November 2023, NIH began notifying individuals whose federal financial reports were rejected (NOT-OD-24-017). Monthly reminder emails will be sent so that revisions can be made, and financial closeouts can occur within the required time frame.

NIH has released additional information clarifying the Implementation of the NIH SBIR and STTR Foreign Disclosure Pre-award and Post-Award Requirements notice (NOT-OD-24-029). Foreign involvement with countries of concern does not necessarily disqualify applicants, but federal factors will be used to assess risk criteria. Applicants should thoroughly review their applications, because NIH will not provide opportunities to address any identified security risks. Any changes in foreign involvement between progress reports requires submission of updated disclosure forms within 30 days.

A recent information session on upcoming changes to the peer-review framework can be accessed online. The new framework will become effective for research project grants with due dates on or after January 25, 2025. Additional NIH grants policy updates (NOT-OD-25-054) can be accessed at the policy webinar held January 31, 2024.

NIH is seeking input on two RFIs: (1) Best Practices for Sharing NIH Supported Research Software (NOT-OD-24-005), due February 1, 2024; and (2) Inviting Comments on the NIH Strategic Plan for Data Science 2023–2028 (NOT-OD 24-037), due March 15, 2024.

Finally, Dr. Wagenaar-Miller reminded members and the community that NIDCD launched a webform to allow individuals to self-nominate for NIDCD peer-review meetings. The form can be accessed on the NIDCD website.

Dr. Wagenaar-Miller closed her presentation by thanking the Division of Extramural Activities staff.

Closing Comments..... Dr. Debara Tucci

Dr. Tucci concluded the meeting by thanking everyone for the discussion and adjourned the meeting at 12:25 pm.

Certification of Minutes

We certify that, to the best of our knowledge, the foregoing minutes and attachments are accurate and correct.[2]

Rebecca A. Miller -S
Digitally signed by Rebecca A. Miller -S
Date: 2024.07.02 14:31:28 -04'00'

Rebecca Wagenaar-Miller, Ph.D.
Executive Secretary
National Deafness and Other Communication Disorders Advisory Council

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Appendices

Roster
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WAGENAAR-MILLER, Becky, Ph.D.
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Appendix 2

NIDCD Council Budget Report

Eric Williams, Budget Officer
NIDCD Advisory Council Meeting
January 26, 2024

National Institute on Deafness and Other Communication Disorders (NIDCD)

FY 2023 Operating Plan (Actual Allocations)

(Dollars in thousands)

	FY 2023 Final Allocation	
Budget Mechanism	*Number*	*Amount*
Research Projects		
Noncompeting	576	$263,385
Admin. Supplements	65	$6,081
Competing	183	$87,738
Subtotal	759	$357,204
SBIR/STTR	19	$16,401
Subtotal, RPG's	778	$373,605
Research Centers	7	$18,515
Other Research	111	$20,142
Total Research Grants	896	$412,262
Individual Training	136	$6,655
Institutional Training	143	$9,096
R & D Contracts	**44**	$23,217
Intramural Research		$56,359
Research Mgmt. & Support		$26,739
TOTAL		$534,327
Lapse		$3

Attendance Open Session Day 1

NIH Staff:
Chris Adams
Angela Ballesteros
Inna Belyantseva
Nadia Biassou (Clinical Center)
Richard Chadwick
Hui Cheng
Laura Cole
Judith Cooper
Janet Cyr
Haoi Doan
Chris Follot
Nancy Freeman
Maria Garcia
Ronna Hertzano
Howard Hoffman
Tanya Holmes
Shiqiong Hu
Nichelle Johnson
Tanji Johnson
Joanne Karimbakas
Andrea Kelly
Lisa Kennedy
Kelly King
Lisa Kopf
Mimi Lee
Joshua Levy
Chuan-Ming Li
Dina Lyon
Castilla McNamara
Sherly Michel
Beatrice Milon
Chris Myers
Eddie Myrbeck
Eric Nunn
Amy Poremba
Kausik (Bobby) Ray
Alberto Rivera-Rentas
Cathy Rowe
Merav Sabri
Elka Scordalakes
Jaclyn Schurman
Aarti Sharma
Katherine Shim
Shirley Simson
Nanette Stephenson
Holly Storkel
Susan Sullivan
Brooke Sydnor
Jean Verheyden
Jenny Wang
Dawn Walker
Bracie Watson
Tim Wheeles
Evan Wicker
Eric Williams
Ningjin Wu
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ASL Interpreter Stephanie
Science Writer Heather Hadfield (Contractor)

Guest Speakers:
Maria Geffen

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Kathy Bainbridge
Angela Ballesteros
Diana Bianchi (NICHD)
Richard Chadwick
Le Chen
Brett Christensen
Judith Cooper
Lisa Cunningham
Janet Cyr
Haoi Doan
Chris Follot
Nancy Freeman
Maria Garcia
Howard Hoffman
Shiqiong Hu
Nichelle Johnson
Tanji Johnson
Joanne Karimbakas
Robin Kee (NIA)
Matthew Kelley
Andrea Kelly
Lisa Kennedy
Kelly King
Lisa Kopf
Chuan-Ming Li
Dina Lyon
Castilla McNamara
Sherly Michel
Beatrice Milon
Elyssa Monzack
Chris Myers
Sonia Nanescu
Eric Nunn
Natasha Pierre Bright
Amy Poremba
Lisa Portnoy
Kausik (Bobby) Ray
Alberto Rivera-Rentas
Cendrine Robinson
Cathy Rowe
Merav Sabri
Elka Scordalakes
Jaclyn Schurman
Aarti Sharma
Katherine Shim
Shirley Simson
Nanette Stephenson
Melissa Stick
Holly Storkel
Susan Sullivan
Brooke Sydnor
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Attendance Closed Session

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