

NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE ON AGING

Summary Minutes

The 155th Meeting
NATIONAL ADVISORY COUNCIL ON AGING
May 14, 2025

National Institutes of Health
Virtual Meeting

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Attachment A: Roster of the National Advisory Council on Aging

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Department of Health and Human Services
Public Health Service
National Institutes of Health
National Institute on Aging
NATIONAL ADVISORY COUNCIL ON AGING
SUMMARY MINUTES
May 14, 2025

The 155th meeting of the National Advisory Council on Aging (NACA) was convened on Wednesday, May 14, 2025, at 10:00 a.m. by videoconference. Dr. Richard Hodes, Director, National Institute on Aging (NIA), presided.

In accordance with the provisions of Public Law 92–463, the meeting was closed to the public on Tuesday May 13, from 1:00 p.m. to 3:00 p.m. for the review, discussion, and evaluation of grant applications in accordance with the provisions set forth in Sections 552(b)(c)(4) and 552(b)(c)(6), Title 5, U.S. Code and Section 10(d) of Public Law 92–463.¹ The meeting was open to the public on Wednesday, May 14, from 10:00 a.m. to 1:00 p.m.

Council Participants:

Dr. Sanjay Asthana
Dr. Darren Baker
Dr. Maritza Ciliberto
Dr. Yanira Cruz
Dr. Susan L. Greenspan
Dr. Yadong Huang
Dr. Rev. Cynthia Huling Hummel
Dr. Sharon K. Inouye
Dr. Sohail Khan
Dr. Frank Longo
Ms. Nancy E. Lundebjerg
Dr. David B. Reuben
Dr. Julie A. Schneider
Dr. Linda J. Van Eldik

Executive Secretary:

Dr. Kenneth Santora, NIA

296 live views via NIH videocast.

¹ For the record, it is noted that members absented themselves from the meeting when the Council discussed applications (a) from their respective institutions or (b) in which a conflict of interest may have occurred. This procedure only applied to applications that were discussed individually, not to “en bloc” actions.

I. REVIEW OF APPLICATIONS

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

A total of 3,311 applications requesting \$8,914,523,509 for all years underwent initial review. The Council recommended 1,698 awards for a total of \$5,013,228,360 for all years. The actual funding of the awards recommended is determined by the availability of funds, percentile ranks, priority scores, and program relevance.

II. CALL TO ORDER

Dr. Kenneth Santora welcomed members to the open session of the 155th NACA meeting. Dr. Hodes called the meeting to order at 10:00 a.m. on Wednesday, May 14, 2025.

A. Director's Status Report

In Memoriam: Neil Buckholtz, Ph.D.

Dr. Hodes announced the passing of Dr. Neil Buchholz and recalled his significant contributions to NIA and the scientific community. Dr. Buckholtz served as the Director of the Division of Neuroscience at NIA until his retirement in 2012. He was a fervent advocate for "open science" and played a leading role in pioneering public-private partnership, which paved the way for open science in Alzheimer's disease. Dr. Buckholtz was also responsible for developing other enduring programs including the Alzheimer's Drug Development Program and the Accelerating Medicines Partnership-Alzheimer's Disease. Dr. Hodes paid tribute to Dr. Buchholz, describing him as a humble individual who took little credit for his contributions. Dr. Buchholz will be deeply missed.

Data Summary of Trends in AD/ADRD Clinical Trials

Dr. Hodes presented a data summary showing the increase in NIA-supported Alzheimer's disease (AD) and AD-related dementias (ADRD) clinical trials focusing on both treatment and prevention between 2013 and 2023. He acknowledged the increased appropriations and support from Congress and multiple administrations, which has contributed to the expansion of resources that deepened the understanding of cellular and molecular mechanisms underlying disease progression and the associated risk factors. This, in turn, has led to a notable growth in non-pharmacologic trials and greater diversification of pharmacologic trials. He further emphasized the growing understanding of the heterogeneity of the disease processes that occur in the brain and emergence of new therapeutic targets have driven the diversification of pharmacologic trials. This is reflected in a marked shift towards non-amyloid trials, with only 15% of trials targeting amyloid in 2023,

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compared to 36% in 2013. Dr. Hodes expressed appreciation for how sustained investments in research have begun translating into tangible clinical interventions.

NASEM Study on Research Priorities for Preventing and Treating AD/ADRD

Dr. Hodes reported that, at the direction of Congress, NIA and National Institute of Neurological Disorders and Stroke commissioned the National Academies of Sciences, Engineering, and Medicine (NASEM) to conduct a study identifying research priorities for preventing and treating AD/ADRD. As a result, a list of suggested priorities has been developed and was released in December 2024. NIA is currently in the process of reviewing these recommendations and translating them into actionable plans. Dr. Hodes acknowledged and expressed his appreciation for the expert panel that contributed significantly to the development of strategic priorities.

Dr. Hodes further elaborated that the five strategic priorities include: (1) enhance longitudinal and intervention studies, which remain a central and ongoing focus of NIA-supported research; (2) enable multidisciplinary and collaborative research, integrating molecular and genetic omics, environmental exposures, and clinical studies; (3) foster research reflective of the populations at risk for disease and conditions associated with aging and AD/ADRD; (4) increase the ease of access and usability of biological samples and data; (5) catalyze transformational change through innovative AD/ADRD research. Dr. Hodes noted a key topic highlighted by the panel that aligns closely with ongoing work is that beyond the individual clinical causes of dementia, there's evidence of common underlying mechanisms. These shared mechanisms suggest the importance of directing translational efforts not only at specific causes but also at upstream and downstream factors that contribute broadly to multiple causes of dementia.

Butler-Williams Scholars Program

Dr. Hodes announced the continuation of the Butler Williams Scholars program, which will be held on August 25-27, 2025, at the NIH main campus in Bethesda, Maryland and encouraged junior faculty researchers to apply. Noting the competitive nature of the program and the importance of bringing new researchers into the field, Dr. Hodes encouraged those who were not selected for this year to continue applying in the future. He also acknowledged the valuable contributions of the Council members and others from the science community who have served key roles in the program.

Research Highlights

Dr. Hodes mentioned that since the last Council meeting, NIA has released 34 research highlights, 17 blogs, and several announcements to share progress with the public. He also announced that NIA staff have participated in various meetings with advocacy groups, congressional staff visits, and briefings on topics such as dementia, sleep research, and healthy aging.

NIA Leadership Update

Dr. Hodes announced the transition of Dr. Sanoj Suneja to a leadership position at the National Institute of Dental and Craniofacial Research. Dr. Suneja joined NIA in 2006 and had been serving as Deputy Director of the Division of Extramural Activities (DEA) and Chief of the NIA DEA Office of the Director.

Discussion

Dr. Darren Baker inquired about the increase in non-pharmacologic trials in the Alzheimer's disease space. He asked whether this trend reflects a decline in enthusiasm from pharmaceutical companies or a shift in research focus toward exploring alternative approaches. He also noted that many of these non-pharmacological interventions appear to be leading the current efforts in the field. Dr. Hodes responded by emphasizing that the rise does not reflect a decline in commitment to pharmacological approaches. Instead, he described it as an expansion of efforts in the non-pharmacological field, particularly in prevention. He noted that many non-pharmacological interventions, such as exercise, cognitive training, and blood pressure control, are being pursued in parallel with pharmacological research, and both now target a broader range of mechanisms. Dr. Hodes also highlighted that the field is moving toward more individualized, targeted strategies that address personal risk factors. He suggested that combining non-pharmacological and pharmacological interventions may be the most effective strategy to move forward. Finally, he concluded that ongoing basic research that spans across behavioral, social, and molecular fields is driving the expansion in both types of interventions. Dr. Baker acknowledged the response and expressed thanks.

Dr. Sanjay Asthana commented on Dr. Hodes's response, anticipating an increase in combination treatment trials that include both pharmacological and non-pharmacological interventions. He highlighted the importance of combination treatment trials involving both pharmacological and non-pharmacological interventions to target major pathologies, which will be necessary to meet the needs of the research community. Dr. Hodes agreed with Dr. Asthana's comment, noting that combination trials are a part of future emphasis in AD/ADRD research.

B. Future Meeting Dates

September 17-18, 2025 (Wednesday and Thursday), Building 45 – Natcher
January 27-28, 2026 (Tuesday and Wednesday), Virtual
May 12-13, 2026 (Tuesday and Wednesday), Building 45 – Natcher
September 15-16, 2026 (Tuesday and Wednesday), Building 45 – Natcher

C. Consideration of Minutes of the Last Meeting

The minutes of the April 2025 Council meeting were considered. A motion to approve the minutes was made, seconded, and passed unanimously.

III. REPORT: WORKING GROUP ON PROGRAM

Dr. Susan Greenspan led the discussion of two concepts: (1) the NIA Aged Rodent Tissue Bank and (2) Expanding the Therapeutic Pipeline for Treating and Preventing AD/ADRD. Both concepts were reviewed and approved by the Council members. Primary reviewers were Dr. Darren Baker and Dr. Frank Longo.

NIA Aged Rodent Tissue Bank – Contract Renewal

This concept proposes to renew the long-standing contract supporting the Aged Rodent Tissue Bank program, which was originally established in 2001 to provide researchers with access to tissues from aged rodent models. This service is distinct from the aged mouse repository maintained by NIA, through which researchers obtain live aged animals, because it supplies pre-collected tissues, making it potentially more cost-effective and practical for standardized assays. The tissue bank includes frozen tissues from various strains, such as C57BL/6, BALB/c, and F1 hybrids, as well as from rat strains like Fisher 344, Brown Norway, and their hybrids. Tissues are available across a range of ages, and custom collection options are also available upon request. As part of the proposed renewal, the program aims to continue supporting this tissue distribution service and expand its offerings by developing tissue arrays. These microarrays would allow for the analysis of multiple samples in one single slide, which is particularly valuable for emerging technologies such as spatial biology. Council members emphasized the importance of this resource in advancing research on the heterogeneity of aging and supportiveness of the concept; with general agreement on the value of renewing the contract given the program's contribution to the research community.

Expanding the Therapeutic Pipeline for Treating and Preventing AD/ADRD: Preclinical Validation and Drug Discovery for Novel Candidate Targets

This concept aims to expand the number and variety of AD/ADRD therapeutics in the development pipeline, ultimately leading to more effective treatments. While NIA has strong programs for early-stage therapeutic target identification and later-stage clinical trials, there remains a critical gap in the middle of the development process. This concept proposes a program to support the initial development of drug candidates or other therapeutics identified by data scientists, translating early discoveries of targets into viable therapeutics that can eventually be tested in human trials. The program would also enhance preclinical testing methods to better predict clinical success. Council members were enthusiastic about this proposal and its potential to fill a key gap in the therapeutic development pipeline for AD/ADRD.

IV. PROGRAM HIGHLIGHTS (DBSR)

The Health and Retirement Study: What We Learn by Adding Biological Measurement to an Interdisciplinary, Longitudinal, Social Science Survey

Dr. Jessica Faul, Research Associate Professor, Survey Research Center, Institute for Social Research, University of Michigan.

The Health and Retirement Study (HRS), created and congressionally supported since 1990, is the largest and most comprehensive nationally representative panel study of Americans over age 50. The HRS focuses on five broad topics: (1) economic resources, (2) health and use of healthcare services, (3) cognition, (4) work and retirement, and (5) family connections. HRS data are linked to administrative records from Social Security, Medicare and Medicaid, the Veteran's Administration, the National Death Index, and employer-provided pension plan information. Since

2006, data collection has expanded to include biomarkers and genetics, psychosocial content, cognitive assessment (Harmonized Cognitive Assessment Protocol), and contextual data.

HRS is a nationally representative study with oversamples of Black and Hispanic individuals. Participants and their spouses/partners are interviewed every 2 years from the time of their entry into the survey until death. Interviews are conducted in multimodal manner – in person, telephone, mail, and web. New 6-year birth cohorts of participants are introduced every 6 years, and proxy respondents are used to retain people with declining health or cognition. Final interviews are conducted with family, following the participant's death.

In 2006, information from physical measures, blood tests, and genetic testing were added to the study. By 2016, the study had recruited around 22,000 participants. Collectively, this study has identified over 80 cardiovascular, neurodegenerative, and immune system biomarkers and established a sample repository available for future research purposes.

The focus of the presentation was on one of the hallmarks of aging: epigenetic alterations. Epigenetics is the study of molecules and mechanisms that regulate gene expression without altering the DNA sequence. Although multiple processes are involved in epigenetic regulation, the presentation is focused on DNA methylation as it is the most readily measurable in population-based research. DNA methylation patterns depend on a variety of factors, including genetic polymorphisms, age, cell-type, environmental exposures, and disease states. Epigenetic changes can act not only as mechanisms contributing to diseases but also as biomarkers of disease or exposure. Epigenome-wide association studies (EWAS) can identify methylation sites statistically associated with specific outcomes. Polyepigenetic scores (PEG), or methylation “risk” scores, are derived to quantify the cumulative effect of methylation across multiple DNA sites associated with a particular outcome. DNA methylation data can also be used to build machine learning (ML) models to predict specific outcomes such as environmental exposures or disease states. In addition, DNA methylation biomarkers can be used to estimate biological age or serve as biomarkers of early disease risks and mortality.

Dr. Faul and colleagues investigated the associations between epigenetic clocks, socioeconomic status (SES), and social and behavioral factors in HRS, as well as their utility in predicting longitudinal outcomes. They examined how demographic and behavioral factors, such as age, sex, education, race/ethnicity, health behaviors, and childhood SES, were associated with different epigenetic clocks. While biological factors like cell type are consistently associated with epigenetic clocks, associations with social behavioral factors varied depending on the epigenetic clock's purpose. For example, the GrimAge clock, designed to predict mortality, showed strong links to mortality-related behaviors such as smoking. Overall, the findings indicated the important role of social and behavioral factors in predicting longitudinal risks for morbidity and mortality. Their work highlights how molecular signatures link to health behaviors and demonstrated the potential of epigenetic markers as predictors of long-term health outcomes.

Dr. Faul and her colleagues used DNA methylation data linked to body mass index to examine how molecular signatures can predict social and behavioral factors (e.g., demographics, health behaviors) and biological outcomes (e.g., diabetes, high blood pressure, psychiatric conditions, and sleep disorders). Their findings suggest that exposure to obesity over time leads to molecular changes that can predict additional health outcomes. Dr. Faul also demonstrated the value of

epigenetic scores derived from methylation signatures of both childhood and adult SES, showing that these scores were predictive of chronic health conditions, including cardiometabolic conditions, self-reported health, mortality, and dementia.

In another project, Dr. Faul described an environmental exposure study in which analytic methods developed from epigenetic data linked to maternal smoking in external samples were applied to HRS methylation profiles. The analyses revealed that maternal smoking was associated with the participants' own adult smoking behavior. Importantly, the DNA methylation signature of maternal smoking was unique and independently predicted both mortality and incident chronic disease.

Dr. Faul also presented work examining how the timing and accumulation of physical activity influence epigenetic aging in HRS participants over a 12-year period, using a Structured Life-Course Modeling Approach. The study found that cumulative physical activity, followed by current activity, were the strongest predictors of epigenetic aging, highlighting the importance of both long-term and recent physical activity for healthy aging.

HRS data are freely and publicly available. with more than 38,000 downloads and over 8,000 citations in publications as of 2024. The HRS has also become a model for a global network of comparable aging studies.

Dr. Faul's future research plans include incorporating RNA sequencing data, adding measures of neurodegeneration and proteomics related to neurological disease, and collecting DNA methylation data at a second time point (six years after the 2016 measure). She also plans to collaborate with the NIA Biomarker Network for data harmonization of -omics data.

Discussion

In response to Dr. Greenspan, Dr. Faul clarified that physical activity was defined as engaging in moderate exercise multiple times a week or vigorous exercise at least once a week. She acknowledged the limitations of using surveys to measure both exercise and activity levels. She also noted that her team is investigating how much exercise is necessary to alter DNA methylation patterns.

In response to Dr. Longo, the discussion focused on sample integrity and the timing of blood sample collection for DNA methylation analysis. Dr. Faul explained that the time of day does not appear to significantly affect DNA methylation and is therefore not a major concern. However, she acknowledged that the season of collection may serve as a confounding factor. She emphasized that her group has put substantial effort to analyzing the stability of DNA methylation states across samples and found methylation states to be generally stable.

Dr. Longo asked about the extent to which methylation patterns (i.e., gene expression) contribute to the causality of age-related endpoints. Dr. Faul responded that she initially viewed methylation more as a causal mechanism of disease; however, based on her research, she is now less convinced of its causal role. Instead, she now sees methylation primarily as a biomarker of underlying disease or exposures. While the question remains unresolved, she emphasized the need for further studies to uncover the role of methylation in disease mechanisms and environmental exposures. She added that RNA data will be critical for understanding gene expression.

Ms. Lundebjerg commented on the importance of international collaborations and asked how they may advance scientific research. Dr. Faul responded that collaborations, especially those that are cross-national, provide critical DNA methylation data with unique social, environmental, and behavioral contexts that cannot be captured domestically, enabling both comparisons and expanding knowledge to improve understanding of health and aging.

In response to Dr. Asthana's comment on adding neurodegenerative disease data, Dr. Faul discussed ongoing efforts to collect brain-related data, including neuroimaging and autopsy tissue samples. She noted the longstanding challenges of such efforts, which are often easier to manage within a localized region. Partnering with Alzheimer's Disease Research Centers was discussed as a potential approach to strengthen these efforts.

To conclude, Dr. Faul highlighted the study design of HRS, emphasizing the importance of real-world population representation. She noted that it is crucial to adopt clinically validated biomarkers that are representative of the social, behavioral, and environmental contexts of the population under study.

V. COUNCIL SPEAKER

Introduction

Dr. Hodes welcomed Dr. Sean Mooney, Director of the NIH Center for Information Technology (CIT), as the guest speaker. Dr. Mooney joined NIH in 2024, bringing extensive leadership experience from institutions such as the University of Washington, where he worked with the National Alzheimer's Coordinating Center, and the Buck Institute for Research on Aging. His academic training spans molecular biology, biochemistry, and pharmaceutical chemistry.

Dr. Hodes highlighted Dr. Mooney's deep expertise in information technology, innovation, and biomedical research, as well as his familiarity with areas critical to NIA. At NIH, Dr. Mooney leads efforts to leverage data, computing, and analysis to advance biomedical research. Dr. Hodes thanked Dr. Mooney for participating and expressed eagerness to hear his perspectives on driving innovation through advanced technologies.

Presentation

Dr. Mooney began by expressing appreciation for the opportunity to speak and noted his long-standing relationship with NIA, having been a funded researcher for over 20 years. He highlighted his past roles at Indiana University, the Buck Institute, and the University of Washington. While he continues to lead a research lab, his presentation focused primarily on NIH's computing and digital infrastructure.

Dr. Mooney emphasized the foundational role of people and structure in building IT systems. He noted that across NIH, there are approximately 6,000 full-time staff in IT-related roles, with ~1,200 to 1,300 within CIT and the Office of the Chief Information Officer (OCIO). While CIT is one of the NIH's 27 institutes and centers (ICs), the OCIO operates within the Office of the NIH Director. CIT manages operations such as cloud platforms, cybersecurity, and core enterprise tools (e.g., email, Teams, Commons ID), whereas OCIO focuses on IT strategy, governance of IT investments, and NIH's information security. CIT supports internal NIH functions and interacts

with the extramural research community through its infrastructure and services. Dr. Mooney noted recent leadership additions, including the appointment of Adele Merritt as NIH CIO.

In his dual role as Director of CIT and Associate Director for Cyberinfrastructure and Cybersecurity, Dr. Mooney coordinates both strategic and operational efforts. He explained that "cyberinfrastructure" encompasses data systems, AI, cloud computing, networking, and standards supporting NIH research. Key collaborators include CIT, OCIO, the National Library of Medicine, the Office of Data Science Strategy (ODSS), and IT teams across all NIH ICs.

Dr. Mooney highlighted several infrastructure achievements. A major success has been the development of a robust network supporting approximately 45,000 staff and 700,000 annual visitors across 200 NIH buildings in nine geographic locations. These facilities are connected by over 4,300 miles of physical network cabling, creating a highly integrated environment for research and operations. Enterprise tools such as Outlook and Teams support over 2.5 million virtual meetings, more than a billion emails exchanged, and storage of over a million gigabytes of data across SharePoint and OneDrive. NIH's high-performance computing system with 100,000 processing cores is maintained with \$10 million annual hardware refresh.

On cloud computing, Dr. Mooney described NIH as "cloud forward," highlighting the STRIDES Initiative, which partners with major cloud vendors (AWS, Google Cloud, and Azure) to provide discounted services. STRIDES has migrated over 364 million GB of data to the cloud, supported over 2,700 research programs, saved over \$100 million, and trained more than 5,500 researchers. One notable development under STRIDES is the NIH Cloud Lab which provides investigators with limited cloud credits (e.g., \$500) and customized training on using the cloud in biomedical research. These training resources were developed in collaboration with the National Institute of General Medical Sciences (NIGMS) and ODSS with contributions from research communities. Cloud Lab exemplifies how STRIDES is evolving beyond basic infrastructure to enable collaborative research in a new digital ecosystem.

Dr. Mooney noted NIH's investments in standardized cloud platforms, including Gen3, Terra, Cavatica, Palantir Foundry, and BRICS. These platforms provide secure, interoperable data access and align with NIH's strategy to make data more usable and scalable.

A key aspect of NIH's cyberinfrastructure vision is modularity and ease of use. The NIH Researcher Auth Service (RAS) provides secure login and authorization across multiple data resources. Built by using the standards from the Global Alliance for Genomics and Health, RAS allows researchers to access and analyze datasets from different repositories simultaneously while maintaining data access permissions. Dr. Mooney likened these modular tools to Lego bricks, which can be flexibly combined to support a wide range of research needs.

He elaborated on the concept of "workspaces" - secure, cloud-based environments where researchers can analyze data from multiple sources using AI and machine learning. These environments are customizable, helping to reduce duplication and foster collaboration. Workspaces are already in use across NIH, with adoption expected to expand further.

Reflecting on his experience at the University of Washington, Dr. Mooney noted gaps in researchers' fluency with cloud tools. He stressed the importance of supporting scalable, cost-effective analytic environments and lowering barriers to entry for investigators.

Dr. Mooney then discussed the 2024 Nobel Prize in Chemistry, awarded for AI-driven protein structure prediction. He traced its roots to the Critical Assessment of Structure Prediction (CASP) challenge, an NIH- and NIGMS-funded effort launched over 30 years ago to evaluate protein modeling algorithms. CASP exemplifies how collaborative, competitive data science challenges can accelerate innovation. Dr. Mooney strongly supports expanding such initiatives at NIH.

Addressing the emergence of "operational AI," Dr. Mooney noted that AI is now being embedded directly into systems. Examples include EPIC's sepsis prediction model in electronic health records, large language model-based message drafting, and AI-generated meeting notes in Teams. Within NIH, AI tools like Trial GPT are being developed for clinical trial recruitment and other applications.

Following the Executive Order, NIH catalogued over 100 AI use cases, 77 of which are active, covering areas such as grants management, chatbots, and natural language processing for grant application review. Secure NIH access to ChatGPT was launched, with over 600 investigators attending the kickoff. Other enterprise AI tools, including Microsoft Copilot, are being rolled out across federal systems.

Dr. Mooney reiterated NIH's vision of a modular, transparent digital ecosystem and encouraged investigators to contribute tools that others can reuse. He concluded by announcing an upcoming newsletter with further updates and invited questions from the audience.

Discussion

The discussion began with Dr. Hodes acknowledging Dr. Mooney's leadership at NIH and inviting him to share key areas where the research community could provide critical support to enhance collaboration and impact. Dr. Mooney noted that rising costs of IT, data, and AI represent significant challenges. He emphasized the importance of building and maintaining a digital ecosystem grounded in flexible, interoperable standards, similar to the internet, to enable seamless collaboration and innovation. Dr. Mooney pointed out three key areas where research community involvement is critical: first, developing fluency with emerging technologies among both intramural and extramural investigators to make informed decisions; second, supporting the adoption and development of technology standards; and third, collaborating to manage and navigate the rising costs of IT, data, and AI to sustain and advance biomedical research.

Dr. Santora asked about secure cloud-based work environments that allow simultaneous use of multiple systems, inquiring specifically about the biggest challenges regarding system security. Dr. Mooney responded that all systems, including local computers, carry inherent security risks. He emphasized the importance of properly securing whichever systems are used and the value of having cybersecurity expertise available. Regarding cloud-based environments, he stated that they are feasible, but the primary challenges lie in adopting standards and ensuring the technologies are user-friendly. He added that creating strong, clear business cases is essential to support decision-makers who may not have an IT or informatics background, enabling them to confidently adopt and implement secure cloud solutions.

Dr. Longo then shared his perspective as a traditional experimentalist. While praising the digital infrastructure being developed, he admitted feeling overwhelmed by its complexity. He noted difficulties in integrating tools into wet lab workflows, despite collaborations with data scientists and programs like Treat-AD. Dr. Longo asked how well these resources are being aligned with the experimental research community and suggested that understanding usage patterns, such as who is using the platforms and how, could help experimentalists and enhance the quality of datasets.

Dr. Mooney acknowledged these concerns, emphasizing that technology is now deeply embedded in every part of scientific research. He stressed the need to build fluency with digital tools across the research community, including experimental scientists. Drawing on his own experience supporting laboratory research at institutions like the Buck Institute, he highlighted the disconnect between digital systems and experimental workflows. A key priority, he said, is to improve how core facilities, such as genomics, proteomics, or cryo-EM, interact with researchers through reusable IT solutions, reducing the need to rebuild infrastructure for each new project. Dr. Mooney reiterated the importance of making data findable, accessible, interoperable, and reusable, warning that without coordinated investment in shared infrastructure, rising costs could divert resources from frontline research.

Dr. Santora concluded the session by thanking Dr. Mooney for a compelling and forward-looking presentation. He expressed appreciation on behalf of the audience for the insights shared and emphasized the importance of this work in shaping the future of biomedical research.

VI. ADJOURNMENT

The open session of the 155th meeting of the National Advisory Council on Aging adjourned at 1:00 p.m. on May 14th. The next meeting is scheduled for September 17-18, 2025.

VII. CERTIFICATION

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.³



Richard J. Hodes, M.D.
Chairman, National Advisory Council on Aging
Director, National Institute on Aging

³ These minutes will be approved formally by Council at the next meeting on September 17-18, 2025, and corrections or notations will be stated in the minutes of that meeting.