

NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE ON AGING

Summary Minutes

The 156th Meeting
NATIONAL ADVISORY COUNCIL ON AGING
September 18, 2025

National Institutes of Health Hybrid 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
September 18, 2025

The 156th meeting of the National Advisory Council on Aging (NACA) was convened on Thursday, September 18, 2025, at 9:00 a.m. in person and 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 Wednesday, September 17, from 12:30 p.m. to 2:30 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 Thursday, September 18, from 9:00 a.m. to 1:00 p.m.

Council Participants:

Dr. Sanjay Asthana
Dr. Darren Baker
Dr. Maritza Ciliberto
Dr. Yanira Cruz (attended virtually)
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

302 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 3,225 applications requesting \$8,001,468,747 for all years underwent initial review. The Council recommended 1,673 awards for a total of \$4,423,534,042 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 156th NACA meeting. Dr. Hodes called the meeting to order at 9:00 a.m. on Thursday, September 18, 2025.

Director's Status Report

Budget Updates

Dr. Hodes provided a status update on the President's budget and congressional appropriations bills for fiscal year (FY) 2026. He also presented data summarizing the FY 2027 Alzheimer's Disease (AD) and AD-Related Dementias (ADRD) Professional Judgment Budget estimates, explaining that this budget stipulates the amount of increase in funding necessary to pursue the goals of the National Alzheimer's Plan. Finally, he shared the publication of [2025 NIH Alzheimer's Disease and Related Dementias Research Progress Report: Advances and Achievements](#), which summarizes significant NIH-funded dementia research advances from the prior year.

NIA General Updates

Since May 2025, Dr. Hodes and senior NIA staff have participated in 8 interest/advocacy group meetings, 1 Congressional staff visit, and 4 Congressional briefings to disseminate NIA progress.

NIH Updates

Dr. Hodes announced NIH's plans for a unified research strategy, gold standard science, and principles to guide foreign research collaborations. He also reported that NIH will prioritize human-based research technologies while reducing the use of animals in research; the Office of Research Innovation, Validation, and Application (ORIVA) will be established to coordinate this effort.

² 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 applied only to applications that were discussed individually, not to "en bloc" actions.

Other additional NIH policy updates included:

1. NIH will not consider applications that are substantially developed using artificial intelligence (AI). NIH will accept no more than six new, renewal, resubmission, or revision applications from an individual principal investigator (PI) or multi-PI (MPI) group for all Council rounds in a single calendar year.
2. The Office of Management and Budget (OMB) directed NIH to use 50% of its remaining competing research project grant (RPG) funds from June to September 2025 for multi-year funding of competing RPGs. NIH will not issue awards to domestic or foreign entities that include a subaward to a foreign entity. NIH is finalizing implementation of a new award structure for applications that request funding for international collaborations.
3. NIH has created a Highlighted Topics website as a new resource to inform the research community about NIH priority areas of scientific interest. This resource is intended to help reduce NIH's overall number of funding opportunities.

1. Future Meeting Dates

January 27, 2026 (Tuesday, Virtual)

May 12-13, 2026 (Tuesday and Wednesday), Building 45 – Natcher

September 15-16, 2026 (Tuesday and Wednesday), Building 45 – Natcher

2. Consideration of Minutes of the Last Meeting

The minutes of the May 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, Chair of the Working Group on Program, led the discussion of all nine concepts. The Council members unanimously and enthusiastically concurred with approval of all concepts, as summarized below.

Paul B. Beeson Emerging Leaders Career Development Award in Aging

Dr. Greenspan and Dr. Inouye served as the reviewers for the renewal of the [Beeson Emerging Leaders Career Development K76 program](#) established in 2004 to support early stage clinician-investigators who have begun to establish research programs and demonstrate leadership in the field of aging research. Since 2016, NIA has received 247 applications and awarded 73 grants through this program. The program aims to provide career development and advanced leadership skills for scientists conducting basic, translational, clinical, or patient-oriented research relevant to aging and geriatrics. It also seeks to strengthen institutional commitment to transformative research and leadership in aging and geriatrics by linking mentors with emerging scientists committed to future leadership in aging research and policy. The Council strongly supported renewal of this critical initiative, citing its demonstrated success and its value in supporting early-career investigators through flexible funding, effective mentor pairing, high-quality

scientific meetings, and a collaborative community. Members expressed strong enthusiasm for continuing the program.

Palliative Care Research Across the Lifespan PAR - Leveraging the Palliative Care Consortium

Dr. Asthana and Dr. Inouye reviewed and presented the Palliative Care Research Across the Lifespan initiative, which intends to solicit R01 applications focused on palliative care research across the lifespan for individuals with serious illnesses and/or their caregivers, aligned with the missions of participating NIH Institutes, Centers, and Offices (ICOs). Large systematic reviews have identified limitations in current U.S. palliative care research, including variability in study design, inconsistent findings, and a lack of rigorous randomized controlled trials to demonstrate efficacy. Projects awarded from this concept will be able to leverage resources from the NIA-supported Palliative Care Consortium to strengthen and coordinate their work; contribute common data, measures, or other inputs to the Consortium; provide a pipeline of research opportunities that build on Consortium pilot/exploratory and career development funding; and serve to inform a coherent and coordinated palliative care evidence base across the lifespan, serious illnesses, and disciplines. The Council deemed this a pivotal and essential concept for advancing palliative care research and expressed strong enthusiasm for its potential to make significant contributions to the field.

Renewal of NIA Research Centers Collaborative Network (RCCN)

Dr. Reuben and Dr. Greenspan reviewed and presented the proposed renewal of the NIA Research Centers Collaborative Network (RCCN). Initially funded in 2018 as a three-year pilot and renewed for five years in 2021, the RCCN aims to enhance collaboration among NIA's seven research center programs. The RCCN provides infrastructure to facilitate collaboration among funded centers through data sharing, scientific conferences, collaborative pilot projects, and knowledge dissemination. The proposed renewal includes expanding development opportunities for early career investigators; increasing the funding level and duration for multi-center projects; developing and maintaining a centralized database of resources, tools, and methodologies with consultation access; and enhancing communication through social media. It also includes establishing exchange programs to support participation in other centers' annual meetings; providing mentors for collaborative teams; and expanding Alzheimer's disease-related activities. The Council viewed the RCCN as an excellent example of leveraging synergy that extends the impact of NIA investments while supporting nearly all of NIA's strategic priorities.

Illuminating AD/ADRD Genome to Enable Precision Genomic Medicine

Dr. Huang and Dr. Baker served as the reviewers for the concept which aims to accelerate the translation of genomic discoveries into therapeutic strategies for AD/ADRD. This collaborative approach will bridge genomics and translational science to facilitate the discovery of genome-based therapeutic targets for pre-clinical drug and biomarker discovery. The goal is to support integrative, cross-disciplinary projects aimed at scaling up mechanistic studies to understand the genomic underpinnings of AD/ADRD. Ultimately, this initiative will lead to identifying actionable therapeutic targets, meeting the urgent need for mechanism-driven insights that can guide precision medicine approaches for AD/ADRD. The Council expressed strong enthusiasm for the concept's potential to make a significant impact through the establishment of a precision genomic medicine research consortium.

Mechanisms Underlying Olfactory Dysfunction in Aging and AD/ADRD

Dr. Huang and Dr. Schneider reviewed and presented the concept for Mechanisms Underlying Olfactory Dysfunction in Aging and AD/ADRD. Olfaction declines with age, and approximately two-thirds of older adults with impaired olfaction are unaware of this sensory defect.

Understanding the mechanisms underlying age-related olfactory decline is crucial for developing interventions to address smell loss and improve quality of life in older adults, as well as for determining whether smell loss can truly serve as a reliable early biomarker of risk for AD/ADRD. This initiative would support research to address these knowledge gaps and provide much-needed evidence on the use of olfactory dysfunction as an indicator of various health outcomes in older adults. The concept addresses three major NIA strategic goals: gaining a better understanding of the biology of aging; developing effective interventions to maintain health, well-being, and function; and advancing knowledge of the aging brain, AD/ADRD, and other neurodegenerative diseases. Council members suggested focusing on mechanistic studies underlying olfaction decline, with the potential to identify therapeutic targets, rather than focusing primarily on biomarker development. Additional areas of interest included examining the effects of sex and genetic risk factors, such as APOE genotype, on olfactory dysfunction in aging and AD/ADRD.

Understanding Cerebellar Contributions to Cognitive and Affective Functions in Aging and Alzheimer's Disease/Alzheimer's Disease-Related Dementias

Dr. Schneider and Dr. Asthana reviewed and presented the concept on Understanding Cerebellar Contributions to Cognitive and Affective Functions in Aging and AD/ADRD. The cerebellum has traditionally been associated with motor functions; however, a growing body of research has identified important roles for the cerebellum in cognitive and affective functions, while comparatively limited work has examined its role in these processes or in neurodegenerative diseases such as AD/ADRD. This initiative proposes to solicit applications using both human and animal models to understand the physiology of the cerebellum in aging and AD, as well as neuroanatomical and pathophysiological changes associated with AD, including analysis using large data sets. The initiative would also support studies examining the cerebellum as a potential target for interventions aimed at enhancing cognitive reserve and/or delaying the onset of AD/ADRD. Council members expressed full support for this initiative.

Novel Approaches to Advance Precision Aging and Cognitive Health

Dr. Huang and Dr. Lundberg reviewed and presented this initiative which supports the development and/or application of novel, cutting-edge machine learning algorithms and/or AI approaches that (1) allow the discovery of individual-level health and function profiles that could ultimately lead to the development of personalized prevention plans or interventions for cognitive and brain health in older adults, and/or (2) advance our understanding of individual differences in human cognitive and brain aging and to enable perturbation of the data to inform precision health approaches. The concept aims to achieve the goals by supporting research to efficiently explore large data collection; determine how cognitive and neural dynamics can be modified; and reveal mechanisms informing how the brain and mind flexibly integrate information, how those processes change with age, and how behavior is impacted in real time. Research using AI/machine learning approaches to identify dimensions and mechanisms by which resilience to age-related cognitive decline, impairment, and/or AD operates is also of interest. Through the R01 mechanism, the initiative would allow for both basic research in

animal models as well as development of profiles for humans, and analyses spanning from cellular to societal levels. Council members emphasized the importance of addressing individual-level complexity through personalized approaches to improve outcomes in prevention, intervention, and clinical trials. They also provided feedback recommending the use of AD/ADRD funding support and the inclusion of clear language requiring high-value common data elements and specific biomarkers to better leverage existing NIA/NIH investments. Overall, Council members were supportive of this concept, noting its timeliness and importance.

AD/ADRD Clinical Trials Short Course

Dr. Van Eldik and Dr. Inouye reviewed and presented this initiative, which is a renewal of [PAR-21-141](#). Clinical trials in the field of AD/ADRD have more than doubled in the past three years, creating a critical need to expand the AD/ADRD clinical trials workforce. As trial designs and research methodology evolve, AD/ADRD clinical trialists require an increasing array of knowledge and skills in addition to expertise in aging and dementia. Such training is necessary for success in team-science environment but is rarely available through traditional medical and graduate education pathways. Through the R25 mechanism, this renewal initiative aims to support applications proposing the development, implementation, and evaluation of creative, innovative, and intensive short courses that provide state-of-the-art training in AD/ADRD clinical trials research. Depending on the goals of the proposed short course, course duration may range from one week or less to a maximum of 12 weeks. Eligible participants would include graduate and medical students, medical residents, postdoctoral scholars, and/or early-career faculty. Council members noted the timeliness of this initiative and highlighted the success of the short courses supported under the previous NOFOs, including the Institute on Methods and Protocols for Advancement of Clinical Trials in ADRD (IMPACT-AD) and Dementia Palliative Care Clinical Trials Training program (DEMENTIA-PCCT)). Council members expressed strong support and enthusiasm for this initiative and emphasized the importance of sharing information on the evaluation outcomes of funded short courses.

Discovery of in vivo Chemical Probes for the Nervous System

This initiative is a renewal of [PAR-24-088](#) and aims to advance the discovery of small molecule chemical probes to identify new targets for nervous-system disorders and to support *in vitro* and *in vivo* preclinical drug discovery studies. Using the R01 mechanism, the initiative proposes to stimulate research focused on the discovery and development of novel, small molecules for their potential use in understanding the biological processes of the nervous system. In addition, it encourages the discovery and/or validation of novel, biological targets with the potential to inform studies of brain disease mechanisms. This initiative also supports the development of tools and datasets to assist academic and biopharma researchers in generating and testing series of chemical leads in relevant model systems to advance novel therapeutic development. This initiative will be a collaborative effort among NIA, the National Institute of Mental Health (NIMH), the National Institute on Drug Abuse (NIDA), and the National Eye Institute (NEI).

IV. PROGRAM HIGHLIGHTS (DN)

Design of New Protein Functions Using Deep Learning

Dr. David Baker, Head of the Institute for Protein Design, Henrietta and Aubrey Davis Endowed Professor in Biochemistry, University of Washington

Dr. Baker began his presentation by describing the traditional protein design workflow, which starts with defining a desired protein function, followed by identifying a corresponding structure and designing amino acid and genomic sequences to support that structure. Candidate proteins are then evaluated through *in vitro* and *in vivo* experiments to validate their structures and functions.

Dr. Baker introduced RFdiffusion, a protein design method developed by his group. In this approach, known protein structures from the Protein Data Bank (PDB) are progressively corrupted with random noise and used to train AI models to reverse the process.

Using RFdiffusion, Dr. Baker's group has designed proteins with a wide range of functions, with particular focus on the receptor-binding proteins. Examples included TNF receptor binders to suppress inflammation, binders targeting peptide-MHC complexes for gene therapy, and G protein-coupled receptor (GPCR) binders for pharmacological agonists or antagonists.

Dr. Baker noted that this approach enables the design of novel signaling molecules by combining receptor binders for specific therapeutic functions. He described efforts to develop nerve growth factor (NGF)-based therapies for neural regeneration, including the design of *de novo* TrkA agonists that mimic NGF's regenerative effects without engaging pain pathways. He also highlighted a synthetic FGFR-HER2 ligand designed using this approach that promoted muscle differentiation.

Dr. Baker briefly discussed the design and development of protein nanomaterials using AI-powered protein design. He highlighted his group's work on a protein-based COVID-19 vaccine that has been approved for clinical use in the United Kingdom and South Korea. He also noted ongoing efforts by his group and collaborators to design symmetry-based delivery molecules.

Dr. Baker then presented designs of proteins with multiple low-energy states, including molecular switches that undergo conformational changes upon effector binding and conditional agonists applicable to controllable immunotherapies. He also discussed novel enzyme designs, in which RFdiffusion uses predefined catalytic sites to generate protein scaffolds that support enzymatic activity. Dr. Baker mentioned that protease design is of particular interest, as proteases can be combined with protein binders to direct targeted protein degradation.

Dr. Baker then focused on his presentation on approaches to combat neurodegeneration. He described efforts to design blood-brain barrier (BBB) trafficking modulators, including binders targeting transcytosis receptors. Preliminary *in vitro* studies showed enhanced BBB permeability, and these approaches are currently being evaluated in mouse models.

Dr. Baker also discussed the design of binders targeting intrinsically disordered proteins in neurodegenerative diseases. Using RFdiffusion, his group designed binders against disordered proteins implicated in neurodegenerative diseases, including amyloid and tau, demonstrating cellular activity and inhibition of protein aggregation *in vitro*.

Dr. Baker concluded by describing efforts to develop tau degraders, including engineered tau binders fused to E3 ligases that promoted tau ubiquitination and clearance in cell-based assays. He also presented preliminary data on phosphorylation-specific tau peptide binders and polymorph-specific fibril binders capable of distinguishing disease-associated tau isoforms, highlighting potential applications in diagnostics and targeted therapeutics for protein aggregates in AD/ADRD.

Discussion

Discussion focused on potential applications of the designed protein binders, including their potential therapeutic use. Members discussed designs that undergo conformational changes upon effector binding. Dr. Baker described these proteins as potential conditional therapeutics or disaggregates, in which endogenous signals would drive conformational change.

Dr. Baker clarified that small molecule effectors in controllable immunotherapies can be designed to function as either agonists or antagonists. He also noted that, similar to antibody-based therapies, long-term use may elicit compensatory immune responses. In related discussion, Council members asked about designing peptide binders in the context of MHC. Dr. Baker explained that most of the efforts have focused on binders to specific MHC-peptide conformations, with specificity against a stabilized MHC region in complex with different peptides. He further noted his ongoing nanocage projects with potential applications in vaccine development.

In closing, Dr. Baker addressed questions regarding the range of proteins that can be designed, noting that current capabilities include transmembrane proteins and ion channels. He explained that, provided the desired biochemical, environmental, and functional properties are well defined, protein design is largely feasible using established methods. He emphasized that the primary challenge lies in identifying the appropriate conditions relevant to specific physiological contexts and diseases.

V. COUNCIL SPEAKER

NIH Director's Update

Dr. Jay Bhattacharya, Director, NIH

Presentation

Dr. Bhattacharya presented on the importance of health in an aging population and its economic impact, emphasizing NIA's critical role in advancing aging and dementia research. He outlined key federal investments, including drug development and repurposing, lifestyle and behavioral interventions, diagnostic and risk factor identification, and caregiving research.

He also described the NIH vision, which is comprised of five elements: improving population health, ensuring reliable results, making major advances, maintaining safety and transparency, and encouraging academic freedom. The presentation focused on the following topics that framed the discussion of new NIH research priorities.

(1) Novel Alternative Methods (NAMs)

The NAMs policy emphasizes translation to human health and seeks to de-emphasize research proposals relying exclusively on animal testing. Use of animal models must be justified by demonstrating their relevance to human translation and the lack of suitable alternative models. Incorporation of NAMs is encouraged in NIH NOFOs involving animal model systems to promote human-focused approaches aligned with human biology.

(2) Gold Standard Science Plan

Gold Standard Science is defined as a comprehensive approach to scientific integrity, emphasizing reproducibility, transparency, clear communication of uncertainty and error, and the appropriate reporting of negative results. Dr. Bhattacharya noted that many scientific publications fall short of these standards and highlighted the need to address the reproducibility crisis and the underreporting of negative findings. He emphasized replication as foundational to scientific validity and called for higher standards to ensure reproducibility.

Dr. Bhattacharya outlined strategic actions to address these issues, including plans to launch an initiative through the NIH Common Fund and to establish an NIH Office of the Director-level office focused on three areas. First, the office would support replication efforts across the scientific community through targeted grant awards. Second, it would develop a repository or journal for publishing replication studies and negative results, ideally linked to PubMed records. Third, it would develop new metrics of scientific success based on transparency and the sharing of resources to enable replication.

(3) Support for Early Career Investigators

Dr. Bhattacharya presented data indicating a significant increase since the 1970s in the proportion of early-career investigators leaving science, which he attributed to limited tolerance of early failure and insufficient support for young scientists to pursue new ideas. He cited findings from a 2019 study examining reliance on novel ideas by career age, defined as years since a scientist's first publication, and found that older scientists tend to rely less on novel ideas than younger scientists. The findings underscore the need for sustained influx of new ideas to drive scientific discovery and for increased support of early career researchers. The study also showed that collaborations between early- and later-career scientists were the most productive in advancing new ideas, highlighting the importance of mentorship and support from senior investigators.

(4) Unified Strategy to Fund Projects

Dr. Bhattacharya presented data showing a shift in NIH funding toward older ideas, from predominantly funding newly generated ideas during 1990-1999 to supporting ideas that were seven to eight years old during 2000-2009. He proposed addressing this trend through a new unified grant funding strategy. Under the updated NIH strategy, fixed percentile paylines, previously used by approximately half of NIH Institutes and Centers (ICs), would no longer serve as the primary determinant of funding decisions. Instead, ICs would place greater emphasis on

strategic mission and research priorities, portfolio balance, and investigator career stage, in addition to scientific merit.

Discussion

Following Dr. Bhattacharya's presentation, Council members discussed topics of concern, including NIH's independence and role within HHS, and requested clarification on certain languages used during his presentation. Dr. Santora noted that he would relay these questions to Dr. Bhattacharya for further elaboration.

Council members discussed the implementation of proposed replication studies and the importance of reporting negative results. Members expressed differing views, including the view that failed results are critical to clinical research. One member expressed concern that an increased emphasis on replicability could detract from incremental science, noting that science is cumulative and builds from prior experiments and failures. Multiple members also noted that replication mechanisms are not new, while acknowledging their importance. In general, members requested additional clarification on how the proposed algorithm-based reproducibility studies will be implemented in practice.

Some Council members responded positively to Dr. Bhattacharya's emphasis on human-focused translational research, acknowledging the substantial gap between cell- and animal-based models and human clinical studies. Members sought clarification on concrete strategies to reengage clinicians in research. Others noted that translational pipelines have long existed and often require years to advance a single mechanism into human studies—an approach that, while not always aligned with Dr. Bhattacharya's emphasis on “new ideas,” remains essential. Members emphasized the need to avoid oversimplifying the translational process and raised questions about the generalizability of translated findings across different populations.

Finally, members expressed concern about a perceived shift in the NIH funding model from long-term public health investment toward a venture capital-style approach. While acknowledging the conceptual importance of the proposed priorities, they noted that funding and resources are limited and requested clarification regarding concrete plans for implementation.

VI. ADJOURNMENT

The open session of the 156th meeting of the National Advisory Council on Aging adjourned at 1:00 p.m. on September 18th. The next meeting is scheduled for January 27th, 2026.

VII. CERTIFICATION

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

³ These minutes will be approved formally by Council at the next meeting on January 27, 2026, and corrections or notations will be stated in the minutes of that meeting.

Richard J. Hodes M.D.

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