

Department of Health and Human Services

National Institutes of Health

National Institute of Nursing Research

Minutes of the National Advisory Council for Nursing Research

September 12–13, 2017

The 93rd meeting of the National Advisory Council for Nursing Research (NACNR) was convened on Tuesday, September 12, 2017, at 1:00 p.m. in Conference Room 6, Building 31, National Institutes of Health (NIH), Bethesda, Maryland. The first day of the meeting was an open session and adjourned that same day at 4:50 p.m. The closed session of the meeting, which included consideration of grant applications, was convened on Wednesday, September 13, 2017, at 9:00 a.m. and continued until adjournment at 1:00 p.m. Dr. Patricia A. Grady, Chair, NACNR, presided over both sessions of the meeting.

OPEN SESSION

I. CALL TO ORDER, OPENING REMARKS, COUNCIL PROCEDURES, AND RELATED MATTERS—Dr. Patricia Grady, Director, National Institute of Nursing Research (NINR)

Dr. Grady called the 93rd meeting of the NACNR to order and welcomed all Council members, visitors, and staff, including new Council members Drs. Yvette Conley, Audwin Fletcher, Shirley Moore, Shelia Sullivan and JoEllen Wilbur. (Dr. Karen Meneses unable to attend.)

Conflict of Interest and Confidentiality Statement

Dr. Marguerite Kearney, Acting Executive Secretary, NACNR, and Director, Division of Extramural Science Programs, NINR, noted that the meeting would be recorded for purposes of the minutes and that audio recordings would be destroyed once the

minutes were completed. She reminded attendees that NIH is a smoke-free campus. She asked Council members to update their addresses on the meeting roster that would be circulated during the meeting. Dr. Kearney referred to the conflict of interest and confidentiality statements provided in the Council materials and indicated that specific instructions would be provided at the beginning of the closed session on Wednesday.

Minutes of the Previous NACNR Meeting

Council members received the minutes of the May 23–24, 2017, NACNR meeting by email. A motion to accept these minutes was made, seconded, and approved unanimously. The approved minutes of each NACNR meeting become part of the Institute’s official record and are posted on the NINR website (www.ninr.nih.gov).

Dates of Future Council Meetings

Council members were asked to confirm their calendars for the following meeting dates and to contact Drs. Grady and Kearney about any conflicts or expected absences.

2018

January 23–24 (Tuesday–Wednesday)

May 15–16 (Tuesday–Wednesday)

September 11–12 (Tuesday–Wednesday)

2019

January 29–30 (Tuesday–Wednesday)

May 21–22 (Tuesday–Wednesday)

September 17–18 (Tuesday–Wednesday)

II. REPORT OF THE DIRECTOR, NINR—Dr. Patricia Grady, Director, NINR

The Director’s report focused on activities and news from the Department of Health and Human Services (HHS), NIH, and NINR since the Council met in May. Highlights of Dr. Grady’s report included:

Budget Update—Limited information is available about the budget for Fiscal Year (FY) 2018, which begins October 1. The government will operate under a Continuing Resolution until early December.

Dr. Grady reviewed distribution of funds, noting that the bulk of funds (80 percent) go to support extramural research, training awards, and research and development. Other NINR budget allocations include the intramural program (6 percent), and research management services (11 percent).

HHS and NIH News—Dr. Grady reported recent appointments within the Department of Health and Human Services. Dr. Jerome Adams has been confirmed as Surgeon General; Dr. Elinor McCance-Katz, as Assistant Secretary overseeing the Substance Abuse and Mental Health Services Administration; Dr. Brenda Fitzgerald, as Director of the Centers for Disease Control and Prevention; and Dr. George Sigounas, as Administrator, Health Resources and Services Administration. Dr. Norman Sharpless has been appointed Director of the National Cancer Institute (NCI).

In August, the *Discovery Channel* premiered “First in Human, a three-part documentary on the NIH Clinical Center narrated by Jim Parsons.

The NIH Next Generation Researchers Initiative (<https://directorsblog.nih.gov/>) aims to bolster funding support for new and mid-career investigators.

In August, NIH announced a new definition of clinical trials (<https://grants.nih.gov/policy/clinical-trials/definition.htm>) designed to help researchers distinguish clinical studies from clinical trials and to support improved tracking and characterization of this research. This change will impact all applications involving research participants and clinical trial applications.

NIH Director Dr. Francis Collins and Dr. Carrie Wolinetz, Associate Director for Science Policy, co-authored a Commentary on the Common Rule and NIH Single IRB Policy that explains how the NIH policy is, by design, entirely complementary to the final Common Rule. The effective date of the new NIH policy is for all applications with due dates on or after January 25, 2018.

Dr. Grady mentioned a selection of NIH funding opportunities in which NINR participates. Announcements are available at <http://grants.nih.gov/grants/guide>.

NINR News—Dr. Grady described the Science of Caregiving Summit hosted by NINR and its partners in August. Keynote speaker Ms. Judy Woodruff, Anchor and Managing Editor of the PBS NewsHour, presented an inspiring look at what it is like to be a caregiver for her oldest son who was born with spina bifida. An archived video of the two-day event is available at videocast.nih.gov.

On September 20, Dr. Mary Beth Happ will present the third 2017 NINR Director's Lecture describing her research program that addresses family bedside presence during critical illness, end-of-life care and treatment decision making in the ICU, and patient and family outcomes in acute-critical illness. Dr. Margaret Heitkemper will present the final lecture for 2017 on November 14; her lecture will focus on symptom science in irritable bowel syndrome. NINR Director's Lectures are posted at <https://www.ninr.nih.gov/newsandinformation/events/pastevents>.

NINR was a co-author of a National Academies of Sciences, Engineering and Medicine Perspectives Paper, "Community-Based Models of Care Delivery for People with Serious Illness" that focused on guiding principles for the development of community-based serious illness care programs.

Accomplishments of the NINR-funded Palliative Care Research Cooperative (PCRC) Group were published in a special report in the *Journal of Palliative Medicine*. The report describes important steps the PCRC has taken to advance the quality and impact of palliative care research.

NINR participated in several events during the spring and summer. These included Dr. Grady's presentation at the 2017 International Council of Nurses, Barcelona, Spain; Dr. Grady's keynote at the inaugural International Indigenous Nursing Research Summit at Florida State University; several Capitol Hill Briefings; and Dr. Grady's presentation to the Oncology Nursing Society on recent NINR-sponsored research developments relevant to cancer.

Dr. Grady noted the range of NINR funding opportunities. Announcements are available at

www.ninr.nih.gov/ResearchAndFunding/DEA/OEP/FundingOpportunities/.

Training Opportunities

- The 2017 Summer Genetics Institute (SGI) included presentations on genetic disorders, epigenetics, the microbiome, and stem cells as well as lab sessions on molecular and cell biology methods. The application period for the 2018 SGI program opens in mid-November.
- The 2017 NINR Methodologies Boot Camp brought 160 scientists, clinicians, graduate students, and faculty from multiple disciplines to the NIH campus. The event featured lectures by distinguished scientists as well as classroom discussion and laboratory training.
- The Graduate Partnerships Program (GPP) aims to encourage and support training of nursing doctoral students to undertake careers in basic or clinical research. The application submission deadline for the 2018 GPP is December 1, 2017.
- This summer, NINR's Division of Intramural Research welcomed summer trainees to conduct research for eight weeks at NINR. Trainees included postdocs, grad students, postbacs, and local high school students.

Staff News—Dr. Grady announced several recent honors awarded to NINR staff. Dr. Katy Meilleur received an NIH Director's Innovation Award of \$200,000 to support creation of a pipeline to streamline testing of novel potential therapeutic compounds for rare neuromuscular diseases—her second award. Dr. Jessica Gill was selected as a Fellow of the American Academy of Nursing.

NINR staff changes include the following: Dr. Paule Joseph was selected to serve as Acting Assistant Clinical Investigator in NINR's Intramural Research Program (IRP), Dr. Pam Tamez has been named Acting Intramural Training Director, and Dr. Rebekah Rasooly has joined the NINR Division of Extramural Science Programs as a Health Science Administrator.

III. NIH CLINICAL CENTER: COLLABORATIONS ACROSS THE NIH INTRAMURAL PROGRAMS—Dr. James Gilman, CEO, NIH Clinical Center

Dr. Gilman provided an update on NIH Clinical Center (CC) operations and listed current opportunities for collaborations across NIH intramural programs at the NIH CC.

In April 2016, the Advisory Committee to the NIH Director set three priorities for change at the NIH CC: strengthen leadership for clinical care quality, oversight, and compliance; address sterile processing; and fortify a culture and practice of safety and quality. Dr. Gilman outlined recent changes at the CC designed to address these priorities.

An external hospital board was established to advise the NIH Director on CC policies, safety and quality, and regulatory compliance. Dr. James Gilman was selected as Chief Executive Officer with responsibility for staff engagement, patient safety, CC organization, facilities, budget, and communication priorities. Dr. John Gallin was named CC Associate Director for Clinical Research with responsibility for strategic partnerships, prioritization and scientific review of protocols, and policy for allocation of scarce CC resources.

An interim Intravenous Admixture Unit (IVAU) opened in April 2017. The interim IVAU addresses challenges of working in the older facility.

The CC mission—to provide hope through pioneering clinical research to improve human health—is guided by the principle of individual and collective passion for high reliability in the safe delivery of patient-centric care in a clinical research environment. The goal is to build a culture of quality while facilitating compliance with numerous NIH and extra-NIH regulations and policies; reduce gaps in clinical research support between smaller and larger NIH Institutes; facilitate clinical research, especially for early investigators; separate policy and operations; and improve patient safety and clinical quality while enhancing clinical research support.

Other recent accomplishments in patient safety and clinical quality include creation of a pediatric observation unit, CC staff expansion, addition of hospice beds,

centralization of research support, root cause analyses, daily patient safety “huddles,” quarterly M&M conferences, weekly CEO patient safety rounds, and establishment of a new event reporting system: Safety, Tracking and Reporting System. Every patient has access to secure messaging via an active patient portal. Providers are required to respond within 72 hours.

NINR clinical activity includes 15 current NINR protocols: 4 clinical trials, 10 natural history studies, and 1 screening study. Five research labs utilize a shared resources approach.

Opportunities for collaborative research at the NIH CC include a U01 that provides \$500,000/year in direct costs for up to four years. To date, four cycles have been completed and 31 awards have been made. NINR’s Dr. Wendy Anderson is a consultant on a U01-supported project, “Cardiovascular Risk in HIV Youth.” The Bench-to-Bedside Program provides \$150,000/year in direct costs for two years. Since 1999, 255 awards have been made, with more than 800 intramural and extramural investigators.

IV. OVERVIEW OF THE NINR INTRAMURAL RESEARCH PROGRAM—Dr. Ann Cashion, Scientific Director, NINR

Dr. Cashion presented an overview of the NINR Division of Intramural Research (DIR): its scientific focus, organization, and research programs. Between 40 and 50 individuals within DIR conduct this work.

The NINR Intramural Research Program is focused on symptom science. The Program conducts novel, high-impact research that quantifies subjective symptom experiences, explores underlying molecular mechanisms, determines environmental influences, recognizes individual variability, and employs clinical interventions.

NINR proposed the creation of an NIH symptom science center to promote understanding of biologic and biobehavioral mechanisms of symptoms to improve patient outcomes and inform personalized approaches to symptom management.

Dr. Cashion outlined the DIR organization. The DIR is led by the Office of the Scientific Director. This Office includes the Office of the Training Director, led by Dr.

Pam Tamez, and the Office of the Clinical Director, led by Clinical Director Dr. Suzanne Wingate. Scientific research programs are divided into four branches: Biobehavioral, Symptom Management, Tissue Injury, and an Advanced Visualization Laboratory that will be added.

The Biobehavioral Branch has two units. The Digestive Disorders Unit, led by Dr. Wendy Henderson, focuses on brain-gut-microbiota mechanisms in symptom distress related to digestive disorders as well as biobehavioral interventions that target digestive disorder symptoms. The Sensory Science & Metabolism Unit is led by Dr. Paule Joseph. Her lab aims to understand molecular and neural mechanisms underlying symptoms to identify novel targets for treatment and improve symptom management strategies.

The Symptom Management Branch includes the Symptom Biology Unit and the Genomic and Clinical Biomarkers Unit. Dr. Cashion's Genomic and Clinical Biomarkers Unit conducts research to discover biomarkers within an environmental and clinical context to predict patient outcomes and guide therapies; specifically, in solid organ transplant recipients as well as other diseases/disorders and patient populations. Dr. Leorey Saligan, Chief of the Symptom Biology Unit, examines the nature and causes of fatigue in specific conditions as well as the molecular and biobehavioral underpinnings of fatigue-associated symptoms.

The Tissue Injury Branch conducts clinical and laboratory-based studies on the mechanisms of tissue injury, including identification of molecular targets and pathways for interventions. Dr. Jessica Gill is Chief of the Brain Injury Unit, which focuses on mechanisms associated with risks for neurological and behavioral symptoms in traumatic brain injuries and concussions. As Chief of the Neuromuscular Symptoms Unit, Dr. Katy Meilleur focuses on novel clinical outcome measures and treatments in congenital myopathies and muscular dystrophies.

Dr. Patricia Brennan will lead the Advanced Visualization Laboratory (under development) that will focus on immersive visualization technologies that allow for rehearsal and stimulate problem solving for individuals with complex diseases that rely on self-management.

In the Omics Laboratory, Drs. Hyung-suk Kim and Dan Wang and multiple other staff conduct cross-cutting research. Their expertise and willingness to learn cutting-edge technologies and teach them to fellows and trainees (i.e., postdocs and postbacs) have provided a stable foundation for the growth of the program.

V. ANNOUNCEMENT OF VISITORS

Dr. Grady announced the names of visitors and encouraged attendees to take advantage of the upcoming break to meet them.

VI. A COLLABORATIVE FRAMEWORK TO ADVANCE FATIGUE

RESEARCH—Dr. Leorey Saligan, Chief, Symptoms Biology Unit, Division of Intramural Research, NINR

Dr. Saligan described a framework of collaboration to support development of a research program on fatigue within the Symptoms Biology Unit. The framework includes a matrix of mentors and collaborators including senior tenured NIH investigators from NCI, the National Heart, Lung, and Blood Institute (NHLBI), and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS); extramural experts from Georgetown University Hospital, Harvard University, and the University of Oviedo in Spain.

His strong collaboration with the NCI Radiation Oncology Department yielded clinically relevant data generated from a natural history study where he identified clinical and demographic factors that influence acute and chronic fatigue experiences related to radiation therapy (RT) for non-metastatic prostate cancer. In addition, Dr. Saligan's collaboration with established laboratories in NIH, such as the Translational Immunology Laboratory of the NIAMS allowed him to explore biologic correlates of RT-related fatigue. His initial laboratory findings were further validated from biologic samples collected by his extramural collaborators from Radiation Medicine Department of MedStar Georgetown University Hospital, providing convincing evidence of the biological basis of RT-related fatigue. To further understand the biological underpinnings of RT-related fatigue, Dr. Saligan established an *in vitro* T-cell model through collaborations with various NIH laboratories such as the Imaging

Section of the NIAMS and the Radiation Oncology Branch of the NCI to visualize key physiological pathways (e.g., glutamatergic and inflammatory pathways) that may play important roles in the development and persistence of RT-related fatigue. He also collaborated with the Phenotyping Core of the NHLBI to develop a mouse model of radiation-induced fatigue to further phenotype this RT-related fatigue behavior and understand peripheral and central mechanisms that underlies it.

Through his collaborations with bioinformaticians and statisticians from Harvard and University of Oviedo in Spain, he was able to identify genes that can predict fatigue risk using a novel predictive algorithm. Currently, Dr. Saligan is conducting a proof-of-concept clinical trial to validate the clinical relevance of these predictive genes.

VII. MYALGIC ENCEPHALOMYELITIS/CHRONIC FATIGUE SYNDROME

INTRAMURAL RESEARCH COLLABORATION—Dr. Brian Walitt, Medical Officer, Division of Intramural Research, NINR

Dr. Walitt described an intramural research collaboration that supported an intense study of a small number of patients with Post-Infectious Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (PI-ME/CFS). Scientists from the NIH CC, NCI, National Institute on Aging, National Institute on Mental Health (NIMH), National Institute of Neurological Disorders and Stroke (NINDS), and NINR participated in this effort. Dr. Avindra Nath is lead investigator, and Dr. Walitt is lead associate investigator for the study.

CFS is a persistent and clinically impactful fatigue coupled with postexertional malaise (PEM) that occurs after previously tolerated physical or mental activity with no alternate explanation for symptoms. Ten to 12 percent of people with significant infections develop CFS.

The study aims to investigate the hypothesis that PI-ME/CFS is triggered by a viral illness that results in immune-mediated brain dysfunction. Phase I is a cross-sectional study for deep phenotyping of PI-ME/CFS to define its pathophysiology. Phase II will validate select biomarkers from Phase I in a longitudinal study and establish objective

endpoints for an intervention study. Phase III will be an early-phase intervention study with an immunomodulatory agent that targets biomarkers validated in Phase II.

The Phase I phenotyping study includes a deep phenotyping visit and an exercise stress visit. Visit 1 includes a barrage of assessments and tests, including cross-sectional clinical and biological assessment; comparison of measurements to controls (i.e., healthy volunteers who recover from Lyme); a dietary evaluation; a microbiome evaluation of buccal mucosa and stool samples, as well as tests of blood, cerebrospinal fluid, and peripheral blood mononuclear cells; neuroimaging; autonomic testing; and mitochondrial function.

Visit 2 will include a provocative exercise stress task designed to induce PEM; serial measures conducted over 72 hours (i.e., qualitative interview, patient-reported outcome questionnaires, blood tests, microbiome and micronutrient testing, metabolic chamber with metabolic diet, sleep electroencephalogram, and lumbar puncture); and baseline/postexercise testing (i.e., neurocognitive, functional magnetic resonance imaging [MRI], and transcranial magnetic stimulation).

As of May 2017, 10 out of 40 healthy controls had completed Visit 1 (two were excluded for discovered medication conditions); 7 out of 40 PI-ME/CFS participants had completed Visit 1, and the first participant's case had been adjudicated; and 1 out of 20 healthy volunteers had completed Visit 2.

VIII. MODERATED PANEL DISCUSSION ON COLLABORATIONS—Dr. Ann Cashion, Scientific Director, NINR

Dr. Cashion discussed collaborations with Drs. Saligan and Walitt.

Dr. Saligan described several challenges he has encountered in collaborative research, including conveying the goals of the study and describing the contributions each investigator can make. Dr. Wiatt noted that it is important to understand the goals of the collaborators and appreciate their independence.

Although NINR is not deeply involved in animal model work, this is an important area for investigating mechanisms. For Dr. Saligan, gaining access to core labs in larger

Institutes and Centers (ICs) was challenging. However, once collaborators saw the outcomes reported in his first paper, they were more willing to provide resources.

Dr. Walitt pointed out that nursing science is uniquely positioned for this type of collaboration. Disorder-focused Institutes recognize that nursing can offer help because of the profession's strong ties to symptoms.

Dr. Saligan described the symptom science center as a disease-neutral entity where collaborators can bring patients. Validating initial findings from the prostate cancer study helped in understanding the shared mechanism for fatigue across this population. One aspect of the next phase involves reaching out to the extramural community to validate findings in a community setting and to move toward sustainability so that the validation process continues across different clinical populations.

IX. BIOMARKERS OF BLAST EXPOSURE, A TEMPLATE FOR FEDERAL AGENCY COLLABORATIONS—Dr. Jessica Gill, Lasker Clinical Research Scholar, Intramural Research Program, Chief, Brain Injury Unit, Division of Intramural Research, NINR

Dr. Gill described a collaboration that focused on biomarkers of blast exposure. Blast exposure is the signature injury of Operation Enduring Freedom and Operation Iraqi Freedom. Most blasts occur with blunt force injuries. Over 250,000 military personnel and veterans have chronic neurological symptoms related to these injuries.

The collaboration involved NINR, the Walter Reed Army Institute of Research (WRAIR), the Uniformed Services University of the Health Sciences (USUHS) Center for Neuroscience and Regenerative Medicine (CNRM), and the University of Rochester. WRAIR has expertise in blast measurement, access to Army and Navy blast training sites, and an overall mission to address the impact of blasts. NINR has expertise in biomarker analyses and clinical implications of brain injuries.

Study participants were recruited from an advanced ten-day blast training course. Pressure sensors were placed above participants' ears to measure blast exposure pressure. Twenty-nine cases sustained a blast greater than or equal to 5 pounds per

square inch (PSI) on day 7; 21 matched controls had exposures less than 2 PSI throughout training.

Results of a comparison of baseline blood samples and samples collected after blast exposures include significant changes in ratios of the proteins amyloid beta 40, amyloid beta 42, and tau. Overall, reductions in amyloid beta 40 and amyloid beta 42 and increases in tau were observed. The ratio of tau to amyloid beta 42 may inform clinical work and investigation of unique patterns of blast biomarkers compared with those of blunt force trauma.

Next steps will include assessing long-term changes, incorporating neuroimaging findings and other methods to understand blast-related changes, and exploring the role of accelerated postblast clearance, including the lymphatic system.

X. BRAIN-GUT CONNECTIONS AND COLLABORATIONS—Dr. Wendy Henderson, Chief, Digestive Disorders Unit, Division of Intramural Research, NINR

Dr. Henderson described collaborative research efforts related to stress effects on intestinal health. Up to 20 percent of the U.S. population reports stress-induced digestive or gastrointestinal (GI) symptoms, which are the single most common reason for emergency room visits, are among the top ten reasons for outpatient visits, and cost \$30 billion annually. There is evidence that chronic stress affects intestinal health across the lifespan.

Dr. Henderson focused on one of seven clinical protocols related to this area: Targeting GI Epithelial Integrity to Improve Arterial Inflammation in HIV, a collaborative study with Dr. Janet Lo at Harvard Medical School, Massachusetts General Hospital. The study will test the hypothesis that increased microbial translation results from impaired epithelial integrity and mucosal immunity that triggers the innate immune system, which causes proatherogenic monocyte and macrophage activation and atherosclerotic disease in HIV disease.

The cross-sectional study and interventional study of healthy controls and randomized controlled trial study in persons living with HIV involves a total of ten visits: four baseline visits (i.e., screening via cardiac computed tomography

angiogram [CTA], intestinal permeability, colonoscopy/endoscopy, and fluorodeoxyglucose positron emission tomography [FDG-PET]); two intervention safety visits; and four end-of-study visits that repeat the tests performed during the four baseline visits.

Future studies include development of a symptom diagnostics lateral flow assay in collaboration with GoDx.

XI. MODERATED PANEL DISCUSSION ON COLLABORATIONS—Dr. Ann Cashion, Scientific Director, NINR

Dr. Cashion discussed collaborations with Drs. Gill and Henderson.

Dr. Gill noted that getting approvals from all of the Institutional Review Boards (IRBs) was a challenge that involved nearly one year of paperwork before the science began. This required being assertive in getting documents to the desk of the right person. Dr. Henderson reported that establishing common data elements was key to having others validate the work, and especially helpful for future collaborations.

If intervention studies can be done extramurally, they should be. The intent is not for NINR to do it all but to come up with a novel idea and give it back. For trials in brain injury, NINR can perform in-depth phenotyping that cannot be done elsewhere.

Council members suggested developing a mechanism to partner intramural and extramural entities to push science out to clinical trials and dissemination. Others suggested establishing a think tank of collaborators to provide feedback on what to do next.

XII. ADJOURNMENT—Dr. Patricia Grady, Director, NINR

Dr. Grady thanked participants and attendees and adjourned the open session of the meeting at 4:30 p.m.

CLOSED SESSION

This portion of the meeting was closed to the public in accordance with the determination that this session concerned matters exempt from mandatory disclosure under Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S. Code, and Section 10(d) of the Federal Advisory Committee Act, as amended (5, USC Appendix 2). Members absented themselves from the meeting during discussion of and voting on applications from their own institutions or other applications in which there was a potential conflict of interest, real or apparent. Members were asked to sign a statement to this effect.

REVIEW OF APPLICATIONS

NACNR members considered 125 research and training grant applications on which NINR was the primary Institute; these applications requested a total of \$35,857,672 (direct costs year 01). The Council also considered 259 applications on which another Institute/Center was primary and NINR was secondary. These applications requested a total of \$89,803,669 (direct costs year 01). The Council concurred with the IRG recommendations on these 384 applications.

ADJOURNMENT

The 93rd meeting of the NACNR was adjourned at 1:00 p.m. on Wednesday, September 13, 2017.

CERTIFICATION

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

Patricia A. Grady, Ph.D., R.N.,
F.A.A.N.
Chair
National Advisory Council for
Nursing Research

Marguerite Kearney, Ph.D., R.N.,
F.A.A.N.
Acting Executive Secretary
National Advisory Council for
Nursing Research

COUNCIL MEMBERS PRESENT

Dr. Patricia Grady, Council Chair
Dr. Marguerite Kearney, Executive Secretary
Dr. Kathryn H. Bowles
Dr. Aaron G. Buseh
Dr. Yvette Conley
Dr. George Demiris
Dr. Audwin Fletcher
Dr. Jennifer Hatzfeld
Dr. Deborah Koniak-Griffin
Dr. Shirley Moore
Dr. Rita Pickler
Dr. Nancy Redeker
Dr. Meredith A. Rowe
Dr. Alexa K. Stuijbergen
Dr. Sheila C. Sullivan Ex Officio
Dr. JoEllen Wilbur
Dr. Jennifer Temel

MEMBERS OF THE PUBLIC PRESENT

Dr. Lalatendu Acharya, Purdue University
Dr. Mridul Datta, Purdue University
Dr. Susan Dorsey, University of Maryland
Mr. Patrick Hein, Purdue University
Dr. Perry Kirlchain, Purdue University
Dr. Stephen Lindemann, Purdue University
Ms. Joy Nathan, BETAH Associates
Dr. Mary Regan, University of Maryland
Dr. Cynthia Renn, University of Maryland
Ms. Kathy Sedgwick, NOVA Research Company
Dr. Maria Vassileva, Social & Scientific Systems

FEDERAL EMPLOYEES PRESENT

Dr. Lynn Adams, NINR/NIH

Dr. Carolyn Allen, NINR/NIH

Dr. David Banks, NINR/NIH

Ms. Melissa Barrett, NINR/NIH

Ms. Theresa Bedford, Uniformed Services University of the Health Sciences

Dr. Jessica Bellinger, CSR/NIH

Dr. Jacinta Bronte-Tinkew, CSR/NIH

Dr. Yvonne Bryan, NINR/NIH

Ms. Adrienne Burroughs, NINR/NIH

Dr. Edmond Byrnes, NINR/NIH

Dr. Ann Cashion, NINR/NIH

Dr. Young Eun Cho, NINR/NIH

Ms. Pamela Davis, NINR/NIH

Mr. Matt Eliseo, NINR/NIH

Dr. Rebekah Feng, NINR/NIH

Ms. Ana Ferreira, NINR/NIH

Alexis Franks, NINR/NIH

Dr. Nara Gavini, NINR/NIH

Dr. Jessica Gill, NINR/NIH

Dr. Michelle Hamlet, NINR/NIH

Dr. Rebecca Hawes, NINR/NIH

Dr. Wendy Henderson, NINR/NIH

Dr. Rebecca Henry, NINR/NIH

Dr. Karen Huss, NINR/NIH

Dr. Paule Joseph, NINR/NIH

Dr. Karen Kehl, NINR/NIH

Ms. Mary A. Kelly, NINR/NIH

Dr. Hyung Suk Kim, NINR/NIH

Ms. Jo-Ann Kriebel, NINR/NIH

Ms. Anna Kuo, NINR/NIH

Ms. Diane Kuszewski, NINR/NIH
Dr. Chen Lai, NINR/NIH
Mr. Tokunbor Lawal, NINR/NIH
Mary Ley, NINR/NIH
Dr. Weiqun Li, NINR/NIH
Dr. Martha Matocha, NINR/NIH
Dr. Jessica McIlvane, NINR/NIH
Dr. Arthur Meltzer, NINR/NIH
Dr. Katy Meilleur, NINR/NIH
Dr. Jeri Miller, NINR/NIH
Dr. Cheryl Nordstrom, CSR/NIH
Dr. Ananya Paria, NINR/NIH
Dr. Cassie Pattinson, NINR/NIH
Dr. Rebekah Rasooly, NINR/NIH
Dr. Mario Rinaudo, NINR/NIH
Dr. Becky Roof, NINR/NIH
Mr. Frederico Rosales, NINR/NIH
Dr. Leorey Saligan, NINR/NIH
Dr. Barbara Sheehan, CSR/NIH
Tonya Spencer, Uniformed Services University of the Health Sciences
Dr. Sheila Sullivan, Veterans Affairs
Dr. Pam Tamez, NINR/NIH
Dr. Chelvi Thyagarajn, NINR/NIH
Dr. Lois Tully, NINR/NIH
Simon Turkington, NINR/NIH
Ms. Erica Vass, NINR/NIH
Dr. Brian Walitt, NINR/NIH
Mr. Dan Wang, NINR/NIH
Mr. Kevin G. Wilson, NINR/NIH
Dr. Sue Wingate, NINR/NIH
Dr. Brian Wolff, NINR/NIH

Mr. Ajay Yadava, NINR/NIH
Dr. Sung “Sarah” Yoon, NINR/NIH