Department of Health and Human Services
National Institutes of Health
National Institute of Nursing Research
Minutes of the National Advisory Council for Nursing Research

January 19-20, 2010

The 70th meeting of the National Advisory Council for Nursing Research (NACNR) was convened on Tuesday, January 19, 2010, at 1:00 p.m. in Conference Room 6C, 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 approximately 4:38 p.m. The closed session of the meeting, which included consideration of grant applications, was convened on Wednesday, January 20, 2010, at 9:30 a.m. and continued until adjournment at 12:30 p.m. Dr. Patricia A. Grady, Chair, NACNR, presided over both sessions of the meeting.

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OPEN SESSION

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

Dr. Grady called the 70th meeting of the NACNR to order, welcoming all Council members, visitors, and staff.

Conflict of Interest and Confidentiality Statement

Dr. Mary Kerr, Executive Secretary, NACNR, reminded attendees that the standard rules of conflict of interest applied throughout the Council meeting. Briefly, all closed session material is privileged, and all communications from investigators to Council members regarding any actions on applications being considered during the Council should be referred to National Institute of Nursing Research (NINR) staff. In addition, during either the open or the closed session of the meeting, Council members with a conflict of interest with respect to any topics or any application must excuse themselves from the room and sign a statement attesting to their absence during the discussion of that application. Dr. Kerr also reminded NACNR members of their status as special Federal employees while serving on the Council, and that the law prohibits the use of any funds to pay the salary or expenses of any Federal employee to lobby or otherwise influence state legislatures or Congress. Specific policies and procedures were reviewed in more detail at the beginning of the closed session and were available in Council notebooks.

Minutes of Previous NACNR Meeting

Standing Council members received a copy of the minutes of the September 22-23, 2009, NACNR meeting by electronic mail. A motion to accept the minutes of the September 22-23, 2009, Council meeting, with changes, was proposed, seconded, and approved unanimously. Any comments, corrections, and changes to the September 2009 meeting minutes identified at a later time should be forwarded to Drs. Grady or Kerr. The approved minutes of each quarterly NACNR meeting become part of the Institute's permanent record and are posted on the NINR Web Site (www.ninr.nih.gov).

Dates of Future Council Meetings

Dates of future meetings in 2010 and 2011 have been approved and confirmed. Council members were asked to confirm their calendars for these meeting dates and contact Drs. Grady or Kerr regarding any conflicts or expected absences.

2010

May 18-19 (Tuesday-Wednesday)

September 14-15 (Tuesday-Wednesday)

2011

January 18-19 (Tuesday-Wednesday)

May 17-18 (Tuesday-Wednesday)

September 20-21 (Tuesday-Wednesday)

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

The Director's report focused on updates since the last Council meeting and on current and impending activities and initiatives related to the NIH and NINR budgets, the NIH overall, and the NINR.

Budget Update—Dr. Grady provided an update on the current status of appropriations and projections for the NINR budget. The NINR's funding for fiscal year (FY) 2009 was $141.879 million and reflected an increase of 2.7 percent over the FY 2008 level of $137.476 million. The FY 2010 budget totals $145.660 million (a 2.7% increase from FY 2009) for the NINR; this increase represents a positive affirmation of nursing science research. NIH's overall FY 2010 budget was approved in December 2009 and totals $31.008 billion (a 2.3% increase from FY 2009).

Dr. Grady reviewed NINR's budget allocations for FY 2010 funds, which include: research program grants (RPGs) (74%), of which P01 grants comprise 1 percent; Centers (4%); research management and support (8%); training (6%); research and development (3%); intramural research (3%); and other research (2%). The NINR ranks as second highest among NIH Institutes and Centers (ICs) in its support of training. The trend in budget increases for the NINR is close to the trends for the overall NIH over time. NINR's budget has nearly tripled during the past 2 decades, but it remains the third smallest among the NIH ICs.

The Institute has maintained a robust number of competing and noncompeting research awards, with 80 awards made in FY 2009. The success rate for funded research applications also has been maintained at a reasonable rate. There has been a decrease, however, in the number of applications submitted during the past 2 years, and a concern is that researchers may be experiencing disillusion and therefore not submitting applications. It is important that applications continue to be submitted so that the best science is funded.

NINR's full-time training position (FTTP) training awards in FY 2009 totaled 226. Dr. Grady noted the request by Council that the funding amount for each FTTP award be increased. Predoctoral and postdoctoral FTTPs currently are awarded at a 2.4:1 ratio. A postdoctoral research term increases the chance of becoming funded as a Principal Investigator (PI) 5 years earlier.

NIH and NINR News—Dr. Grady reported on news items of interest in the Department of Health and Human Services (HHS), NIH, and NINR communities. Dr. Regina Benjamin has been appointed as the U.S. Surgeon General. The HHS is publishing success stories, and Dr. Grady encouraged Council members to identify and share their respective institutions' success news. Comments are being accepted regarding: (1) Healthy People 2020 draft objectives; and (2) National Plan for Action To Eliminate Health Disparities, produced by the Office of Minority Health. President Obama celebrated the American Recovery and Reinvestment Act (ARRA) with the NIH on September 30, 2009. Dr. Francis Collins, NIH Director, received the National Medal of Science in October 2009 and performed at the Rock Stars of Science Briefing and Tribute with Dr. Rudy Tanzi, Harvard University, and Aerosmith guitarist Joe Perry. Two requests for applications (RFA) have been released: (1) the NIH Director's Opportunity for Research in Five Thematic Areas (FA-OD-10-005) calls for applications related to genomics and other high throughput technologies, translating basic science, science and health care reform, global health, and reinvigorating the biomedical research community; and (2) Recovery Act FOAs from the NIH Basic Behavioral and Social Science Opportunity Network (OppNet) (RFA-OD-10-003). NIH grantees Drs. Thomas A. Steitz and Ada E. Yonath, along with former NIH grantee Dr. Venkatraman Ramakrishnan, won the 2009 Nobel Prize in Chemistry. In addition,

NIH grantees Drs. Elizabeth H. Blackburn, Carol W. Greider, and Jack W. Szostak won the 2009 Nobel Prize in Medicine. The NIH held its first "Engaging the Public Research Week" in October 2009, which included a meeting of the Council of Public Representatives (COPR). The NIH Advisory Committee to the Director (ACD) met in December 2009 and discussed the Director's vision for the NIH, stem cell policy, comparative effectiveness research, and therapeutics for rare and neglected diseases, as well as a report from Dr. Linda S. Birnbaum, Director, National Institute of Environmental Health Science (NIEHS).

Appointments across the NIH included: Dr. Eric Green, Director, National Human Genome Research Institute (NHGRI); Dr. Susan B. Shurin, Acting Director, National Heart, Lung and Blood Institute (NHLBI); and Dr. Alan Guttmacher, Acting Director, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD). Dr. Grady expressed sadness and noted the tremendous loss experienced by the NIH and the scientific research community, with the passing of both Dr. Ruth Kirschstein and Dr. Marshall Nirenberg.

NINR News—Dr. Grady reported on recent NINR events. The NINR Strategic Planning Retreat was held on December 8, 2009. The NINR brochure on Palliative Care was featured on the NIH Web Site for 5 weeks, with close to one-half million downloads. The *NIH Catalyst* included a research brief describing the NINR Intramural Research Program (IRP). Research opportunities of interest to the nursing community and the deadline for applications include: (1) the Graduate Partnerships Program (GPP), which provides doctoral fellowship training, due January 31, 2010; (2) the Bravewell-NINR-NIH Clinical Center (BNC) Postdoctoral Fellowship in Integrative Medicine, due June 1, 2010; and (3) ARRA Administrative Supplements available through the

NINR (NOT-OD-09-056 and NOT-OD-09-060), due March 19, 2010. The NINR is providing online training for developing nurse scientists via its Web site; the training includes continuing education credits. The Institute will be celebrating its 25th anniversary soon, and planned events include: 2010 Scientific Symposium (September 30, 2010); NINR Director's Lecture (January 18, 2011); NINR-NIH Clinical Center Joint Conference (Spring 2011); Grant Submission Workshops (Spring 2011); Science in the Cinema (Summer 2011); and 2011 Scientific Symposium (Fall 2011). Dr. Grady invited members to peruse NINR's redesigned and updated Web site (www.ninr.nih.gov) for additional news.

III. NIH DIRECTOR INTRAMURAL PROGRAM—Dr. Michael Gottesman, Deputy Director for Intramural Research, NIH

Dr. Michael Gottesman, NIH Deputy Director for Intramural Research, provided an overview of the NIH's Intramural Research Program (IRP). Begun in 1887, the program has conducted research that transformed biomedicine and trained investigators who lead academic health centers. The Program provides a distinct environment to support the overall NIH mission that entails intellectual freedom for scientists to conduct research sustained by long-term resources and funding, and further abetted by collaborations, partnerships, and supportive leadership. Twenty-three of NIH's 27 ICs participate in the IRP.

Distinguishing features of intramural research include a focus on high-impact, long-term, innovative science with emphasis given to rigorous retrospective peer review, and the advantage

of close proximity between laboratory and clinical investigators in the NIH Clinical Center, facilitating translations between scientific discovery and patient treatment and care. In addition, scientific leaders interact directly with PIs, and researchers can attend to their research and mentoring instead of preparing grant proposals. Other benefits of the IRP include an emphasis on postdoctoral rather than graduate training and the fact that financial conflicts are minimized by government ethics rules.

Research funds across the NIH are allocated to extramural (more than 80% of the total NIH budget) and intramural (less than 11%) programs. NIH's intramural resources are allocated to: clinical research (35%), basic laboratory science (10%); translational research (47%); and service to the research community (8%). The distribution of the intramural budget by accounting categories for FY 2008 was: NIH Clinical Center (13%), ORS, ORF, etc. (31%); other intramural research (53%); and other management funds (3%).

The NIH has experienced flat budgets for multiple years (FY 2004-2009), presenting challenges in maintaining research operating budgets while meeting increased administrative and personnel costs. Trans-NIH initiatives have been encouraged to share resources and stimulate innovation, including in imaging, human immunology, systems biology, stem cells, undiagnosed disease programs, and bioengineering and physical sciences.

There is always an interest in determining how best to utilize the IRP and in building a translational research continuum to target validation and preclinical pharmaceutical development to early phase clinical research. Other challenges include maintaining the preeminence of the

NIH Clinical Center, encouraging trans-NIH initiatives to leverage talent and resources, and enhancing the diversity of scientists and trainees at the NIH.

IV. INTRODUCTION TO THE NINR INTRAMURAL PROGRAM—Dr. Raymond Dionne, Scientific Director of the Intramural Program, NINR

Dr. Dionne provided an overview of NINR's Intramural Research Program, which emphasizes research in the biology of symptom management to improve patient outcomes and quality of life (QOL). The Program focuses on gene expression methods for symptoms biology research in studies that are largely collaborative. The approach is to develop strategies to evaluate genetic contributions to the symptoms experience, working at the DNA level to identify genetic polymorphisms that have influence on protein structure and function and manifest in some functions of behavior.

Knowledge of symptoms pathways and biology that underlies or is built upon this genetic variation provides a base for more detailed studies. Pathophysiology following tissue injury is an active target in that additional targets are discovered, upregulation and downregulation of targets occur, often resulting in epigenetic changes, new cells in the area release various cytokines that modulate outcomes, and plasticity changes can occur and persist long after the injury has resolved.

RNA from tissue, blood samples, and collection from micro-dialysis are examined to identify the most likely targets. Following confirmation using PCR-based technologies that gene interaction is being changed, protein-based technologies are used to identify the location of upregulated or downregulated targets. The benefits of this strategy include identification of some normal cytokines that are targets associated with acute injury to the development of inflammation, as well as potential identification of currently unknown targets. In addition, nascent research on epigenetic mechanisms might explain disease processes and identify new therapeutic targets; pain mechanisms are considered in terms of epigenetics, providing a better understanding of why traditional approaches to chronic pain often are unsatisfactory.

NINR's IRP is composed of three branches that address biobehavior, symptoms management, and tissue injury, with approximately 35 staff. Current clinical protocols and projects are studying pain; central nervous system disorders (brain injury, posttraumatic stress disorder [PTSD], and stroke); gastrointestinal disorders and obesity; fatigue; and mucosal injury. NINR's IRP strategy to address the challenges for improved symptoms management include: novel targets, biobehavioral markers, improved phenotyping, and individualized therapy.

V. **NINR SCIENTISTS**—Drs. Taura Barr, Jessica Gill, and Leo Saligan, NINR Intramural Scientists

Genomic Approaches for the Characterization of Neurological Symptoms—Dr. Barr

Dr. Barr described genomic approaches for the characterization of neurological disease symptoms. Acute ischemic stroke is the third leading cause of death in the United States, with 8-12 percent of events resulting in death within 30 days, and approximately 3-8 percent of patients receiving tissue plasminogen activator (tPA). Complications of stroke include ischemia/reperfusion injury, inflammatory/immune response, modulation of gene and protein expression, cerebral swelling, and hemorrhagic transformation. A further complication is blood brain barrier (BBB) disruption, which involves hyperintense acute reperfusion injury marker (HARM); this can be seen in delayed cerebrospinal fluid space enhancement via a fluid attenuation inversion recovery (FLAIR) MRI and is associated with poor outcome.

A pilot study of biomarkers of BBB disruption examined matrix metalloproteinases-9 (MMP-9). MMP-9 regulates the extracellular matrix, is activated by tPA, and has found to be involved with hemorrhagic transformation, parenchymal hematoma, oxidative stress, area of infarct, and BBB disruption. The study hypothesized that plasma MMP-9 would be associated with HARM because BBB disruption initiates hemorrhagic transformation, and MMP-9 is associated with hemorrhagic transformation. The investigation found an association between baseline MMP-9 and early BBB disruption, and confirmed preclinical observations. Further studies should address whether MMP-9 plays a causative role in BBB disruption following stroke.

Dr. Barr described her dissertation work on novel approaches to stroke, particularly gene expression profiling in human acute ischemic stroke. Peripheral blood was used as an alternative to blood tissue to provide a genomic fingerprint. Dr. Barr's study aimed to determine transcripts under- and over-expressed in acute ischemic stroke patients compared to neurologically healthy

controls and determine the changes in gene expression during the first 48-hours following stroke, as well as the gene expression profile associated with HARM. The study samples included patients with imaging-confirmed stroke and neurologically normal controls. Among nine genes profiled, eight were found to be upregulated and one downregulated; five genes replicated from the first and only whole blood expression study. A pathway analysis revealed that innate immunity is a key mediator of change in expression and outcome. The study also showed a novel kinase anchoring protein, related to protein kinases C and A, that is a candidate for BBB disruption; *in vitro* studies are ongoing to isolate the protein using immunoprecipitation and Western blot and to determine protein response to oxygen glucose deprivation. Dr. Barr indicated that validation of the stroke panel is underway, and that these gene expression findings have clinical implications for cardiac patients and might contribute to the development of a stroke triage panel.

Future directions for research include the clinical utility of a transcriptome profile for the diagnosis of neurological disease, age and BBB function in health and disease, and incorporation of transcriptome profiling into characterization of complex neurological diseases. In addition, improvements in medical and nursing care of stroke and mild traumatic brain injury could help prevent long-term health and economic consequences.

Mechanisms of Post Traumatic Stress Disorder (PTSD) and Resilience—Dr. Gill

Dr. Gill described research on the two types of responses to trauma: PTSD and resilience to trauma. Trauma is an event that is experience, witnessed, or learned of actual or threatened

death, serious injury, or threat to the physical being. PTSD is more common than previously thought and occurs through re-experiencing, avoidance/numbing, and hyper-arousal. Symptoms last at least a month and cause significant distress. Major depressive disorder is a serious comorbidity that occurs in 30-50 percent of PTSD patients; these two disorders together increase medical risks for cardiovascular disease, chronic pain, and obesity, as well as more inflammatory risks compared to PTSD alone.

Studies to understand the psychological mechanisms of resilience to trauma—and thus help develop interventions for those individuals at greatest risk—have been conducted. Research questions considered the psychological variables that predict resilience to trauma, including dispositional traits, general coping strategies, methods to cope with a trauma, and social support. Emotional intelligence, which has been shown to mitigate stress, also was studied. The studies found that unique predictors of resilience in logistic regression include a greater purpose in life, less use of self blame as a coping strategy, and less identification of the anxious intimate attachment style.

Biological mechanisms of PTSD were studied in a randomized, blinded trial including 19 PTSD patients, 10 of whom had comordibity condition of major depressive disorder. Patients with PTSD and major depressive disorder were found to have lower cortisol, higher overnight IL-6, lower overnight neuropeptide Y, and lower overnight galanin levels than the patients without the comorbidity. Implications from the study include: the psychological abilities associated with resilience may be fostered through nurse-led interventions and PTSD with and without major depressive disorder differ in endocrine and immune function, increasing risks for cardiovascular

disease, chronic pain, fatigue, and metabolic disorder for patients with both disorders. Dr. Gill noted that several protocols are underway to further study the mechanisms of resilience and PTSD risk through the interactions between genetics, the environment, and physiological functioning. The NINR supports trauma research through unique patient samples, novel clinical assessments, and advanced laboratory methods.

Investigating the Molecular-Genetic Correlates of Fatigue—Dr. Saligan

Dr. Saligan presented research on molecular and genetic correlates of fatigue. Improvements in fatigue management are needed, as up to 96 percent of patients with cancer complain of fatigue and $9.1 billion of lost productivity is due to chronic fatigue syndrome. Additionally, clinical management of fatigue is compromised by the complexity of diagnosing fatigue syndromes. There has been significant interest in fatigue treatment studies and in understanding the mechanisms of fatigue. The National Comprehensive Cancer Network (NCCN) has prepared Practice Guidelines in Oncology for Cancer-related Fatigue, which recommends five non-pharmacologic interventions and one pharmacologic intervention. Fatigue has long-term effects, particularly for cancer patients; testicular cancer patients, for example, continue to experience fatigue 11 years following the completion of treatment. It also affects health-related quality of life: more than 42 percent of breast cancer survivors and 60 percent of sarcoidosis patients suffer from fatigue. Fatigue impacts the physiological, self-concept, role function, and interdependence domains of ocular sarcoidosis patients. A physiological model of fatigue illustrates how triggers such as environment or illness can cause fatigue, affecting immune, metabolic, and vascular

systems, and can lead to fatigue and other symptoms, including cachexia, stress, pain, and insomnia.

Dr. Saligan's research aims to discover and understand correlates of fatigue through investigation of fatigue in patients with sarcoidosis. Fatigue in the patients and control group was scored based on physical and mental fatigue; patients totaled a score of 26.69 compared with the control group's score of 16.81. Further tests included a 6-minute walk, hand-grip test, monitoring of physical activity, and a correlative analysis. Clinical implications included that fatigued patients with sarcoidosis have decreased aerobic capacity, reduced skeletal muscle strength, and sedentary physical activity; assessment of fatigue should be included in their care, as well as an increased role of rehabilitation intervention; and analyses of biologic samples should be conducted to determined underlying mechanisms of fatigue.

Dr. Saligan described a second study examining molecular and genetic correlates of fatigue in prostate cancer patients undergoing radiation chemotherapy. Gene expression micro-array analyses were conducted and histograms compared baseline versus control and produced a 7-level analysis. A volcano plot showed 8 upregulated and 126 downregulated genes, and additional analysis revealed a two-way hierarchical cluster. Other ongoing investigations are focusing on fatigue in health individuals and in fibromyalgia. It is hoped that these studies will produce predictors of fatigue.

VI. BRAVEWELL NINR CLINICAL CENTER (BNC) FELLOWS PROGRAM—

Dr. Raymond Dionne, Scientific Director of the Intramural Research Program, NINR and Dr. Sunny Alperson, Bravewell Fellow

Dr. Alperson explained that the Bravewell Collaborative exists to bring about optimal health and healing for individuals and society. It consists of a community of philanthropists dedicated to integrating advanced biomedical science with a whole-person approach. Bravewell, the NINR, and the NIH Clinical Center co-sponsor the BNC Fellows Program.

Dr. Alperson provided an overview of a proposed, exploratory randomized controlled clinical trial on the efficacy of mindful Tai Chi on obese and overweight adults. The increasing prevalence of obesity requires a strategic change toward and integrative system approach. Based on the ideas that both Tai Chi and mindfulness improve health and well being, and that mindfulness meditation shows different neural activation than narrative mode, the study's hypothesis proposed that the mindful Tai Chi group would show significant improvements in overall well being, including psychological and physical well being, and lifestyle changes in the course of 12 weeks and follow up. Analysis will involve multivariate linear regression and growth curve analyses. Dr. Alperson said that the protocol has been submitted and reviewed by the NINR, experts have been selected for external scientific review, and the protocol has been submitted for pre-Institutional Review Board (IRB) review. Recruitment for the trial is estimated to begin by March 2010.

VII. POSTER SESSION

Dr. Grady invited participants to attend poster sessions by NINR intramural investigators: Drs. Jane Fall-Dickson, Wendy Henderson, Laura Kwako, HyungSuk Kim, Xiao Min (Amy Wang), and Lena St. John.

Poster topics included:

- Oral Symptom Intensity, Health Related Quality of Life, and Correlative Salivary Cytokines in Adult Survivors of Hematopoietic Stem Cell Transplantation With Oral Chronic Graft-Versus-Host Disease
- Self Reported Symptoms in Individuals With Chronic Hepatitis B Virus Treated With Lamivudine and Adefovir or Adeovir Monotherapy
- Relationship Between Mitochondrial Dysfunction and Fatigue in Cancer Patients Following External Beam Radiation Therapy
- Pro Inflammatory NF-48 Dependent Cytokine Expression in Saliva, Oral Ulcer Exudate, Plasma, Oral Mucus From Adult Survivors of HSCT With Oral Chronic Graft-Versus-Host Disease
- Advancing Understanding of Symptoms Biology To Individualize and Improve Management, Quality of Life and Disease Treatment Up-Regulation of IL-6, IL-8 and CCL2 Gene Expression After Acute Inflammation: Correlation to Clinical Pain
- Genome Wide Approaches in Advancing Individualized Care Management
- Relationship Between Pediatric Gastrointestinal Pain, Mast Cells, Serotonin and Substance P

- Child Sexual Abuse: Long-Term Effects for Women and Their Children

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Following this update, Dr. Grady thanked participants and attendees for their time and interest and adjourned the open session of the meeting.

CLOSED SESSION

This portion of the meeting was closed to the public in accordance with the determination that this session was concerned with 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

The members of the NACNR considered 113 research and training grant applications on which NINR was the primary Institute; these applications requested a total of $27,417,795 (direct costs year 01). The Council also considered 645 applications on which another Institute/Center was primary and NINR was secondary; these applications requested a total of $207906569 (direct costs year 01). The Council concurred with the IRG recommendations on these 758 applications.

The members of the NACNR also considered 16 American Recovery and Reinvestment Act applications on which NINR was the primary Institute; these applications requested a total of $6,053,553 (direct costs). The Council considered 39 American Recovery and Reinvestment Act applications on which another Institute/Center was primary and NINR was secondary; these applications requested a total of $ 19,474,087 (direct costs). The Council concurred with the IRG recommendations on these 55 applications, including supplements.

ADJOURNMENT

The 70th meeting of the NACNR was adjourned at 12:30 p.m. on January 20, 2010.

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

Mary E. Kerr, Ph.D., R.N., F.A.A.N.
Executive Secretary
National Advisory Council for Nursing Research

MEMBERS PRESENT

Dr. Patricia A. Grady, Chair
Dr. Mary E. Kerr, Executive Secretary
Dr. Anna Alt-White, *Ex Officio*
Dr. J. Randall Curtis
Dr. Kevin Frick
Dr. Barbara Guthrie
Dr. Diana Lake
Dr. Jean McSweeney
Capt. Maggie Richard, *Ex Officio*

Dr. Marla Salmon
Dr. Gail Stuart
Dr. Clarann Weinert
Dr. Janet Williams

MEMBERS OF THE PUBLIC PRESENT
Jane Abiona, Delaware State University
Margaret Rose Agostino, Delaware State University
Delphine Batcha, Delaware State University
Jasmine Blackman, Delaware State University
Teresa Bonner, Bravewell Collaborative
Lawrence B. Brooks, Delaware State University
Anna Chenjo, Delaware State University
Lalia Clarke, Delaware State University
Jasmine M. Collins, Delaware State University
Jeanette Delgado, Delaware State University
Shadara Edmond, Delaware State University
Bonnie Pfeifer Evans, Bravewell Collaborative
Andrea F.R. Fischl, University of Pittsburgh
Eunice Gwanmesia, Delaware State University
Katrina Harrison, Delaware State University
Chidiebere Iwundu, Delaware State University
Debora Jones, Johns Hopkins University School of Nursing
Damaris Kasimu, Delaware State University
Aja Kellam, Delaware State University
M. Shawn Kennedy, *American Journal of Nursing*
Kershona Knight, Delaware State University
Karlystra Nicome Delaware State University
Kristal Melvin, Johns Hopkins University School of Nursing/U.S. Army
Kpana Mengah, Delaware State University
Michele Mittelman, Bravewell Collaborative
Cheryl L. Moore, Delaware State University
Jeanne Murphy, Johns Hopkins University School of Nursing
Jackline Nanga, Delaware State University
Fawn Palmer, Delaware State University
Rasheedah Potter-Reeves, Delaware State University
John Retzlaff, Lewis-Burke Associates/University of Virginia
Monique Rhodes, Delaware State University
Leigh Smith, Delaware State University
Adrienne Starks, University of Maryland, Baltimore County
Emily Stevens, University of Pittsburgh
Davi-Lue Suah, Delaware State University
Darlene Summers, Consolidated Solutions and Innovations
Stephanie Triplett, Delaware State University
Jing Wang, University of Pittsburgh
Gloria Watson, Delaware State University

Joanne Wescott, Delaware State University
Lily Yeboah, Delaware State University

FEDERAL EMPLOYEES PRESENT
Dr. Sunny Alperson, Bravewell Collaborative
Dr. David Banks, NINR/NIH
Dr. Taura Barr, NINR/NIH
Ms. Melissa Barrett, NINR/NIH
Dr. David Bates, NINR/NIH
Mr. Brian Beckham, NINR/NIH
Mr. Raymond Bingham, NINR/NIH
Mr. David Boley, NINR/NIH
Dr. Yvonne Bryan, NINR/NIH
Ms. Andria Cimino, NINR/NIH
Ms. Emilia Colon, NINR/NIH
Dr. Paul Cotton, NINR/NIH
Ms. Lisa Depaolo, NINR/NIH
Dr. Arseima Del Valle-Pinero NINR/NIH
Dr. Ray Dionne, NINR/NIH
Dr. Chris Hafner-Eaton, NINR/NIH
Dr. Jane Fall-Dickson, NINR/NIH
Ms. Ana Ferreira, NINR/NIH
Dr. Koki Fukuhara, NINR/NIH
Ms. Jane Gelbmann, NINR/NIH
Dr. Jessica Gill, NINR/NIH
Ms. Elisa Gladstone, NINR/NIH
Dr. Michael Gottesman, NINR/NIH
Dr. Indira Gowda, NINR/NIH
Dr. John Grason, NINR/NIH
Mr. Kevin Green, NINR/NIH
Dr. Amanda Greene, NINR/NIH
Mr. Ernesto Corrales NINR/NIH
Dr. Rebecca Hawes, NINR/NIH
Dr. Jeanette Hosseini, NINR/NIH
Dr. Chai-Pin Hsiao, NINR/NIH
Dr. Karen Huss, NINR/NIH
Mr. Douglas Hussey, NINR/NIH
Ms. Deborah Jennings, NINR/NIH
Ms. Ellie Johnson, NINR/NIH
Dr. Mi Rim Kim, NINR/NIH
Dr. Weiqun Li, NINR/NIH
Dr. Yujing Liu, NINR/NIH
Dr. Susan Marden, NINR/NIH
Ms. Angela Marshall, NINR/NIH
Ms. Angela Martino, NINR/NIH
Mr. Mike Mercado, NINR/NIH

Ms. Sussana Morales, NINR/NIH
Ms. Mary Murray, NINR/NIH
Ms. Brandis O'Neal, NINR/NIH
Dr. Natalie Rasmussen, NINR/NIH
Mr. Chip Rose, NINR/NIH
Dr. Denise Russo, NINR/NIH
Dr. Lena St. John, NINR/NIH
Dr. Leorey Saligan, NINR/NIH
Dr. Erika Schroeder, NINR/NIH
Ms. Candice Scott, NINR/NIH
Ms. Cheryl Stevens, NINR/NIH
Ms. Tara Taylor, NINR/NIH
Dr. Chelvi Thyagarajan, NINR/NIH
Dr. Xenia Tigno, NINR/NIH
Dr. Lois Tully, NINR/NIH
Dr. Gwenyth Wallen, NINR/NIH
Dr. Dan Wang, NINR/NIH
Dr. Xiao Min Wang, NINR/NIH
Dr. Joan Wasserman, NINR/NIH
Ms. Ginger Webb, NINR/NIH
Dr. Linda Weglicki, NINR/NIH
Mr. Max Whitfield, NINR/NIH
Ms. Laura Williams, NINR/NIH
Mr. Kevin Wilson, NINR/NIH
Dr. Marie Zeimetz, NINR/NIH