

**DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH  
NATIONAL CENTER FOR COMPLEMENTARY  
AND INTEGRATIVE HEALTH**

**NATIONAL ADVISORY COUNCIL FOR COMPLEMENTARY  
AND INTEGRATIVE HEALTH  
MINUTES OF THE FIFTY-NINTH MEETING  
June 3, 2016**

**NACCIH Members Present**

Dr. Martin Blaser, New York, NY  
Dr. David Borsook, Waltham, MA  
Dr. Craig Brater, Indianapolis, IN  
Dr. Alice Clark, University, MS<sup>1</sup>  
Dr. Stephen Ezeji-Okoye, Palo Alto, CA  
Dr. Tracy Gaudet, Washington, DC  
Dr. Steven George, Gainesville, FL<sup>1</sup>  
Dr. Christine Goertz, Davenport, IA  
Dr. Patricia Herman, Santa Monica, CA  
Dr. Steven Hersch, Charleston, MA  
Dr. Susmita Kashikar-Zuck, Cincinnati, OH  
Dr. Janice Kiecolt-Glaser, Columbus, OH  
Dr. Helene Langevin, Boston, MA<sup>1</sup>  
Dr. Richard Niemtzw, Alexandria, VA  
Dr. Cynthia Price, Seattle, WA  
Dr. Reed Tuckson, Sandy Springs, GA  
Dr. Chenchen Wang, Boston, MA

<sup>1</sup>Telephone

**NACCIH Members Not Present**

Dr. Deborah Powell, Minneapolis, MN  
Dr. Eric Schoomaker, Bethesda, MD

**NIH Staff Present**

Maria Ferreira, FIC  
Peter Kozel, CSR  
Kathleen Michels, FIC  
Gila Neta, NCI, DCCPS  
Dan Xi, NCI, OCCAM

**Members of the Public**

Iris Aharonovich  
Michelle Baker  
Kennota Carter

Liu Wei  
Susan Weland  
Allison Winters

## **I. Closed Session**

The first portion of the fifty-ninth meeting of the National Advisory Council for Complementary and Integrative Health (NACCIH) was closed to the public, in accordance with the provisions set forth in Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S.C., and Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2).

A total of 179 applications were assigned to the National Center for Complementary and Integrative Health (NCCIH). Of these, 105 were reviewed by NCCIH and 74 by the Center for Scientific Review. Applications that were noncompetitive or not discussed, or were not recommended for further consideration by the scientific review groups, were not considered by Council.

Council agreed with staff recommendations on 85 applications, requesting \$32,896,747 in total costs.

## **II. Open Session—Call to Order**

The open session convened at 10:15 a.m. Dr. Martin Goldrosen, NACCIH Executive Secretary, called the meeting to order. The minutes of the February 2016 NACCIH meeting were approved unanimously.

## **III. Director's Report**

NCCIH Director Dr. Josephine Briggs welcomed the five new Council members, Drs. Steven George, Bin He, Patricia Herman, Cynthia Price, and Susmita Kashikar-Zuck. She reported on several staff arrivals and departures, with special thanks to Dr. Karin Lohman, the departing Director of the Office of Policy, Planning, and Evaluation, who built a superb, highly skilled team and led the planning process for the Center's 2011 and 2016 strategic plans.

NCCIH will greatly miss Dr. Dale Birkle Dreer, Chief of the Office of Scientific Review, who died in March. Dr. Dreer was respected throughout the National Institutes of Health (NIH) for her important role in mentoring new review officers. She will be remembered as a kind and compassionate person as well as a superb public servant.

NIH had hoped that appropriation hearings held in March and April would result in a budget, but it now seems likely that NIH will go into 2017 with a continuing resolution. Former Senator Thomas Harkin, a longtime champion of the Center, met with NCCIH leaders on May 10 and toured three intramural laboratories.

Dr. Briggs discussed the impact of the increase in funding between FY2015 and FY2016 on competing grants in FY2016 and subsequent years. Because grants are multiyear commitments,

an increase in grant funding in one year can lead to decreased funding for new research in subsequent years. To minimize fluctuations in funds available for new grants, NCCIH favors shorter term commitments in years when funding is high.

Recent news stories in major media, including CBS News, *The Wall Street Journal*, *U.S. News and World Report*, and Medscape, have featured NCCIH-funded research. A *Consumer Reports* summary on pain management expressed appropriately cautious views but acknowledged the value of nonpharmacologic approaches. An analysis of 2016 news stories by NCCIH's press team showed that pain was by far the most commonly discussed condition and meditation was the most commonly discussed complementary health approach.

Some of the attention given to pain in news stories may reflect the increasing awareness of the national opioid abuse epidemic. Dr. Briggs hopes that NIH will strongly support the Centers for Disease Control and Prevention's new guidelines for opioid prescribing and will invest more extensively in developing scientific evidence in this area. NCCIH focuses on nonpharmacologic approaches to pain management but has not yet funded any studies to determine whether the incorporation of these approaches into pain management strategies can reduce inappropriate use of opioids.

The Precision Medicine Initiative (PMI) Cohort Program, for which Dr. Briggs served as Interim Director, is hoping to officially launch in the fall. A permanent Director for the PMI Cohort Program, Mr. Eric Dishman, has been appointed.

This month's integrative medicine lecture, by Dr. Kashikar-Zuck, will focus on a nonpharmacologic treatment method for juvenile fibromyalgia.

**Discussion.** In response to a question from Dr. Tuckson, Dr. Briggs explained that NCCIH has a variety of metrics with which to evaluate the success of its grants. A presentation on this topic will be included in the next Council meeting. Dr. Blaser and Dr. Borsook raised the topic of overuse of opioids and the need for other methods of pain relief. Dr. Briggs agreed that the opioid problem is serious. She explained that patients need a variety of pain management strategies that give them a sense of control; the use of a single nonpharmacologic approach is unlikely to be successful. Dr. Gaudet said that the Department of Veterans Affairs is sponsoring a state-of-the-art conference on pain in November. NCCIH will be involved in this conference, and many aspects of this complex topic will be discussed.

#### **IV. Concept Clearance: Development of Devices or Electronic Systems To Monitor or Enhance Mind-Body Interventions**

Dr. Wen Chen, an NCCIH program director, presented a proposed initiative to solicit research leading to the development of new or adapted technologies to assess the mechanisms of action of mind and body interventions, monitor and measure their outcomes, or help to optimize their effectiveness. Proposed studies should either promote technological innovation or involve pilot

clinical testing of wearable devices or systems such as smart clothes, digital tattoos, or personal electronics. For example, under this initiative, researchers might:

- Develop and pilot test devices to provide biofeedback for mind and body interventions or to measure and promote adherence to the interventions
- Adapt actigraphy devices for mind and body movement therapies
- Develop or adapt technologies for monitoring sleep, breathing, or electrodermal responses
- Develop biochemical marker monitoring (e.g., for stress) relevant to a mind and body approach.

**Discussion.** Dr. He strongly supported the concept. Dr. Tuckson questioned the appropriateness of adding technology to practices that don't ordinarily require it, such as meditation, but acknowledged that well-designed devices may help people learn a mind and body technique properly and practice it successfully. Dr. Gaudet noted that young people may be especially interested in using the technologies that would be developed through this research.

A motion to approve the concept was made, seconded, and passed unanimously.

## V. NCCIH's 2016 Strategic Plan

NCCIH Deputy Director, Dr. David Shurtleff, presented NCCIH's newly released *2016 Strategic Plan: Exploring the Science of Complementary and Integrative Health*. The plan was developed under the leadership of Dr. Lohman, with input from Council and other stakeholders at several stages of the process. Its research objectives are aligned with those of the NIH-wide strategic plan released in December 2015.

NCCIH's new strategic framework has three scientific and two cross-cutting objectives:

Scientific objectives:

- Objective 1. Advance fundamental science and methods development.
- Objective 2. Improve care for hard-to-manage symptoms.
- Objective 3. Foster health promotion and disease prevention.

Cross-cutting objectives:

- Objective 4. Enhance the complementary and integrative health research workforce.
- Objective 5. Disseminate objective evidence-based information on complementary and integrative health interventions.

The strategic plan also explains the four factors that NCCIH takes into account when setting research priorities:

- Scientific promise
- Amenability to rigorous scientific inquiry

- Potential to change health practices
- Relationship to use and practice.

A special section of the strategic plan presents NCCIH's six top current research priorities. This portion of the plan is regarded as a living document that will change as research priorities evolve. The current priorities are:

- Nonpharmacologic management of pain
- Neurobiological effects and mechanisms
- Innovative approaches for establishing biological signatures of natural products
- Disease prevention and health promotion across the lifespan
- Clinical trials utilizing innovative study designs to assess complementary health approaches and their integration into health care
- Communications strategies and tools to enhance scientific literacy and understanding of clinical research.

The next steps will include broad dissemination and implementation of the plan, further development and refinement of the high-priority areas, and followup to determine how well NCCIH is meeting the plan's objectives over the coming years.

**Discussion.** Dr. Briggs explained that high-priority areas still to be developed include probiotics and mind and body prevention strategies. When drafts are available, they will be presented to Council members for their input.

Dr. Gaudet pointed out that Dr. Briggs advocated for inclusion of health promotion in the NIH-wide strategic plan, an important step forward. Dr. Gaudet also recommended that messaging about health promotion should emphasize that it involves more than just screening.

Dr. Brater suggested that health care providers, particularly those still in training, would be a good population to study in terms of burnout, resilience, and wellness because of the stresses they experience. Dr. Briggs added that family caregivers could be studied for similar reasons, and Dr. Kiecolt-Glaser agreed.

Council members discussed the difficulties in determining the optimum outcome measures for health promotion studies, particularly in light of the strong effects of socioeconomic status.

Dr. Tuckson requested additional information on NCCIH's plans in the area of communications and asked whether NCCIH could send new publications to Council members so they could share information about them on social media. Dr. Briggs replied that a communications update would be presented at a future Council meeting and that NCCIH would connect interested Council members to the Center through social media mechanisms.

## **VI. Minisymposium: Pragmatic Trials for Pain Management**

Dr. Michael Lauer, NIH Deputy Director for Extramural Research, chaired a minisymposium on pragmatic trials for pain management. The first speaker, Dr. Gila Neta of the National Cancer

Institute, explained the nature of pragmatic trials and the reasons for using them. She also described a tool that assesses the degree to which a trial is pragmatic or explanatory.

Dr. Neta said that pragmatic trials can be broadly defined as randomized controlled trials whose purpose is to inform decisions about practice. Unlike explanatory trials, which measure efficacy (the benefit a treatment produces under ideal conditions), pragmatic trials measure effectiveness (the benefit a treatment produces in routine clinical practice). In pragmatic trials, interventions are evaluated in the patients for whom the treatment is intended, in the settings where they would normally receive care.

Dr. Neta presented a recently updated version of the Pragmatic-Explanatory Continuum Indicator Summary tool (PRECIS-2), which can be used to evaluate the degree to which a trial is explanatory vs. pragmatic in each of nine domains: eligibility, recruitment, setting, organization, flexibility (delivery), flexibility (adherence), followup, primary outcome, and primary analysis. This tool can be used to guide the design and implementation of pragmatic trials. It is not intended as a marker of study quality; depending on the study question, the degree of pragmatism may vary across domains.

Participating remotely, Dr. Lynn DeBar of Kaiser Permanente Center for Health Research in Portland, Oregon, summarized a pragmatic study of interdisciplinary pain management embedded in primary care that is being conducted at Kaiser Permanente facilities in three regions. The study participants are patients with chronic pain from diverse conditions who are on long-term opioid therapy. The trial was initiated at the request of Kaiser Permanente operational leaders, who recognized the need for better management of patients of this type, many of whom currently receive fragmented, poorly coordinated care.

The intervention, which involves comprehensive intake assessment, communication with the primary care provider, group sessions, individual coaching, and case management, is designed to coordinate and integrate services to help patients adopt self-management skills for managing chronic pain, limit use of opioids, and address exacerbating factors that are amenable to treatment within the primary care setting. Consistent with the pragmatic nature of the trial, the intervention is being compared with usual care, and outcome variables are being assessed using data collected during routine clinical care.

Dr. DeBar explained that the biggest challenges encountered during this trial have involved training and retention of staff, especially nurses and behavioral specialists. Other challenges faced by researchers who conduct pragmatic trials within health care systems include the large number of stakeholders, the dynamic nature of usual care, and the complexity of introducing behavioral and/or complementary interventions into a care system.

Dr. Anthony Delitto of the University of Pittsburgh summarized the TARGET trial, a national multi-site trial to address the issue of how to prevent acute low-back pain from becoming chronic. The trial will be conducted as a cluster randomized trial in primary care environments.

The TARGET intervention, in which patients receive psychologically informed physical therapy to improve physical function and address psychological obstacles to recovery in addition to

standard guideline-based care, will be compared with standard guideline-based care alone in patients at high risk of progressing to chronic low-back pain. Patients at low or medium risk will be followed as an observational cohort. All care will be delivered as part of the normal operations of primary care settings, with the intervention provided by community physical therapy settings to which the primary care providers normally refer patients. Except for patient-reported outcome data collected at 6 and 12 months, all data used for the study will be derived from electronic health records (EHRs) and claims repositories. Recruitment for the study has begun at one of the five study sites.

**Discussion.** Discussion focused on the following topics:

- **EHRs.** Despite recent improvements, it is still difficult to add some types of information into EHRs. Sometimes data gained during a study can only be added to the record as a PDF file, which makes it hard to retrieve. It can also be difficult to return information to primary care providers electronically.
- **Comparing interventions with usual care.** Usual care varies from one practice or location to another and can change over time. If usual care is too variable, it can be unclear what the intervention is being compared to. There is a risk that the types of care compared in the two arms of a trial might be too similar to each other, making data difficult to interpret. In studies of behavioral or complementary interventions, it can be important to verify, to the extent possible, that the intervention is actually taking place. For example, in TARGET, a checklist filled out by the physical therapists is used to determine whether patients are receiving various components of psychologically informed physical therapy.
- **Recruitment.** In pain management studies, it can be difficult to recruit patients quickly because many may be reluctant to consider options other than medication or surgery.
- **Willingness of primary care providers to participate.** Health care providers may be reluctant to participate in a study if it requires them to perform extra tasks. Recruiting needs to be done during the normal flow of everyday operations. In TARGET, the Institutional Review Boards at most study sites waived the requirement for informed consent because the study compares two accepted standards of care and is considered quality improvement; this has decreased the burden on the health care providers.
- **Willingness of researchers to participate.** Many researchers are more interested in biological and physiological mechanisms than practice-oriented outcomes. It may be possible to address questions of interest to these researchers and gain their support by conducting mechanistic substudies within a large-scale pragmatic trial. The mechanistic studies gain the benefit of randomization and of knowing the clinical outcomes of the larger trial.

## **VII. Update of the NCCIH Intramural Program**

Dr. Catherine Bushnell, Scientific Director of NCCIH's Division of Intramural Research, presented an overview of the NCCIH intramural research program. Its core goals are to build and maintain a world-class, cutting-edge research program on pain perception and modulation, focused on fundamental mechanisms rather than evaluating treatment efficacy. The intramural program seeks to improve understanding of the higher-order neural mechanisms underlying pain

perception and pain modulation by the environment, emotional and cognitive states, expectation, and context in both humans and animal models, and to increase understanding of pain and pain modulation in people with pain conditions by taking advantage of the rich resources of the NIH intramural environment, including the Clinical Center.

The NCCIH intramural program in its current form was initiated when Dr. Bushnell arrived at NIH in 2012. Since then, the program has obtained a memorandum of understanding with the National Institute of Neurological Disorders and Stroke (NINDS) for infrastructural support, hired core staff, renovated space, recruited three tenure-track faculty members, and undergone a 4-year review by the NINDS Board of Scientific Counselors. NCCIH intramural researchers conduct both human and animal research and work across the NIH campus through trans-NIH activities with others who are also interested in pain. The NCCIH intramural program has established an NIH-wide 100-member special interest group on pain that has brought outstanding speakers to the campus, as well as a special interest group on mind and body modalities.

One unique feature of the NIH intramural program as a whole is the Stadtman Tenure-Track Investigator Program, currently cochaired by Dr. Bushnell, which conducts broad searches to identify new talent and then creates positions within the intramural program to match their scientific interests. In addition to bringing highly qualified researchers to NIH, this program has increased the percentages of minority and female hires. One of NCCIH's tenure-track investigators was hired through this program.

After Dr. Bushnell finished her general overview, Dr. Alex Chesler, a tenure-track investigator in the intramural program, described his laboratory's research, which focuses on the detection of touch and pain. Mechanosensation—the ability to sense forces—underlies many sensory experiences. Dr. Chesler's group is using transgenic mice to identify the molecular transducers involved in mechanosensation, the cell types that express these molecules, and the relevant neural circuits.

The somatosensory system, which allows a person or animal to detect sensations, works through a sensor net that covers the whole body. This system is highly conserved between species. Different neurons respond to different degrees to different stimuli, and mice can be genetically altered in ways that allow these differences to be elucidated and visualized.

The unique opportunities for collaboration within the NIH intramural program have benefited Dr. Chesler's research. He was contacted by an intramural clinical scientist who had a patient with unusual sensory and motor disabilities of unknown cause. Working with clinical collaborators, Dr. Chesler and his colleagues investigated the nature of this patient's neurological deficits (and later those of a second patient with the same symptoms), established that they involved abnormalities in mechanosensation, determined the genetic cause, and confirmed that the deficits were identical in most respects to those in mice with mutations in the same gene. Thus, the gene in question appears to play a key role as a molecular transducer of mechanosensation in both mice and humans.

**Discussion.** In response to questions from Dr. Borsook, Dr. Chesler said he believes that the somatosensory system plays a role in neuropathic pain. Silencing sensory neurons—as local



anesthetics do—is effective in relieving pain, and imaging studies have shown that neurons respond differently and have greater spontaneous activity in the presence of inflammation. It is unclear, however, whether the receptors Dr. Chesler is studying have any relationship to the effects of acupuncture.

### **VIII. Public Comment and Adjournment**

No public comments were offered.

The meeting was adjourned at 3:00 p.m.

We hereby certify that, to the best of our knowledge, the foregoing minutes are accurate and complete.

Martin Goldrosen, Ph.D.  
Executive Secretary  
National Advisory Council for  
Complementary and Integrative Health

Josephine Briggs, M.D.  
Chairperson  
National Advisory Council for  
Complementary and Integrative Health