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The NINR Research Centers Program

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Since new developments are the products of a creative mind, we must therefore stimulate and encourage that type of mind in every way possible.

—George Washington Carver

Traditionally, new developments in science have been the products of the creative mind of the independent scientist, striving to answer a question or solve a complex problem. This independent, investigator-initiated model remains a dominant driving force of research. However, as science progresses in the 21st century, additional research paradigms, interdisciplinary and cooperative in nature, are evolving. In particular, research characterized by collaboration and resource sharing is increasingly innovative and highly successful. The National Institute of Nursing Research (NINR) recognizes that collaborative research is facilitated through support mechanisms that foster communication, cooperation, and resource leveraging. It is this recognition that continues to drive us to expand and enhance the NINR Research Centers Program.

Research Centers bring scientists, students, and other colleagues with similar interests together to focus on a common area of investigation, such as symptom management in chronic diseases, improved patient outcomes, or end-of-life care. Throughout the history of NINR, Centers have made vital contributions to advancing the Institute goals of building research infrastructure, expanding research capacity, and increasing training opportunities. They provide the stable base needed to develop broad, interdisciplinary programs of research and enhance mentorship of doctoral students and early-career scientists.

Overview of NINR Research Centers

Protecting Resources, Achieving a Balance

Over the last several years, the budget for NINR, as for all of the National Institutes of Health, has remained relatively flat—representing a loss of purchasing power when taking into account the rate of inflation of biomedical research and development costs. At present, the typical cost of the individual R01 grant is high, making it difficult for NINR to support all of the worthy grant applications the Institute receives each year.

One role that Research Centers have is the protection of resources for independent research projects. They can increase efficiency and lower the costs of research through the pooling of resources such as infrastructure, training programs, and administrative support. Working within a Center benefits both experienced investigators looking to maintain and deepen their research projects and newer investigators looking to build their research careers.

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Multiple strategies are needed to move science forward. The individual investigator will likely remain the central figure in scientific investigation. However, through the Research Centers Program, NINR hopes to maintain the influence of the individual while taking advantage of the collective power of the group, in an effort to leverage the benefits of both approaches.

Developmental Stages

The Research Centers Program accounts for approximately 7% of the NINR budget. What the “ideal size” should be is difficult to determine. However, there is a need to look at productivity as a balance. In 2006, NINR conducted an extensive evaluation of the Research Centers Program that drew upon the Institute’s own experiences and the assessments of external experts. This assessment found that the Centers reflect a continuum of research programs at different stages of development, each with unique needs and potential. With ongoing input from the extramural community, NINR has tailored the Research Centers Program to support Centers at each of three stages:

- Nursing Science Centers (P20)
- Nursing Centers of Excellence (P30)
- Research Program Projects (P01).

Nursing Science Centers (P20)

Nursing Science Centers (P20) target schools of nursing with emerging research programs, helping them to expand their early research efforts, centralize resources, strengthen research capabilities, and increase productivity to generate new research. The P20 Centers typically support several small to mid-level research projects focused on a common theme and conducted at the scale of pilot study (R03) grants. NINR expects the P20 Centers to improve capabilities at institutions with nascent research programs, increase the number of investigators involved in interdisciplinary research, and lead to the development of larger scale research projects.

Nursing Centers of Excellence (P30)

Nursing Centers of Excellence (P30) are designed for investigators and institutions with several years of demonstrated research success. These P30 Centers support the creation of interdisciplinary collaborative research programs among established investigators in specific areas of basic and/or clinical research of strategic interest to NINR. They typically consist of several medium-sized, foundational research projects on the scale of exploratory or developmental (R21) grants. By sharing resources and infrastructure among several experienced researchers, NINR anticipates that studies initiated within these P30 Centers will become highly productive more quickly than possible as separate studies.

Research Program Projects (P01)

In 2007, NINR introduced the Program Project (P01) initiative, for investigators and institutions with proven and long-established records of research. P01 grants serve as platforms for conducting high-impact research on topics of critical importance to NINR, nursing science, and public health. The goal of the P01 grants is to bring together a group of investigators with several large independent research projects, allowing them to share resources and work collaboratively to address an important public health challenge.

Schools of nursing receiving P01 grants under this initiative will be expected to focus on:

- interventions to improve the quality of life, promote health, and/or prevent disease in persons living with chronic illness,
- interventions to improve the health and quality of life of informal caregivers, and

- relevant research methodology.

In fiscal year 2008, NINR awarded its first two P01 grants:

- Adherence & Health Related Quality of Life: Translation of Interventions, to the University of Pittsburgh, and
- Self-Management Interventions in Life-Limiting Illness, to Duke University.

Recent Findings from NINR Research Centers

NINR Research Centers support studies in a wide range of areas. As one example, a study from the P20 Center, *Trajectories in Aging and Care*, found that a home-based walking exercise program helped to improve sleep quality for older breast cancer patients, who often experience fatigue, sleep disturbances, and depressive symptoms due to their disease or its treatment.¹ As another example, an interdisciplinary research team at the P30 *Center for Reducing Risks in Vulnerable Populations* is studying a noninvasive ultrasound technology that may detect changes in the cervix of pregnant women as it undergoes ripening, facilitating earlier identification of mothers at risk for premature delivery.²

Centers FAQs

To help scientists, students, and the public learn more about the NINR Research Centers, a set of Frequently Asked Questions (FAQs) is available on the NINR web site (www.ninr.nih.gov). These FAQs provide answers to both general questions about the Centers program, as well as more specific questions targeted to potential Centers grant applicants.

Recent Developments in the Centers Program

Because the Centers program has succeeded in advancing NINR research objectives in a cost-effective manner, the Institute continues to look for ways to expand its reach. NINR has recently supported several new Centers and re-issued a Centers Request for Applications (RFA).

New Centers in Self-Management or End-of-Life Research

Self-management and end-of-life care are two areas of increasing interest and concern to the public. Accordingly, NINR responded by supporting a Research Center initiative to facilitate program development and progress in self-management and end-of-life research. Self-management has grown in importance as more people are required to take responsibility for managing their illnesses. In response to increasing public concern about the handling of death and dying within the health care system, NINR was named the lead Institute at NIH for end-of-life research. NINR supports studies that explore key end-of-life areas such as clinician/family member communication, decision-making, and issues of pediatric end-of-life and palliative care.

In 2007, NINR awarded grants to three P20 and three P30 Centers under this initiative. These new Centers will support multiple projects and enhance collaborative efforts to increase the quality and quantity of innovative, interventional, and interdisciplinary research projects in the targeted science areas.

New Centers: Requests for Applications

In a continuing effort to broaden the scope and impact of the Centers program, NINR recently issued three new RFAs:

- RFA-NR-09-001: Centers in Symptom Management Research or Centers in Health Promotion/Disease Prevention: Building Research Teams for the Future (P20).

- RFA-NR-09-002: Centers of Excellence in Symptom Management Research or Centers of Excellence in Health Promotion/Disease Prevention (P30).
- RFA-NR-09-003: Program Projects in Symptom Management Research and Program Projects in Health Promotion/Disease Prevention Research (P01).

Full descriptions of these RFAs can be found on the NINR web site (www.ninr.nih.gov).

An Investment in the Future

Nursing science addresses the major health challenges to our society and represents a critical investment in the health of current and future generations.

NINR continues to develop programs to stimulate the best science being carried out by the best people in the most effective ways. NINR maintains strong support for the individual scientist pursuing independent projects, and the Institute also realizes the need to create collaborative research environments. Research Centers have been, and continue to be, important and efficient ways to foster research capacity in nursing science. These Centers have established hubs of focused research within schools of nursing across the country, supporting highly collaborative research environments that promote the development of skilled new investigators and the sharing of knowledge and resources to enhance interdisciplinary dialogue and speed the application of research into practice. They also provide ideal settings for focused research in areas of science of strategic importance to the Institute. In refining and expanding the Centers program, NINR seeks to ensure that the already substantial contributions nursing science has made to health care research will continue to grow, so that nursing science can make a difference in people's lives well into the future.

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