



## STRATEGIC OBJECTIVE 4

### IMPROVE THE CAPACITY OF THE FIELD TO CARRY OUT RIGOROUS RESEARCH

When Congress established NCCAM, it recognized the need to build research capacity in the field and authorized NCCAM to undertake various steps to bring together qualified experts from various CAM disciplines and the biomedical sciences to carry out NCCAM's research mission. These efforts have been successful in training and creating a cadre of CAM research scientists from biomedical, behavioral, and CAM backgrounds. A robust and highly collaborative interdisciplinary community of investigators, based in both conventional biomedical and CAM institutions, now employs and develops state-of-the-art research methods and tools in studying the safety and potential application of CAM interventions.

#### Challenges and Needs

Significant growth in the quality and quantity of the evidence base regarding CAM reflects this growth in CAM research capacity. In the past 10 years, NCCAM has funded more than 2,500 research projects resulting in more than 3,300 scientific articles in peer-reviewed journals. Nonetheless, as described in the first three strategic objectives of this plan, numerous challenges remain that must be addressed to support rigorous research on the role of CAM interventions in treating health problems and improving health and well-being.

To pursue these questions successfully, NCCAM must continue to ensure that the human talent, resources, and infrastructure needed to design and carry out the highest quality basic, translational, and clinical research are in place; that they involve collaborative, interdisciplinary research partnerships across a spectrum of scientific and health practice disciplines and experiences; and that the Center takes advantage of opportunities to leverage national and international scientific resources and experience.



## Strategies

### **Strategy 4.1: Support a variety of high-quality research training and career development opportunities to increase the number, quality, and diversity of CAM researchers.**

*A successful and robust CAM research enterprise must include CAM practitioners expert in their respective disciplines and biomedical/behavioral scientists expert in cutting-edge scientific methods.*

A successful and robust CAM research enterprise must draw from two sources of well-trained, skilled, and experienced talent: CAM practitioners expert in their respective disciplines and biomedical/behavioral scientists expert in cutting-edge scientific methods. CAM practitioners are the key holders of knowledge related to the potential application of CAM interventions and disciplines. NCCAM has always recognized the need for research training and career development efforts targeted specifically toward this diverse community. Over the years the Center has developed a number of programs aimed at enhancing CAM practitioners' abilities to critically evaluate biomedical literature, participate in clinical research, and, in some cases, seek advanced training and career development opportunities for careers in the field of CAM and integrative medicine research.

Researchers from many different biomedical and behavioral disciplines are the key holders of scientific knowledge and technologies required for in-depth investigation of the basic biological, physiological, and clinical effects and safety of CAM interventions. Over the years, NCCAM has also targeted resources aimed

at attracting well-trained and experienced scientists into CAM research and in supporting their development as scientific leaders in the field.

Going forward, NCCAM will continue to support a variety of high-quality research training and career development opportunities aimed at building and maintaining a vibrant, productive, multidisciplinary, and diverse research enterprise and addressing the unique needs for research training in this field. In particular, the Center will focus on:

- CAM practitioners who wish to gain the knowledge and experience needed to engage in rigorous, collaborative, multidisciplinary research in their field
- Scientists trained in key biomedical and behavioral research disciplines necessary for rigorous, state-of-the-art scientific investigation of CAM interventions, practices, and disciplines
- Members of populations who are underrepresented in scientific research and are interested in careers in CAM and integrative medicine research.

## Research Training and Career Development Opportunities— Areas of Emphasis

Experts in CAM clinical practice	Biomedical and behavioral research scientists
<p>Goal: Gain knowledge and experience in rigorous, collaborative, multidisciplinary research in their field of CAM expertise</p> <ul style="list-style-type: none"> <li>■ Doctoral degree holders</li> <li>■ Early and mid-career professionals</li> <li>■ Members of populations underrepresented in scientific research</li> </ul>	<p>Goal: Gain knowledge and experience in applying scientific expertise to collaborative, multidisciplinary CAM research</p> <ul style="list-style-type: none"> <li>■ Doctoral degree holders</li> <li>■ Mid-career and senior investigators</li> <li>■ Members of populations underrepresented in scientific research</li> </ul>



## Interdisciplinary Collaboration and Partnerships

The success of the CAM research enterprise depends upon multidisciplinary partnerships and collaboration between CAM practitioners and biomedical/behavioral research scientists.

Expert practitioners in CAM disciplines and interventions	Biomedical and behavioral research scientists
Key holders of knowledge regarding the history, use, application, and practice of CAM interventions and disciplines	Key holders of the scientific knowledge and technologies required for rigorous investigation of the effects and safety of CAM interventions

*Clinical investigation aimed at providing scientific evidence useful to the public, health care providers, and health policymakers is an inherently interdisciplinary enterprise.*

### Strategy 4.2: Foster interdisciplinary collaboration and partnerships.

Across the fields of biomedical and behavioral research it has become clear that clinical investigation aimed at providing scientific evidence useful to the public, health care providers, and health policymakers is an inherently interdisciplinary enterprise. This is particularly true of the field of CAM research. Rigorous investigation in this field requires cross-disciplinary and multidisciplinary teams, both within and across institutions and health care settings.

For example, the development of effective translational research tools for CAM research requires in-depth understanding of the interventions, the health conditions under study, and the tools and technologies of relevant basic and clinical research disciplines. This can only be achieved through partnerships involving institutions and practitioners with particular expertise in CAM or integrative medicine together with institutions and individuals with relevant biomedical or behavioral research expertise and experience. Promoting and fostering such collaborative and strategic partnerships has been and will remain a cornerstone of NCCAM’s approach to capacity building.

**Strategy 4.3: Collaborate with and leverage the scientific and information resources and activities of other fields, organizations, and countries.**

Incentives for private-sector investment in CAM research are few. As a consequence, NCCAM's investments in investigating CAM safety and usefulness and increasing capacity for CAM research are particularly important. Although the Center continues to take the lead among Federal agencies in CAM research, it cannot pursue its mission in isolation.

For example, given the breadth of NCCAM's mission, the Center frequently enlists the help and collaboration of other institutes and centers (ICs) of NIH. Examples range from joint sponsorship of large clinical trials to trans-NIH workshops or research initiatives. These collaborations with other NIH ICs have yielded significant payoffs in advancing knowledge of CAM and disseminating the research results. NCCAM will continue to leverage its privileged position as a component of NIH and actively seek opportunities and partners in areas of shared interest. In addition, NCCAM is now poised to serve as a focal point for specific trans-NIH activities important to public health, such as chronic back pain.

In addition, CAM, integrative medicine, and traditional medicine are focal points of interest of many national and international scientific and professional organizations, national governments, and the World Health Organization. NCCAM's decade of effort aimed at building scientific evidence about these practices is a rich resource of experience and information for these activities. In turn, the efforts and initiatives of these other organizations and countries provide numerous opportunities for collaborative and mutually beneficial research, training, and information-sharing activities.

