

Abstract of the Center for Interdisciplinary Health Disparities Research

The specific aims of the Center for Interdisciplinary Health Disparities Research are to: **Aim #1:** bring together scientists from inside and outside the University and members of the community who are especially vulnerable to adverse health conditions to inform the Center's scientific agenda; **Aim #2:** foster investigations that consider health disparities from multiple levels of analysis via shared conceptual frameworks that integrate discipline-specific theories and methods; **Aim #3:** increase interest in health disparities among scientists and students from various disciplines and from community members; **Aim #4:** develop measures and methods that are appropriate for use with vulnerable populations and that allow factors at various levels (social/environmental, behavioral/psychological, and biological/genetic) to be analyzed together; **Aim #5:** increase existing knowledge on the social, behavioral, and biological factors that influence health disparities and the nature of their interactions; and **Aim #6:** disseminate findings through channels established through the Center to as wide an audience as possible, including members of vulnerable populations, community-based organizations and agencies, and scientific investigators inside and outside the University.

In its first five years, the Center will focus on group differences in breast cancer, notably why Black women in the US and West Africa experience breast cancers that occur at a younger age and are more aggressive and lethal than those of White women. McClintock (Project 1), based on an animal model of social regulation of mammary tumor biology developed in her laboratory, will compare the gene regulation in mammary tumors and the ovarian function of socially isolated and group-living rats. Olopade (Project 2) will (a) look at the molecular characterization of primary patient samples in Nigeria and Chicago's South Side to see if alterations in BRCA 1 contribute to breast cancer in younger Black women and (b) explore the McClintock model in primary patient samples. Gehlert and Masi (Project 3) will explore emic views of breast cancer and its treatment and test the McClintock model with community volunteers. In the latter, they will examine neighborhood and community factors (such as collective efficacy and crime), living situations and social connectedness, behavioral responses (such as vigilance and perceived stress), and biological (e.g., cortisol levels) and health outcomes (most notably breast cancer). Conzen (Project 4) will study the rate of mammary tumor growth, response to chemotherapy, and chemoprevention in two animal models. The Tissue Core will provide analysis of mammary tissue. Coordination and dissemination will occur through the Administrative Core, by means of Faculty Colloquium and Monthly Speaker Series, In-Service and Summer Apprenticeship programs, a Center Website and Web page for communication with other CPHHDs, etc.

Research Plan of the Center for Interdisciplinary Health Disparities Research as a Whole

a. Specific aims of the Center

The second goal of Healthy People 2010 (after “to increase quality and years of healthy life”) is to eliminate health disparities among demographic groups in the United States. The report outlines differences that occur by gender, race or ethnicity, income or education, geographic location, and sexual orientation. Although significant group differences have been noted for almost a hundred years, our understanding of how these differences come about is not yet well developed. Although work within scientific disciplines has shed light on the factors that contribute to health disparities, lacking is a clear understanding of how social and behavioral factors interact with the physical environment to influence group differences in health outcomes. An approach is needed that draws together scientists from a variety of disciplines to pool ideas and develop a shared language, new measures, and innovative methods that would allow the development of a broader understanding of the determinants of health disparities. For the results of scientific investigations to be successfully translated into action plans for eliminating health disparities, they must draw upon the knowledge and resources of communities of persons vulnerable to adverse health conditions and capture the needs and life realities of those communities.

Although the importance of interdisciplinary research is being recognized increasingly (Institute of Medicine, 2001), obstacles to achieving true collaboration are inherent in university structures. Kahn and Prager (1994, p. 12) point out that competition for funds, separate disciplinary languages and methods, and rewards for publishing frequently and on narrow topics impede collaboration by investigators from different disciplines. When communication and collaboration occur, they are most likely to occur between disciplines that fall within the same level of analysis (e.g., social/environmental, behavioral/psychological, and biological/genetic).

The University of Chicago has a rich history of shared research and teaching among groups of faculty with common interests. The Institute for Mind and Biology and the School of Social Service Administration, two of the hosts of the proposed Center, represent examples of the University’s interdisciplinary tradition. The Biological Sciences Division, the Center’s third host, has a history of interdisciplinary training (e.g., its M.D./Ph.D. Program in Medicine, Arts, and Social Sciences). The long-term objective of the proposed Center for Interdisciplinary Health Disparities Research is for scholars to move from solid interdisciplinary bases to achieve a transdisciplinary approach to understanding population health and health disparities and the elimination of group differences in health.

The specific aims of the proposed Center for Interdisciplinary Health Disparities Research are to:

Aim #1: bring together scientists from inside and outside the University and members of the community who are especially vulnerable to adverse health conditions by virtue of their group membership to inform the Center’s scientific agenda

Aim #2: foster investigations that consider health disparities from multiple levels of analysis via shared conceptual frameworks that integrate discipline-specific theories and methods

Aim #3: increase interest in population health and health disparities among scientists and students from various disciplines and from community members

Aim #4: develop measures and methods that are appropriate for use with vulnerable populations and that allow factors at various levels (social/environmental, behavioral/psychological, and biological) to be analyzed together

Aim #5: increase existing knowledge on the social/environmental, behavioral/psychological, and biological factors that influence health disparities and the nature of their interactions

Aim #6: disseminate findings through channels established through the Center to as wide an audience as possible, including members of vulnerable populations, community-based organizations and agencies, and scientific investigators inside and outside the University.

The scientific agenda of the Center will evolve as gaps in understanding of population health and health disparities are filled via research projects and increased and improved communication with members of the community, and new gaps are revealed. In the first five years of the Center, its efforts will focus on understanding population differences in the incidence and nature of breast cancer among Black and White women. Black women in the United States and West Africa develop breast cancers that occur at a younger age and are more aggressive and more lethal than do White women of Northern European ancestry (Lyman, Kuderer, Lyman, Cox, Reintgen & Baekey, 1997). Center investigators, in projects that build on and inform one another, will take a multi-level approach to understanding Black-White disparities in breast cancer, using animal studies and investigations of Yoruba women in Nigeria and Black women on the South Side of Chicago.