

**Office of Research on Women's Health**

**NIH Health Disparities Strategic Plan  
Fiscal Years 2004-2008**

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## **MISSION/VISION STATEMENT**

### **MISSION**

The Office of Research on Women's Health (ORWH) was established in September 1990 within the Office of the Director, National Institutes of Health (NIH), to serve as a catalyst and focal point for women's health research at NIH.

The ORWH (a) advises the NIH Director and staff on matters relating to research on women's health; (b) strengthens and enhances research related to diseases, disorders, and conditions that affect women; (c) ensures that research conducted and supported by NIH adequately addresses issues regarding women's health; (d) ensures that women are appropriately represented in biomedical and biobehavioral research studies supported by NIH; (e) develops opportunities for and supports recruitment, retention, re-entry, and advancement of women in biomedical careers; and (f) supports research on women's health issues. The ORWH works in partnership with the NIH institutes and centers to ensure that women's health research is part of the scientific framework at NIH and throughout the scientific community.

ORWH was given the mandate to:

- Strengthen, develop, and increase research into diseases, disorders, and conditions that affect women, determine gaps in knowledge about such conditions and diseases, and then establish a research agenda for NIH for future directions in women's health research;
- Ensure that women (and minorities) are appropriately represented in biomedical and biobehavioral research studies, especially clinical trials, that are supported by NIH; and
- Develop and implement initiatives to increase the number of women in biomedical careers and to facilitate their advancement and promotion.

The Office is responsible for establishing NIH-wide goals and policies for research related to women's health and coordinating NIH activities undertaken in performing such research.

With the participation of the biomedical, public policy, and advocacy communities, the ORWH developed a research agenda that addresses the ways in which biologic characteristics including sex, gender, age, race/ethnicity, economic status, geographic location such as rural or inner city living, and other factors influence the health of women. The *Agenda for Research on Women's Health for the 21st Century*<sup>1</sup> (<http://www4.od.nih.gov/orwh/report.pdf>) is based upon several general principles and the expanded definition of women's health. The published report serves as the foundation on which research priorities and programmatic direction are established. The members of the NIH Advisory Committee on Research on Women's Health, composed of nonfederal representatives, further review the recommendations that are utilized to determine priority research areas.

In the development of women's health research and programmatic priorities, the following four overarching themes are currently recommended:

1. **Sex/Gender Determinants** Women are characterized by both sex and gender as highlighted in the ORWH *Agenda for Research in Women's Health for the 21<sup>st</sup> Century* and the Institute of Medicine report, entitled *Exploring the Biological Contributions to Human Health: Does Sex Matter?*<sup>2</sup> Sex factors that contribute to the biological differences include chromosomes, reproduction, and hormones. The effects of gender on psychological, social, and behavioral perspectives are important considerations in most areas of research. Consideration of these variables is critical to the accurate interpretation and validation of research affecting women's health. Moreover, these variables determine how similar or different health or disease processes may be between women and men.
2. **Health Disparities/Differences and Diversity** Women are disproportionately affected by some conditions and diseases in terms of incidence, diagnosis, course, and response to treatment. Some populations of women may be at higher risk for adverse disease outcomes because of factors such as: biology, environment, race/ethnicity, culture, education, access to care, and quality of care. Therefore, the need exists for opportunities for inclusion of diverse populations of women as volunteers in clinical studies. Thus, clinical research should include, but not be limited to, population-specific characteristics such as cultural diversity, race, ethnicity, immigrant status, rural or inner city residency, poverty, sexual orientation, and physical or mental disabilities.
3. **Lifespan** The health of girls and women is affected by developmental, physiological, and psychological age. Women's lives are marked by continuum from intrauterine life to the elderly years: infancy, childhood and adolescence, menarche, reproductive life, the menopausal transition, postmenopausal years, the elderly and frail elderly. Many women's lives and health status are influenced by factors such as work inside and outside the home, care-giving roles such as childcare and elder care responsibilities, reproductive influences, and chronic illness. Each of these may influence health, disease, treatment choices, and response to therapy. Researchers should consider these variables in designing studies related to women's health.
4. **Interdisciplinary Research** With increasing understanding of the inter-relatedness and complexity of disease, the nature of scientific investigation is shifting to an interdisciplinary collaborative approach. Advances in women's health can be better achieved by promoting partnerships in cross-disciplinary research from basic, clinical, and translational research that involves collaborative interactions among investigators in all areas of academic, private industry, and federal settings, and provides access to the latest scientific tools and technologies.

Research from many perspectives is needed in women's health, including integration of knowledge from disparate sources as well as teams with multiple areas of scientific expertise. Interdisciplinary research can facilitate the integration of basic science, clinical research and translational research, population studies, behavioral and social

research, and outcomes research. An additional focus on bioengineering and biomedical informatics, genomics, proteomics, imaging, industry, and metabolomics is increasingly relevant to research on women's health.

## **VISION**

The Office of Research on Women's Health at the NIH seeks to enhance and expand research and programs based upon science-driven initiatives that can, then, redress inequities in prevention, detection, and treatment of illness among women of diverse races, cultures, and circumstances. In its policies and programs, the ORWH emphasizes the need to consider not only influences of sex and gender, but other biologic and social bases for differences between men and women in health and disease. In addition, emphasis is placed on designing research studies in order to determine racial and ethnic influences. The ORWH leads the trans-NIH efforts to ensure that all components of the NIH comply with the guidelines requiring the inclusion of women and minority members in human subject research. A trans-NIH Tracking and Inclusion Committee convened by ORWH and co-chaired by a senior IC official monitors the adherence of ICs to the NIH policy and procedures for inclusion of women and minorities in clinical research funded by NIH. This committee also tracks data on the numbers of women and minorities participating in clinical research.

In concert with the institutes and centers of the NIH, the ORWH develops and/or supports research and initiates programs to implement the recommendations of the *Agenda for Research on Women's Health for the 21<sup>st</sup> Century* to address the gaps in knowledge about diverse populations of girls and women. The ORWH also undertakes activities designed to foster the participation of diverse populations of women in biomedical research as study subjects and as investigators, to redress disparities in the health status and health outcomes of diverse populations of women and to provide career development opportunities to diversify the pool of biomedical researchers with an interest in addressing health disparities.

The ORWH will continue to pursue these mandates in conjunction with the scientific, professional and advocacy communities of women and men. In expanding and enhancing these visionary goals, particular attention will be given to new and evolving factors that influence our understanding of health as well as innovative directions for improving health status especially among disparate and minority populations. Emphasis will be given to collaborative efforts to enhance interdisciplinary research and career development, the clinical translation of the results of research, as well as creation of a cadre of new investigators prepared for emerging scientific challenges. ORWH contributions should and would enhance knowledge about the health of women, and men, of diverse racial, ethnic, social, geographic and other characteristics in the global environment.

## **STRATEGY FOR ADDRESSING HEALTH DISPARITIES**

To ensure that the health and career concerns of specific groups of underrepresented and minority women and men are adequately and appropriately addressed, the ORWH has given priority to the initiation of new research studies that address health and health disparities including sex/gender factors. The ORWH has initiated programs to increase opportunities for women of all races in biomedical careers. Further, the ORWH is addressing issues to increase the participation of diverse populations of women and minorities in clinical research through monitoring the implementation of the NIH inclusion policy, as well as through efforts to help investigators recruit and retain diverse populations in their clinical studies. The ORWH will develop and expand programs to increase and encourage opportunities for a diverse pool of women to enter and successfully advance in biomedical careers. The ORWH will continue in its collaborative efforts with the Office of Extramural Research (OER) and the ICs, to ensure that the inclusion policy requiring women and minorities in clinical research is continually addressed and recognized as part of the scientific review within the grant application process.

Specific policies and programs have been implemented to ensure that minority women benefit from the NIH sponsored research. Through a broad-based effort involving clinicians, researchers, community leaders, health activists, psychologists, social scientists, and citizens, the ORWH developed the *Agenda for Research on Women's Health in the 21<sup>st</sup> Century*. Volume 6 of the agenda series, *Differences Among Populations of Women*<sup>3</sup> ([http://www4.od.nih.gov/orwh/agenda\\_book\\_6.pdf](http://www4.od.nih.gov/orwh/agenda_book_6.pdf)), focuses on the specific health needs of minority women, women in rural areas and inner cities, and other groups that have traditionally been underserved by the medical research and health care communities. Critical issues addressed include the importance of delineating factors that contribute to disparities in health status and health outcomes among diverse populations of women. These include biological, genetic, racial, cultural and ethnic, psychosocial and behavioral factors, educational influences, traditional and alternative health practices, environmental influences, poverty and socioeconomic status, access to health care and occupational issues.

The ORWH also publishes a lay version of the *Agenda for Research on Women's Health for the 21<sup>st</sup> Century*, in English, Volume 7<sup>4</sup> (<http://www4.od.nih.gov/orwh/agenda-vol7.pdf>) and in Spanish, Volume 8<sup>5</sup> (<http://www4.od.nih.gov/orwh/agenda-vol8-spanish.pdf>) in order to provide information about the importance of research and help educate to the lay public about research addressing health disparities as well as current and future priorities.

Additionally, the ORWH generates and distributes several professional and lay publications related to women's health research and minority/disadvantaged women, such as the *Women of Color Health Data Book*<sup>6</sup>, available in hard copy and online in both English (<http://www4.od.nih.gov/orwh/wocEnglish2002.pdf>) and Spanish (<http://www4.od.nih.gov/orwh/wocSpanish.pdf>). This publication will continue to be updated with current research findings related to the health of many different populations of women and incorporates new and useful data and statistics from research.

It is important and scientifically appropriate for women and minorities to be included in human subject research so that differences in response to interventions can be determined and all populations can benefit from the outcomes of research. The findings of biomedical and behavioral research provide the scientific basis for improving standards of care, formulating public health policy, changing individuals' health-related behaviors and expectations of their health, modifying health care delivery systems, and creating strategies for overcoming cultural and economic barriers to health care.<sup>7</sup> The continuing challenge is to confront the recruitment and retention of women, minorities, and other participants to ensure that clinical research is representative, relative, and targeted to address scientific questions important to the public health.

The ORWH recognizes that to succeed in recruiting and retaining diverse populations of women in clinical research, it is necessary to enlist the help of community-based individuals and organizations and health professionals who are on the front lines of health care delivery. Several important factors in overcoming barriers that often limit the participation of ethnic minorities in research include (a) cultural competence on the part of researchers regarding the intended study population; (b) collaboration with and participation of communities and community groups of the targeted population in the planning, implementation and evaluation of such research; and (c) utilizing researchers who are themselves from the communities they seek to include in studies.

The ORWH will continue to expand the number of efforts to assist in the recruitment and retention of women and minorities in NIH funded clinical research. The *Outreach Notebook for the Inclusion, Recruitment and Retention of Women and Minority Subjects in Clinical Research*<sup>8</sup> (<http://www4.od.nih.gov/orwh/outreach.pdf>) is and continues to be widely disseminated throughout the scientific and advocacy communities. This document contains practical guidance, examples and advice on recruiting minority women in clinical studies as well as a list of resources for investigators as they seek to comply with the NIH inclusion guidelines. The implementation of these guidelines is a partnership between the ORWH and other components of the NIH and the broader scientific community. The publication assists investigators and public health policy makers address the continuing challenges confronting the recruitment and retention of women, men and minorities, so that clinical research is representative, relevant, and targeted to address scientific questions important to the public health.

A report of a recent workshop, *Science Meets Reality: Recruitment and Retention of Women in Clinical Studies and the Critical Role of Relevance*<sup>9</sup> provides innovative and proven methods for the inclusion of women and minorities. This report, which is based on the experiences of many accomplished and successful researchers in conducting clinical research with women and minorities, will continue to be used as a resource providing advice to investigators, information to potential volunteers and examples for program development efforts. A summary of this meeting is available on the ORWH website at <http://www4.od.nih.gov/orwh/smr.html>.

Recognizing that research is essential to providing the scientific basis for improvements in health status and health care, the ORWH is dedicated to fostering and supporting efforts to improve the health of all Americans, especially those whose health concerns have not been adequately addressed by the biomedical research community in the past.

## **1.0 AREAS OF EMPHASIS IN RESEARCH**

### **1.1 Area of Emphasis One: Sex/Gender Determinants and Health Disparities/Differences and Diversity**

ORWH employs a deliberative process annually to review and revise the NIH-wide Research Priorities for Women's Health. Since its establishment, ORWH has been fostering greater awareness of the study of sex/gender differences in all areas of health and disease, and the importance of including sufficient numbers of minorities and subpopulations of minority girls and women in order to obtain valid research results and address health disparities. Because the ORWH does not have direct funding authority, ORWH collaborates with the NIH institutes and centers to fund or co-fund meritorious research grants.

#### **1.1.1 Objective One: Increase Awareness of Need for Sex/Gender and Race/Ethnicity Analysis Components in Proposed Research Studies**

Create greater awareness among extramural scientific reviewers of the need for research applications under review to include sex/gender analysis as well as analysis by race/ethnicity, as part of the proposed research studies.

##### **1.1.1.1 Action Plan**

Working with the Office of Extramural Research (OER), expand and update current scientific review guidelines for extramural scientists involved in Center for Scientific Review (CSR)-directed reviews.

##### **1.1.1.2 Performance Measures**

Continue to create and disseminate clearer criteria to extramural scientists participating in CSR peer review groups to follow in reviewing grant applications and proposals, specifying requirements as to sex, race, and ethnicity of study participants, and the importance of evaluating sex/gender differences.

Continue to partner with extramural resources to foster the evaluation of sex/gender research, especially innovative methods for analyses.

Continue to publicize research findings that showcase sex/gender analysis, and continue to encourage journal publishers to emphasize the importance of sex/gender analysis.

##### **1.1.1.3 Outcome Measures**

Increased number of research grants that address sex/gender factors in health and disease.



Increased collaboration with NIH institutes and centers in the development, implementation and support of innovative approaches in the design of research studies that address sex/gender differences.

### **1.1.2 Objective Two: Stress Inclusion of Minority Populations and Subpopulations of Minority Women and Girls in Research Grants**

Communicate the scientific relevance and importance of including minority populations, the subpopulations of minority girls and women in NIH-supported research grants in order to address health disparities.

#### **1.1.2.1 Action Plan**

In collaboration with the NIH institutes and centers, encourage and foster innovative approaches and methodologies to study health problems, risk factors, and protective factors among minority girls and women in order to address health disparities.

#### **1.1.2.2 Performance Measures**

Encourage greater awareness among scientific reviewers of the requirement for and the scientific reasoning for investigators to include diverse populations and subpopulations of minority girls and women as study participants.

In collaboration with OER, promote a more comprehensive review of all grant applications, ensuring investigators clearly document their inclusion/exclusion, if scientifically relevant, of minority girls and women as study participants in research studies.

In collaboration with OER, promote the development of culturally appropriate instrumentation and outcome measures for minority populations, especially subpopulations of minority girls and women.

In collaboration with OER, encourage the development of research models that include and define the provision of subpopulations of minorities, girls and women.

Incorporate the use of a qualitative models as well as quantitative models so that researchers can better facilitate studies in different minority populations and subpopulations of minority girls and women.

#### **1.1.2.3 Outcome Measures**

Increased collaboration with NIH institutes and centers in the development, implementation and support of innovative approaches in the design of research studies that address health disparities in minority girls and women.

### **1.1.3 Objective Three: Improve Study of and Communication to Minority Communities**

Improved Data Collection, Analysis, and Reporting of Information to Minority Communities.

#### **1.1.3.1 Action Plan**

Continue to monitor the inclusion of women and minorities, especially those who have previously been excluded from clinical studies, and to stress the importance of the resulting differential data, and conveying those differences to the scientific and consumer communities.

#### **1.1.3.2 Performance Measures**

Continued examination and identification of the cultural and financial barriers for minority girls and women to participation in clinical studies.

Foster the design of additional or new research studies to specifically address health disparities of various populations, especially of minority girls and women.

Promote greater communication and dissemination of culturally appropriate and sensitive information to minority girls and women.

Promote collaboration with faith-based and community-based organizations in the design and implementation of research studies.

#### **1.1.3.3 Outcome Measures**

Increased compliance with the requirement for inclusion of women and minorities and the number of NIH-funded investigators who include minority girls and women as participants in clinical studies, at the time of initial grant application.

Monitor the increase in publications on this subject from local and national organizations.

### **1.1.4 Objective Four: Stress Study of Diseases and Conditions Disparately Affecting Minority Groups**

Encourage investigators to study diseases and conditions within the minority communities by focusing on girls and women who are at higher risk for specific diseases or conditions.

#### **1.1.4.1 Action Plan**

In collaboration with NIH institutes and centers, encourage and foster innovative research on diseases and disorders prevalent in minority populations.

#### **1.1.4.2 Performance Measures**

Increased attention to gaps in knowledge related to diseases and conditions specific to minority girls and women, or that have a higher prevalence in these populations.

Consistent planning and designing of research studies leading to better appreciation of the health problems and risk factors within the minority female population.

Involvement of minority investigators in research, especially those who have access to distinct resources within their community.

Improve partnerships between investigators and communities in the design and conduct of the research, and in recruitment of study participants.

Develop and expand research collaborations with minority academic institutions such as Hispanic serving institutions (HSI), Historically Black colleges and Universities (HBCU) and Tribal Colleges and Universities (TCU); and state organizations servicing women in the respective minority communities.

#### **1.1.4.3 Outcome Measures**

Increased knowledge about diseases and conditions that are more prevalent or may affect populations and subpopulations of minority girls and women.

Increase the scientific bases for studies focusing on diseases and conditions more prevalent among or affecting populations and subpopulations of minority girls and women.

#### **1.1.5 Objective Five: Promote Participation of Minority Women Investigators in Clinical Research**

In collaboration with NIH institutes and centers, encourage the participation of minority women as investigators in the planning, design and scientific review of clinical studies.

##### **1.1.5.1 Action Plan**

In collaboration with OER, profile career development awards for women and minority investigators throughout the NIH.

In collaboration with OER, determine innovative ways to overcome the barriers for minority women as investigators and/or participants in research.

##### **1.1.5.2 Performance Measures**

Examine specific barriers to participation in clinical research and access to health care from the minority woman's perspective, both as an investigator, and as a study participant.

Promote active participation of minority women in research projects, especially as it relates to problem identification, selecting appropriate recruitment strategies, methods of data collection, and participating in the analysis and interpretation of study results.

### **1.1.5.3 Outcome Measures**

In collaboration with OER, increase the number of NIH-funded investigators who include minority women in the planning and designing of clinical studies, as co-investigators and as study participants.

### **1.1.6 Objective Six: Increase Understanding of Contributions and Needs of Minority Women in Science**

Promote a better understanding in the biomedical and behavioral research community of the potential contributions and special needs of minority women in science.

#### **1.1.6.1 Action Plan**

In collaboration with the NIH institutes and centers, identify successful models of women and minority scientists across the extramural funding portfolios.

#### **1.1.6.2 Performance Measures**

Encourage greater awareness and acceptance of the uniqueness of minority women scientists in all areas of the biomedical and research community.

Implementation of programs that encourage diversity and increased cultural sensitivity for minority women in all facets of the academic and professional environment.

Collaboration with organizations to ensure that the environmental, linguistic and physical access needs of minority women is addressed.

Inclusion of minority women in the planning and implementation of NIH-sponsored events directed to special populations of women.

#### **1.1.6.3 Outcome Measures**

Increased participation of minority women, as investigators and study participants, in both biomedical and behavioral research.

Increased participation of minority women in leadership roles in both biomedical and behavioral research.

## **2.0 AREAS OF EMPHASIS IN RESEARCH CAPACITY**

### **2.1 Area of Emphasis One: Career Development and Research Training**

The ORWH's mandate includes the development of opportunities for the recruitment, retention, reentry, and advancement of women in biomedical careers. A wide variety of career development programs have been implemented over the years including the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) program, an innovative K-12 program to support the training of junior faculty researchers in a mentored environment in women's health research. Because ORWH does not have direct funding authority, all projects are funded or co-funded through the NIH institutes and centers.

Expansion and continuation of programs such as these is part of the overall plan for career development and research training in ORWH.

#### **2.1.1 Objective One: Promote Educational and Professional Development of Special Populations**

Foster education, training, and professional development of women and minorities in biomedical careers.

##### **2.1.1.1 Action Plan**

Expand and continue to develop programs such as the ORWH Reentry Program and the BIRCWH Programs which strongly encourage the involvement of women and minorities.

Develop and expand programs to support special populations of women interested in pursuing careers in science at the middle school, high school, undergraduate and graduate levels.

Promote continued collaboration with NIH institutes and centers as well as other agencies to utilize ORWH career development and research training programs and initiatives.

Encourage collaboration between ICs to provide awards for minority students interested in scientific careers.

Foster programs that can help to increase the success rate of grant applications for minority women investigators.

##### **2.1.1.2 Performance Measures**

Increase in the number of applications submitted requesting participation in ORWH sponsored/cosponsored programs such as the BIRCWH and the Reentry program.

*The BIRCWH program seeks to increase the number of researchers working on women's health issues by pairing junior researchers with senior investigators in mentored, interdisciplinary scientific settings. ORWH leads the BIRCWH initiative and several NIH Institutes, the Office of Dietary Supplements, and the Agency for Healthcare Research and Quality co-sponsor this program.*

*The ORWH Re-entry Program was developed in 1992 as a pilot program to help fully trained scientists (women and men) reestablish careers in biomedical or behavioral science after taking time off to care for children or parents, or to attend to other family responsibilities. This program is now supported by all NIH institutes.*

Increase in the number of materials on biomedical careers requested by community organizations, students, teachers, and health professionals.

*ORWH continues to provide support to the Office of Education and the Office of Science Education to develop programs that enhance opportunities for students and intramural research fellows. Programs include video and poster series aimed at middle school and college students, career development workshops, science communication courses, and Fellows Award for Research Excellence (FARE). Future plans include adding a video on dentistry highlighting minorities and women professionals.*

*The ORWH supports ongoing projects and has initiated specific training projects that include opportunities for minority students, high school students, and college faculty and students to obtain research experience or exposure to current scientific concepts through the NIH. The ORWH also develops and supports a number of programs for the advancement of girls and women in science through collaboration with the NIH Office of Science Education, including a video series featuring minority women surgeons, researchers, and pathologists and an on-line curriculum designed to spark interest in biomedical sciences among middle-school and high-school students.*

*ORWH/Foundation for the Advanced Education in Sciences (FAES)/NIH High School Student Summer Program. This summer the program had 24 new high school students and 17 returning students. There were 26 women and 15 men, including 11 minorities (2 African-American women, 1 Hispanic woman and 1 Hispanic man), coming from both public and private schools in Maryland, Virginia, and the District of Columbia to spend time at the NIH in intramural labs.*

*The Office of Loan Repayment and Scholarships (OLRS). The Office of Intramural Research (OIR) is responsible for the development and management of the Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds (UGSP). The UGSP provides scholarships to undergraduate students who have been competitively selected from a nation-wide pool of candidates. An average of 15 scholarships are awarded each year.*

*The objective of the Health Disparities Research Loan Repayment program (HDR-LRP) Program is the recruitment and retention of highly qualified health professionals to research careers that focus on minority health or other health disparities issues. The*

*program provides for the repayment of educational loan debt of qualified health professionals who agree to conduct minority health or health disparities research for two years. The program provides for the repayment of the principal and interest of the educational loans, up to a maximum of \$35,000 per year.*

### **2.1.1.3 Outcome Measures**

Increase in the number of career development awards and fellowships to minority women students at the graduate level.

Increase in the number of women and minority middle and high school students considering future biomedical careers.

Increase in the number of women and minority investigators who are successful applicants for NIH funding

### **2.1.2 Objective Two: Support Career Development and Research Training Through Mentoring**

Continue to support and facilitate mentoring of women and minority scientists.

#### **2.1.2.1 Action Plan**

Continue to work with professional societies, groups and associations in defining, generating, and publicizing successful models of mentoring.

Continue to provide special training, rewards and recognition for mentors of special populations of women scientists.

Continue to provide opportunities for women and minorities to participate in scientific conferences and the peer review process.

#### **2.1.2.2 Performance Measures**

Increase in the number of professional societies, groups and associations with which the ORWH works to develop mentoring models.

Increase in requests for information on mentor training programs.

Increase in the number of women and minorities requesting information on participation in scientific conferences and the peer review process.

#### **2.1.2.3 Outcome Measures**

Increased understanding of minority and women investigators about how to navigate the channels for academic advancement.

Increased availability of minority and women investigator models and their understanding of the role of being mentors.

Greater recognition of the potential scientific contributions of minorities and women investigators and appreciation of their value in the scientific arena.

### **2.1.3 Objective Three: Institutional Encouragement and Support of Career Advancement**

Encourage institutions to develop programs and mechanisms that allow women and minority scientists to advance in their careers without sacrificing family and community responsibilities.

#### **2.1.3.1 Action Plan**

Collaborate with independent and government institutions to develop programs that address the participation and advancement of women, especially women of racial and ethnic minority groups, in biomedical careers.

Facilitate programs sponsored and/or cosponsored by the ORWH that enable special populations of women scientists to meet family, work, and community responsibilities while pursuing biomedical career interests.

Provide opportunities for reentry of women and minority scientists into biomedical careers and career redirection.

#### **2.1.3.2 Performance Measures**

Increase in the number of institutions with which the ORWH collaborates to develop programs for the participation and advancement of women in biomedical careers, especially for women of racial and ethnic minority populations.

Increase in the number of women and minority scientists participating on study sections and advisory boards of independent institutions.

#### **2.1.3.3 Outcome Measures**

Increase in the number of institutions that have implemented programs to encourage the career development of women of special populations in biomedical careers.

More diverse representation of women and minorities participating on institutional study sections, advisory boards, and the peer review process

### **2.1.4 Objective Four: Professional Society, Group, and Organization Support of Career Advancement**



Encourage professional societies, groups and organizations to develop programs, models, and other mechanisms to foster the advancement of women and minorities in biomedical research.

#### **2.1.4.1 Action Plan**

Continue to expand AXXS (Achieving Xcellence in Science) efforts.

Expand collaboration and partnerships with underserved community organizations and scientific/professional societies, especially those focused on special populations of female scientists at all levels of the career pipeline.

Support workshops and opportunities to stimulate appropriate professional societies to develop management and leadership training programs.

Facilitate ways for professional societies, groups, and organizations to formalize networking opportunities for special populations of women scientists.

Improve mechanisms for disseminating information to professional societies, groups, and organizations on new and existing funding support for grants and training programs.

#### **2.1.4.2 Performance Measures**

Increase in the number of requests for information on AXXS programs.

Increase in the number of professional societies, groups, and organizations with which the ORWH collaborates to develop programs, models, and other mechanisms to foster the career development of women and minority scientists.

Increase in the number of requests for information on career development programs co-sponsored and sponsored by the ORWH.

#### **2.1.4.3 Outcome Measures**

Increase in the number of participants in the AXXS program.

Greater opportunities for women and minorities interested in pursuing biomedical careers through collaboration with the NIH/ORWH and professional societies, groups, and organizations.

### **2.1.5 Objective Five: Build Community Awareness of Women and Minority Scientists**

Foster appreciation in the community for the contributions and needs of women and minorities in science.

#### **2.1.5.1 Action Plan**

Support programs that encourage diversity and heightened cultural sensitivity in all facets of the academic and medical environment.

Celebrate the uniqueness and promote the acceptance of special populations of women scientists in all areas of the scientific community.

#### **2.1.5.2 Performance Measures**

Increase in requests for materials or information recognizing the contributions and needs of women and minorities in science.

#### **2.1.5.3 Outcome Measures**

Greater understanding of the contributions and needs of women and minorities in science.

## **2.2 Area of Emphasis Two: Interdisciplinary Research**

### **2.2.1 Objective One: Sponsor Programs that Support Interdisciplinary Research on Women's Health**

ORWH has developed, implemented and funded new and innovative interdisciplinary research centers and interdisciplinary research training programs. These programs benefit both women's and men's health through sex and gender research, interdisciplinary scientific collaboration, and support for young investigators in a mentored environment to become independent investigators doing research in women's health.

#### **2.2.1.1 Action Plan**

Continue implementation of the BIRCWH and SCOR.

Expand the knowledge base of women's health research related to sex and gender factors using an interdisciplinary approach

Encourage an interdisciplinary approach to research on the role of sex and gender related health effects.

#### **2.2.1.2 Performance Measures**

Increased attention to the BIRCWH and SCOR programs and the expansion of these or the development of similar programs.

Increase in the number of women and minorities receiving K and other NIH Awards.

### **2.2.1.3 Outcome Measures**

Greater knowledge of women's health derived from interdisciplinary research on sex and gender differences.

Increased number of young investigators who pursue interdisciplinary biomedical research careers in women's health.

### **3.0 AREAS OF EMPHASIS IN COMMUNITY OUTREACH, INFORMATION DISSEMINATION, AND PUBLIC HEALTH EDUCATION**

#### **3.1 Area of Emphasis One: Outreach, Information Dissemination, and Public Health Education Targeted at the Community**

##### **3.1.1 Objective One: Expand the Knowledge Base for Women of Special Populations about Health Disparities**

Communicate to women the influence of sex, gender, race/ethnicity, and economic circumstance on health and health outcomes and successful methods to reduce disparities.

###### **3.1.1.1 Action Plan**

Continue to broaden contacts with community- and faith-based organizations with an interest in women's health and the health of special populations.

Continue to develop educational materials targeted at specific special populations of women that address health issues specific to their communities.

Collaborate with community-based advocacy groups and organizations and local and state women's and minority health offices to facilitate the distribution of educational materials developed by the ORWH, including brochures, handouts, posters, videos, and broadcast announcements, at community events such as health-related fairs, workshops, and conferences.

Continue to participate in community health events to expand public awareness of women's health research.

Continue to develop and present workshops, meetings, and symposia to educate advocates in issues related to and methods of reducing health disparities of special populations of women.

Encourage the participation of special populations of women in clinical research by increasing their knowledge and trust of the clinical research arena and building awareness of the importance of their inclusion in clinical trials.

###### **3.1.1.2 Performance Measures**

Increased size of the network of advocates for special populations of women with which the ORWH collaborates.

Increased volume and diversity of ORWH-published educational materials targeting special populations of women.

Increased volume and diversity of educational materials sent to community-based advocacy groups and organizations and state and local women's and minority health offices to promote understanding of the health concerns of special populations of women.

Greater participation in community events, such as health fairs, at which the ORWH distributes materials specifically targeted to special populations of women.

Increased number of women of special populations attending ORWH sponsored and co-sponsored events.

Increased number of workshops, meetings, and conferences, facilitated by the ORWH, that address differences in health among special populations.

Greater attendance of ORWH-facilitated workshops, meetings, and conferences by women of special populations.

Increased total number and percentage of women of special populations participating in clinical research, especially in clinical research that targets their specific populations.

### **3.1.1.3 Outcome Measures**

Increased interest among the advocacy community in collaborating with the ORWH to develop and distribute new and innovative educational materials addressing health issues for special populations of women.

More requests to the ORWH to disseminate information on women's and minority health at community events and workshops, meetings, and symposia.

Greater awareness of health disparities within special populations of women  
More clinical data specific to special populations of women that help address and eliminate health disparities.

## **3.2 Area of Emphasis Two: Outreach, Information Dissemination, and Public Health Education Targeted at the Health Professionals**

### **3.2.1 Objective One: Expand the Knowledge of Health Disparities of Special Populations of Women among Health Professionals**

Facilitate the continuing education of health professionals about the magnitude of health disparities faced by special populations of women and successful interventions that can reduce health disparities among special populations of women.

#### **3.2.1.1 Action Plan**

Expand the pipeline of information on clinical studies of special populations of women.

Encourage the participation of professional societies in disseminating information on health disparities of special populations of women to health professionals.

Encourage health professionals to target their health interventions to special populations of women.

Encourage health professionals to use their experience with patients to assist with the development of new health professional-administered interventions targeted at special populations of women..

### **3.2.1.2 Performance Measures**

Increased number of requests by health professionals for information on health concerns of diverse populations of women.

Increased number of professional societies with which the ORWH collaborates to disseminate to health professionals educational materials on health disparities faced by special populations of women.

### **3.2.1.3 Outcome Measures**

Increased interest among individual health professionals in clinical research addressing the health disparities of special populations of women.

Increased interest within and among professional societies in addressing health disparities of special populations of women.

Increased requests for information by health professionals on research on special populations of women.

Implementation of effective health professional-based interventions to reduce health disparities faced by special populations of women.

More optimal treatment based on knowledge gained from clinical research on special populations of women.

## **3.3 Area of Emphasis Three: Outreach, Information Dissemination, and Public Health Education Targeted at the Research Community**

### **3.3.1 Objective One: Increase Interest in Health Disparity Research Related to Special Populations of Women**

Encourage research on ways to reduce health disparities faced by special populations of women

#### **3.3.1.1 Action Plan**

Encourage increased research on the extent and magnitude of health disparities faced by special populations of women and approaches to reducing these disparities.

Continue to provide educational arenas, such as the Women's Health Special Interest Group and the Women's Health Seminar Series, to inform the research community and public of current research addressing health issues of special populations of women.

#### **3.3.1.2 Performance Measures**

Increased number of collaborations to research health disparities confronting special populations of women.

Increased amount of research on health disparities that affect special populations of women.

Increased number of applications for leveraged funds to develop health professional-administered interventions targeted at special populations of women.

Increased number of applications for leveraged funds to study health disparities of special populations of women.

Increased emphasis on special populations of women in presentations of the Women's Health Seminar Series and the Women's Health Special Interest Group and increased attendance and participation by women of special populations.

#### **3.3.1.3 Outcome Measures**

Larger pool of information on the effects and methods of reducing health disparities faced by special populations of women.

Increased interest in developing future studies to examine health disparities faced by special populations of women.

### **3.3.2 Objective Two: Encourage Publication of Clinical Research Results on Special Populations of Women**

Encourage the publication and distribution of the research results involving special population of women, related to the role of gender, race/ethnicity, culture, and economic circumstance in the health and health outcomes of women.

#### **3.3.2.1 Action Plan**

Continue to work with journal editors to encourage them to publish research results and analyses that report the difference or lack thereof in health and health outcomes among special populations of women.

Encourage researchers to report experiences, successful and unsuccessful, in working with special populations of women.

Encourage researchers to report data by sex and race/ethnicity.

### **3.3.2.2 Performance Measures**

Revised editorial policies of peer-reviewed journals that require publication of research results from analysis of sex and race/ethnicity.

Increased number of publications reporting on differences of health and health outcomes among special populations of women.

### **3.3.2.3 Outcome Measures**

More accurate data on health and health outcomes specific to special populations of women.

Decrease in the dearth of information on health disparities among special populations of women.

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<sup>1</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Agenda for Research on Women's Health for the 21<sup>st</sup> Century. A Report on the Task Force on the NIH Women's Health Research Agenda for the 21<sup>st</sup> Century, Volume 1. Executive Summary. DHHS Publication No. 99-4385. (1999)

<sup>2</sup> Wizemann, Theresa M. and Mary-Lou Pardue, ed. *Exploring the Biological Contributions to Human Health: Does Sex Matter?* Report of the Committee on Understanding the Biology of Sex and Gender Differences, Board on Health Sciences Policy, Institute of Medicine. Washington, D.C.: National Academy Press, 2001.

<sup>3</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Agenda for Research on Women's Health for the 21<sup>st</sup> Century, Volume 6. Differences Among Populations of Women; Scientific Meeting and Public Hearing, Santa Fe, New Mexico, July 1997. DHHS Publication No. 99-4390. (1999)

<sup>4</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Agenda for Research on Women's Health for the 21<sup>st</sup> Century. A Report of the Task Force on the NIH Women's Health Research Agenda for the 21<sup>st</sup> Century, Volume 7. New Frontiers in Women's Health. DHHS Publication No. 01-4391. (2001)

<sup>5</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Programa de Trabajo Para La Investigacion De La Salud De La Mujer En El Siglo XXI. A Report of the Task Force on the NIH Women's Health Research Agenda for the 21<sup>st</sup> Century, Volume 1. DHHS Publication No. 01-4392. (2001)

<sup>6</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Women of Color Health Data Book. NIH Publication No. 02-4247. (2002)

<sup>7</sup> Pinn VW. Equity in biomedical research. *Science* 1995; 269:739.



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<sup>8</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Outreach Notebook for the Inclusion, Recruitment and Retention of Women and Minority Subjects in Clinical Research. NIH Publication No. 03-7036. (2003)

<sup>9</sup> US Department of Health and Human Services, Public Health Service, National Institutes of Health. Science Meets Reality: Recruitment and Retention of Women in Clinical Studies and the Critical Role of Relevance. A Report of the Task Force sponsored by the NIH Office of Research on Women's Health. NIH Publication No. 03-5403. (2003)