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*A program of The Well Project*

## **Women's Research Initiative on HIV/AIDS**

**San Martin, California**

**April 15-18, 2010**

### **2010 Meeting Summary**

# Women’s Research Initiative on HIV/AIDS

## 2010 Meeting Summary

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# Women's Research Initiative on HIV/AIDS

## 2010 Meeting Summary

### Executive Summary

The 2010 meeting of the Women's Research Initiative (WRI) was organized to address the complex question: *What makes women vulnerable to HIV infection, and once infected, to disease progression?* The two and a half-day meeting included five invited scientific presentations on women's risk, updates from WRI members about their research related to HIV and women, and robust roundtable discussions and breakout group activities designed to enhance group deliberations around this question. Attending the meeting were 20 members of the WRI (including representatives from clinical care, HIV research, academia, community-based organizations, government, the pharmaceutical industry and HIV-positive women), guest speakers and invited experts.

The primary conclusion of the WRI 2010 is that a greater focus on interdisciplinary research (which places research questions about women and HIV into biomedical, behavioral and social contexts) is *vital* to adequately address issues that impact all aspects of HIV treatment and prevention for women. The group hypothesized that many of the field's current gaps in knowledge around women and HIV can be traced to a result of a research focus and approach limited to a single discipline.

The WRI defines interdisciplinary research as research that brings together biomedical, behavioral and social sciences to address the relevant questions affecting women. This must take place at the outset of any clinical trial design, in an effort to create a comprehensive set of outcomes. Creating interdisciplinary clinical trials will increase the likelihood of identifying and evaluating the important multi-factorial sex-based differences in HIV transmission and progression.

The WRI also highlighted that true interdisciplinary HIV research in women must involve both women at risk for HIV and women infected with HIV at the earliest stages of clinical trial design. The integration of women from the HIV community into the design process will facilitate the development of effective, informed and meaningful research and will significantly impact the recruitment and retention of women in clinical research.

The WRI recommends that future HIV research funding for studies about women be directed toward interdisciplinary studies. The group recognizes that the development and execution of interdisciplinary research has significant challenges and has made several preliminary recommendations about how to overcome those challenges, including:

- Developing a lexicon (or a common vocabulary) at the outset of trial formulation to ensure that a common language is understood and used by all stakeholders
- Creating consensus among all stakeholders at the outset of research design around research questions and priorities
- Investing in activities designed to establish trust, developing a common language and ensuring a common background knowledge to facilitate the unique group dynamics and interpersonal relationships fundamental to an effective interdisciplinary research team
- Developing new funding structures if current models cannot be modified to allow for community participation in the clinical trial design process

Given that traditional, biomedical research may incompletely address issues important to HIV-positive women, the WRI proposes a specific study that asks HIV-positive women the question: “Why do YOU think you were infected with HIV?” It is important to note that this question is distinct from the way the question has traditionally been framed – as “How did you get infected with HIV?” Answers to this question from the HIV-positive WRI participants revealed complex social, behavioral and biological issues that facilitated their acquisition of HIV. This illustrated the need for integrative research on HIV and women.

## 2010 WRI Meeting Theme

The WRI 2010 meeting aimed to address a central question from biomedical, behavioral and social sciences research perspectives: ***What makes women vulnerable to HIV infection and once infected, what drives HIV disease progression in women?*** This focus was determined at the 2009 WRI meeting, at which members agreed to reframe the research agenda on women and HIV by exploring how women become infected and how they protect themselves from HIV infection, utilizing integrated expertise from the three perspectives described above.

The 2010 WRI meeting had several key objectives:

- Highlight the most critical research findings on HIV and women identified between January 2009 and early 2010
- Identify the most important HIV prevention and intervention research priority areas to shape the future research agenda, with a specific focus on novel or expanded approaches to unmet research needs
- Facilitate knowledge-sharing across and between disciplines and institutions
- Support individual WRI members in identifying opportunities to facilitate new research

To highlight the most critical research efforts and findings of the past year, invited experts and WRI members presented biologic, behavioral and social research on key topics related to women and HIV. Each of these talks fueled rich discussion on the importance of integrated sciences in women's research. In addition, roundtable discussions in which participants briefly highlighted their plans for working in HIV and women's issues during the coming year helped facilitate collaborations among members.

This year, as in prior years, the WRI served as a unique forum, allowing key stakeholders in HIV and women's research and care to share research ideas, experiences and challenges, as well as to develop novel approaches to enhance their work. For a full agenda, please see Appendix B.

## WRI 2010 Finding

WRI 2010 participants discussed at length the many confounders (or factors that can influence research, leading to unexpected outcomes that may skew the results) in biologic, behavioral and social research. The important information and data presented at the meeting highlighted the inherent hurdles in translating research into meaningful information for women living with HIV, their care teams, service providers and policy makers. These challenges were the focus of deliberations, moving the group away from discussion of specific research questions to the limitation of single-discipline approaches. In these discussions, this key limitation to conducting effective research on women with HIV emerged and after extensive discussion, there was universal agreement that ***In order to advance an agenda of increased and more robust understanding of HIV in women, research must become truly interdisciplinary in nature.*** This

recommendation has application across all types of research, including randomized controlled trials, cohort and observational studies.

The group defined interdisciplinary research as a process that brings together stakeholders representing biomedical, behavioral and social sciences when *designing* clinical trials, in an effort to create a comprehensive set of outcomes that are “real world” applicable. Research based on a single perspective has significant limitations when translating research data into care for women with HIV/AIDS. Unless interdisciplinary questions and applicable research methods are considered at the beginning of study design, it is difficult to address these issues or answer these questions at the end of the study.

The group concluded that a true interdisciplinary approach to HIV research in women requires that women at risk for and infected with HIV be considered and consulted at the earliest stages of clinical trial design, playing a significant role in framing the research question(s) to help ensure the design will answer the intended question, and that the question is meaningful and relevant for women living with HIV. The involvement of women from the HIV community will also serve as a catalyst for community engagement throughout study implementation, significantly impacting recruitment and retention in these important studies.

The WRI agreed that creating interdisciplinary research studies will increase the likelihood of identifying and evaluating important sex-based differences in HIV transmission and progression. To date, most research takes place in a defined track within the biomedical, behavioral or social science realms. Often this work is done sequentially or in tandem, but rarely in an integrated manner. Designing biomedical studies to consider those variables that rich behavioral and social science research have linked to related outcomes at the outset of study development will enable researchers to draw much more accurate conclusions, thus impacting women’s lives more significantly.

Ultimately, the shift to integrated, interdisciplinary research is an important and timely next step in the evolution of successful HIV research in women.

## **WRI 2010 Recommendations**

***Research funding should be directed to interdisciplinary studies that incorporate the following design considerations:***

- Innovative use of both quantitative and qualitative research methods to facilitate interdisciplinary research
- Consideration of research designs other than randomized controlled trials to take into account other dimensions of efficacy
- Study planning with the recognition that basic research occurs in an environmental, community, behavioral and social context
- Assessment of inclusion and exclusion criteria in studies and identification of potential systemic barriers to women’s participation in HIV prevention and therapeutic research

- Evaluation of factors (including system, recruitment and investigator bias) associated with enrollment and retention of women in both pharmaceutical industry and non-industry sponsored studies
- Demonstration of commitment to work with the community to identify relevant questions and high-risk populations for study in the United States

## Challenges

As the group continued discussions around interdisciplinary research, it became clear that even WRI members who believed they were multidisciplinary in their approach to research were missing critical design considerations and opportunities to collect important information.

Using breakout group exercises, meeting participants began to outline potential challenges and develop suggestions to overcome barriers to the design and conduct of effective interdisciplinary research:

- Different disciplines utilize different language and vocabulary and bring varied background knowledge, assumptions, values and methods to their approach to research – *developing a common lexicon at the outset of research development will ensure that all involved in the research design will be clear on meaning and intent*
- Defining terms and framing the research question(s) appropriately is challenging due to different perspectives brought by different researchers, based on discipline – *creating a team invested in ongoing research development will help build a cooperative process focused on doing the most integrated and meaningful research*
- The multi-disciplinary process requires that group dynamics and interpersonal relationships be considered so that a single domain of expertise does not negatively impact the trial – *researchers should invest time in activities that establish trust, common language, and shared background knowledge*
- Existing funding mechanisms tend to focus on narrow questions or single disciplines and rarely support community participation in framing research questions (unless the study is specifically designated as community-based participatory research) – *new or complementary funding structures may be necessary where current models lack flexibility*

## Study Example: “Why do women get infected?”

In discussing the ways in which traditional, biomedical research may incompletely address issues important to HIV-positive women, the WRI brainstormed a study that asks women with HIV “why do YOU think you were infected with HIV?” This question is distinct from *how* women get infected and the group expected that a question framed in this way could potentially reveal underlying issues, assumptions and beliefs about HIV acquisition (see Appendix D for diagram).

## **Conclusion**

The WRI serves as a unique forum, allowing stakeholders involved in HIV care and research to dialogue, share ideas, experiences and challenges, as well as to develop novel approaches to enhance their work. This year the WRI members focused on the inherent hurdles in translating research into meaningful information for women living with HIV and their care teams, service providers and policy makers. The WRI identified the limitations of single discipline research approaches as a key constraint to effective research on women with HIV. The group concluded that in order to advance a more robust agenda of understanding HIV infection in women, research must become truly interdisciplinary. This recommendation has application across all types of research, including controlled randomized trials, cohort and observational studies. Moving forward, HIV research funding for women should support an integrated, interdisciplinary approach to truly enhance and expedite understanding of HIV disease in women.

## **Appendix A: Overview of the Women’s Research Initiative on HIV/AIDS**

Despite the fact that women incur more than half of all new HIV infections globally, critical questions about HIV/AIDS in women remain unanswered. Until these questions are addressed, we are limited in our ability to design effective prevention and treatment intervention strategies, resulting in further infections and deaths associated with HIV and AIDS.

Since 2003, the Women’s Research Initiative on HIV/AIDS (WRI) has advocated for “more, better and faster research” into HIV disease in women. The WRI has brought together more than 75 interdisciplinary experts, representing clinicians, research scientists, and advocates from academia, community, government, the pharmaceutical industry and HIV-positive women, in an effort to expand, enhance and coordinate efforts to improve research related to HIV disease in women.

The WRI includes 30 current members who serve in staggered three-year terms to maintain the momentum and deliverables from this experience-rich think tank. An executive committee provides oversight and guidance for the annual meeting and related activities. For a full list of WRI attendees and invited speakers for 2010, please see Appendix B. For a full list of WRI members and past participants, please visit [www.womensresearchinitiative.org](http://www.womensresearchinitiative.org).

## Appendix B: WRI 2010 Meeting Participants

Laura Armas- Kolostroubis, MD* Parkland Health and Hospital System; Texas/Oklahoma AIDS Education and Training Center	Judith Auerbach, PhD* San Francisco AIDS Foundation
Richard Averitt The Well Project	Dawn Averitt Bridge* The Well Project
Gina Brown, MD* National Institute of Health Office of AIDS Research	Ju-Hui Chang, PhD Ragon Institute of Massachusetts General Hospital, Massachusetts Institute Technology and Harvard
Susan E. Cohn, MD, MPH Northwestern University Feinberg School of Medicine	Elizabeth Connick, MD University of Colorado Denver Division of Infectious Diseases
Terri Creagh, PhD Clinical and Epidemiologic Research	Rebecca Denison WORLD
Shari Dworkin, PhD, MS UCSF	Monica Gandhi, MD, MPH University of California, San Francisco (UCSF)
Kristy Grimm, PharmD Bristol-Myers Squibb	Debbie P. Hagins, MD Chatham County Health Department
Yasmin Halima, MPH Global Campaign for Microbicides	Sally Hodder, MD UMDNJ – NJMS
Naina Khanna U.S. Positive Women’s Network (PWN) and WORLD	Alan Landay, PhD Rush University Medical Center
Sharon Lee, MD Family Health Care	Krista Heitzman Martel The Well Project
Caroline Mitchell, MD, MPH University of Washington	Joseph Mrus, MD, MSc Tibotec
Bach-Yen Nguyen Merck Research Labs	Monica Ruiz, PhD, MPH Forum for Collaborative HIV Research, George Washington University

Stephen P. Storfer, MD* Boehringer Ingelheim Pharmaceuticals, Inc.	Carole Treston, RN, MPH AIDS Alliance for Children Youth & Families
Charles Wira, PhD Dartmouth Medical School, Department of Physiology	

\*Executive committee member

## Appendix C: Meeting Approach

To highlight the most critical research efforts and findings of the past year, invited expert speakers and WRI members presented on their work on key topics in biologic, behavioral and social research on women and HIV. Each of these talks fueled rich discussion and often culminated in unique synthesis and perspective by the group.

The invited speakers and their topics included:

### ***In Defense of the Vagina***

Caroline Mitchell, MD, MPH, Asst. Professor, Department of Obstetrics & Gynecology, University of Washington

Reviewed innate immune defense mechanisms that may protect women from HIV-1 acquisition and how those systems may fail. Presented possible strategies for enhancement of immune defenses as part of HIV-1 prevention strategies.

### ***HIV and the Aging Immune System***

Alan L. Landay, PhD, Professor and Chairman Department of Immunology/Microbiology Rush University Medical Center

Covered basic aspects of how HIV may accelerate aging by affecting innate and adaptive immune systems and demonstrated how accelerated aging may contribute to non-HIV specific co-morbidities.

### ***Gender (sex) difference in HIV-1 innate immune function***

Judy Chang, MD, Ragon Institute of MIT, MGH and Harvard

Characterized differences between male and female innate immune responses to HIV-1 and downstream impact on HIV-1 disease progression.

### ***Integrating Economic Empowerment and HIV Prevention: Where are We Now and What Else Needs to be Done?***

Shari L. Dworkin, PhD, MS, Associate Professor, Medical Sociology, University of California at San Francisco, Department of Social and Behavioral Sciences

Examined domestic and global evidence concerning integrated economic and HIV/AIDS prevention programming. Emphasized key areas of success and lessons learned, and evaluated how progress compares between domestic and global contexts.

WRI Member updates included:

- Dr. Chuck Wira: Updated information on the innate immune system in the female reproductive tract and the ways in which pregnancy and progressive HIV disease alters protection.
- Dr. Liz Connick: Sex differences in acute/early HIV infection.

- Dr. Sharon Lee: The role of anal intercourse in heterosexual HIV transmission
- Yasmin Halima and Dr. Gina Brown: Scientific and advocacy perspectives on PrEP and microbicides and their implications for women.
- Dr. Terri Creagh: Drug Label Review project update. This update focused on ongoing work of the WRI to analyze the content of antiretroviral drug labels.

In addition to the invited speakers and member updates, the WRI conducted a group roundtable where each participant briefly highlighted their personal areas of focus for the coming year. In describing their work, each participant mentioned issues where they may required outside assistance or knowledge. This exercise was especially helpful as networks expanded and experts were able to connect on projects.

## Appendix D: Study Model

