

The 'Jewels in Our Genes' Study: Investigating Why Black Women are at Increased Risk of Early Breast Cancer

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(PhysOrg.com) -- A nation-wide cancer information program targeting African-Americans, called the Witness Project, is partnering with a University at Buffalo genetic epidemiologist to conduct the first national study of genes that increase breast cancer susceptibility in African-American families.

The "Jewels in Our Genes" study, funded by the Susan G. Komen for the Cure Foundation, developed at lightning speed in the usually slow-paced world of grant funding: from proposal to a three-year, \$431,395 commitment in five months.

Heather Ochs-Balcom, Ph.D., assistant professor in the UB Department of Social and Preventive Medicine (SPM), and principal investigator on the study, happened upon this opportunity when she attended an informational session on new grant programs sponsored by the Komen Foundation.

One particular program, called the Career Catalyst in Disparities Research, was funding grants to study the genetics of [breast cancer](#) disparities. It was designed specifically to foster the independent careers of junior scientists while answering important questions about a disease that disproportionately affects young African-American women.

Listening to the grant requirements, Ochs-Balcom realized she met all its qualifications: As a genetic epidemiologist, she focused on the role of genetic factors in determining health and disease in families and in populations, and she was a young researcher, a "junior scientist."

Meanwhile, Deborah Erwin, Ph.D., cofounder of the national Witness Project and director of the Office of [Health Disparities](#) in Roswell Park Cancer Institute's Division of Cancer Prevention and Population Sciences, had been approached by

Veronica Meadows Ray, a breast cancer survivor and member of the local Witness Project group.

Ray, who also is involved in RPCI's cancer survivor programs, wanted to know if a study could be conducted to determine why a family like hers developed several cases -- her mother, aunt and several cousins also had breast cancer -- even though they don't carry the known BRCA gene mutations.

The pieces critical to conducting the "Jewels in Our Genes" study began to fall into place.

After hearing the grant requirements, Ochs-Balcom approached Erwin at the Komen grant seminar, which Erwin also had attended, and told her she specializes in family studies. Erwin then told her about Ray's family.

"I looked into what studies had been conducted so far in African-American families," said Ochs-Balcom, "and found that this kind of study hadn't been done before. So I decided to write the Career Catalyst application with Dr. Erwin as a mentor and Veronica's family as our partner.

"Without Veronica asking questions like this and being involved in the Witness Project, Dr. Erwin meeting me about the same time and finding out I have expertise in family studies, plus the new career catalyst grants being solicited by Komen, none of this would have happened," Ochs-Balcom said. "I would say it's a testament to what can be done when people like Veronica get involved in their community. It all started with her.

"We know that socioeconomic status and access to health care play a major role in disparities in breast cancer severity and mortality," continued Ochs-Balcom, "but inherited genetic factors also may play

an important role. The lack of investigations with minority groups has limited this research, and motivated us to write this grant."

That was in May 2008. Ochs-Balcom developed the proposal, applied for the grant, and was approved on the first try.

"This grant is an exceptional example of the benefits of connecting the disease concerns of patients and the community with appropriate scientific expertise to initiate novel research," said Erwin.

"I am excited to be able to mentor such a talented young investigator as Dr. Ochs-Balcom in methods to include the community perspective and voice in her genetic epidemiological studies."

The study has two components. Focus groups of local African-American women now are meeting to help develop the best recruitment strategy and to determine how to overcome cultural barriers surrounding participation in medical research. The 24-month national recruitment phase is set to begin this October.

Researchers will be enrolling extended African-American pedigrees, or families, from across the U.S. -- Ochs-Balcom is aiming for 125 -- in which two or more women had breast cancer. Having the support of the Witness Project is crucial in this phase. The community network already in place reaches approximately 10,000 women, according to Ochs-Balcom.

Witness Program volunteers -- African American women, both cancer survivors and lay health advisors -- present programs through local churches and community organizations. They discuss their own experiences, assure women that breast cancer is not a death sentence and stress the importance of mammograms. The presentations now will include information on the "Jewels in Our Genes" study, and encourage attendees who have breast cancer in their families to take part.

Women who enroll will be asked to complete the study questionnaire and to mail a saliva sample to

the study center in a specially designed collection tube. Samples will be used for DNA analysis and to search for new breast cancer genes in the families.

"Through this research, we hope to find new genes that may help to identify new biologic pathways to study in breast cancer," said Ochs-Balcom.

She recently joined the Western New York affiliate of Susan G. Komen for the Cure Foundation board of directors, which funds grants locally.

Provided by University at Buffalo ([news](#) : [web](#))

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