



DR. SUSAN LOVE
RESEARCH FOUNDATION

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Meet Our Grantees

Kimberly Baltzell, PhD, and Gertrude Buehring, PhD

The Dr. Susan Love Research Foundation gives out pilot grants to jumpstart innovative research and to encourage scientists to pursue the intraductal approach. These grants are awarded through an innovative grant process at the Foundation's biennial **International Symposium on the Intraductal Approach to Breast Cancer**. <http://www.dslrf.org/cnr/content.asp?L2=1&L3=4&SID=364>

In 2007, Kimberly Baltzell, RN, PhD, an assistant adjunct professor at the University of California, San Francisco, and Gertrude Buehring, PhD, a professor of virology at the University of California, Berkeley, received a \$5,000 grant from the Foundation for their project, "**Oncogenic Viruses in Nipple Aspirate Fluid: Biomarkers for Breast Cancer Risk Assessment?**" <http://www.dslrf.org/cnr/content.asp?L2=2&L3=1&L4=1&SID=369&PID=89> The pilot grant provided the foundation the investigators needed to receive \$490,000 from the Avon Foundation to pursue this line of research.

Q: How did you become interested in the intraductal approach and intraductal research?

Dr. Baltzell: I became interested in the intraductal approach when I recognized the absence of tools to actually look for precursors to breast cancer. Many research dollars are directed to treatment for breast cancer or finding tumors at an early stage. This is important; however, we will not make much progress in this field until we find out what is causing women to get breast cancer in the first place.

Dr. Buehring: I have been interested in this approach since the early 1970s, when I discovered that breast cells frequently present in milk are still viable and could be grown in culture. I became even more enthused when I heard about the work of two researchers, Dr. Sartorius in Santa Barbara and Dr. Petrakis at UCSF, who were aspirating breast fluid from women who came into their clinic with breast symptoms and studying the cells in this fluid for abnormalities. I decided to conduct a similar study. My study recruited women from the general population, as I wanted to see whether examining cells found in breast fluid might be useful for general screening purposes.

Q: What did the pilot grant you received from the Foundation allow you to do?

Dr. Buehring: The pilot grant allowed us to test a number of techniques for making preparations of breast fluid cells on slides and to determine which technique allowed the greatest retention of cells on the slides when we performed an assay to detect presence of viruses in the breast cells. The number of cells in breast fluid is usually fairly small (<500) so we do not want to lose any of the precious sample.



Q: How did the Foundation pilot grant help you to receive additional funding?

Dr. Baltzell: The pilot grant allowed us to explore the possibility of looking for an infectious agent at the site of breast cancer origin. Once the feasibility of this was established, the Foundation grant gave the concept credibility. Given this vote of confidence from such a respected organization, we were able to seek additional funding.

Dr. Buehring: The pilot grant helped us to receive additional funding by connecting us with fantastic collaborators at M.D. Anderson Cancer Center: Dr. Henry Kuerer and Dr. Savitri Krisnamurthy. With the contribution of these scientists and clinicians, we were able to obtain generous funding from the Avon Foundation to continue this work.

Q: What is the focus of your research project?

Dr. Baltzell: We are investigating whether viral agents may act as precursors to breast cancer development, much like the human papillomavirus (HPV) has been associated with the development of cervical cancer.

Dr. Buehring: We are examining breast fluid and matching breast tissue from woman for the presence of three viruses that might play a role in causing cancer. We want to see if what is in the breast fluid parallels what is seen in the tissue. If it does, this would support the idea that sampling cells from breast fluid could provide a non-surgical way of detecting what is going on inside of the breast, which might be useful for screening women for cancer-causing viruses.

Q: What would you like to do next?

Dr. Buehring: We would like to continue with this line of research and be able to study enough breast fluid and matching breast tissue to get meaningful results. To date we have completed samples from about 50 women but we need to analyze fluid and tissue from 200 women to have strong statistics and valid conclusions.

Dr. Baltzell: Make breast cancer something my daughter reads about in history books.