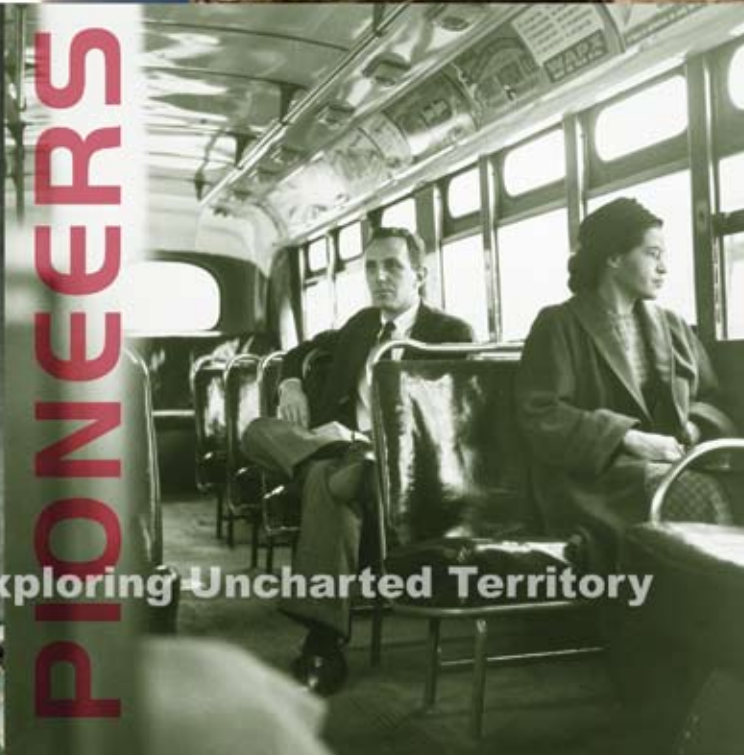




CBCRP
Bulletin
News from the California Breast Cancer Research Program

Winter 2005
Volume 9, Number 2



INSIDE:

- CBCRP Symposium Review—1
- From the Director's Desk—Exploring Uncharted Territory—2
- Community Research Grows in California—3
- Cornelius L. Hopper Poster Awards—6
- CDP-EWC Debuts Photodocumentary Project—11
- CBCRP News—13

Exploring Uncharted Territory

The topics at the symposium were as varied as the audience, but all demonstrated how progressive thinking can contribute to understanding and defeating breast cancer.

The CBCRP Research Symposium—Seeking Solutions, Committing to Action

*Katherine McKenzie, Ph.D.,
CBCRP External Relations
Manager*

The CBCRP hosted its fifth state-wide symposium September 9-11 at the Sacramento Convention Center and Sacramento Hyatt Regency. The symposium gathered together over 600 advocates, researchers, clinicians, and the general public to learn about the current state of the science and to discuss new ways to fight breast cancer.

An abiding characteristic of our biennial symposia is that they are multifaceted, and this year was no exception. A plenary session discussion about the unequal burden of breast cancer and workshops on current topics gave attendees a view of cutting-edge thinking and techniques being applied to breast cancer research. We also showcased the latest research results funded by the CBCRP through over 80 posters and four breakout sessions. Throughout the symposium the impact of the disease received prominent attention through the participation of breast cancer survivors and a curated art exhibition by and about those affected by breast cancer.

The symposium was accessible to everyone interested in breast cancer research, regardless of their scientific background. A breast cancer 101



course kicked off the symposium and helped newcomers understand the basics—the terminology, the key issues, and how to interpret the findings at the meeting. Trained advocates guided people through the research posters and interpreted research jargon.

The topics at the symposium were as varied as the audience, but all demonstrated how progressive thinking can contribute to understanding and defeating breast cancer. We learned about the approaches being used to develop personalized treatments for cancer, research towards understanding the connection between psychology and the body's response to cancer,

the challenges and opportunities of learning whether the levels of toxins in our bodies would help us understand environmental contributions to breast cancer, and how we might develop new preventions and therapies by better understanding how breast cells mature and interact with each other. Some of these issues need more investigation, but we know enough about others to initiate action.

One issue that confounds researchers and advocates is the question of why the impact of breast cancer varies between different communities and what can be done about it. A blue-ribbon

Continued on **page 4**

It is the CBCRP's job to encourage exploration into uncharted territory. It is the researcher's challenge to step off the "known" path and take the leap to invest time in a radically new idea.

From the Director's Desk

Marion H. E. Kavanaugh-Lynch, M.D., M.P.H.,
Director of the CBCRP



Exploring Uncharted Territory

The other day I was invited to join a panel on public radio KQED's *Forum*, where we discussed recent advances in breast cancer research, including options in treatment, prevention, funding, and access to care. Our lively discussion included the ongoing Herceptin clinical trial at the University of Kentucky, in which early results indicate an improvement in the disease-free survival for women in their first year of taking the drug. On the one hand, I welcome any progress made in the effort to eliminate breast cancer; on the other, I'm concerned about potentially over-hyping incremental advances that will only help a small group of women who develop breast cancer. Until we can prevent and cure breast cancer, we can't stop looking for new and better ways to help everyone affected by the disease.

When Michael Krasne, the show's host, asked me what I thought was needed most in breast cancer research, I said, "We need new ideas." Ever since the show aired, people have been asking me what I meant. Yes, it's great that we're making improvements in breast cancer treatment, but too few researchers have explored beyond the same theories about breast cancer. We have a list of things we know are associated with breast

cancer, but we don't know how they cause breast cancer. We need more answers. Better yet, we need more questions.

Because of the CBCRP's uniqueness—our commitment to innovation—we are able to support controversial research projects that have a high risk of failure, because they could also radically advance our efforts towards a solution to breast cancer. We've funded investigations into the possible connection between the bovine leukemia virus and breast cancer. We've supported research into the hypothesis that the sterile environment of the industrialized countries inhibits our immune systems' ability to fight breast cancer. We have funded studies pursuing the theory that estrogen given at pregnancy levels during adolescence can prevent the disease. The outcomes of these studies are not yet fully realized, but they will add information about this complex disease. We need more people to pursue different ideas, explore new theories, and come up with unique and challenging hypotheses that focus not just on detection and treatment, but also on causes and prevention.

It is the CBCRP's job to encourage exploration into uncharted territory.

It is the researcher's challenge to step off the "known" path and take the leap to invest time in a radically new idea. We can work together to explore implausible ideas with scientific rigor. Although some ideas may fail, even one success could make all of the effort worthwhile.

A handwritten signature in black ink that reads "Mhel Kavanaugh-Lynch".

You can listen to a podcast of Mhel's appearance on KQED's *Forum* on the CBCRP website.

Workshops on current topics gave attendees a view of cutting-edge thinking and techniques being applied to breast cancer research.



care products. By learning about and becoming accustomed to the research funding application process, community organizations are not only submitting more concept papers, they are submitting better quality research ideas, exploring a wider range of research topics involving more diverse populations and greater geographic representation throughout the state.

The impressive cultural diversity in the 2005 CRC concept papers:

- African American lesbians
- American Indians
- Muslims
- Deaf and hearing impaired
- Chinese immigrants
- Samoans
- Thai elders
- Multi-ethnic Asian
- Slavic
- Chamorro
- Southeast Asian
- Rural
- Latinas

CBCRP Symposium continued from page 1

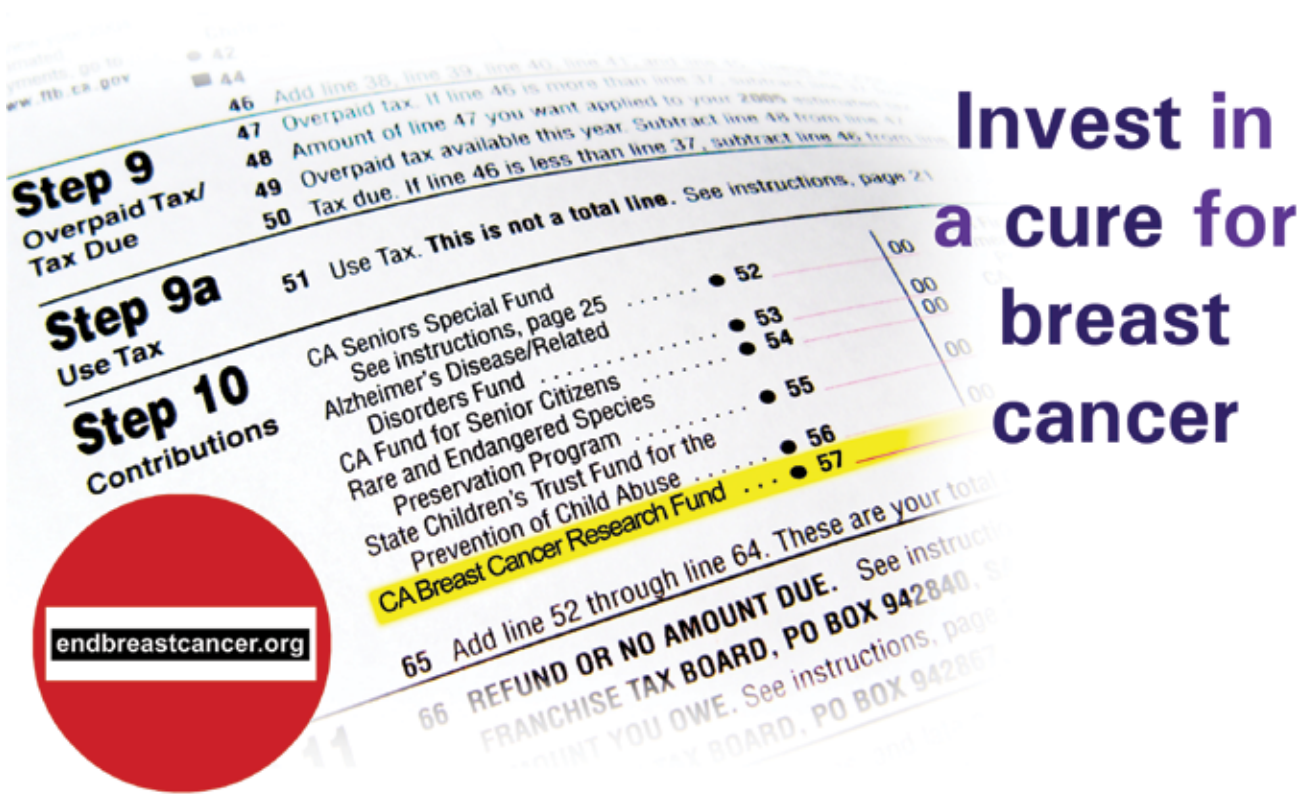
panel moderated by Robert Hiatt, M.D., Ph.D., of the University of California, San Francisco Comprehensive Cancer Center and composed of William Wright, Ph.D., of the California Department of Health Services; Debra Oto-Kent, M.P.H., of the Health Education Council; Lovell Jones, Ph.D., of the University of Texas MD Anderson; Sandra Millon-Underwood, Ph.D., FAAN, of the University of Milwaukee; and Rachel Morello-Frosch, Ph.D., of Brown University tackled this issue. They discussed the state of breast cancer in California and examined the aspects that could contribute to the unequal burden including biology, environment, and access to health care.

Some of the panel's recommendations were based on the direction that research should take, such as reassessing how biological studies correlate to racial/ethnic groupings. Others were policy-based, such as educating healthcare professionals to recognize and eliminate hidden biases. The main message from the panel was that it is time to take what we know about the unequal burden of breast cancer and translate it into effective prevention and treatment programs.

The symposium provided myriad venues for committing to action. The exhibitors described ways that attendees could fight breast cancer at the advocacy level and the personal level. The keynote speech by author, actress, and twenty-year breast cancer survivor Marcia Wallace provided inspiration about taking control of your life when facing a breast cancer diagnosis.

The keynote address given by Dr. Kenneth Olden, director emeritus of the National Institute of Environmental Health and Sciences and the National Toxicology Program, emphasized the need for early intervention in breast cancer development. Stopping cancer before it starts will require understanding the influences on its development. As we move into the future, Dr. Olden predicted, "The environment is moving to the center of the national research agenda. It's going to make all the difference for the prevention of diseases like breast cancer."

The symposium provided a forum for sharing and discussing progressive ideas towards understanding and eliminating breast cancer, and presented ideas for people to take away and apply to their research, their activism, and their lives. We're pleased with the free exchange of ideas and knowledge at the symposium, and we appreciate the enthusiastic contributions from all of our presenters, exhibitors, and attendees.



Invest in
a cure for
breast
cancer



Contribute to the California Breast Cancer Research Fund on line 57 of State income tax form 540—it's simple, effective, and automatically tax deductible.

Just some of the broad research your contributions have already supported:

- Lifestyle influences (like diet and obesity) that increase breast cancer risks
- Environmental factors (like dioxins and PBDEs) that potentially cause breast cancer
- Natural and low-toxic preventive agents and therapies like mushrooms and Chinese herbs
- Earlier detection methods such as optical detectors or blood tests
- Reliable predictors of the disease
- Better support networks for socially or geographically isolated women
- Living well post-diagnosis, looking at such issues as returning to work, the partner's role in recovery, and the effectiveness of support groups

You can see a full list of grants funded by the Tax Check-Off program on our website (www.endbreastcancer.org/awardsList.php). With your continued support, we can make more research like this possible.

Remember, 95% of all donations goes toward breast cancer research and education, and only 5% goes to administration.



Leading innovation in breast cancer research, communication, and collaboration in order to eliminate the disease.

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Cornelius L. Hopper Poster Awards Winners

The Cornelius L. Hopper Poster Awards acknowledge investigators whose presentations excelled in three areas that are highly valued by the CBCRP: potential impact on breast cancer, research innovation, and best presentation for a lay audience. The advisory Breast Cancer Research Council, whose backgrounds reflected the diverse makeup of the symposium audience, selected the poster award winners. The winners were:

Best Presentation to a Lay Audience

African American Women Using the Every Woman Counts Program: Who Are They?

Priscilla Banks, Carol Somkin, and Joan Bloom
African American Advisory Committee on Cancer (AAAC), Kaiser Permanente, and University of California, Berkeley

Most Innovative

High Resolution Imaging of Human Tumor Formation and Angiogenesis in a Novel Zebrafish Model

Konstantin Stoletov
The Scripps Research Institute

Highest Potential Impact

Breast Cancer Prevention with Estrogen
Satyabrata Nandi
University of California, Berkeley



Con Hopper

You can find a complete list of the Cornelius L. Hopper Award winners and honorable mentions and their abstracts on our website.

African American Women and Breast Cancer: What Works?

*Walter Price, Dr.P.H., CBCRP
Community Initiatives Manager*

This attractive, informative poster, which received the award for Best Presentation to a Lay Audience, is an example of the power of a truly collaborative research project. By involving the community in every phase, the entire research project has achieved greater relevancy, accessibility, and success.

The poster highlighted the partnership between Priscilla Banks (Community Co-PI), representing the African American Advisory Committee on Cancer (AAAC); Carol Somkin, research scientist in Kaiser Permanente



(Left to right): Priscilla Banks, Carol Somkin, and Carol Sims

Continued on **page 7**

What Works continued from page 6

Oakland's Division of Research; and Joan Bloom, professor at University of California, Berkeley School of Public Health (Researcher Co-PIs). The AAAC is a group of African American women who are formally involved in many health care issues and advise and interact with health care agencies throughout state and the nation, with a focus in the Bay Area.

The collaboration developed for over a year before the team submitted their concept paper. They started with the very basic question, "Why is it that African American women, while diagnosed less frequently with breast cancer than white women, are more frequently diagnosed with late-stage breast cancer and suffer higher mortality rates than white women?" Through a series of meetings, Ms. Banks worked with Drs. Somkin and Bloom to hone that question into a more granular, achievable line of inquiry, and to develop the team's research goals and objectives. The AAAC worked with its larger community to ensure that their needs, values, and viewpoints were accurately and equally represented. The team settled on examining healthcare settings and interactions with providers and staff to determine the aspects that promote and inhibit the experience of culturally sensitive care for African American women.

The researchers wrote a first draft of the concept paper (a prerequisite to submitting a CRC application), which was edited and expanded on by AAAC members. Following

the concept paper peer review, the AAAC met twice again to discuss and develop a response to the reviewers' comments. The AAAC also obtained letters of support from the community collaborators, and the partnership wrote and submitted the full application.

Ms. Banks and Drs. Somkin and Bloom continue to participate in all aspects of the design and implementation of the project, from the development of the instruments to the data collection, data analysis, and interpretation. When the project is complete, the partners will participate equally in writing reports and manuscripts. In general, the scientists assist the AAAC to refine the scientific issues and provide research strategies, while the AAAC provide the cultural expertise.

The collaboration between the community and the scientific researchers has enhanced the strength of the research questions, and community's deep involvement in this project has facilitated the team's efforts to communicate to a lay audience.

Studying Breast Cancer Angiogenesis Using a Novel Model System

Laurence Fitzgerald, Ph.D., CBCRP Core Funding Manager

Researchers are continually exploring the use of non-mammalian model systems to study key processes in cancer biology. Because cancer

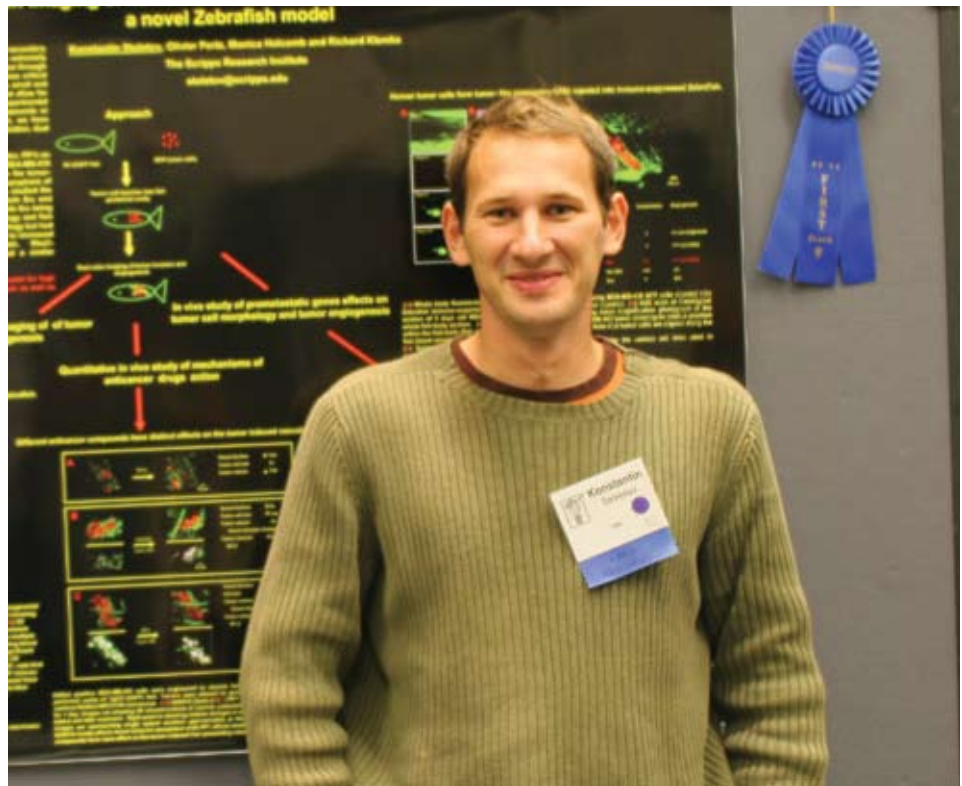
progression involves evolutionarily-conserved biological pathways, such as DNA repair, regulation of the cell cycle, and growth control-signaling pathways, it is often much easier to investigate the underlying genetic and molecular mechanisms using animals that can be manipulated more readily in the laboratory. Konstantin Stoletov, Ph.D., from The Scripps Research Institute, La Jolla, was funded in 2005 through a CBCRP postdoctoral fellowship to use a fish model to explore the initial steps in breast cancer cell invasion and angiogenesis. When Dr. Stoletov presented the early phases of his research at the recent CBCRP symposium, he was selected from over 80 other posters as the winner of the Cornelius Hopper award for Best Innovation.

The story begins with a small fresh water fish, called Zebrafish, which have the unique advantage of being transparent until they are about one month old. Thus, all phases of embryonic development and adult organ structure can be readily observed. These fish mature very rapidly, and they are easier to maintain and experiment on compared to rodent models. Interestingly, Zebrafish can be induced to develop tumors and their morphology and genetic aspects have striking similarities to human cancers. Dr. Stoletov will inject human breast tumor cell lines into Zebrafish and observe the induction of the blood vessel network (angiogenesis) by a technique called "confocal microscopy." Human tumor cells and fish blood vessels are "labeled" with different

colored fluorescent dyes, so they can be directly seen in the living fish by using light of different wavelengths. Thus, tumor growth, cell movements, and progression can be recorded over time in an individual living animal without dissection.

In preliminary studies, Dr. Stoletov demonstrated that the human breast cells can form tumors in Zebrafish, and they will induce the formation of a blood vessel network to allow for their continued growth. A low percentage of the tumors in the fish will spread outside the injection site and kill the animal just like the metastasis events seen in human tumors. In fact, these preliminary studies were the first time sequential images of tumor angiogenesis in a living animal have been generated. The advantage of confocal microscopy is that a series of thin sections can be taken through the tumor-host angiogenic tissue and then used to reconstruct a three-dimensional tumor structure. In terms of the molecular events regulating angiogenesis, the fish appear to be remarkably similar to humans, at least for the key growth-promoting genes, such as VEGF.

Of course, one could ask, “this is interesting, but what experiments can be performed that are relevant to human breast cancer?” First, the



Dr. Stoletov's model system is poised to shed new light on how RhoC is involved in breast cancer cell movements, induction of angiogenesis, and metastasis

Zebrafish system is ideal for studying the earliest movement of cancer cells towards host endothelial cells as the first step in acquiring a blood supply. Little is known about these processes in human cancer, so we lack insight on how to validate drug targets for treating or preventing early cancers. Second, a family of small signaling proteins, called Rho GTPases, can be studied in this system. Rho proteins represent a related family of small GTPases that regulate the cell's internal actin cytoskeleton. Conse-

quently the most prominent roles for Rho-GTPases include control of cell shape, cell division, and motility. Dr. Stoletov is specifically interested in RhoC, and his Zebrafish system will allow him to modulate the levels of this protein when present in the human tumor xenograft. RhoC gene is overexpressed in a rare, but highly invasive and angiogenic form of breast cancer, called inflammatory breast cancer (IBC). Dr. Stoletov believes that his model system will enable him

Continued on page 9

Novel Model System continued from page 8

to uncover the molecular mechanisms activated by RhoC that render IBC so aggressive. Thus, Dr. Stoletov's innovative Zebrafish model system is poised to shed new light on how RhoC is involved in breast cancer cell movements, induction of angiogenesis, and metastasis.

Dr. Stoletov received his undergraduate training in Russia and completed his graduate work at Albert Einstein College of Medicine in New York. Since 2003 he has been a postdoctoral fellow in the laboratory of Richard Klemke, Ph.D., at Scripps. He is applying an excellent background in angiogenesis and cell motility under the mentorship of Dr. Klemke and in collaboration with other faculty at Scripps to enter the field of breast cancer research.

A Second Look at Estrogen

*Katherine McKenzie, Ph.D.,
CBCRP External Relations
Manager*

Satyabrata Nandi, Ph.D., of University of California, Berkeley, presented a poster addressing one of the pivotal questions in breast cancer research today. How can we prevent breast cancer from ever developing? One way to answer this question is to learn which behaviors or physiologic characteristics protect women from developing breast cancer and mimic those conditions in susceptible women.

It has long been observed that a full-

term pregnancy before the age of 20 reduces the risk of developing breast cancer by 50 percent. Something about pregnancy causes either changes in the breast or factors affecting the breast that result in protection from cancer. During pregnancy the levels of the hormones estrogen and progesterone are elevated, affecting both the breast cells and the balance of other hormones in the body. Dr. Nandi undertook a study to determine whether it was the hormonal changes or the changes in the breast tissue that was responsible for reducing the risk of developing breast cancer. Armed with this information, he could develop a way prevent breast cancer by mimicking natural processes.

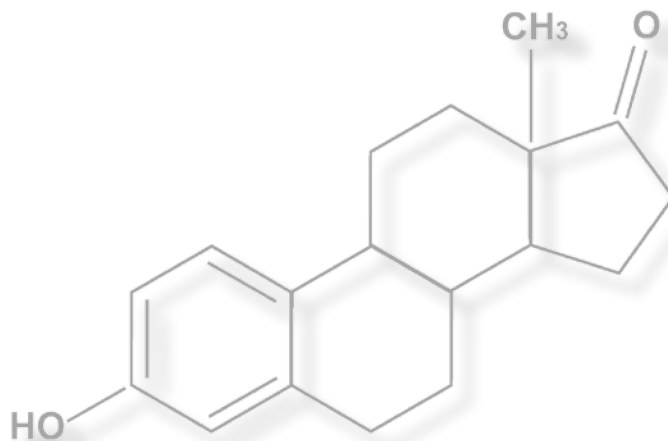
Dr. Nandi realized that trying to answer this question in humans would be difficult because there are such wide variations between individuals and even within the same women at different stages of maturity and menstrual cycle. Instead, he decided to tackle this question by investigating it in rodents, which also are protected from developing breast tumors by pregnancy during adolescence.

Dr. Nandi gave pregnancy levels of estrogen or estrogen and progesterone to adolescent rats for two to four

weeks, even though giving estrogen is counter-intuitive because a body of data indicates that higher lifetime exposures to estrogen correlate with a higher risk of developing breast cancer. Estrogen is a complicated hormone and has many effects throughout the body. The time of life when exposed to estrogen may actually be the determinant of whether estrogen is protective or promotes cancer. Indeed, Dr. Nandi found that estrogen or estrogen and progesterone treatment in adolescent rats protected them from developing mammary tumors long after the treatment ended.

Changes at the cell level were not the reason for this protection. Cells can be induced to mature through non-estrogenic means, but while they look like the cells that were caused





to mature by using estrogen, they do not behave the same way. In animals that received the estrogen treatment, prolactin and growth hormone (which contribute to the tumor growth) were permanently reduced and their mammary glands were protected from developing tumors. This precisely mimicked the hormonal changes and protection from tumor development that occurs due to full term pregnancy. Non-estrogenic treatments did not change the balance of these hormones, nor did they protect the mammary gland from developing tumors.

The protective effect of short term estrogen or short-term estrogen and progesterone treatment is as effective as ovariectomy or long term treatment with tamoxifen in rats. Moreover, no side effects in fertility, body weight, or other cancers were observed with the short-term treatments. If this paradigm holds up for humans, then it may be possible to develop a safe, effective, and universally affordable prevention strategy for breast cancer that would not require long-term hormone treatments.



Satyabrata Nandi (left) and Raphael Guzman



Putting a Human Face on California's Breast Cancer Statistics: Department of Health Services' Cancer Detection Programs: Every Woman Counts Debuts Photodocumentary Project

Eric Mandell – California Department of Health Services, Cancer Detection Section

A powerful photodocumentary exhibit designed to educate and inspire women throughout California was unveiled on October 6, 2005, by the California Department of Health Services (CDHS) in recognition of Breast Cancer Awareness Month. The debut of the Every Woman Counts exhibit was held at Sacramento's Westfield Downtown Plaza, which co-hosted the event with CDHS and the California Broadcasters Association.

Photography has long been recognized as an effective tool for social change. In May 2002, CDHS' Cancer Detection Section (CDS) embarked on a year-long photodocumentary project, funded by a grant from the Centers for Disease Control and Prevention, to collect women's images, voices, and stories across the state. The 62 subjects depicted are ethnically, linguistically, and geographically diverse women who were served by California's free breast and cervical cancer early detection program, Cancer

Detection Programs: Every Woman Counts (CDP: EWC). Approximately half of the women were cancer survivors diagnosed through CDP: EWC; the other half were women who had

the women in a variety of settings important to them: at church, while fishing, at parks, with grandchildren, by schools, and at work.

Each photograph and story captures the day-to-day challenges and triumphs faced by underinsured women throughout California. These are the faces and stories that are part of California's breast cancer statistics. They are intended to humanize and represent the impact of cancer early detection efforts on individual women and their families in California. The Every Woman Counts photo exhibit is a unique health marketing tool designed to educate and inspire underserved women to seek life-saving screening services. It draws attention to the barriers faced by the uninsured in a compelling and highly personal manner, in order to emphasize the importance of these services to policymakers.

The women of the Every Woman Counts photodocumentary come from different cultures and speak many languages, yet their

When the legislation establishing the CBCRP was enacted, a sister program was also born—the Cancer Detection Program: Every Woman Counts (CDP:EWC). The CDP:EWC is funded in part by half of the cigarette tax that funds the CBCRP and is run by the Cancer Detection Section in the California Department of Health Services. The mission of the CDP:EWC is to “save lives by preventing and reducing the devastating effects of cancer for all Californians through early detection, diagnosis, and treatment, with special emphasis on the underserved.” They offer breast cancer screening, diagnostic, and treatment services through a consortium of providers in all 58 counties in California. They also collaborate with the CBCRP to develop research agendas that increase outreach and delivery of care, particularly to underserved communities.

received yearly breast cancer screening services through the program. Over 9,000 images were captured of



From left to right: *The Chang Family, Jacque Nunez, Marti Pollard, Michelle Inks, Rosa Miramontes, Antoinette Richardson, Evelyn Okada, Madeline Gregory*

message is the same. They stress the importance of yearly screening services, in order to take good care of themselves and their families, and to detect cancer early so that it can be cured. In sharing their stories, they hope that other women recognize a bit of themselves in these snapshots, stand strong, and take action.

Breast cancer is the most common invasive cancer among women, accounting for nearly one out of three cancers diagnosed. Every 24 minutes, a woman in California is diagnosed with breast cancer. Each year, more than 4,000 women in our state will die from the disease. Early detection is the key to surviving breast cancer. When found early, the survival rate is 95 percent.

Unfortunately uninsured women are the least likely to receive breast and cervical cancer early detection services, and consequently are most at risk of developing late-stage cancer. According to California Behavioral Risk Factor Survey data, 33.5 percent of uninsured California women 40 and older have never had a mammogram. Low-income, uninsured, and minority women have the lowest rates of annual screening and suffer from higher

mortality rates. CDP: EWC is focused on eliminating these disparities.

Since 1991, CDP: EWC has provided free breast and cervical cancer services to more than one million low-income and uninsured/underinsured women. Through calls to the program's toll-free number, a qualified woman is referred to a healthcare provider in her neighborhood. The toll-free line, 800-511-2300, is the only one in the nation that assists callers in six different languages: English, Spanish, Mandarin, Cantonese, Korean, and Vietnamese. The program's Web site can be accessed at <http://www.dhs.ca.gov/cancerdetection/>.

Given CDP: EWC's mission to serve all California women, projects like this demonstrate the need to continually reach out to individual women. These women are important in the lives of their families, they have unrealized dreams for their future, and they have a unique story to tell. They are an inspiration to us all to continue the fight to reduce the burden of cancer in California's underserved communities. Starting in December, the exhibit will be displayed at various sites in California. To learn more about the photodocumentary and view

videos featuring women from Cancer Detection Programs: Every Woman Counts, please visit: <http://www.dhs.ca.gov/cancerdetection/photodoc/>.

CBCRP News

Welcome to New Council Members

The advisory breast cancer research council for the CBCRP has undergone some changes in 2005. They elected a new chair and vice-chair, Christine White and Lisa Wanzor, respectively, and have added five new members. We look forward to a productive year working with Christine, Lisa, and all of the new members. The new members are:



Anuja Mendiratta is a Senior Program Officer with the Women's Foundation of California. Prior to joining the Foundation, she managed the San Francisco Foundation's Environmental Health and Justice Initiative for four years and worked as a Program Officer at the Marin Community Foundation. Ms. Mendiratta lives in Berkeley and currently also serves on the boards of the La Peña Cultural Center, the Center for Environmental Health, and the Community Toolbox for Children's Environmental Health.



Angela Padilla is the co-founder and leader of Bay Area Young Survivors (BAYS), the only support and activist group for women under 45 affected by breast cancer in the Bay Area. She is currently forming *Mighty Moms*, a support group for women with young children who are affected by cancer. Last year Angela was nominated by Lifetime Television as a breast cancer hero.



Maria Wetzel will be a 10 year survivor of breast cancer in February. She has been active on BCList.org—an internet support list—since her diagnosis, a member of NBCC for the

past six years, and is a volunteer with the Cancer Resource Center of Mendocino, where she serves as a patient navigator, a consultation planner, and an information specialist to staff and women newly diagnosed with breast cancer.



Felicia Hodge is a professor of Primary Care Nursing and director of the Center for American Indian Research and Education at the University of California, Los Angeles. She is a health policy researcher and a Native American who has been involved in a large number of research projects on breast cancer and other health issues among ethnic populations. Her current research focuses on chronic health conditions and health beliefs and behaviors among American Indians and Alaska Natives.



Mark Pegram is an oncologist and researcher at the University of California, Los Angeles's Jonsson Cancer Center, assistant professor at the UCLA School of Medicine and Director of the Women's Cancer Program. He was a co-investigator on Dennis Slamon's research that led to the development of Herceptin. His career is devoted to clinical translational research with a strong focus on breast and ovarian cancer. He has worked extensively with advocates and has been a contributor to the Susan Love MD website.

Spread the Word about Line 57

The California Breast Cancer Research Program (CBCRP) is seeking assistance in spreading the word of how California income tax payers can "Invest in a Cure" for breast cancer by simply contributing to Line 57 on their State income tax form 540.

You can help by:

- Partnering with us in holding

informational rallies in your community

- Hosting an informational meeting, event, or reception with a CBCRP guest speaker
- Advertising in your newsletters and/or website
- Informing your tax preparer of the option
- Distributing materials to local businesses
- Telling a friend

For more information about how you can help to spread the word, contact Brenda Dixon-Coby at cbcrp@ucop.edu.

CBCRP Grant Applications Due in January

Applications for IDEA, Postdoctoral Fellowship, and Dissertation awards are due on January 12, 2006. The CBCRP is implementing an electronic application submission and peer review system this year. The electronic application is the only means by which one may submit a full application for a grant. The CBCRP has contracted with proposalCENTRAL to ensure a smooth application and review process. The online application is secure; your personal information will not be shared with any individual or institution outside of CBCRP staff and reviewers. You can download application forms at <https://v2.ramscompany.com/>.

CBCRP on Tour

If you would like to get the most up-to-date information about the CBCRP, or just talk to CBCRP staff in person, look for our exhibit at the following conferences.

Environmental Links to Breast Cancer: Connecting Communities Through the Research Process

January 21, 2006

Oakland, CA

Fifth Annual Women's Health Conference

March 2-3, 2006

Los Angeles, CA

The Berkeley Conference of African Americans, Pipeline to Excellence: Recreating the Village

March 17-18, 2006

Berkeley, CA

About the Cover

Women pioneers have frequently been at the forefront of exploring "uncharted territory".

Visionaries such as Marie Curie, Amelia Earhart, and Rosa Parks helped advance the frontiers of change through their trailblazing efforts.

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Breast Cancer Research Council

Chair, Christine White, M.D., *private industry representative*

Vice Chair, Lisa Wanzor, *advocate*

Moon S. Chen, Jr., Ph.D., M.P.H., *scientist/clinician*

James Ford, M.D., *scientist/clinician*

Felicia Schanche Hodge, Dr.P.H., *scientist/clinician*

Amy Kyle, Ph.D., M.P.H., *scientist/clinician*

Anuja Mendiratta, *nonprofit health organization representative*

John W. Morgan, Dr.P.H., *nonprofit health organization representative*

Angela Lucia Padilla, *advocate*

Mark Pegram, M.D. *scientist/clinician*

Kim Pierce, *advocate*

Kurt Snipes, Ph.D., *ex-officio member*

Kathy Walters, *advocate*

Maria Wetzel, *advocate*

What is the California Breast Cancer Research Program?

The California Breast Cancer Research Program (CBCRP) was established pursuant to passage by the California Legislature of the 1993 Breast Cancer Act (*AB 2055 (B. Friedman) [Chapter 661, Statutes of 1993]* and *AB 478 (B. Friedman) [AB 478, Statutes of 1993]*). The program is responsible for administering funding for breast cancer research in the State of California.

The mission of the CBCRP is to eliminate breast cancer by leading innovation in research, communication, and collaboration in the California scientific and lay communities.

- The CBCRP is the largest state-funded research effort in the nation and is administered by the University of California, Office of the President
- The CBCRP is funded through the tobacco tax, voluntary tax check-off on personal income tax forms, and individual contributions
- The tax check-off, included on the personal income tax form since 1993, has drawn over \$6 million for breast cancer research
- Ninety-five percent of our revenue goes directly to funding research and education efforts
- The CBCRP is the 4th largest funder in the world
- Since 1994, the CBCRP has awarded nearly \$164 million in 663 grants and 8 supplement awards to 73 institutions across the state. The CBCRP supports innovative breast cancer research—cow viruses, Tibetan herbs, snake venom—that might otherwise go unfunded. With continued investment, the CBCRP will work to find better ways to prevent, treat, and cure breast cancer.

Breast Cancer Research Council Members

The CBCRP relies on its advisory Breast Cancer Research Council (BCRC), which is responsible for tracking the trends and opportunities for progress that arise in the breast cancer community, making funding recommendations, and planning future directions of the CBCRP. The BCRC is made up of 16 people selected to represent those affected by breast cancer and the institutions that can help find a solution.

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