Introduction

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

The California Breast Cancer Research Program (CBCRP) is pleased to announce the funding of 17 new research projects that will advance our knowledge about the community impact, biology, detection, and treatment of breast cancer. With these new awards we are investing $4,597,137 for research projects being performed at 16 institutions and community organizations across the state.

The CBCRP supports breast cancer research in California from funds obtained through:

- A portion of a 2¢ per pack State cigarette tax
- Contributions from individuals using the State's income tax check-off option
- Donations from concerned community members dedicated to defeating breast cancer

The CBCRP is administered by the University of California, Office of the President, in Oakland. Our overall objectives, strategies, and priorities are developed with the assistance of a volunteer California Breast Cancer Research Council (BCRC), which sets program priorities and recommends the grants to be funded. The BCRC consists of 16 members: five are representatives of breast cancer survivor/advocacy groups; five are scientists/clinicians; two are members from nonprofit health organizations, one is a practicing breast cancer medical specialist, two are members from private industry, and one is an ex officio member from the California Department of Health Services breast cancer early detection program, “Every Woman Counts.”

CBCRP research funding is organized through a number of sub-program units including:

- Community initiatives supports research grants that incorporate both traditional researcher and community group co-investigators to study a problem specific to a community, but with wider dissemination potential.
- Core funding focuses on investigator-initiated traditional grants to support smaller, innovative projects, larger translational grants, and conferences.

The full abstracts of these newly funded grants, as well as those from previous CBCRP funding cycles, can be found on our website: [www.CABreastCancer.org](http://www.CABreastCancer.org).
Overview of CBCRP Award Types
CBCRP funded new research projects using a variety of award types in 2014:

- **Community Research Collaboration (CRC)** awards bring community organizations—such as breast cancer advocates, community clinics, or organizations serving under-represented women—together with experienced scientists to investigate breast cancer problems that are important to that community, using culturally-appropriate research methods. CRC Pilot (18-month) and CRC Full Research awards (three years) are available. In 2014, we also funded one supplement to an on-going CRC grant and a CRC conference award to support the development of CRC research teams.

- **Innovative Developmental and Exploratory Awards (IDEAs)** are 12- to 18-month grants for targeted high-risk/high-reward projects. The CBCRP incorporates the “critical path” concept, which requires applicants to place their project on a research continuum leading to practical applications. IDEAs are offered to both new and established investigators.

- **Translational Research** awards support projects that overcome barriers and put prior research knowledge to practical use in the patient or community setting.

- **Conference Awards** support a conference, symposium, retreat, or other meeting to link breast cancer researchers, non-breast cancer investigators, and community members for the purpose of stimulating new ideas and collaborations.

LOI and Application Submissions and Review
IDEA and Translational Research Awards applications must pass through a letter of intent (LOI) screening process conducted by our Council to select projects that best meet our award type and programmatic criteria. We view this as a benefit to both the applicants and Program in terms of reducing the effort to prepare full applications and the CBCRP’s corresponding peer review costs.

<table>
<thead>
<tr>
<th>Award Type</th>
<th>LOIs submitted</th>
<th>LOIs approved</th>
<th>Percent approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEA</td>
<td>55</td>
<td>48</td>
<td>87%</td>
</tr>
<tr>
<td>Translational Research Award</td>
<td>15</td>
<td>8</td>
<td>53%</td>
</tr>
</tbody>
</table>
After the LOI process the full application data is shown in the table below.

**Table 2. 2014 full application submissions by award type and priority issue**

<table>
<thead>
<tr>
<th>Award Type (↓)</th>
<th>CBCRP Priority Issue</th>
<th>Award Type Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Etiology &amp; Prevention</td>
<td>Community Impact</td>
</tr>
<tr>
<td>Innovative, Developmental &amp; Exploratory (IDEA)</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Translational</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Community Research Collaboration (CRC) Pilot and Full</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Community Research Collaboration Supplement</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Community Research Collaboration Conference</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>CBCRP Conference</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Priority Totals</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>

**Funding Highlights**

**Table 3. 2014 grant distribution by award type**

<table>
<thead>
<tr>
<th>Award Type</th>
<th>Number of Applications</th>
<th>Grants Funded (Success Rate)</th>
<th>Amount Awarded</th>
<th>Percentage of Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEA</td>
<td>39</td>
<td>9 (23%)</td>
<td>$2,219,049</td>
<td>48.3%</td>
</tr>
<tr>
<td>Translational</td>
<td>5</td>
<td>1 (20%)</td>
<td>$968,782</td>
<td>21.1%</td>
</tr>
<tr>
<td>Community Research Collaboration (CRC)</td>
<td>11</td>
<td>3 (27%)</td>
<td>$1,777,287</td>
<td>25.5%</td>
</tr>
<tr>
<td>Community Research Collaboration Supplement</td>
<td>1</td>
<td>1 (100%)</td>
<td>$76,320</td>
<td>1.7%</td>
</tr>
<tr>
<td>Community Research Collaboration Conference</td>
<td>1</td>
<td>1 (100%)</td>
<td>$150,418</td>
<td>3.3%</td>
</tr>
<tr>
<td>CBCRP Conference</td>
<td>1</td>
<td>1 (100%)</td>
<td>$8,142</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>16 (28%)</td>
<td>$4,597,137</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 4. 2014 grant distribution by priority issue

<table>
<thead>
<tr>
<th>Award Type</th>
<th>Number of Applications</th>
<th>Grants Funded (Success Rate)</th>
<th>Amount Awarded</th>
<th>Percentage of Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etiology &amp; Prevention</td>
<td>7</td>
<td>2 (29%)</td>
<td>$435,508</td>
<td>10%</td>
</tr>
<tr>
<td>Community Impact</td>
<td>12</td>
<td>5 (42%)</td>
<td>$2,157,574</td>
<td>47%</td>
</tr>
<tr>
<td>Detection, Prognosis &amp; Treatment</td>
<td>28</td>
<td>7 (25%)</td>
<td>$1,303,659</td>
<td>28%</td>
</tr>
<tr>
<td>Biology of the Breast Cell</td>
<td>11</td>
<td>3 (33%)</td>
<td>$702,356</td>
<td>15%</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>17 (24%)</td>
<td>$4,597,137</td>
<td>100%</td>
</tr>
</tbody>
</table>
Grants Funded in Cycle 20 2013-2014

Community Initiatives Grants

API-Friendly Resources for Breast Cancer Clinical Trials
Award type: Community Research Collaboration Award - Pilot
Priority Issue: Detection/Prognosis/Treatment
Vanessa Malcarne
San Diego State University Research Foundation
$52,325
Georgia Sadler
UCSD
$48,750
Fe Seligman
Operation Samahan, Inc.
$100,000
Total: $214,332

Engaging Underserved Women in Health Research
Award type: Community Research Collaboration Award - Full
Priority Issue: Community Impact of Breast Cancer
Galen Joseph
UCSF
$381,249
Allyssa Nickell
Shanti Project, Inc.
$375,000
Total: $756,249

Exploring Rural Disparities in Breast Cancer Mortality
Award type: Community Research Collaboration Award - Pilot
Priority Issue: Community Impact of Breast Cancer
Brenda Elvine-Kreis
Humboldt Community Breast Health Project
$62,044
Terry Uyeki
Humboldt State University
$155,059
Total: $217,102
HERMOSA: Health & Environmental Research on Make-up of Salinas Adolescent
Award type: Community Research Collaboration Award - Supplement
Priority Issue: Community Impact of Breast Cancer

Kim Harley
UCB
$36,000

Kimberly Parra
Clinica de Salud del Valle de Salinas
$40,320

Total: $76,320

Quick Start: Training in CBPR in Breast Cancer, Environment, and Disparities
Award type: Community Research Collaboration Award - Conference
Priority Issue: Community Impact of Breast Cancer

Heather Sarantis
Commonweal
$150,418

Core Funding Grants

A Novel TNBC Therapeutic Opportunity: Cystine Addiction
Award type: IDEA Award
Priority Issue: Detection/Prognosis/Treatment

Luika Timmerman
UCSF
$187,500

Breast Cancer and the Human Oral Microbiome
Award type: IDEA Award
Priority Issue: Etiology and Prevention

Michael Campbell
UCSF
$187,264

CT guided DOT for Breast cancer imaging
Award type: IDEA Award
Priority Issue: Detection/Prognosis/Treatment

Changqing Li
UCM
$193,750

Drug to Block Double-Strand Break Repair in Breast Cancer
Award type: IDEA Award
Priority Issue: Detection/Prognosis/Treatment

Gilbert Chu
Stanford University
$160,500
Gut Microbiota in Association with Chemotherapy Treatment
Award type: IDEA Award
Priority Issue: Detection/Prognosis/Treatment

Anna Wu
USC
$246,937

Intervening on Reproductive Health in Young Survivors
Award type: Translational Research Award
Priority Issue: Community Impact of Breast Cancer

Irene Su
UCSD
$968,782

Mechanical Stressors and Age as Regulators of Telomerase
Award type: IDEA Award
Priority Issue: Biology of the Breast

Mark LaBarge
Lawrence Berkeley National Laboratory
$209,606

Persistent Organic Pollutants and Mammographic Density
Award type: IDEA Award
Priority Issue: Etiology and Prevention

Eunjung Lee
USC
$248,244

Systemic Metabolic Reprogramming by Breast Cancer-Secreted microRNAs
Award type: IDEA Award
Priority Issue: Biology of the Breast

Shizhen Emily Wang
Beckman Research Institute of the City of Hope
$252,000

Sulindac-Derived Compounds for Breast Cancer Therapy
Award type: IDEA Award
Priority Issue: Detection/Prognosis/Treatment

Xiao-Kun Zhang
Sanford-Burnham Medical Research Institute
$292,498

Targeting Breast Cancer Metastasis to Bone
Award type: IDEA Award
Priority Issue: Biology of the Breast

Christopher Contag
Stanford University
$240,750
Laura van't Veer  
UCSF  
$8,142

Denotes awards that have been supported in part through voluntary contributions

Denotes awards supported in part by the Katherine A. Buzbee Trust

Denotes awards supported in part by the Anita Tarr Turk Fund for Breast Cancer Research of the Community Foundation for Monterey County

Denotes Faith Fancher Research Award recipient. Faith Fancher was a long-time television news anchor and personality with KTVU (Oakland) who waged a very public battle against breast cancer. She also was the founding member of the CBCRP Executive Team, which formed in 2001 to help raise the visibility and fundraising profile of our program. Faith passed away in October 2003 after a six-year struggle with breast cancer. In Faith's honor, and to commemorate all that she did for breast cancer education and research, we have created this annual award. The selected grant reflects the values that Faith held most closely and extends the work that Faith did for all women facing breast cancer.
The following 16 California research institutions and community organizations were awarded new CBCRP funding in the 2013-2014 grant cycle. Community collaborative (CRC) grants may be split between institutions.

<table>
<thead>
<tr>
<th>Institution (city)</th>
<th># Investigators</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beckman Research Institute of the City of Hope</td>
<td>1</td>
<td>$252,000</td>
</tr>
<tr>
<td>Clinical de Salud del Valle de Salinas</td>
<td>1</td>
<td>$40,320</td>
</tr>
<tr>
<td>Commonweal</td>
<td>1</td>
<td>$150,418</td>
</tr>
<tr>
<td>Humboldt Community Breast Health Project</td>
<td>1</td>
<td>$62,044</td>
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<tr>
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<td>1</td>
<td>$209,606</td>
</tr>
<tr>
<td>Operation Samahan, Inc.</td>
<td>1</td>
<td>$100,000</td>
</tr>
<tr>
<td>San Diego State University Research Foundation</td>
<td>1</td>
<td>$52,325</td>
</tr>
<tr>
<td>Sanford-Burnham Medical Research Institute</td>
<td>1</td>
<td>$292,498</td>
</tr>
<tr>
<td>Shanti Project, Inc.</td>
<td>1</td>
<td>$375,000</td>
</tr>
<tr>
<td>Stanford University</td>
<td>2</td>
<td>$401,250</td>
</tr>
<tr>
<td>University of California, Berkeley</td>
<td>1</td>
<td>$36,000</td>
</tr>
<tr>
<td>University of California, San Diego</td>
<td>2</td>
<td>$1,018,032</td>
</tr>
<tr>
<td>University of California, San Francisco</td>
<td>4</td>
<td>$764,155</td>
</tr>
<tr>
<td>University of California, Merced</td>
<td>1</td>
<td>$193,750</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>2</td>
<td>$495,181</td>
</tr>
</tbody>
</table>
The CBCRP thanks the participants in our 2014 review committees for their service and dedication to our Program!

In the first phase of the funding process, grant applications were peer reviewed and scored for scientific merit by review committees using a model that follows established practice at the National Institutes of Health (NIH). Each committee is composed of scientists and advocates from outside California. The Committee Chair leads the review process and is a senior researcher. Scientific Reviewers have broad expertise in topics associated with individual applications. Breast cancer Advocate Reviewers are women active in breast cancer advocacy organizations, and many of them are also living with the disease. Advocates bring their personal knowledge and commitment to the review process. Each committee also includes a California Advocate Observer, who does not review or vote, but represents California's advocacy community. The observer gains insight into our process and provides feedback to the Program. When additional expertise is needed, an Ad Hoc Member is brought in to review a particular application not covered by the other committee scientist reviewers.

The CBCRP uses a scientific merit scoring system that rates individual components (e.g., approach, innovativeness, impact). This allows our expert reviewers and Council to better differentiate applications that might otherwise appear identical. Depending on the award type, we use four or five scientific merit components in the peer review process.

We triage some applications that score in the lower range of a committee’s portfolio using the preliminary scores of the assigned reviewers. Applications in the upper range of a committee’s portfolio all receive full committee discussion, as do any of the lower scoring applications nominated to full review by one reviewer.

Applications that were not triaged were rated by the CBCRP’s Council for programmatic responsiveness. The following criteria were used:

- Responsiveness to the CBCRP’s priority issues and award type (or initiative)
- Strength of individual scientific merit component scores (e.g., innovation for IDEA applications)
- Underfunded topic
- Quality of the lay abstract
- Inclusion of advocates in the funded research
- Addressing the needs of the underserved
- Critical path/translation (IDEA and Translational Research Award), or dissemination and translational potential (CRC)

This two-tiered evaluation and funding process ensures both scientific excellence and relevance of the research to the CBCRP’s mission and goals.
**Community Impact Review Committee**

**Chair:**
Carolyn Gotay, Ph.D.
School of Population and Public Health
University of British Columbia
Vancouver, BC Canada

**Scientific Reviewers:**
Sherrie L. Flynt Wallington, Ph.D.
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Lombardi Comprehensive Cancer Center
Georgetown University Medical Center
Washington, DC

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Social & Scientific Systems, Inc.
Durham, NC

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Associate Director, Prevention Research Center Preventive Research Center, Dept of Pediatrics
University of New Mexico
Albuquerque, NM

Beti Thompson, Ph.D.
Member
Cancer Prevention Research Unit
Fred Hutchinson Cancer Research Center
Seattle, WA

Reginald Tucker-Seeley, ScD
Assistant Professor of Social and Behavioral Sciences
Harvard University School of Public Health
Center for Community Based Research
Dana-Farber Cancer Institute
Boston, MA

**Advocate Reviewers:**
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Breast Cancer Options, Inc
Rhinebeck, NY 12572

Patricia O'Brien
Assistant Professor of Clinical Psychology
University of Vermont College of Medicine
Dept. of Hematology Oncology
Burlington, VT

**California Advocate Observer:**
Maija Witte, MPH
Breast Cancer Fund
San Francisco, CA
Clinical, Prevention & Biological Sciences Review Committee

Co-Chairs:

Leena Hilakivi-Clarke, Ph.D.
Professor
Georgetown University
Department of Oncology
Washington, DC

Fredika M. Robertson, Ph.D.
Executive Director, Clinical Research Sciences
Virginia Commonwealth University
Center for Clinical and Translational Research
Richmond, VA

Scientific Reviewers:

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Principal Investigator
Laboratory of Human Carcinogenesis
National Cancer Institute
Bethesda, MD

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Associate Professor of Cellular and Structural Biology
Greehey Children’s Cancer Research Institute
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The University of Texas MD Anderson Cancer Center
Department of Clinical Cancer Prevention
Houston, TX

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University of Illinois at Chicago
Chicago, IL

Suzanne E. Fenton, Ph.D.
Reproductive Endocrinologist
Division of Intramural Research
National Toxicology Program, Cellular & Molecular Pathology
Research Triangle Park, NC

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Molecular and Cellular Oncogenesis Program
The Wistar Institute
Philadelphia, PA

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Duke University, School of Medicine
Department of Surgery
Durham, NC

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Boise State University
Boise, ID

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School of Medicine - Division of Medical Oncology
Denver, CO

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University of Texas HSC at Tyler
Tyler, TX

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Director, Colorado Cancer Imaging Core
University of Colorado School of Medicine
Aurora, CO

Eva Marie Sevick, Ph.D.
Professor and Director
The University of Texas Health Science Center
The Brown Foundation Institute of Molecular Medicine
Houston, TX

Steven M. Swanson, Ph.D.
Professor of Pharmacognosy
Department of Medicinal Chemistry and Pharmacognosy
University of Illinois at Chicago
Chicago, IL

Bryan E. Welm, Ph.D.
Assistant Professor of Oncological Sciences
University of Utah, Huntsman Cancer Institute
Salt Lake City, UT
Advocate Reviewers:
Lisa M. DeFerrari, MBA
The Virginia Breast Cancer Foundation
Arlington, VA

Eunice Hostetter
Susan G. Komen Foundation
Kirkland, WA

Kimberly Newman-McCown
Susan G. Komen Foundation
Melrose Park, PA

Madeleine R. Tress, Ph.D.
SHARE
New York, NY

Mary I. Whitehead
National Breast Cancer Coalition
Sharon, CT

California Advocate Observer:
Shirley H. Brown
Women of Color Breast Cancer Survivor's Support Project Breast
Los Angeles, CA


California Breast Cancer Research Council Programmatic Review Committee

**Advocates**

**Maria Caprio**  
Shanti Project’s Breast Cancer Program

**Marta Nichols**  
Breast Cancer Connections

**Karuna Jaggar**  
Executive Director  
Breast Cancer Action

**Sharima Rasanayagam, Ph.D.**  
Director of Science  
Breast Cancer Action

**Naz Sykes**  
Dr. Susan Love Research Foundation

**Janice Mathurin**  
Director of Operations  
West Fresno Health Care Coalition

**Nonprofit Health Organization Representatives**

**Ted Schettler, M.D., M.P.H**  
Science Director  
Science and Environmental Health Network

**Medical Specialist**

**Jon M. Greif, DO, FACS**  
Bay Area Breast Surgeons, Inc.

**Industry Representatives**

**K. Alice Leung**  
Founder and Principal  
Sapientiae

**Marjorie Green M.D.**  
Medical Director  
Genentech

**Scientist/Clinicians**

**Cynthia A. Gomez, Ph.D.**  
Director, Health Equity Initiative  
San Francisco State University

**Melanie Marty, Ph.D.**  
Assistant Deputy Director  
Scientific Affairs Division - Office of  
Environmental Health Hazard Assessment

**Arash Naeim, M.D., Ph.D.**  
Associate Professor  
David Geffen School of Medicine, UCLA

**Kristiina Vuori, M.D., Ph.D.**  
President  
Sanford-Burnham Medical Research Institute

**David Wellisch, Ph.D.**  
Professor  
UCLA-David Geffen School of Medicine
California Breast Cancer Research Program Staff
Marion Kavanaugh-Lynch, M.D., M.P.H.
Director

Lisa Minniefield
Program Specialist

SPECIAL RESEARCH INITIATIVES
Sharan Campleman, Ph.D.

COMMUNITY INITIATIVES
Senaida Fernandez, Ph.D.

CORE FUNDING
Katherine McKenzie, Ph.D.

RESEARCH DISSEMINATION & OUTREACH
Lyn Dunagan