



CALIFORNIA
**Breast
Cancer
Research**
PROGRAM

**Compendium of
Awards**

**Cycle 27
2020-2021**

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 15 new research projects** that will advance our knowledge about the community impact, prevention, etiology, detection, and treatment of breast cancer. With these new awards we are **investing \$4,570,331 for research projects being performed at 16 institutions and community organizations across the state.**

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

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 several sub-program units including:

- **Community initiatives** supports research grants that incorporate both academic researchers and community group 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.
- **Program Directed Initiatives** support California Breast Cancer Prevention Initiative and Preventing Breast Cancer: Community, Population, and Environmental Approaches projects. These are one-time initiatives that are designed to identify and eliminate environmental causes of breast cancer; identify and eliminate disparities/inequities in the burden of breast cancer in California; develop population-level interventions (including policy research) on known or suspected breast cancer risk factors and protective measures; and develop target interventions for high-risk individuals, including new methods for identifying or assessing risk.

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.

Overview of CBCRP Priority Areas

- **The Community Impact of Breast Cancer: The Social Context** explores the factors that contribute to the unequal burden of breast cancer among diverse communities and the policy alternatives that would contribute to reducing disparities in access to prevention, risk reduction, detection, treatment, support, and/or survivorship services for California's underserved populations. Subtopics of this priority area include:
 - Health Policy
 - Health Services
 - Sociocultural, Behavioral and Psychological Issues Relevant to Breast Cancer: The Human Side
 - Disparities: Eliminating the Unequal Burden of Breast Cancer
- **Etiology and Prevention: Finding the Underlying Causes** investigates the causes of breast cancer and the strategies that can be used to prevent it. We are interested in learning about the environmental and biological factors that interact to increase the risk of developing breast cancer and the approaches that can be used to reduce or eliminate breast cancer risk. Subtopics of this priority area include:
 - Etiology: The Role of Environment and Lifestyle
 - Prevention and Risk Reduction: Ending the Danger of Breast Cancer
- **Biology of the Breast Cell: The Basic Science of the Disease** supports research that addresses the critical need to understand the pre-neoplastic, causative events of breast cancer at the tissue level, including the stroma. These studies investigate genetic changes in stem cells and normal tissue as well as disease progression and the tumor heterogeneity at the basic science level. Subtopics of this priority area include:
 - Biology of the Normal Breast: The Starting Point
 - Pathogenesis: Understanding the Disease
- **Detection, Prognosis and Treatment: Delivering Clinical Solutions** supports projects with aims that are on the critical path for translation. They develop novel imaging technologies, new biomarkers, and genomic/proteomic approaches for more accurate diagnosis and prognosis. They are also researching less toxic and more individualized therapies, mechanisms of drug resistance, and studies to evaluate alternative medicines and natural products. Subtopics of this priority area include:
 - Imaging, Biomarkers, and Molecular Pathology: Improving Detection and Diagnosis
 - Innovative Treatment Modalities: Searching for a Cure.

Overview of CBCRP Award Types

CBCRP funded new research projects using a variety of award types in 2018:

- **Community Research Collaboration (CRC)** awards bring community organizations—such as breast cancer advocates, community clinics, or organizations serving under-represented women—together with experienced academic 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.
- **Innovative Developmental and Exploratory Awards (IDEAs)** are 12- to 18-month grants for targeted high-risk/high-reward projects. 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.

- **Program Directed Initiatives** support **Requests for Proposals (RFPs)** that competitively fund investigator-initiated research responding to the California Breast Cancer Prevention initiative topic, **Request for Qualifications (RFQs)** that fund grants based on the qualifications of the investigator to undertake CBCRP-defined research projects in close collaboration with CBCRP and **Program Directed Awards (PDAs)** to fund crucial projects identified during the strategy development proposed by the Steering Committee and approved by the CBCRP Council.

LOI and Application Submissions and Review

IDEA 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 CBCRP's corresponding peer review costs.

Table 1. LOI submission and approval results

Award Type	LOIs submitted	LOIs approved	Percent approved
IDEA	30	23	77%
Translational Research Award	3	2	67%

After the LOI process, the full application data is shown in the table below.

Table 2. 2021 full application submissions by award type and priority issue

Award Type ↓	CBCRP Priority Issue				Award Type Totals
	Etiology & Prevention	Community Impact	Detection, Prognosis & Treatment	Biology of the Breast Cell	
Innovative, Developmental & Exploratory (IDEA)	2	2	13	4	21
Translational Research	1	0	1	0	2
Community Research Collaboration (CRC) Pilot	1	1	0	0	2
Community Research Collaboration Full	0	3	0	0	3
Program-Directed Initiatives	3	8	0	0	11
CBCRP Conference	0	1	0	0	1
Priority Totals	7	14	14	4	40

Funding Highlights

Table 3. 2021 grant distribution by award type

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
IDEA	21	5 (24%)	\$1,027,240	22.5%
Translational Research	2	0 (0%)	\$0	0%
Community Research Collaboration (CRC) – Pilot	2	1 (50%)	\$206,248	4.5%
Community Research Collaboration (CRC) - Full	3	2 (67%)	\$1,638,859	35.9%
CBCRP Conference	1	1 (100%)	\$24,722	0.5%
Program-Directed Initiatives	11	6 (55%)	\$1,673,262	36.6%
Total	40	15 (38%)	\$4,570,331	100%

Table 4. 2021 grant distribution by priority issue

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
Etiology & Prevention	7	2 (29%)	\$1,114,705	24.4%
Community Impact	15	10 (67%)	\$2,816,401	61.6%
Detection, Prognosis & Treatment	14	2 (14%)	\$408,075	8.9%
Biology of the Breast Cell	4	1 (25%)	\$231,150	5.1%
Total	40	15 (38%)	\$4,570,331	100%

Grants Funded in Cycle 27 2020-2021

Community Initiatives Grants

Ethnic Enclave Effect on Vietnamese American Women's Breast Cancer Experience

Award type: Community Research Collaboration Award - Pilot

Priority Issue: Community Impact of Breast Cancer

Hai Hong
Illumination Institute
\$82,498

Lihua Liu
University of Southern California
\$123,750

Total Award: \$206,248



Evaluating a multi-component oncofertility care intervention for rural young breast cancer survivors

Award type: Community Research Collaboration Award - Full

Priority Issue: Community Impact of Breast Cancer

Helen Palomino
Cancer Resource Center of the Desert
\$258,868

Hui-Chun Su
UC San Diego
\$459,826

Total Award: \$718,694



Faith in Action! A Church-Based Navigation Model to Increase Breast Cancer Screening in Korean Women

Award type: Community Research Collaboration Award - Full

Priority Issue: Community Impact of Breast Cancer

Jeong Yup Lee
Los Angeles Onnuri Church
\$139,700

Robert Haile
Cedars-Sinai Medical Center
\$780,465

Total Award: \$920,165

Core Funding Grants

Orange County Complete Breast Cancer Care Continuum Conference

Award type: Community-Led Conference Award
Priority Issue: Community Impact of Breast Cancer

Hai Hong
Illumination Institute
\$24,722

Defining the Cellular Origin of BRCA1-associated Breast Cancer

Award type: IDEA Award
Priority Issue: Biology of the Breast

Hua Wang
Lundquist Institute for Biomedical Innovation at Harbor-UCLA Medical Center
\$ 231,150



A fiber-diverse, anti-inflammatory diet and aerobic exercise reduce risk of breast cancer recurrence

Award type: IDEA Award
Priority Issue: Etiology and Prevention

William McCarthy
UCLA
\$195,000

Treating and Preventing Breast Cancer Using Beneficial Bacteria

Award type: IDEA Award
Priority Issue: Detection, Prognosis and Treatment

Jack Bui
UC San Diego
\$213,075



Targeted therapy to reverse triple negative breast cancer health disparities and boost immunotherapy

Award type: IDEA Award
Priority Issue: Detection, Prognosis and Treatment

Diana Marquez-Garban
UCLA
\$195,000

Women in Janitorial Services: Breast Cancer Risks from Chemical Exposures

Award type: IDEA Award
Priority Issue: Community Impact of Breast Cancer

Robert Harrison
UCSF
\$193,015



Denotes awards that have been supported in part through voluntary contributions from California taxpayers



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.

Program-Directed Research

A Community-Partnered Approach to Understanding the Social and Systemic Factors Influencing Breast Cancer Risk in Immigrants: Phase 1

Award type: CBCPI Request for Proposals

Priority Issue: Community Impact of Breast Cancer

California Initiative to Prevent Breast Cancer in Immigrants (CIPBCI) - Convener

Krystal Redman
Breast Cancer Action
\$137,500

Occupational Risk Factors for Breast Cancer Among Immigrant Women – Research Team

Rachel Morello-Frosch
UC Berkeley
\$136,176

Erin Carrera
Antoinette Ricafort
Breast Cancer Prevention Partners
\$10,350

Total Award: \$146,526

Do ethnic enclaves prevent breast cancer in Latina women? - Research Team

Marilyn Tseng
California Polytechnic State University - SLO
\$90,759

Alex Espinoza-Kulick
Cultural and Creative Arts Center of the Santa Maria Valley
\$37,917

Total Award: \$128,676

Community-academic partnership to understand increasing breast cancer risk among Asian immigrants - Research Team

Kimberly Miller
University of Southern California
\$78,515

Hai Hoang
Illumination Institute
\$27,500

Sherry Huang
Orange County Herald Center
\$27,500

Total Award: \$137,495

Investigating Industry Influence Over Scientific Information on Breast Cancer and the Environment: Exploring the UCSF Industry Documents Library

Award type: PBC Request for Proposals

Priority Issue: Community Impact of Breast Cancer

Breast Cancer and the Environment: Investigating Industry Influence on Scientific Information

Cristin Kearns
UCSF
\$203,360

California Linking Action with Science for Prevention of Breast Cancer (CLASP-BC): Phase 1 Convener
Award type: CBCPI Request for Proposals
Priority Issue: Etiology and Prevention

Charting Paths to Prevention for Breast Cancer: Building Community Partnerships for Action

Nancy Buemeyer
Breast Cancer Prevention Partners
\$919,705

2021 CBCRP Funding by Institution

The following **15 California research institutions and community organizations were awarded new CBCRP funding in the 2020-2021 grant cycle.** Community Research Collaboration (CRC) and Immigration Program Initiative projects are split between institutions.

<u>Institution</u>	<u># of Grants</u>	<u>Amount</u>
Breast Cancer Action	1	\$137,500
Breast Cancer Prevention Partners	2	\$1,055,881
California Polytechnic State University - SLO	1	\$90,759
Cancer Resource Center of the Desert	1	\$258,868
Cedars-Sinai Medical Center	1	\$780,465
Cultural and Creative Arts Center of the Santa Maria Valley	1	\$37,917
Illumination Institute	3	\$134,720
Los Angeles Onnuri Church	1	\$139,700
Lundquist Institute for Biomedical Innovation at Harbor-UCLA Medical Center	1	\$231,150
Orange County Herald Center	1	\$27,500
Public Health Institute	1	\$193,015
UC Berkeley	1	\$147,126
UCLA	2	\$390,000
UC San Diego	2	\$672,901
UCSF	1	\$203,360
University of Southern California	2	\$206,250

2021 CBCRP application evaluation process & review committee rosters

CBCRP thanks the participants in our 2021 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 the review a particular application not covered by the other committee scientist reviewers.

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. We use four scientific merit components to comprise the score.

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 CBCRP's Council for **programmatic responsiveness**. Combinations of the following criteria were used:

- Responsiveness to 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 CBCRP's mission and goals.

Community Impact Review Committee

Chairs:

Vernal Branch

Patient Research Advocate
Mooresville, NC

Phoenix Matthews, PhD

Professor and Associate Dean for Equity and Inclusion
University of Illinois
College of Nursing
Chicago, IL

Scientific Reviewers:

Ella Greene-Moton

Community Director
Flint Center for Health Equity Solutions
SEPA - Community Activities Manager
Center for Public Health and Community Genomics
University of Michigan School of Public Health
Ann Arbor, MI

Beti Thompson, PhD

Professor Emeritus, Cancer Prevention Program
Public Health Sciences Division
Fred Hutchinson Cancer Center
Seattle, WA
The University of Texas Health Science Center
School of Public Health
Houston, TX

Fernando Pineda-Reyes

Chief Executive Officer
CREA Results
Denver, CO

Advocate Reviewers:

Jane Segelken, MA, MSW

Volunteer Health Advocate
Cancer Resource Center of the Finger Lakes
Ithaca, NY

Grace Sembajwe, ScD, MSc

Epidemiologist and Associate Professor
Occupational Medicine Epidemiology and
Prevention
Northwell Health
Great Neck, NY

California Advocate Observer:

Melanie Canter

Breast Cancer Care & Research Fund
Santa Monica, CA

Clinical, Prevention & Biological Sciences Review Committee

Chair:

Douglas Yee, MD

Director, Masonic Cancer Center
Professor of Medicine & Pharmacology
University of Minnesota
Minneapolis, MN

Scientific Reviewers:

Abenaa Brewster, MD, MHS

Professor
Department of Clinical Cancer Prevention, Division
of Cancer Prevention and Populations Sciences
MD Anderson Cancer Center
Houston, TX

E. Shelley Hwang, MD, MPH

Professor of Surgery
Chief, Breast Surgical Oncology
Vice Chair of Research, Department of Surgery
Duke University School of Medicine
Durham, NC

Ruth Keri, PhD

Professor of Molecular Medicine
Lerner College of Medicine
Associate Director for Basic Research
Case Comprehensive Cancer Center
Case Western Reserve University School of
Medicine
Cleveland, OH

Peter Kabos, MD

Associate Professor
Kabos Research Lab
Department of Medical Oncology
University of Colorado, Anschutz School of
Medicine
Aurora, CO

Erik Nelson, PhD

Assistant Professor
Molecular and Integrative Physiology
University of Illinois
Urbana, IL

William Redmond, PhD

Associate Member, Laboratory of Cancer
Immunotherapy
Director, Immune Monitoring Laboratory
Earle A. Chiles Research Institute
Providence Cancer Institute
Portland, OR

Danny Welch, PhD

Professor of Cancer Biology
University of Kansas Medical Center
University of Kansas Cancer Center
Kansas City, KS

Advocate Reviewers:

Anna Cluxton

Young Survival Coalition
Columbus, OH
amcluxton@gmail.com

Eunice Hostetter

ACS Cancer Action Network
Seattle, WA

Susan Siegel

Virginia Breast Cancer Foundation
Richmond, VA

Ad Hoc Reviewer:

Zhihong Gong, PhD

Associate Professor of Oncology
Department of Cancer Prevention and Control
Roswell Park Comprehensive Cancer Center
Buffalo, NY

California Advocate Observer:

Patty Harrington

Women in Bio
Rio Vista, CA

CBCPI Immigration and Breast Cancer Risk Review Committee

Chair:

Francesca Gany, MD, MS

Chief, Immigrant Health and Cancer Disparities Service
Memorial Sloan Kettering
New York, NY

Scientific Reviewers:

Heide Castañeda, PhD, MPH, MA

Professor and Associate Chair
Department of Anthropology
University of South Florida
Tampa, FL

Lauren Houghton, PhD, MSc

Assistant Professor
Department of Epidemiology
Columbia University
New York, NY

Sandi Pruitt, PhD

Associate Professor
Department of Population and Data Sciences
University of Texas Southwestern
Dallas, TX

Advocate Reviewers:

Esther Herrera

Operations Manager
La Unión del Pueblo Entero (LUPE)
San Juan, Texas

Amy Wu

Social Media Manager
National Asian Breast Cancer Initiative
New York, NY

Preventing Breast Cancer Industry Influence on Breast Cancer

Chair:

David Michaels, PhD, MPH

Professor

Department of Environmental and Occupational Health

George Washington University

Washington, DC

Scientific Reviewers:

Jeffrey Reznick, PhD

Chief, History of Medicine Division

National Library of Medicine

Bethesda, MD

Ruthann Rudel, MS

Director of Research

Silent Spring Institute

Newton, MA

Advocate Reviewer:

Laura Weinberg

President, Director of Students & Scientists Breast Cancer

Great Neck Breast Cancer Coalition

Great Neck, NY

**Californians Linking Action with Science for Prevention of Breast Cancer (CLASP-BC):
Phase 1 Convener Review Committee**

Chair:

Jon Kerner, PhD

CBCRP Strategy Advisor
Independent Consultant
Bethesda, MD

Scientific Reviewers:

Ella Greene-Moton

Administrator
Community Based Organization Partners (CBOP)
Community Ethics Review Board (CERB)
Flint, MI

Polly Hoppin, ScD

Research Professor and Program Director
Zuckerberg College of Health Sciences
University of Massachusetts Lowell
Lowell, MA

Rodney Lyn, PhD, MS

Professor and Dean
School of Public Health
Georgia State University
Atlanta, GA

Jennifer Moreland, MPH

Chronic Disease Manager
Denver Public Health
Denver, CO

Advocate Reviewers:

Nikia Hammonds-Blakeley, PhD, MBA

Founder and Executive Director
The CHAMPION Promise Foundation
Frisco, TX

California Breast Cancer Research Council Programmatic Review Committee

Advocates

Abigail Arons, MPH

Breast Cancer Action

Michele Atlan

Breast Cancer Care and Research Fund

Colleen Carvalho

Bay Area Cancer Connections

Dolores Moorehead

Women's Cancer Resource Center

Joan Venticinque

Cancer Patient Advocacy Alliance

Nonprofit Health Organization

Representatives

Tasha Stoiber, PhD

Environmental Working Group

Clara Omogbai, DrPH

California Health Collaborative

Medical Specialist

Ujwala Rajgopal MD, FACS, FICS

MD Professional Corporation

Industry Representatives

Christine Meda, MS

IncelDx, Inc.

Melanie Smitt MD

Genentech

Scientist/Clinicians

Ana Navarro, PhD

University of California, San Diego

Sharon Lum, MD

RAND Corporation

Sharon Pitteri, PhD

Stanford University

Rati Fotedar, PhD

San Diego Community College District

Veronica Vieira, DSc

University of California, Irvine

Ex Officio

Svetlana Popova, MD, MPH

Every Women Counts Program

California Breast Cancer Research Program Staff

Marion Kavanaugh-Lynch, MD, MPH

Director

Lisa Minniefield

Program Specialist

SPECIALRESEARCH INITIATIVES

Nicholas Anthis, DPhil

COMMUNITY INITIATIVES

Senaida Fernandez, PhD

CORE FUNDING

Katherine McKenzie, PhD

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