



CALIFORNIA

Breast
Cancer
Research
PROGRAM

Compendium of Awards

**Cycle 26
2020**

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 16 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 \$5,305,982 for research projects being performed at 17 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 projects 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	23	17	74%
Translational Research Award	12	7	58%

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

Table 2. 2020 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)	0	1	9	5	15
Translational Research	3	1	2	0	6
Community Research Collaboration (CRC) Pilot	1	6	0	0	7
Community Research Collaboration Full	1	0	0	0	1
Program-Directed Initiatives	5	0	0	0	5
CBCRP Conference	1	3	2	0	6
Priority Totals	11	11	13	5	40

Funding Highlights

Table 3. 2020 grant distribution by award type

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
IDEA	15	6 (40%)	\$1,269,490	23.9%
Translational Research	6	2 (33%)	\$2,051,417	38.7%
Community Research Collaboration (CRC) – Pilot	7	3 (43%)	\$534,811	10.1%
Community Research Collaboration (CRC) - Full	1	1 (100%)	\$908,051	17.1%
CBCRP Conference	6	2 (33%)	\$50,000	0.9%
Program-Directed Initiatives	5	2 (40%)	\$492,213	9.3%
Total	40	16 (40%)	\$5,305,982	100%

Table 4. 2020 grant distribution by priority issue

Award Type	Number of Applications	Grants Funded (Success Rate)	Amount Awarded	Percentage of Total Funding
Etiology & Prevention	11	5 (45%)	\$1,596,345	30.1%
Community Impact	11	4 (36%)	\$1,362,030	25.7%
Detection, Prognosis & Treatment	13	5 (38%)	\$2,022,607	38.1%
Biology of the Breast Cell	5	2 (40%)	\$325,000	6.1%
Total	40	16 (40%)	\$5,305,982	100%

Grants Funded in Cycle 26 2019-2020

Community Initiatives Grants

Breast health and the Environment among Latinas in Los Angeles (BELLA) Study

Award type: Community Research Collaboration Award - Full

Priority Issue: Community Impact of Breast Cancer

Nancy Ibrahim
Esperanza Community Housing
\$163,900

Jill Johnston
University of Southern California
\$744,151

Total Award: \$908,051



GRAtom Pesticides (GRAPE): Exposure potential from groundwater and air in California Wine Country

Award type: Community Research Collaboration Award - Pilot

Priority Issue: Etiology and Prevention

Peggy Reynolds
UCSF
\$108,106

Jane Sellen
Pesticide Action Network
\$16,940

Nichole Warwick
Sonoma Safe Ag Safe Schools (SASS)
\$45,035

Total Award: \$171,081



Peer navigation for African American women during the breast cancer peri-diagnostic period

Award type: Community Research Collaboration Award - Pilot

Priority Issue: Community Impact of Breast Cancer

Starla Gay
Roots Community Health Center
\$99,479

Lisa Goldman Rosas
Stanford University
\$93,136

Total Award: \$192,615

Rural Latinas' breast cancer narratives: Metaphor analysis as a window into cultural values

Award type: Community Research Collaboration Award - Pilot

Priority Issue: Community Impact of Breast Cancer

Candice Adam-Medefind
Healthy House within a Match Coalition
\$78,515

Dalia Magana
UC Merced
\$92,287

Total Award: \$171,115

Core Funding Grants

Adverse Health Outcomes in Breast Cancer Survivors exposed to Pain Medications

Award type: Translational Research Award

Priority Issue: Community Impact of Breast Cancer

Reina Haque
Kaiser Foundation Research Institute
\$973,300

Breast Cancer and the Environment Workshop

Award type: CBCRP Conference Award

Priority Issue: Etiology and Prevention

Michele Rakoff
Breast Cancer Care and Research Fund
\$25,000

Cell Surface Enablers of Breast Cancer Metastasis

Award type: IDEA Award

Priority Issue: Biology of the Breast

Jeroen Roose
UCSF
\$130,000

A Genomic Insert of Immune Suppression for the Negative Prediction of Cancer Survival

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment

Paola Betancur
UCSF
\$193,376

Nail Salon Worker Health and Safety Research Conference

Award type: CBCRP Conference Award

Priority Issue: Community Impact of Breast Cancer

Lisa Fu
Susan G. Komen for the Cure
\$25,000

A novel agent to treat breast cancer brain metastases

Award type: Translational Research Award

Priority Issue: Detection, Prognosis and Treatment

Melanie Hayden Gephart
Stanford University
\$1,078,117

Pharmacological targeting of cholinergic receptors as a novel breast cancer immunotherapy

Award type: IDEA Award

Priority Issue: Biology of the Breast

Brian Eliceiri
UC San Diego
\$195,000

Targeting FBXO44/SUV39H1 Silencing of LINE-1 Retrotransposons to Prevent Breast Cancer Recurrence

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment

Charles Spruck
Sanford Burnham Prebys Medical Discovery Institute
\$292,500



Targeting immunometabolism to increase the efficacy of breast cancer immunotherapy

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment

Michael Campbell
UCSF
\$195,000



Viro-immunotherapy for Triple Negative Breast Cancer

Award type: IDEA Award

Priority Issue: Detection, Prognosis and Treatment

Shyambabu Chaurasiya
Beckman Research Institute of the City of Hope
\$263,614



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

Does California beef have growth promotant residues and do they pose a breast cancer risk?

Award type: CBCPI Request for Proposals

Priority Issue: Etiology and Prevention

Russell Hovey

UC Davis

\$753,009

Hormones And Meat: does Beef Under-Regulation Generate Estrogenic Residues? (HAMBURGER)

Award type: CBCPI Request for Proposals

Priority Issue: Etiology and Prevention

Gina Solomon

Public Health Institute

\$232,213

2020 CBCRP Funding by Institution

The following 17 California research institutions and community organizations were awarded new CBCRP funding in the 2019-2020 grant cycle. Community Research Collaboration (CRC) projects are split between institutions.

<u>Institution</u>	<u># of Grants</u>	<u>Amount</u>
Asian Health Services	1	\$25,000
Beckman Research Institute of the City of Hope	1	\$263,614
Breast Cancer Care and Research Fund	1	\$25,000
Esperanza Community Housing	1	\$163,900
Healthy House within a Match Coalition	1	\$78,515
Kaiser Foundation Research Institution	1	\$973,300
Pesticide Action Network – North America	1	\$16,940
Public Health Institute	1	\$232,213
Roots Community Health Center	1	\$99,479
Sanford Burnham Prebys Medical Discovery Institute	1	\$292,500
Sonoma Safe Ag Safe Schools (SASS)	1	\$46,035
Stanford University	2	\$1,171,253
UC Davis	1	\$260,000
UC Merced	1	\$92,287
UC San Diego	1	\$195,000
UCSF	4	\$626,482
University of Southern California	1	\$744,151

2020 CBCRP application evaluation process & review committee rosters

CBCRP thanks the participants in our 2020 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.

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 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:

Carolyn Gotay, PhD

Professor Emeritus of Population and Public Health
University of British Columbia
Vancouver, BC

JoAnn Tsark, MPH

Co-Director, Community Engagement Core for Ola HI
John A. Burns School of Medicine, University of Hawaii
Honolulu, HI

Scientific Reviewers:

James Butler III, DrPH, Med

Associate Professor
Department of Behavioral & Community Health
University of Maryland College Park
School of Public Health
College Park, MD

Steven Fu, MD, MSCE

Director, Center for Care Delivery and Outcomes
Research (CCDOR)
Minneapolis VA Health Care System
Associate Chief of Medicine for Research
Professor of Medicine
University of Minnesota Medical School
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Adjunct Research Assistant Professor of Medicine
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Center for Public Health Systems & Services
Research and Public Health Practice-based
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School of Public Health
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College Park, MD

Karriem Watson, DHS

Assoc. Director Community Outreach and
Engagement University of Illinois Cancer Center
Chicago Health Equity Collaborative
University of Illinois, Chicago School of Public Health
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Advocate Reviewers:

Jane Segelken, MA, MSW

Cayuga Family Medicine
Ithaca, NY

Ad Hoc Reviewer:

Laura Hamasaka

Public Health/Health Equity Consultant
National Association of Chronic Disease
Washington, DC

California Advocate Observer:

Ada Osoy

Living Beyond Breast Cancer
Pasadena, CA

Clinical, Prevention & Biological Sciences Review Committee

Chair:

Patricia A. Thompson Carino, Ph.D.

Professor, Department of Pathology
Associate Director for Basic Research Cancer
Center
Stony Brook School of Medicine
Stony Brook, NY

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

Chi-Chen Hong, PhD

Associate Professor of Oncology
Department of Cancer Prevention & Control
Roswell Park Comprehensive Cancer Center
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Assistant Professor
Molecular and Integrative Physiology
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Director, Immune Monitoring Laboratory
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Louis
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Siyuan Zhang, MD, PhD

Dee Associate Professor
Department of Biological Sciences
Notre Dame University
Notre Dame, IN

Advocate Reviewers:

Ann Fonfa

Annie Appleseed Project
Delray Beach, FL

Eunice Hostetter

ACS Cancer Action Network
Seattle, WA

Susan Siegel

Virginia Breast Cancer Foundation
Richmond, VA

California Advocate Observer:

Stacey Tinianov

Director of Advocacy and Engagement at
Citizen
Santa Clara, CA

CBCPI Hormones in Beef & Well Water Review Panel

Chair:

Keeve Nachman, PhD, MHS

Director, Food Production and Public Health Program

Assistant Professor

Johns Hopkins University

Department of Environmental Health and Engineering; Department of Health Policy and Management
Baltimore, MD

Scientific Reviewers:

Kerri Gehring, PhD, MS

Professor, Meat Sciences

Texas A&M University

Animal Science

College Station, Texas

Jon Sobus, PhD

Physical Scientist

National Exposure Research Laboratory

Environmental Protection Agency

Durham, NC

Laura Vandenberg, PhD

Associate Professor

University of Massachusetts, Amherst

School of Public Health & Health Sciences

Amherst, MA

Advocate Reviewer:

Lisa DeFerrari, MBA

Virginia Breast Cancer Foundation

Charlottesville, VA

California Breast Cancer Research Council Programmatic Review Committee

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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

Thu Quach, PhD

Asian Health Services

Medical Specialist

Ujwala Rajgopal MD, FACS, FICS

MD Professional Corporation

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IncelDx, Inc.

Melanie Smitt MD

Genentech

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Sharon Lum, MD

RAND Corporation

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Ex Officio

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