CALIFORNIA BREAST CANCER RESEARCH PROGRAM

Request for Qualifications (RFQ)

Investing in Communities' Local-Level Needs to Reduce Racial Disparities in Breast Cancer: Phase II

California Breast Cancer Research Program Preventing Breast Cancer: Community, Population, and Environmental Approaches

Deadline to apply:
March 06, 2025

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About the California Breast Cancer Research Program and the Preventing Breast Cancer Initiative

The **California Breast Cancer Research Program (CBCRP)** was established pursuant to passage by the California Legislature of the 1993 Breast Cancer Act (i.e., *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 CBCRP is to eliminate breast cancer by leading innovation in research, communication, and collaboration in the California scientific and lay communities.

- CBCRP is the largest state-funded breast cancer research effort in the nation and is administered by the University of California, Office of the President.
- 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 $12 million for breast cancer research.
- Ninety-five percent of our revenue goes directly to funding research and education efforts.
- CBCRP supports innovative breast cancer research and new approaches that other agencies may be reluctant to support.
- Since 1994, CBCRP has awarded over $290 million in 1,249 grants to institutions across the state. With continued investment, CBCRP will work to find better ways to prevent, treat and cure breast cancer.

PBC Priority Areas

CBCRP's Program Initiatives integrate expertise and experience from a range of stakeholders to identify compelling research questions and fund research projects that help find solutions to reduce suffering from breast cancer and move science closer to eliminating the disease. The Program Initiatives engage scientists, advocates, people impacted by breast cancer, and the broad community in a dialogue to frame research priorities and fund meaningful research.

In 2004, CBCRP launched its Special Research Initiatives (SRI), devoting 30% of research funds to research to environmental causes of breast cancer and the unequal burden of the disease. Under this initiative, CBCRP funded 26 awards totaling over $20.5 million. In 2010, CBCRP launched its second round of Program Initiatives, the California Breast Cancer Prevention Initiatives (CBCPI), adding population-level prevention interventions as a target area and devoting 50% of its funds to these priority areas. To date, CBCRP has funded 27 awards under CBCPI, totaling over $22 million.

In 2015, CBCRP's Council decided to build on the existing Program Initiatives by devoting 50% of CBCRP research funds between 2017 and 2021 to a third round of Program Initiatives. This new effort is titled Preventing Breast Cancer (PBC): Community, Population, and Environmental Approaches. Approximately $20 million is being dedicated

to directed, coordinated, and collaborative research to pursue the most compelling and promising approaches to:

- Identify and eliminate environmental contributors to breast cancer.
- Identify and eliminate fundamental causes of health disparities with a focus on breast cancer in California.
- Develop and test population-level prevention interventions that incorporate approaches to address the needs of the underserved and/or populations experiencing disparities in the burden of breast cancer.

In 2020, CBCRP began releasing a series of initiative based on 10 concept proposals to stimulate compelling and innovative research in all three PBC focus areas.

In 2023, CBCRP issued an RFP for "Investing in Communities' Local-Level Needs to Reduce Racial Disparities in Breast Cancer: Phase I (Planning Grant leading to Phase II Eligibility)". Planning Grant awards were made to 3 research teams. This RFP is for Phase II of this initiative.

Investing in Communities' Local-Level Needs to reduce Racial Disparities in Breast Cancer: Phase II

Eligibility and Available Funding

This initiative aims to implement and test the effectiveness of promising intervention frameworks to address local level social and environmental risk factors for breast cancer in historically marginalized communities. Phase II funding is only available to project teams who were funded under Phase I.

CBCRP intends to fund up to two awards in Phase II, each with a maximum direct cost budget of $400,000 and a duration of 2 years.

Completed responses to this RFQ are due by March 06, 2025, 12 pm noon PST. The project start date is August 01, 2025.

For more information and technical support, please contact:

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Background/Justification

There are significant racial disparities in breast cancer incidence, care, and outcomes, with Black women experiencing higher incidence of aggressive breast cancer subtypes, lower quality of care, and higher mortality rates than White women (Daly & Olopade, 2015; DeSantis et al., 2016; Williams et al., 2016). These disparities persist despite efforts to eliminate them. An increasing number of scholars and scientists identify systemic racism as the fundamental cause of health disparities (Reskin, 2012; Williams et al., 2019; Yearby, 2020). This causal effect is exerted through numerous interrelated pathways, including residential segregation, economic deprivation, healthcare quality and access, social and environmental exposures, and environmentally conditioned health behavior. In order to be effective, efforts to prevent breast cancer and eliminate disparities must therefore acknowledge and work to address racism *as a system*. This approach differs from traditional intervention paradigms, which seek to isolate factors in a linear causal chain resulting in a single health outcome, in that it works from the assumptions that multiple interrelated causes can exert a multiplicative influence over and above the sum of their effects, that numerous outcomes are likely to trace back to the same interrelated set of causes, and that disruptions in one subsystem will likely not change outcomes.

Focus is therefore shifted from finding a single cause to finding those subsystems, or nodes in the network of related causes, that mediate the relationships between numerous other subsystems and the outcome(s) of interest. Those component subsystems that are necessary for the maintenance of systemic equilibrium can be understood as leverage points (Reskin, 2012).

With respect to health disparities generally, and breast cancer disparities specifically, residential racial segregation is an example of one such leverage point. When coupled with

racist and discriminatory policies, residential segregation has historically produced inequities in access to opportunities and resources: access to high quality education; access to credit markets, housing, health care; and the quality and nature of interactions with law enforcement and the criminal justice system (Reskin, 2012). This type of racial segregation has facilitated inequitable access to the social, economic, and environmental determinants of health. It has served as a fulcrum—a leverage point—in systems, influencing the operation of every major subsystem and producing racial inequities and disparities.

The focus of this request for proposals is based on the hypothesis that the power of place can be harnessed such that it may serve as a leverage point to combat, rather than contribute to racial disparities in breast cancer.

Further background for this Initiative is provided in Appendix A.

Research Questions

The ultimate goal of this initiative is to prevent breast cancer and reduce racial breast cancer disparities by using a systems-informed, community-partnered participatory research and intervention approach to address local level social needs in under-resourced minoritized communities. The Phase II project should build on the Phase I planning grant that formed partnerships between community members and academic researchers to work together to develop a Phase II plan that:

1) Spans multiple sectors (subsystems),
2) Is informed by appropriate conceptual models of the complex systems at play in the specific community, and
3) Explores and builds a coordinated effort across these sectors to leverage community strengths, modify environmental factors, and address social needs to reduce breast cancer incidence and disparities.

Given the diversity of California communities, a wide range of content areas and types of interventions might be the focus of projects submitted to this initiative. Examples of California communities include, but are not limited to, those defined by geography, culture, racial/ethnic composition or shared experience or goals. Content areas will vary across proposals and communities. The focus might include areas that affect local level social needs and environmental factors that contribute to inequitable access to opportunities for health and well-being. Areas of focus may include, but are not limited to, built environment and land use, transportation, food access, housing, education, employment, social services, and healthcare.

To further spark ideas in community-academic teams, examples of research topics to explore include, but are not limited to, the following:

- What local level social needs are unmet, yet important, to a specific community in CA that can impact breast cancer risk, incidence and mortality?
- Which unmet social needs pose the greatest risk for producing racial disparities in breast cancer risk, incidence, and mortality?

- Breast cancer risk and incidence and associated racial disparities in their communities?
- What local-level partnerships might address social needs and breast cancer risk?
- How do multiple systems work synergistically to impede health and well-being and facilitate increased breast cancer risk and incidence? Conversely, which subsystems may interact to positively impact these communities and protect against breast cancer?
- How might large existing datasets be used to identify priority social needs (e.g., housing) that are also linked with breast cancer risk (e.g., environmental pollutants, secondhand smoke)?
- What public and private investments in community might address critical leverage points to eliminate breast cancer disparities?
- How do individuals and populations interface with systems and environments through their lived experience in ways that impact breast cancer incidence and disparities?

Approaches and Methods

Given that the various subsystems that make up the causal foundations of racial breast cancer disparities are spread across a diverse array of interrelated domains of practice and expertise, the aim of this initiative is to encourage (1) partnership among community members and academically-trained researchers to 2) use community-partnered systems methods (i.e. problem structuring) to develop appropriate models of the complex systems that impact breast cancer in the specific community, and 3) build a coordinated effort [across sectors] to leverage community strengths, modify environmental factors, and address social needs to reduce breast cancer incidence and disparities.

A key practice in building and maintaining partnerships between community leaders and academically-trained partners is the practice of taking practical steps to promote equity and inclusion in the team. To that end, the CBCRP encourages teams to use the engagement principals for equity and inclusion that were developed by the Patient-Centered Outcomes Research Institute (PCORI) to inform their planning grant activities.

CBCRP is particularly interested in projects that leverage ongoing community activities and propose an innovative and practicable application of systems methods. Mixed methods are encouraged and it is hoped that the examples above may provide a starting point for community members and their academically-trained research partners, even those who do not have previous experience with systems methods. CBCRP does not require computationally intensive systems methods or more resource intensive computational systems approaches like agent based modeling.

Phase II – Intervening to modify place, meet social needs, prevent breast cancer, and reduce disparities

While Phase I centered on developing a rationale for action, Phase II involves moving to action based on that rationale. The ultimate goal is to engage a cross-sector network of community stakeholders and academic partners to implement a coordinated, systems-

informed action plan to leverage community strengths, modify environmental factors, and address social needs to reduce breast cancer incidence and disparities in a minoritized community of focus. Possible research/evaluation methods implemented could include but are not limited to: case-control studies, natural experiments, or longitudinal observational designs. Teams can add additional members to the team between Phase I and Phase II, however the partnership in Phase II should include the original team members.

Community involvement and focus

All applications should be community-partnered participatory research projects led by co-PIs within the academic and community organizations applying. Each grant application should define needs and assets in communities: for example, describe the strengths, resources, and assets of the community that will support their work in the project. Projects should use methods and approaches that prioritize community engagement, multi-sector participation, collaborative planning, and a focus on applying systems thinking to enhance place and the lived experience of residents. They should plan on building a collaborative network of stakeholders and to identify the modifiable subsystems specific to a given community that exert influence on breast cancer risk and incidence (problem structuring).

Dissemination Plans

The project must incorporate a dissemination plan that puts research into action by making clear policy recommendations. This plan should identify potential stakeholders, including breast cancer advocates, community members, policy makers and the larger public. Beyond publication in the scientific literature, the plan should outline possible activities including but not limited to presentations, press releases or hearings before key stakeholders/decision-makers, web-based strategies and content, and other project- and topic-specific materials. Applicants should tailor the dissemination plan to the appropriate strategies for the various stakeholder groups to ensure the most effective, productive, and positive engagement. Community partners should play a substantive role in formulating and helping carry out the proposed dissemination plan.

Budget

CBCRP intends to fund up to two awards in Phase II, each with a maximum direct cost budget of $400,000 and duration of 2 years.

Indirect (F&A) costs are paid at the appropriate federally approved F&A rate for all institutions except for University of California campuses, which receive a maximum of 35% F&A (25% for off-campus projects). Organizations that do not have a federally approved F&A rate may request a De Minimis rate of 25%.

Supplemental funding is available for funded projects to support promising high school students, undergraduate students and/or community members from groups underrepresented in breast cancer research and/or those who wish to pursue careers focused on questions affecting underrepresented communities to breast cancer research. Applications for these supplements will be accepted during the prefunding stage of the award and will start August 1, 2025. Visit https://cabreastcancer.org/files/cbcrp-diversity-supplement.pdf to learn more.

References

Daly, B., & Olopade, O. I. (2015). A perfect storm: How tumor biology, genomics, and health care delivery patterns collide to create a racial survival disparity in breast cancer and proposed interventions for change. *CA: A Cancer Journal for Clinicians*, *65*(3), 221–238. MasterFILE Elite.

DeSantis, C. E., Fedewa, S. A., Goding Sauer, A., Kramer, J. L., Smith, R. A., & Jemal, A. (2016). Breast cancer statistics, 2015: Convergence of incidence rates between black and white women. *CA: A Cancer Journal for Clinicians*, *66*(1), 31–42. CINAHL Plus with Full Text. https://doi.org/10.3322/caac.21320

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and Health: Evidence and Needed Research. *Annual Review of Public Health*, *40*, 105–125. CINAHL Plus with Full Text. https://doi.org/10.1146/annurev-publhealth-040218-043750

Williams, D. R., Mohammed, S. A., & Shields, A. E. (2016). Understanding and effectively addressing breast cancer in African American women: Unpacking the social context. *Cancer (0008543X)*, *122*(14), 2138.

Williams, D. R., Priest, N., & Anderson, N. B. (2016). Understanding associations among race, socioeconomic status, and health: Patterns and prospects. *Health Psychology*, *35*(4), 407–411.

Williams F, Colditz GA, Hovmand P, Gehlert S. (2018) Combining Community-Engaged Research with Group Model Building to Address Racial Disparities in Breast Cancer Mortality and Treatment. *J Health Dispar Res Pract*. 2018 Spring;11(1):160-178. PMID: 30701128; PMCID: PMC6349249. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6349249/

Yearby, R. (2020). Structural Racism and Health Disparities: Reconfiguring the Social Determinants of Health Framework to Include the Root Cause. *Journal of Law, Medicine & Ethics*, *48*(3), 518–526. Education Source.

How We Evaluate RFPs

CBCRP uses a two-tier evaluation process: peer review and programmatic review. It is a combination of (i) the peer review rating, (ii) the programmatic rating, and (iii) available funding that determines a decision to recommend funding.

Peer Review

All applications are evaluated by a peer-review committee of individuals from outside of California. The committee is composed of scientists from relevant disciplines and breast cancer advocates and other community representatives.

Planning Grant applications are rated using four equally weighted criteria. The first two are categorized as "collaboration elements", and the second two are termed "scientific merit".

- **Partnership** (Collaboration Element)
    - The extent to which the strengths/nature of the proposed community partnership is reflected in leadership and involvement in all phases of the project (e.g. inception to dissemination).
    - The level to which both partners' knowledge and lived experience is integrated into planning and conducting the research.
    - Demonstrated successful collaboration in previous research projects, particularly in the Phase I project.
    - The extent to which agreements have been reached regarding procedures for resolving disagreements among collaborators, ownership of data, and dissemination of results.
    - The level to which both co-PIs have engaged with the larger community to get their input during the Phase I project and in the Phase II application development process.
    - The extent to which agreements have been reached regarding procedures for resolving disagreements among collaborators, ownership of data, and any dissemination of results.
    - The potential for capacity-building for any or all of the partners.
- **Community Benefit** (Collaboration Element)
    - The extent to which the community has been involved in the Phase I project and the development of the idea and questions, and the writing of the Phase II research proposal.
    - Plans for how the broader community will be involved in the project during the course of the research, from helping to conceptualize the question(s) through any dissemination of the results.
    - The potential importance and benefit to the broader community of the research question(s) and expected outcomes.
    - The potential for the research project to facilitate learning, further collaboration, and systems change.

    - The plan for translating the research results into tangible benefits for the communities and for engaging the communities, local and state stakeholders and policy decision makers in discussions of the results of the research and the implications for them.
- **Quality of the Research** *(Scientific Merit)*
    - The scientific importance of the research questions, including consideration of the most relevant literature and whether the intervention being researched will result in a breast cancer prevention strategy.
    - The appropriateness and integration of the conceptual framework, research methods, and data analysis plan to the research question and aims.
    - How have the learnings from Phase I been incorporated into this Phase II application?
    - The strength of the research plan to analyze the effectiveness of the prevention strategy.
- **Feasibility** (Scientific Merit)
    - The extent to which the project can be successful given the partners' knowledge, skills, resources, and experience.
    - The likelihood of completing the project as proposed given the available funding and time frame.
    - The usefulness (validity and/or importance) of data from previous research and community experience (including from Phase I) for the proposed Phase II research and implementation plan.

Programmatic Review

This review is conducted by the California Breast Cancer Research Council and involves reviewing and scoring applications with sufficient scores from the peer review process based on the criteria listed below. The individuals on the Council performing this review include advocates, clinicians, and scientists from a variety of disciplines. In performing the Programmatic Review, the advisory Council evaluates **only a portion of the application materials** (exact forms are underlined). Pay careful attention to the instructions for each form. The Programmatic criteria include:

- **Responsiveness.** How responsive are the project and co-PIs to the stated intent of the selected Initiative? Is the project specific to breast cancer? Applicants should avoid general references to the requirements of the RFP. Do they describe how elements of the proposed research plan are linked to one or more of the specific RFP topic areas. Compare the PIs' statements on the Program Responsiveness form and the content of the Lay and Scientific Abstracts to the PBC topic area.
- **Quality of the Lay Abstract.** Does the Lay Abstract clearly explain in non-technical terms the research background, questions, hypotheses, and goals of the project? Is the relevance to the research initiative understandable?
- **Diversity, Equity and Inclusion.** Do the statements in the Collaborative Agreements demonstrate a plan for the research team to include community members representing at least one group that is underrepresented in breast cancer research? Do the project and the PIs' statements on the Program Responsiveness

form demonstrate how this research will address the needs of the underserved (including those that are underserved due to factors related to race, ethnicity, socioeconomic status, geographical location, sexual orientation, physical or cognitive abilities, age, occupation and/or other factors)? Do the statements in the PIs' Program Responsiveness form describe how the research will affect systems change for historically disenfranchised groups?

- **Community Involvement.** Are the named community PIs and community organizations clearly driving the proposed research project? How well has the team described the strengths/nature of the proposed community partnership and how is it reflected in leadership and involvement in all phases of the project (e.g. inception and application through to dissemination). How well has the team described how both co-PIs have engaged with the larger community to get their input in the application development process. Are meetings and other communications sufficient for substantive engagement and collaboration? Are the roles and responsibilities of the PIs clearly outlined and is the agreement for sharing of budget clear? [The Advisory Council will examine the co-PIs' statements on the Lay and Scientific Abstracts, Program Responsiveness form, and Collaborative Agreements.]
- **Dissemination and translation potential**. The degree to which the applicant's statements on the Program Responsiveness form provides a clear dissemination plan and a convincing argument that the proposed research has the potential to inform real-world breast cancer prevention efforts.

Application Instructions

Application materials will be available through RGPO's SmartSimple application and grant management system. Please review the SmartSimple Application Instructions for the technical instructions for accessing and completing your application. This supplemental programmatic instruction document provides guidance for the content of your application.

Application Components

Section 1: Title Page

- **Project Title:** Enter a title that describes the project in lay-friendly language. (Max 100 characters).
- **Project Duration:** Selected duration should be 2 years.
- **Proposed Project Start Date:** Enter a project start date of August 01, 2025.
- **Proposed Project End Date:** Enter a project end date of July 31, 2027 for a 2-year award.

Section 2: Applicant/PI

A required field entitled "ORCID ID" is editable on the Profile page. ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized. If you have not already obtained an ORCID ID number, you may do so at http://orcid.org/ Once you have done so, please enter your 16-digit identifier in the space provided on your profile page in the following format: xxxx-xxxx-xxxx-xxxx.

Section 3: Project Information

Please use the following guidelines to differentiate between Lay and Scientific Abstracts:

Lay Abstract (Max 2400 characters)**:** This item is evaluated in both the scientific and programmatic review. Do not use symbols or other special text, as these will not transfer to the "abstracts" box. The Lay Abstract must include the following sections:

- A non-technical introduction to the research topics
- The **question(s) or central hypotheses** of the research in lay terms
- The general methodology in lay terms
- Innovative elements and potential impact of the project in lay terms

The abstract should be written using a style and language comprehensible to the general public. Avoid the use of acronyms and technical terms. The scientific level should be comparable to either a local newspaper or magazine article. Avoid the use of technical terms and jargon not a part of general usage. Place much less emphasis on the technical aspects of the background, approach, and methodology. Ask your advocate partner to read this abstract and provide feedback.

Scientific Abstract (Max 2400 characters)**:** This item is evaluated mainly in the peer review. Do not use symbols or other special text, as these will not transfer to the "abstracts" box. The Scientific Abstract should include:

- A short introductory paragraph indicating the **background** and overall topic(s) addressed by the research project.
- The **central hypothesis** or **questions to be addressed** in the project.
- A listing of the **objectives or specific aims** in the research plan
- The major research **methods and approaches** used to address the specific aims.
- A brief statement of the **impact** that the project will have on breast cancer.

Provide the critical information that will integrate the research topic, its relevance to breast cancer, the specific aims, the methodology, and the direction of the research in a manner that will allow a scientist to extract the maximum level of information. Make the abstract understandable without a need to reference the detailed research plan.

Additional information: Applicants must respond to the following categories and discussion points using the online fields provided:

- **CBCRP Research Priorities.** Select "Community Impact of Breast Cancer" as the CBCRP priority issue that the research addresses.
- **CSO Research Type(s) and Sub-Type(s).** Select corresponding CSO Type, and CSO Sub-Type(s) that best represent your project.
- **Subject Area(s).** See SmartSimple submission instructions for more details.
- **Focus Areas(s).** See SmartSimple submission instructions for more details.
- **Research Demographics.** Complete this table if the research project will involve human subjects. Enter the target demographics of the research participants that you propose to recruit. See the SmartSimple submission instructions for more details.
- **Milestones.** See SmartSimple submission instructions for more details.

Section 4: Project Contacts

Project Personnel. Provide contact information and effort for Key Personnel and Other Significant Contributors on your project including the Applicant Principal Investigators (Co-PIs), Co-Investigators, Advocates, Trainees, Collaborators, Consultants, and support personnel, as necessary. Upload biosketches to each of your Key Personnel members in this section, as shown in the SmartSimple instructions. A 10% minimum effort (1.2 months per year) is required for the Applicant PIs (Co-PIs).

Section 5: Budget

This section contains several sub-tabs: Institution Contacts, Budget Summary, Budget Details, and Subcontract Budget Details. Complete the information in the Institutional Contacts, Budget Summary, Budget Detail and, if applicable, Subcontract Budget Details tab as described in the SmartSimple Application Instructions.

Each institution that is a partner in the project must complete a budget. This means the Community Co-PI and the Academic Co-PI will each have their own Budget. If a collaborative partner on the project has a subcontract, then that subcontracting organization can complete a budget, or the prime partner can complete the budget for the

subcontracting organization. The Submitting Co-PI has the ability to edit all budgets, although the invited Co-PI does not.

Duration is 2 years, and the direct costs budget cap is $400,000.

The budget allocated to the research dissemination activities must be specifically labeled in the budget justification.

Additional budget guidelines:

- **Equipment** purchases up to $10,000 are allowed. Only include individual items >$5,000. Any items less than $5,000 must be purchased under the "supplies" budget category.
- **Other Project Expenses:** Include other project costs such as supplies and/or materials here.
- **Travel:** A minimum of $400 must be budgeted in year 1 for travel to the **CBCRP symposium. Scientific meeting travel** is capped at $2,000/yr.
- **Indirect (F&A) costs.** Non-UC institutions are entitled to full F&A of the Modified Total Direct Cost base (MTDC); UC institutional F&A is capped at 35% MTDC*, or 25% MTDC for off-campus investigators (not retroactive to prior grants)**.**

**Allowable expenditures in the MTDC base calculation include salaries, fringe benefits, materials and supplies, services, travel, and up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Equipment, capital expenditures, charges for patient care and tuition remission, rental costs, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of $25,000 shall be excluded from the modified total direct cost base calculation. If a grantee or subcontractor does not have a federally negotiated F&A rate at the time of the proposal submission, the grantee and/or subcontractor may estimate what the federally negotiated rate will be at the time of award and include this rate in the proposed budget, or may request a "De Minimis" F&A rate of 25% MTDC.*

For funded projects, supplemental funding is available to support promising high school students, undergraduate students and/or community members from groups underrepresented in breast cancer research and/or those who wish to pursue careers focused on questions affecting underrepresented communities to breast cancer research. Applications for CBCRP diversity supplements will be accepted during the prefunding stage of the award and will start August 1, 2025. Visit https://cabreastcancer.org/files/cbcrp-diversity-supplement.pdf to learn more.

Additional budget guidelines can be found in Appendix B.

Section 6: Assurances

Enter assurance information. If available, enter your institutional Federal Wide Assurance (FWA) code or equivalent for Human Subjects, an IACUC Animal Welfare Assurance code for Vertebrate Animals, and equivalent for Biohazard ad DEA Controlled Substance approvals.

Section 7: Documentation

Complete and upload all required items. All uploads must be in PDF format. Listed below are the forms and templates you download from SmartSimple, enter text, convert to PDF, and, unless instructed otherwise, re-upload to your application in this section.

Upload Item (Template/Form)	Page limit	Required or optional	Peer Review?	Programmatic Review?
Research Plan	**10**	**Required**	**Yes**	**No**
Program Responsiveness	**3**	**Required**	**Yes**	**Yes**
Collaborative Agreements	**2**	**Required**	**Yes**	**Yes**
Biosketches (All Personnel listed on Key Personnel form)	**5 (each biosketch)**	**Required** *(upload to Project Personnel section)*	**Yes**	**Yes (PI only)**
Facilities	**1 per institution**	**Required**	**Yes**	**No**
Human Subjects	**No limit**	**Required**	**Yes**	**No**
Appendix list and uploads	**30**	**Optional**	**Yes**	**No**

Detailed Description of Proposal Templates

Research Plan (required)

This section is the **most important** for the peer review. Note carefully the page limits, format requirements, and suggested format. **Limit the text to ten pages.** References are not included in the page limit.

Format issues: Begin this section of the application using the download template. Subsequent pages of the Research Plan and References should include the principal investigator's name (last, first, middle initial) placed in the upper right corner of each continuation page.

The Research Plan and all continuation pages must conform to the following four format requirements:

1. The height of the letters must not be smaller than 11 point; Aptos, Times New Roman or Arial are the suggested fonts.
2. Type density, including characters and spaces, must be no more than 15 characters per inch (cpi).
3. No more than 6 lines of type within a vertical inch;
4. Page margins, in all directions, must be 0.75 inches.

Use the appendix to supplement information in the Research Plan, not as a way to circumvent the page limit.

We ask that applicants describe the proposed project in sufficient detail for reviewers to evaluate its scientific merit and collaboration elements, as described below. If you don't use all the pages to describe your research plan, it might be best to review what you have

written and explain in more detail anything not fully explained. **However, note that a concise, focused research plan of less than the maximum number of pages is preferable to one less concise and made longer by overly elaborate or unimportant details.**

Supporting materials (such as questionnaires, consent forms, interview questions, letters of collaboration) that are directly relevant to the proposal may be included in the Appendix. **The research plan must be self-contained and understandable without having to refer extensively to supporting materials.**

Suggested outline:

Statement of Goals, Research Questions, and Specific Aims. In a short paragraph, describe goals for the research project. Briefly state the research question(s) and hypothesis for the Full Research award. Follow with the Specific Aims—the specific tasks that will be undertaken to address the research question(s). These tasks should be very clearly defined and should not include exploratory or development undertakings. The research questions, hypothesis, and aims should have a logical connection.

The relationship of the project to the specific PBC Project Type and expectations outlined within the RFP should be clear.

Background and Significance. Concisely describe the rationale underlying the proposed research and strategy; the methodology to be employed; and the experience, knowledge, and skills of the research team. Emphasize positioning the research in the context of existing relevant scientific literature. Demonstrate a grasp of the current state of the knowledge relevant to the problem. Provide up-to-date references, acknowledge controversies and contradictory reports, and be comprehensive and accurate. If there is little literature on the topic, draw on information from related fields. Demonstrate the community interest, participation in the plan development from the beginning, and the potential contribution of the proposed research. Briefly state the long-term potential of the research: the problems, issues, or questions which, through the execution of this award, can be further developed, specified, and sharpened into testable hypotheses; and the methodologic approach (or possible approaches that seem at present most appropriate to be used). Keep discussion of the general problem of breast cancer brief; emphasize the specific problem addressed by your research proposal.

Preliminary Data. If applicable, outline the findings from the Phase I Project and how that shaped this application for Phase II. In all cases, describe the prior experience with the intervention to be investigated. Emphasize any work by the Co-PIs and data specific to breast cancer. Present any data obtained in detail, with a description of how the data was obtained and analyzed. Describe any pitfalls or problems that arose, as well as how they were overcome. Provide justification and support for the potential for useful knowledge and interventions to result from the research.

Research Methodology: Research Design, Conceptual Framework, and Data Analysis. Describe in detail the exact tasks listed in the Statement of Goals, Research Questions, and Specific Aims. Provide a detailed description of the work you will do during the Award period, exactly how it will be done, and by whom. For instance, if women are to be surveyed, explain how many women will be surveyed; why you chose this number; how the women will be identified and recruited; why you believe you will be able to reach and recruit this many women; what questions you will ask them; whether you will use face-to-face or telephone interviews, or written surveys and why you will use the method chosen; and, how the data will be collected and analyzed. Be as detailed as possible. Provide this information for each specific task cited in the first section. Discuss potential pitfalls and how you will overcome them should they arise, or alternative methods that you will use if the intended methods are not fruitful. Provide a realistic timeline. Be sure to include a hypothesis and conceptual framework.

Partnership Collaboration Plan and Community Benefit. Begin this section by describing the community of interest for this study. Is the community distinct because of geography, age, gender, associated by disease status or risk, race, sexual orientation, or socio-economic status? Describe the interest of the community in the research question and how they have participated in identifying it. Discuss the importance and benefit to the community of the research question and expected outcome. Specifically answer how the broader community of interest was involved in developing the research proposal. Describe the relationship between the community co-PI and their community organization and the community of interest. How will the community of interest be included on the research team? Discuss how the leadership of the community organization (the Executive Director, the Board of Directors, or the individuals of an informal organization) will ensure that the organization or group is committed to the research project? Describe how the Community Co-PI and the community organization will communicate with one another to facilitate input and decision-making.

Program Responsiveness (required)

This item is evaluated in the peer review and programmatic review. **Limit the text to three pages**. The CBCRP Council (who conducts the programmatic review) will NOT see your Research Plan. The information on this template allows the CBCRP Research Council to rate the application for adherence to the objectives of the PBC research area as outlined in the specific RFP.

Please note that the content in this section must be specific to your proposal.

PBC Focus (Responsiveness): Provide a clear, brief summary for the CBCRP Council (1 or 2 paragraphs) of how your proposed research addresses the specific RFQ topic area, by increasing or building on scientific knowledge of breast cancer; by pointing to additional solutions to identify and eliminate environmental causes, and or disparities in breast cancer; and/or, by helping identify or translate into relevant interventions and strategies to address breast cancer. Avoid general references to the requirements of the RFQ. Describe how elements of the proposed research plan are linked to one or more of the specific RFQ topic areas. As this is a community-partnered participatory research project, do highlight

the strengths/nature of the proposed community partnerships as reflected in the leadership and involvement in all areas.

Diversity and Inclusion: Describe how the project will address the needs of the underserved (including those that are underserved due to factors related to race, ethnicity, socioeconomic status, geographical location, sexual orientation, physical or cognitive abilities, age, occupation and/or other factors) and how it will affect systems change for historically disenfranchised groups.

Dissemination and Translation Potential: Describe how research findings will be shared with various stakeholder audiences (i.e., policymakers, community members, breast cancer advocates, other researchers/agencies, health care providers, funders etc.). Describe the potential for how the research findings will be translated into policy and/or other practice to inform real-world breast cancer prevention efforts.

Collaborative Agreements (required)

This form is reviewed in the peer review and the programmatic review. Applicants should remember that a fully collaborative and power-sharing partnership is a key aspect of this application. **Limit the text to two pages.**

Avoid general references to the requirements of the RFP. Highlight the strengths/nature of the proposed community partnerships as reflected in the leadership and involvement in all areas. Describe how the community PI has been in a leadership role in the application development process and how the team has engaged with the larger community to get their input in the application development process.

The Community Applicant is required to verify the agreements addressed in this form by submitting a statement that the governing body (Board of Directors for a nonprofit organization or the individuals responsible for organizing an informal organization) has reviewed and approved these agreements.

The collaborative agreement should include the following elements:

- **Ownership of Data**: Describe what decision you made about who will own the data and intellectual property rights and why you came to that decision (i.e. what factors you considered, what was important to you in making this decision). If you decide that the data will be owned by only one of the collaborators, please consider that the need to continue to work together will likely extend well beyond the grant period. Will the partner who owns the data be willing to volunteer his/her time well after the grant period to provide access to the data for the other partner? Be sure to discuss ownership of identified and de-identified data, including arrangements both partners have agreed to ensure access to that data by the other partner (including beyond the study period).
- **Handling Disagreements:** Describe what decision you made about the procedures you will go through to handle disagreements during the course of the study and afterwards. Past teams have had to resolve issues around data ownership, conduct of the research, dissemination of data and publications, administrative and budget

issues, etc. Describe why you believe your decision on handling disagreements will work for you.

- **Recipient of Grant Award**: Describe what decision you made about whether the grant award will be contracted directly to one partner or to both partners and why you came to that decision. CBCRP suggests that if both applicant agencies have the administrative capacity to manage grant awards, that each agency receives a separate award.
- **Plans for Broader Community Involvement:** Describe how individual community members not on the research team (including staff and board of the community agency applicant as well as community members outside of the organization) will be involved in the planning, conducting of research and dissemination of results. Describe how the community co-PI will be overseen by the community applicant and what steps will be taken to select a replacement community co-PI if that were to be needed (please keep in mind that the community co-PI replacement will need to be approved by CBCRP in accordance with the Grants Administration Manual available on the CBCRP website).
- **Plans for Turnover of Personnel:** Describe how the turnover of personnel will be handled (who will hire, fire, etc.) Describe how the community co-PI, specifically, will be overseen by the community applicant and what steps will be taken to select a replacement community co-PI if that were to be needed (please keep in mind that the community co-PI replacement will need to be approved by CBCRP in accordance with the Grants Administration Manual available on the CBCRP website).

Biographical Sketch (required)

This item is evaluated in the peer review and the programmatic review. **Use the NIH form (version 2015 or later) for each key person and attach it in the Project Personnel section. Limit the length of each biosketch to *no more than* five (5) pages.**

Facilities (required)

This item is evaluated in the peer review. **Limit the text to one page per institution.** Follow the instructions on the template.

Human Subjects (required)

This item is evaluated in the peer review. **This form is required to be completed for applications that use Human Subjects, including those in the "Exempt" category. Applications that do not utilize Human Subjects should state "N/A" on the form and upload, as well.** Use additional pages, if necessary.

For applications requesting "Exemption" from regular IRB review and approval. Provide sufficient information in response to item #1 below to confirm there has been a determination that the designated exemptions are appropriate. The final approval of exemption from DHHS regulations must be made by an approved Institutional Review Board (IRB). Documentation must be provided before an award is made. Research designated exempt is discussed in the NIH PHS Grant Application #398 http://grants2.nih.gov/grants/peer/tree_glossary.pdf. Most research projects funded by

the CBCRP falls into Exemption category #4. Although a grant application is exempt from these regulations, it must, nevertheless, *indicate the parameters of the subject population* as requested on the form.

For applications needing full IRB approval: If you have answered **"YES"** on the Organization Assurances section of the application and designated no exemptions from the regulations, the following **seven points** must be addressed. In addition, when research involving human subjects will take place at collaborating site(s) or other performance site(s), provide this information before discussing the seven points. Although no specific page limitation applies to this section, be succinct.

1. Provide a detailed description of the proposed involvement of human subjects in the project.
2. Describe the characteristics of the subject population, including its anticipated number, age range, and health status. It is the policy of the State of California, the University of California, and the CBCRP that research involving human subjects must include members of underserved groups in study populations. Applicants must describe how minorities will be included and define the criteria for inclusion or exclusion of any sub-population. If this requirement is not satisfied, the rationale must be clearly explained and justified. Also explain the rationale for the involvement of special classes of subjects, if any, such as fetuses, pregnant women, children, prisoners, other institutionalized individuals, or others who are likely to be vulnerable. Applications without such documentation are ineligible for funding and will not be evaluated.
3. Identify the sources of research material obtained from individually identifiable living human subjects in the form of specimens, records, or data. Indicate whether the material or data will be obtained specifically for research purposes or whether use will be made of existing specimens, records or data.
4. Describe the plans for recruiting subjects and the consent procedures to be followed, including: the circumstances under which consent will be sought and obtained, who will seek it; the nature of the information to be provided to the prospective subjects; and the method of documenting consent.
5. Describe any potential risks —physical, psychological, social, legal, or other. Where appropriate, describe alternative treatments and procedures that might be advantageous to the subjects.
6. Describe the procedures for protecting against, or minimizing, any potential risks (including risks to confidentiality), and assess their likely effectiveness. Where appropriate, discuss provisions for ensuring necessary medical or professional intervention in the event of adverse effects on the subjects. Also, where appropriate, describe the provision for monitoring the data collected to ensure the safety of subjects.
7. Discuss why the risks are reasonable in relation to the anticipated benefits to subjects, and in relation to the importance of knowledge that may be reasonably expected to result.

Documentation of Assurances for Human Subjects

In the Assurances tab, if available at the time of submission, include official documentation of the approval by the IRB, showing the title of this application, the principal investigator's name, and the approval date. Do not include supporting protocols. Approvals that are obtained under a different title, investigator or organization are *not* acceptable, unless they cross-reference the proposed project. Even if there is no applicant institution (i.e., an individual PI is the responsible applicant) and there is no institutional performance site, an USPHS-approved IRB must provide the assurance. If review is pending, final assurance should be forwarded to the CBCRP as soon as possible. Funds will not be released until all assurances are received by the CBCRP. If the research organization(s) where the work with human subjects will take place is different than the applicant organization, then approvals from the boards of each will be required.

Data and Safety Monitoring Boards (DSMB)

Applications that include Phase I-III clinical trials may be required to provide a data and safety monitoring board (DSMB) as described in the NICI policy release, http://grants.nih.gov/grants/guide/notice-files/not98-084.html. This ensures patient safety, confidentiality, and guidelines for continuing or canceling a clinical trial based on data collected in the course of the studies. The CBCRP may require documentation that a DSMB is in place or planned prior to the onset of the trial.

Appendix (optional)
Follow the instructions and items list on the template. **The appendix may not be more than 30 pages in length.**

Note that the *research plan must be self-contained* and understandable without having to refer to the appendix. Only those materials necessary to facilitate the evaluation of the research plan or renewal report may be included; the appendix is not to be used to circumvent page limitations of the application.

Appendix A: Detailed Background on this Initiative

As stated in the body of this RFQ, the focus of this Initiative is based on the hypothesis that the power of place can be harnessed such that it may serve as a leverage point to combat, rather than contribute to racial disparities in breast cancer.

In order to re-conceptualize this web of interrelated influences in a more actionable framework, concepts from ***systems theory*** are used later in this background to: demonstrate that residential segregation is a key leverage point in the racial discrimination system, outline a systems-oriented, community-engaged approach to breast cancer prevention and disparities research, and outline opportunities for community members, academic researchers and policy makers to harness the power of place by partnering directly with each other in coordinating breast cancer prevention efforts in historically marginalized communities. When used here, the term 'historically marginalized communities' refers to groups in the United States that have experienced marginalization that has been documented over time. The term 'marginalized' refers to "a process by which persons or groups are…deprived of mobility, control over self-will, and/or critical resources; indignified and humiliated; exposed to toxic environments; and/or exploited physically or mentally, such that they are at increased safety, health, social, and political risk." (Hall and Carlson, 2016).

Racial disparities in breast cancer incidence, care, and outcomes

While White women have historically had the highest incidence rates for breast cancer, their incidence rates have remained stable while incidence rates for Black women have continued to increase (DeSantis et al., 2016; Amirikia KC et al., 2011). Recent data from California indicate that on average, there are 124.7 cases of breast cancer reported for every 100,000 women in the state. When examined by race, there were 120 cases for every 100,000 Black women; 109.3 cases for every 100,000 Asian and Pacific Islander women; 98.9 cases for every 100,000 Latina women; and 126.9 of 100,000 White women (CDC, 2022). Black women disproportionately experience treatment delays, longer waiting periods after abnormal screening, and lower likelihood of receiving guideline concordant cancer care than White women (Daly & Olopade, 2015; Schneider et al., 2002; Hershman, et al., 2005). While mortality rates for breast cancer have steadily decreased in recent decades, outcomes have improved less for Black women than for White women (Ademuyiwa et al., 2011; Williams et al., 2016; Grann et al., 2006; Albain et al., 2009). In 2019, the average rate of breast cancer deaths in California was 18.7 out of every 100,000 women. When examined by race, 27.3 Black women died of breast cancer out of every 100,000 Black women; there were 12.3 deaths for every 100,000 Asian and Pacific Islander women; 14.5 deaths for every 100,000 Latina women; and 19.7 for every 100,000 White women (CDC, 2022).

Systemic Racism and Health Disparities

Much like racial breast cancer disparities themselves, biological and social contributors to those disparities do not arise in a vacuum. Scholarly and scientific consensus is building

that identifies racism itself as a fundamental cause of health disparities. Yearby (2020) argues that the social determinants of health framework articulated in Healthy People 2020 is insufficient precisely because it does not give primary place to racism as an upstream factor contributing to all other social determinants. Williams, Mohammed, and Shields (2016) provide an overview of the social context of breast cancer disparities among Black women, outlining the recent body of research on the biological effects of discrimination which ultimately lead to elevated breast cancer risk.

Risk and protective factors are distributed differently by race, with historically marginalized groups more likely to be exposed to higher levels of many risks. There are numerous plausible ways to examine individual risk and protective factors together with discrimination. Several possibilities include: SES (low SES is a risk factor for more aggressive subtypes that disproportionately impact Black women; Dunn et al., 2010; Williams, et al., 2016); trauma (Lewis et al., 2015; Trichopoulos et al., 2008; Williams et al, 2016 p. 2141); the effect of chronic stressors (weathering) and accelerated aging (allostatic load; Geronimus et al., 2006; Geronimus et al., 2010); the built environment and its impact on physical activity (Sallis et al., 2018; Kärmeniemi et al. 2018; Smith, 2017).

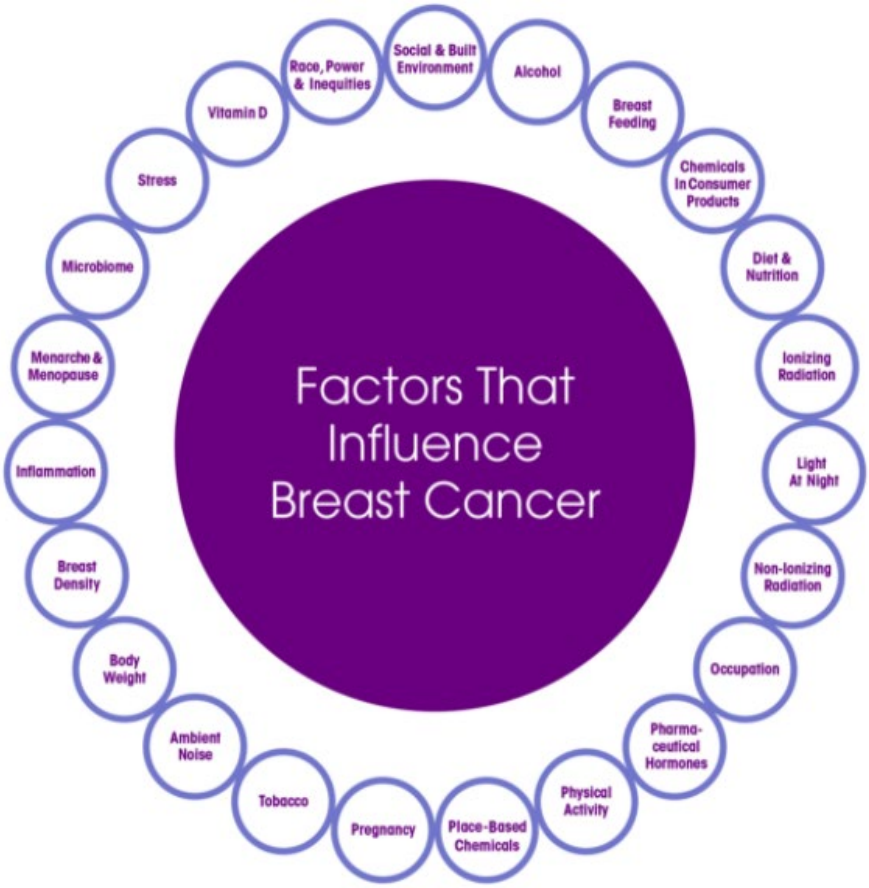
Further, in a systematic review of 17 studies focusing on racial residential segregation and cancer disparities, 70% of analyses showed a statistically significant association between segregation and disparities. The authors state: “residing in segregated African-American areas was associated with higher odds of later-stage diagnosis of breast and lung cancers, higher mortality rates and lower survival rates from breast and lung cancers, and higher cumulative cancer risks associated with exposure to ambient air toxins” (Landrine et al., 2017).

Reskin (2012) gives a broad outline of racial discrimination in American society and makes a compelling case that each of the ways in which disparities exist are connected by the broader system of racism within which they are situated. According to her model, racial disparities in outcomes across numerous domains are the result of a single, integrated system of racial discrimination. This literature indicates that, in order for racial breast cancer disparities to be eliminated, impacted communities, academic researchers, and policy makers must address racism *as a system*. Reskin argues that systems are not easily disrupted by an intervention that focuses at the individual level.

Risk & protective factors

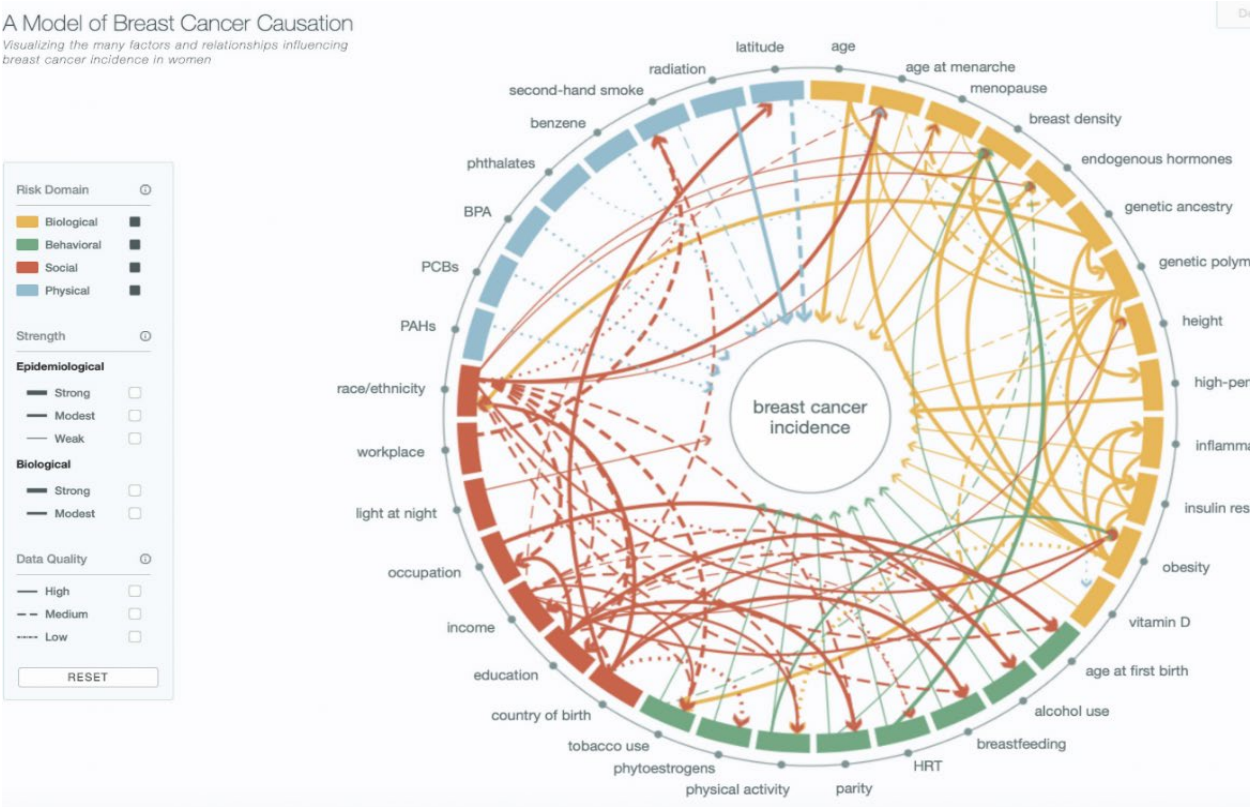
An array of factors contributes to disparities in breast cancer incidence and outcomes (e.g. Buermeyer et al., 2020; Institute of Medicine, 2012; Williams et al., 2016).

Figure 1. Potential foci for breast cancer primary prevention efforts



Paths to Prevention: The California Breast Cancer Primary Prevention Plan has described 23 risk factors where interventions could focus in efforts for primary prevention of breast cancer [see Figure 1, from *Paths to Prevention*]. *Paths to Prevention* highlights *race, power, and inequities,* as well as *the social and built environment,* as systems-level factors that impact all other risk factors. Readers interested in better understanding the causes of breast cancer and related disparities are encouraged to read *Paths to Prevention*, which has a thorough literature review (Buermeyer et al., 2020). While risk factors are presented separately here, the causal mechanisms are not truly separable. In reality, they are deeply interconnected. An illustration of this can be found in Figure 2. Based on the work on post-menopausal breast cancer, the interactive model in the figure illustrates the many relationships among risk and protective factors (Hiatt et al., 2014).

Figure 2. Complexity of relationships among select BC risk factors



Advantage of Systems Theory for Understanding and Intervening on Disparities

Systems theory offers a model that is well-suited to addressing complex issues. In particular, the approach focuses on identifying a systemic leverage point that may assist communities, academic researchers, policy-makers, and others in new and comprehensive approaches to preventing and/or eliminating racial disparities. Systems theory is designed to model complex, interrelated networks of component subsystems (e.g. insurance networks; housing market; healthcare systems). Systems theory may be useful in: (1) developing explanatory models for the complex and highly interrelated causes of breast cancer disparities, and: (2) to clarify why those disparities have thus far proven resistant to intervention.

Most discussion of breast cancer disparities and other health inequities is confined to the healthcare or public health systems, and stops short of articulating the broader, more fundamental problem of systemic racism that contributes to inequities across a diverse array of outcomes.

As long as interventions to reduce racial breast cancer disparities confine themselves to the healthcare system without addressing the broader context of racial inequity, the systemic quality of robustness will likely result in the persistence of disparities. In contrast, intervention approaches to racial health disparities in breast cancer outcomes that explicitly address leverage points have the potential to impact numerous subsystems

simultaneously and disrupt that equilibrium. **Thus, leverage points should be understood as ideal areas of intervention and research. An example leverage point that is described below is residential racial segregation.**

***Place as a Leverage Point in the System of Racial Discrimination*.**
As Williams, Lawrence, and Davis state, "Residential segregation has been identified as a leverage point or fundamental causal mechanism by which institutional racism creates and sustains racial economic inequities" (p. 117). Despite much intervention, residential racial segregation continues to be pervasive in the US. The racism that creates racially segregated communities is what is problematic. Racism has been defined as, "an organized societal system in which the dominant racial group… uses its power to devalue, disempower, and differentially allocate societal resources and opportunities to groups defined as inferior" (Williams & Cooper, 2019).

The Plessy v. Ferguson decision is correctly derided for upholding the constitutionality of segregation, and for maintaining the fiction that there could be "separate but equal" facilities for Black and White Americans. This decision was unjust precisely because of the reality that communities in which Black Americans lived, and their accompanying infrastructure, suffered from radical, intergenerational economic deprivation and social oppression. The consequences of that deprivation persist to this day, and they include disparities in health.

Given that residential segregation has facilitated the production of health inequities, "place" is of central importance in shaping health trajectories of individuals and communities. As noted above, *Paths to Prevention: The California Breast Cancer Primary Prevention Plan* identifies two key areas as influencing and providing context for all other correlates of breast cancer risk (Buermeyer, N. et al., 2020). These are: "race, power, and inequalities," and "the social and built environment." Interventions that address residential segregation and identify place as a key leverage point will have the advantage of addressing both of these areas at once.

Experiences of discrimination occur within the social and spatial context of the communities and workplaces within which racial minorities live, and these communities and workplaces disproportionately play host to the many risk factors related to social and built environments outlined above. A systems perspective would therefore suggest that residentially segregated minoritized communities themselves are systemic leverage points through which numerous other subsystems exert a causal effect on breast cancer incidence and disparities. **The effectiveness of efforts to reduce disparities may therefore be maximized through a focus on place, since it is a modifiable point at which all of the other systems intersect and which is essential to the maintenance of the system of disparity.**

If society is to neutralize the negative effects of systemic racism and reduce and ultimately eliminate racial inequities in breast cancer there must be greater focus on creating "communities of opportunity" (Williams and Cooper, 2019). This term describes "the transformation of communities that have been historically disadvantaged because of racism and its related systematic under-investments, into places that provide

opportunities for education, labor markets, housing markets, credit markets, health care and all other domains that drive well-being" (Williams and Cooper, 2019). If investments are made to restructure place in a manner to provide equitable access to opportunities and resources, outcomes related to health and well-being will improve, disparities will be reduced, and a positive trajectory toward equitable outcomes can be established.

In other words, eliminating racial breast cancer disparities will require significant investment in community and coordinated efforts across multiple systems to prevent breast cancer in historically marginalized communities. **The upstream causes of disparities are tied to place, and these efforts will need to be guided by community stakeholders to address community-specific concerns.** An effective place-based initiative should focus on changing the systems to prioritize access to opportunities and resources that shape health and well-being to better serve the population. A few examples include initiatives aimed at early childhood development, improving housing conditions, reducing childhood poverty, improving income and employment opportunities, and increasing access to high quality health care.

The Purpose Built Communities model is an example of the theory underlying a place-based initiative. Franklin and Edwards outline three major components of the Purpose built model: development of quality mixed-income housing to ensure residents can remain in their communities, creation of effective charter schools from Kindergarten up that attract both low- and middle-income families, and robust community services and infrastructure that improve quality of life and provide opportunities for residents to break the cycle of poverty (n.d.). The authors emphasize that all **place-based** efforts to transform communities must be **geographic** ("Focus on a well-defined geography and a single community of interest"), **holistic** ("Orchestrate change across multiple dimensions, primarily housing, education, private investment, and social services") and **specific** ("Be specifically designed to leverage the unique assets of the target neighborhood") (Franklin and Edwards, n.d.).

In addition to addressing social needs through place-based initiatives, there is also a need to enhance place for under-resourced minoritized communities in ways that consider and address the known risk factors for and determinants of breast cancer.

Examples of Systems Methods: Local-level Social Needs and Related Interventions
Research is needed to identify, implement, and test the effectiveness of promising intervention frameworks to address local level social and environmental risk factors for breast cancer in historically marginalized communities. These research endeavors should engage a cross-sector network of community stakeholders to construct systems maps of local-level community resources and protective factors, identify social and environmental risk exposures, and coordinate activities to reduce disparities in ways that take advantage of established knowledge related to breast cancer prevention.

An excellent summary of systems science applications in public health may be found in Luke and Stamatakis (2012). Below two examples are provided from the literature on local level social needs and their related interventions. Further, this section provides a bulleted list of several questions that applicants might consider for their projects. There is a

burgeoning body of literature applying systems methods specifically in health equity research settings that gathers input from communities to increase the accuracy of maps and 'rich pictures'. Applicants are encouraged to review the summary of community-engaged systems methods outlined in Frerichs et al (2016) which cites several examples of innovative work in this area.

One example cited is Taylor et al. (2012), which describes a soft systems approach to mapping stakeholder views of recreational facility use to increase access among low income communities. A cross sector network of community stakeholders was engaged to build a "rich picture" of barriers to recreational facility usage. This case study, taking place over the course of one year, helped improve understanding of the causes of non-participation in health-promoting recreational activities. The insights gleaned through this process ultimately informed the development of a geographic information modeling system to assist in decision making around development of new locations and extensions of existing recreational facilities.

Another innovative example which is directly relevant to the topic of this funding mechanism is Williams et al (2018), which reports the process and results of a community-partnered system mapping of physical activity among Black women in St. Louis, Missouri that sought to clarify the causes of delays in breast cancer treatment. Thirty-four community stakeholders, including breast cancer survivors, were engaged in a group modeling process. This process resulted in the development of a causal loop diagram (CLD) that provided critical insights into upstream causes of treatment delays, an important contributor to breast cancer disparities. Eight subsystems, as well as the feedback loops between subsystems, were identified in the CLD, including mental health, access to medical care, income, social support, and knowledge of breast health. These findings prompted the authors to emphasize the importance of leveraging "places of influence to promote early treatment" (Williams et al., 2018, p. 11).

Systems science methods can be understood as falling within one of two categories: qualitative methods and computational methods (Frerichs et al., 2016). The former approach is more informal and involves conceptual frameworks informed by the general insights of systems theory (i.e. complexity, nonlinearity, emergence, feedback loops). It is therefore more directly accessible to non-specialists, who may apply systems thinking in the form of concept maps, systems visualizations, etc. The latter approach is more formal, and requires specific expertise in specialized quantitative methods (i.e. agent-based modeling, systems dynamics, network analysis). This approach confers advantages related to explanatory and predictive power, but is more expensive and may be less accessible to general audiences.

A systems perspective would therefore suggest that as long as interventions to reduce racial breast cancer disparities confine themselves to only isolated subsystems within the broader context of racial inequity, the equilibrium of systemic racism is likely to reassert itself and disparities are likely to persist. In contrast, intervention approaches to racial health disparities in breast cancer outcomes that explicitly address the emergent properties of the broader system of racial inequity have the potential to result in those

shifts in the relationships between relevant subsystems that are required to disrupt systemic equilibrium and eliminate racial disparities. As previously noted, **the focus of this request for qualifications is based on the hypothesis that the power of place can be harnessed such that it may serve as a leverage point to combat, rather than contribute to racial disparities in breast cancer.**

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Appendix B: Cost and Expense Guidelines

For all budget categories, clearly label/itemize all costs associated with research dissemination activities in the budget justification.

1) Personnel

- The Budget Summary line item for Personnel should reflect the total cost of all individuals identified as supported by the grant and their level of effort. In the personnel section of the application, be sure to name all individuals to be supported by the grant AND provide their percent effort (months devoted to the project). All paid individuals must also be listed on the budget.
- Follow the NIH Guidelines and Calculation scheme for determining Months Devoted to Project, available at the links below:
    - NIH Guidelines:
    - http://grants.nih.gov/grants/policy/person_months_faqs.htm
    - NIH Calculation Scheme: http://grants.nih.gov/grants/policy/person_months_conversion_chart.xls
- Provide a justification for all budgeted personnel, identifying each individual by name, role on the project, and proposed effort. When computing salary for key personnel, use only the base salary at the applicant organization, excluding any supplementary income (e.g., clinical or consulting incomes). The Program does not enforce a salary cap, as long as the overall budget adheres to the costs & expenses guidelines and the amount requested stays within the allowable costs.

2) Student Tuition Fees, Graduate Student Stipends

- For non-fellowship awards: Graduate students may be paid as personnel and may also receive tuition remission. Tuition remission, however, will be considered compensation. The total compensation (salary plus fringe benefits plus tuition listed in this category) may not exceed $30,000 per project year (total for all students). A maximum of $10,000 per year is allowed for the combined costs of tuition/enrollment fee remission, fringe benefits, and health insurance. Stipend may be budgeted as salary (and included in the MTDC cost calculation) if the institution pays these expenses through a personnel line item.

3) Other Project Expenses

- Include expected costs for supplies and other research expenses not itemized elsewhere. Please break out and provide detailed cost. Please pay special attention to expenses that include or exclude associated indirect costs by selecting from options in the drop-down menus in the “Included in IDC” and “Not-Included in IDC” sub-categories. Cost should be broken out by year, include overall cost by category, an itemized sub-category list, and description of costs.

- Pooled expenses (e.g. insurance surcharges such as GAEL, system wide networking surcharges, and other pooled training and facilities expenses) may be allowed as a direct cost at the discretion of the Program with certification of the following: 1) the project will be directly supported by the pooled expenses, 2) the pooled expenses have been specifically excluded from the indirect cost rate negotiation, and 3) the pooled expenses have been allocated consistently over time within the organization. Please explain any requested pooled expense requests in the budget justification.

- Advocate (s) Expenses. Include any travel, meeting, and consultation costs/fees associated with advocate engagement.

4) Equipment (Unit Cost over $5,000)

- Each requested equipment item must be >$5,000 and explain in budget justification. A quote may be requested during the pre-funding period prior to the issuance of an award.

5) Travel

Please provide itemized details as to the number of travelers and mode of travel for each travel category relevant to your project.

- **Travel – CBCRP Meeting:** CBCRP may organize an event requiring your travel within the funded grant period. All applicants should budget a one-time minimum expense of $400 under year 1 in the travel budget line labeled: "Travel - CBCRP Meeting".

- **Travel - Project Related:** Project-related travel expenses are allowable only for travel directly related to the execution of the proposed research activities. Label such expenses as “Travel – Project Related.” These expenses must be fully justified in the budget justification. Please break out and provide detailed cost.

- **Travel - Scientific Meetings:** Scientific conference travel is limited to $2,000 per year (excluding a mandatory allocation of $400 in one year of the project for travel to the CBCRP Conference under Travel - CBCRP Meeting). Label such expenses as “Travel-Scientific Meetings” and explain in budget justification. Please break out and provide detailed cost.

6) Service Contracts and Consultants

- Both categories require additional description (Budget Justification). Provide hours/rate for consultant effort on the project if applicable.

7) Subcontracts

- In the case of University of California applicants, subcontracts need to be categorized and broken out as one of two types, University of California-to-University of California (UC to UC) sub agreements or transfers; or, Other. A subcontract is not allowed to have another subcontract. Requires additional description (Budget Justification).

8) INDIRECT (F&A) COSTS

- **Indirect cost policy:** Non-UC institutions are entitled to full F&A of the Modified Total Direct Cost base (MTDC); UC institutional F&A is capped at 35% MTDC (25% for off-campus projects). For institutions that do not have a federally-negotiated rate, a de minimus rate of 25% may be requested.

- **Modified Total Direct Costs (MTDC)** include salaries and wages, fringe benefits, materials and supplies, services, travel, and up to the first $25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract) to an outside institution. MTDC does not include (indirect costs are not allowed on): capital expenditures, charges for patient care, scholarships and fellowships (including postdoctoral stipends), tuition remission and graduate student stipends, participant support costs, rental costs of space, equipment purchases more than $5,000 per item, the portion of each sub grant and subcontract in excess of the first $25,000, and the total cost of any subcontract from one UC to another UC campus. On a non-fellowship award, you may apply indirect costs to graduate student salary (under salary only, not as stipend) but not to tuition & fees.

- For all eligible projects that allow grantees to recover the full amount of their federally negotiated indirect cost rate agreement, grantees must also accept the full federally recognized F&A rate for all award subcontractors (except for subcontracts to UC institutions, where F&A is capped by the statewide rate agreement as described in the RFP). If a grantee or subcontractor does not have a federally negotiated F&A rate at the time of the proposal submission, the grantee and/or subcontractor may estimate what the federally negotiated rate will be at the time of award and include this rate in the proposed budget, or may request a "De Minimis" F&A rate of 25% MTDC. A higher indirect rate that has been accepted for state or local government contract or other California grantmaker contract may be approved at the discretion of the Program Director and the Research Grants Program Office Executive Director.

- **INDIRECT COSTS ON SUBCONTRACTS**
    - The award recipient institution will pay indirect costs to the subcontractor.
    - For non-UC subcontracted partners, CBCRP will allow full F&A of the Modified Total Direct Cost (MTDC), as defined above.
    - F&A costs are not allowed for one UC institution's management of a subcontract to another UC institution.
    - The amount of the subcontracted partner's F&A costs can be added to the direct costs cap of any award type. Thus, the direct costs portion of the grant to the recipient institution may exceed the award type cap by the amount of the F&A costs to the subcontracted partner's institution.

Appendix C: Other CBCRP Application Policies and Guidelines

Eligibility and Award Limits

1. **Any individual or organization in California may submit an application**. The research must be conducted primarily in California. We welcome investigators from community organizations, public or privately-owned corporations and other businesses, volunteer health organizations, health maintenance organizations, hospitals, laboratories, research institutions, colleges, and universities. **Applicants at California-based Nonprofit Institutions**: CBCRP will accept applicants from PIs at non-profit organizations or institutions, provided that the organization can manage the grant and demonstrate financial health. The organization must also meet our liability insurance requirements. If the application is recommended for funding, the University will collect additional information, such as tax ID numbers and financial reports, to review the organization during the pre-funding process to ensure all financial management and project management eligibility criteria can be met.
2. **We encourage researchers new to breast cancer to apply.** Applicants who have limited experience in breast cancer research should collaborate with established breast cancer researchers.
3. **Multiple applications and grant limits for PIs.** A PI may submit more than one application, but each must have unique specific aims. On each CBCRP Cycle, applicants are limited to a maximum of two (2) grants either as PI or co-PI, and these must be in different award types. The Program and Policy Initiative grants are not included in this limit. A PI may have more than one Program or Policy Initiative grant in a year.
4. **University of California Campus Employees:** In accord with University of California policy, investigators who are University employees and who receive any part of their salary through the University must submit grant proposals through their campus contracts and grants office ("Policy on the Requirement to Submit Proposals and to Receive Awards for Grants and Contracts through the University," Office of the President, December 15, 1994). Exceptions must be approved by the UC campus where the investigator is employed.

Policy on Applications from PIs with Delinquent Grant Reports

PIs with current RGPO grant support will not be eligible to apply for additional funding unless the required scientific and fiscal reports on their existing grants are up-to-date. This means that **Progress/Final Scientific Reports or Fiscal Reports that are more than one month overdue may subject an application to disqualification** unless the issue is either, (i) addressed by the PI and Institution within one month of notification, or (ii) the PI and Institution have received written permission from CBCRP to allow an extension of any report deadlines.

Confidentiality

CBCRP maintains confidentiality for all submitted applications with respect to the identity of applicants and applicant organizations, all contents of every application, and the

outcome of reviews. For those applications that are funded CBCRP makes public, (i) the title, principal investigator(s), the name of the organization, and award amount in a "Compendium of Awards" for each funding cycle, (ii) the costs (both direct and indirect) in CBCRP's annual report, (iii) the project abstract and progress report abstracts on the CBCRP website. If the Program receives a request for additional information on a funded grant, the principal investigator and institution will be notified prior to the Program's response to the request. Any sensitive or proprietary intellectual property in a grant will be edited and approved by the PI(s) and institution prior to release of the requested information.

No information will be released without prior approval from the PI for any application that is not funded.

Award Decisions

Applicants will be notified of their funding status by July 1, 2025. The written application critique from the review committee, the merit score average, component scores, and programmatic evaluation are provided at a later time. Some applications could be placed on a 'waiting list' for possible later funding.

Appeals of Funding Decisions

RGPO strives to resolve issues raised throughout the grantmaking lifecycle from funding decisions to project closeout. **Before submitting an appeal or grievance, applicants are encouraged to discuss their concerns with the appropriate program officer or program director**.

The only basis on which an appeal regarding the funding decision of a grant application will be considered is in the case of an alleged error in, or violation of the peer review procedures and/or process. Appeals based on substantive disagreement with the peer review evaluation will not be considered. In such cases, applicants may resubmit applications in a subsequent grant cycle.

Applicant appeals must be made to the program within 30 days of receipt of the review cycle summary statement. If discussions with the program do not satisfactorily resolve an applicant's issue, either the applicant or the program may contact the RGPO Executive Director for resolution. If resolution is not achieved, or if the applicant believes that a violation has occurred that has not been adequately addressed through these efforts, a formal appeal may be filed with the Vice President of Research and Innovation.

Pre-funding Requirements

Following notification by CBCRP of an offer of funding, the PI and applicant organization must accept and satisfy normal funding requirements in a timely manner. Common pre-funding items include:

1. Supply approved indirect (F&A) rate agreements as of the grant's start date and any derived budget calculations.
2. Supply any missing application forms or materials, including detailed budgets and justifications for any subcontract(s).

3. IRB applications or approvals pertaining to the award.
4. Resolution of any scientific overlap issues with other grants or pending applications.
5. Resolution of any Review Committee and Program recommendations, including specific aims, award budget, or duration.
6. Modify the title and lay abstract, if requested.

Publications Acknowledgement

All scientific publications and other products from a RGPO-funded research project must acknowledge the funding support from UC Office of the President, with reference to the specific CBCRP funding program and the assigned grant ID number.

Open Access Policy

As a recipient of a California Breast Cancer Research Program (CBCRP) grant award, you will be required to make all resulting research findings publicly available in accordance with the terms of the *Open Access Policy* of the Research Grants Program Office (RGPO) of the University of California, Office of the President (UCOP). This policy, which went into effect on April 22, 2014, is available here: https://www.ucop.edu/research-grants-program/grant-administration/rgpo-open-access-policy.html.

Grant Management Procedures and Policies

All CBCRP grant recipients must abide by other pre- and post-award requirements pertaining to Cost Share, Indirect Cost Rates, Monitoring & Payment of Subcontracts, Conflict of Interest, Disclosure of Violations, Return of Interest, Equipment and Residual Supplies, Records Retention, Open Access, and Reporting. Details concerning the requirements for grant recipients are available in a separate publication, the University of California, Office of the President, "***RGPO Grant Administration Manual***." The latest version of the Manual and programmatic updates can be obtained from the Program's office or viewed on our website: http://www.ucop.edu/research-grants-program/_files/documents/srp_forms/srp_gam.pdf

Contact Information

Technical support and questions about application instructions and forms should be addressed to the Research Grant Programs Office Contracts and Grants Unit:
RGPOGrants@ucop.edu

For scientific or research inquiries please contact:

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The California Breast Cancer Research Program is part of the Research Grants Program Office of the University of California, Office of the President.