Novel Approaches to Predict or Prevent the Influences of Environmental Chemicals on Breast Cancer Risk

Informational Webinar for Prospective Applicants



Agenda

- > The California Breast Cancer Research Program (CBCRP)
 - CBCRP Program-Directed Initiatives
 - Preventing Breast Cancer Initiatives (PBC)
- Novel Approaches to Predict or Prevent the Influences of Environmental Chemicals on Breast Cancer Risk (Biomonitoring)
 - Overview
 - Research Questions, Topics and Requirements
 - How Grants are Evaluated
 - Important Dates
- Resources for Submitting an Application in SmartSimple



California Breast Cancer Research Program (CBCRP)

- Founded in 1993
 - breast cancer activists, scientists, clinicians, state legislators, and
 University of California officials collaborated to win passage in the state
 legislature of the California Breast Cancer Act.
 - funded by a tax on tobacco products, voluntary state personal income tax form check-off, and individual contributions.
 - tax check-off has drawn over \$13 million for breast cancer research.
- Grown to become one of nation's largest state-funded breast cancer research effort
- Among the largest breast cancer research funders in the world
- Ninety-five percent of our revenue goes directly to funding research and education efforts

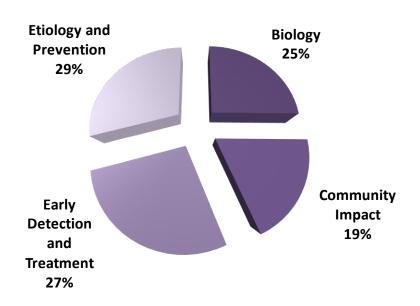
Mission: to prevent and eliminate breast cancer by leading innovation in research, communication, and collaboration in the California scientific and lay communities



Since 1994, CBCRP has funded



- > Over 1,200 grants
- ➤ Totaling over \$290 million
- ➤ To over 840 academic & community researchers
- > At over 140 institutions across the state





Program-Directed Initiatives

Vision

To identify and support research strategies that increase understanding of, and **create solutions to**, environmental links to breast cancer and fundamental causes of health disparities in breast cancer.

Goals

- Support a coordinated statewide effort to explore innovative ideas and new theories
- Leverage California's unique and diverse geographic and population resources
- Undertake critical studies that significantly move these fields forward

First round launched in 2004; second round in 2010



Preventing Breast Cancer (PBC):

Community, Population, and Environmental Approaches

In 2015

CBCRP's Council approved a third round of Program Initiatives, devoting 50% of funds (~\$20 million) 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 and 2021

CBCRP's Council approved 10 concept proposals to stimulate research in these three areas, including:

 Novel Approaches to Predict or Prevent the Influences of Environmental Chemicals on Breast Cancer Risk (Biomonitoring Initiative)



Biomonitoring Initiative Overview

Overall Aim: To expand the methods and application of biomonitoring beyond the chemicals, populations, and mechanistic pathways that have been well-studied so far and to explore two topic areas:

- 1. biomonitoring and links to biological response endpoints in exposed populations; and
- 2. the development/ discovery and application of a novel assay or marker to predict/ prevent risk of breast.



Biomonitoring Initiative Overview

Available Funds:

CBCRP intends to fund up to three proposals for a maximum duration of three years and \$430,000 maximum total direct costs each.

Eligibility:

- Any individual or organization in California may apply.
- The research must be conducted primarily in California.



Biomonitoring Initiative Research Questions

Applications are encouraged to address the following:

- A. Expand the scope of inquiry in biomonitoring science beyond well-recognized and well-studied chemical exposures (such as estrogen-mimics) by identifying and characterizing chemical exposures with relevant biological activity linked to breast cancer.
- B. Characterize metabolome/exposome-related shifts associated with breast disease and mammary development using non-targeted analytic or artificial intelligence methods.
- C. Elucidate functional pathways linking exposure to biological response markers and disease, for spurring action based on human exposure

Topic 1 – Biomonitoring in Exposed Populations

- Conduct biomonitoring in populations exposed at high levels to chemicals of interest for breast cancer and use metabolomics or other -omics to identify associations between the exposure and early biological effects.
- The study should be carried out with relevant female cohorts that have existing chemical exposure data or biospecimens that can be leveraged for such a biomonitoring of exposure/biological response project.
- The study should focus on measurements of endogenous processes that are breast-cancer-relevant, as identified by Schwarzman et al. 2015 and other CBCRP chemical testing grantees (see Appendix A), or recently discovered cancer biomarkers such as exosome miRNA.
- Projects associated with predictive value on breast cancer risk for current use chemicals will be more favorable than research on chemicals banned many years ago.

Topic 2 – Develop/discover and apply a novel assay

Examples may include:

- Develop in vitro or short-term in vivo assays to detect biological activities associated with the characteristics of carcinogenic chemicals in mammary tissue.
- Develop a measurement of environmentally relevant mixtures, including vehicle exhaust, diesel, pesticide residues, indoor air (occupational setting), or air pollution that is more interpretable with respect to exposure source and biological effects than current tools.
- Discover novel biomarkers linking disease and exposures using artificial intelligence or other bioinformatic tools (pattern recognition or cross-species or cross-strain similarities/differences in existing datasets) and test its predictive potential for breast cancer in animal or cell-based studies



Biomonitoring Initiative Dissemination Plan

- Proposals must include plans for dissemination and translation of newly discovered/developed methods and results.
- The applicants should address the likely relevance to both future research and current policy discussions.
- The applications should include plans to disseminate results to breast cancer advocates, policymakers, and the larger public, beyond publication in the scientific literature.
- The project team's community advocate(s) should play a substantive role in formulating and helping carry out the proposed dissemination plan.

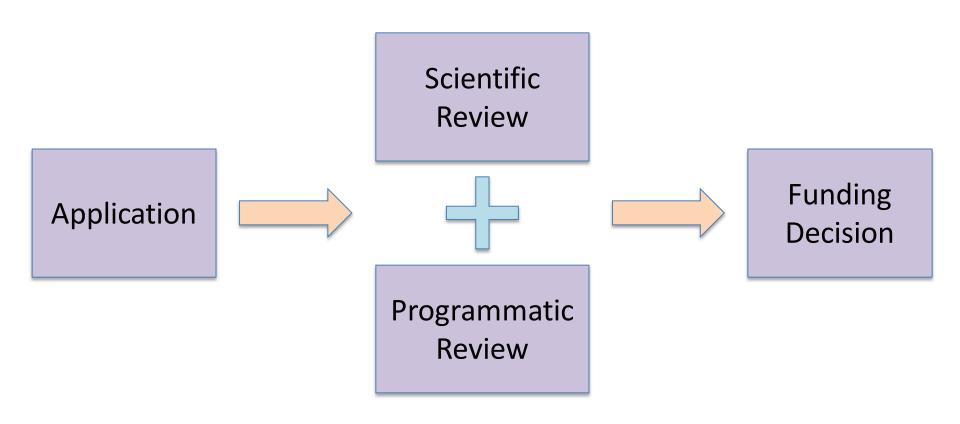


Biomonitoring Initiative Advocacy Involvement Requirement

- Advocacy involvement is a requirement for the research funded under this initiative.
- Applications should include a California community advocate affiliated with an advocacy and/or community organization with an interest in the area of biomonitoring, environmental exposures and breast cancer.
- The community advocate(s) should be involved in the development of the project, goals, aims, and research questions and should drive the identification and definition of community needs and health equity imperatives.
- Applications will be evaluated on advocate involvement:
 - identification of an appropriate advocate for the proposed research
 - a detailed description of how the advocate will be involved in the project
 - submission of a Letter of Commitment co-signed by advocate and the PI
 - a budget line item and justification covering the advocate time, effort, and expenses on the project (e.g. at least quarterly, in-person meetings)
- Additional resources:
 - Learn more about CBCRP's approach and view relevant resources: cbcrp.org/approach/advocacy-involvement
 - CBCRP staff are available to consult with applicants, if needed, about meeting the advocacy requirement



Two-Tier Evaluation Process



Breast Cancer

Research Program

Biomonitoring Initiative Review Criteria

	Criteria
Scientific Review	InnovationImpactApproachFeasibility
Programmatic Review	 Responsiveness Critical path/Translation Lay Abstract Addressing the needs of the underserved Advocacy Involvement



Application Components

Form/Attachment	Requirement	
Lay Abstract	Required (Prog Rev)	
Scientific Abstract	Required (Prog Rev)	
Budget and Justification	Required	
Research Plan	Required	
Program Responsiveness	Required (Prog Rev)	
Critical Path & Underserved	Required (Prog Rev)	
Advocacy Involvement	Required (Prog Rev)	
Letter of Commitment	Required (Prog Rev)	
Biosketches	Required (Prog Rev)	
Facilities	Required	
Human Subjects	Required	
Vertebrate Animals	Optional	
Appendix	Optional	



Important Dates

	Date
Applications due	March 2 2023 (12 pm noon PT)
Notification of funding status	July 1, 2023 (at the latest)
Project start date	August 1, 2023



Questions?



How to submit a proposal in SmartSimple

Research Grants Program Office (RGPO) Contracts and Grants Unit (C&G)

- C&G works in collaboration with CBCRP, serving as interface on administrative and procedural aspects your **Application** submission and review process.
- Contact information:
 - Email: RGPOgrants@ucop.edu (Best method)



Key Dates & Tips

Award Type	Application Deadline	
Investing in Communities' Local-Level Needs to Reduce Racial Disparities in Breast Cancer: Phase 1	March 2, 2023, 12pmPT	
Novel Approaches to Predict or Prevent the Influences of Environmental Chemicals on Breast Cancer Risk	March 2, 2023, 12pmPT	
Intergenerational Transmission of Breast Cancer Health Inequities	March 2, 2023, 12pmPT	

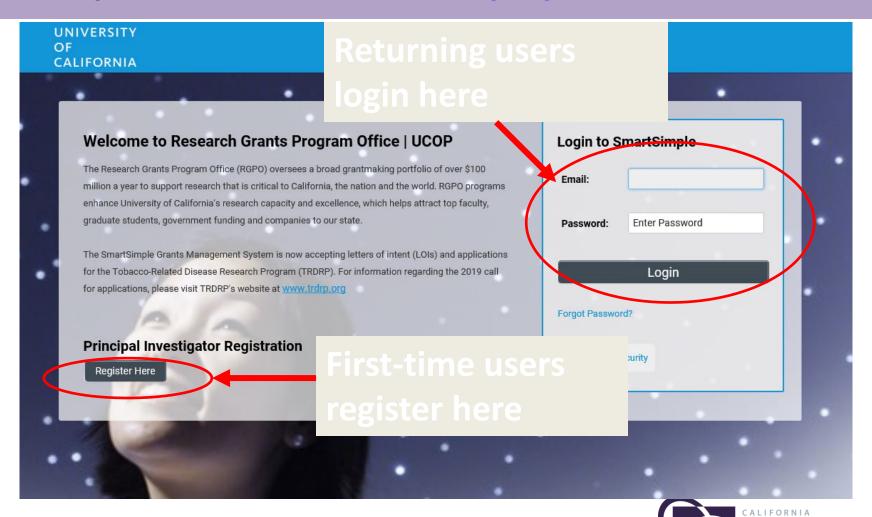
- All materials must be submitted through SmartSimple
- Detailed instructions are provided on the CBCRP website and in SmartSimple

Research Program

- Start early to become familiar with SmartSimple
- Submit early: No late applications will be accepted

Accessing SmartSimple

Login to SmartSimple: https://rgpogrants.ucop.edu/

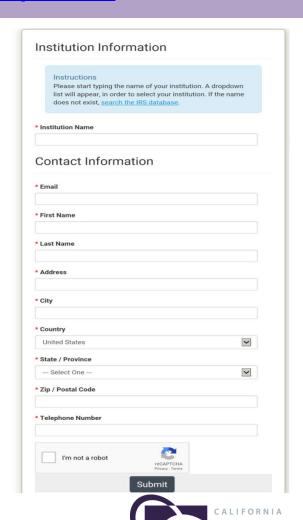


Breast Cancer Research Program

Creating an Account on SmartSimple https://rgpogrants.ucop.edu

Enter your institution and complete your applicant contact information.

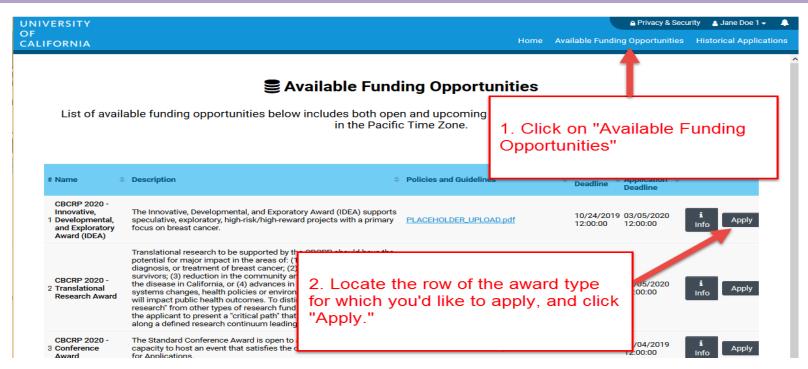
If you receive a message that an account with your email address already exists, return to the main login page and click "Forgot Password."



Breast Cancer

Research Program

Preparing and Submitting an Application



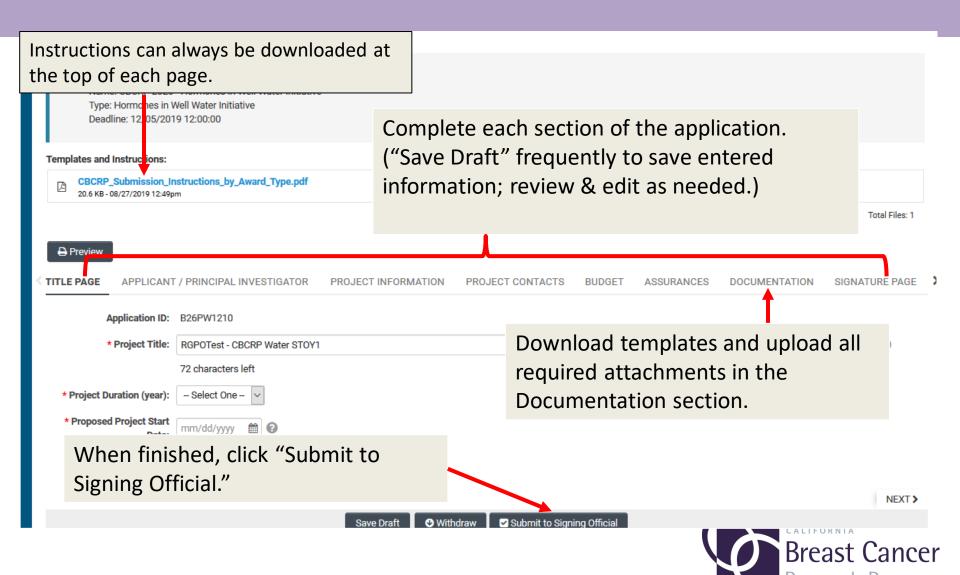
 Click on the "Available Funding Opportunities" tab in the upper right corner.

Breast Cancer

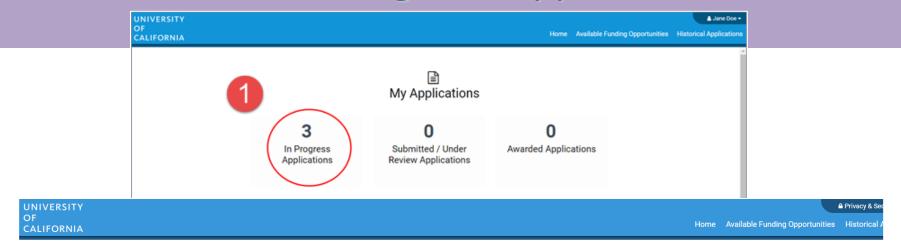
Research Program

2. Find the row that corresponds to the award you're interested in and click "Apply."

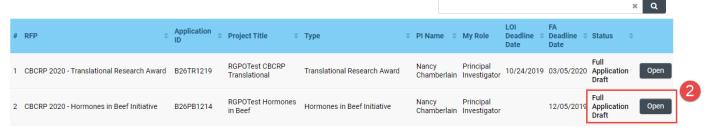
Application Submission



Location of "In Progress" Applications



In Progress Applications

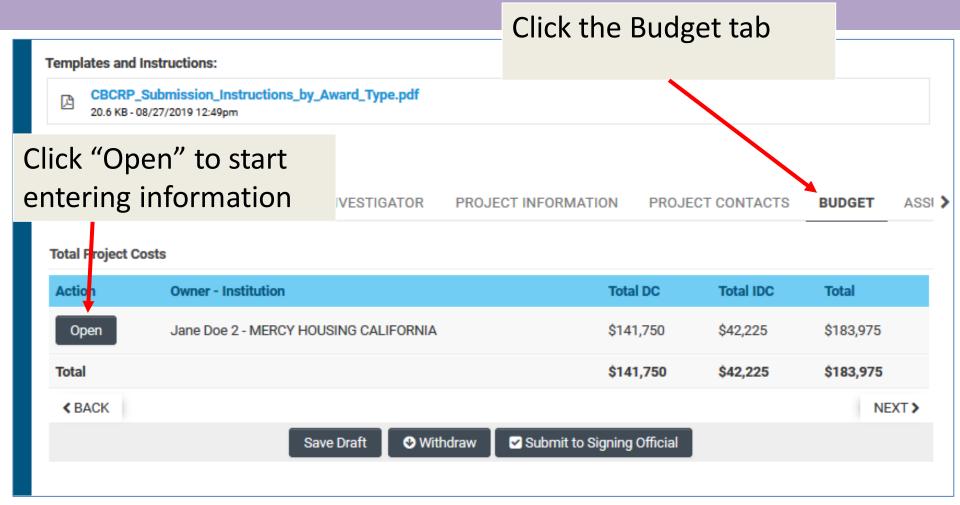


Research Program

- 1. When returning to continue a draft application, click on "In Progress Applications" on the Home page of SmartSimple.
- 2. Locate the row for your draft application. Click "Open" to continue full application and access instructions and templates.

 California Breast Cancer

Budget tab



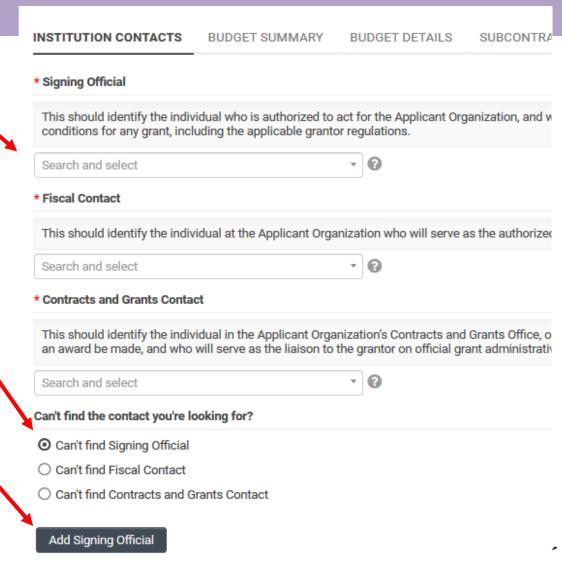


Budget tab – Adding Institution Contacts

Start typing the name of your signing official into the field and select from the list that populates.

If you cannot find their name in the list, click "Can't find Signing Official."

Then click "Add Signing Official."



Budget tab – Editing the budget

Translational Research Award Application » Budget

♪ Back to Application



Budget Instructions:

Please open the budget and carefully read the limits set on the call for applications. If exceeded, system will alert and user is required to adjust the numbers.

NSTITUTION CONTACTS

BUDGET SUMMARY

BUDGET DETAILS

SUBCONTRACT BUDGET DETAILS

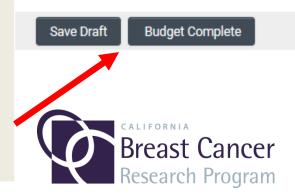
Please click the Edit Budget button below to enter your budget information.

Edit Budget

Jane Doe 1 - MERCY HOUSING

Budget Summary

Do not click "Budget Complete" until you have entered all the necessary budget figures and justification notes – clicking this button will lock your budget and you will not be able to make additional edits.



Budget tab – Editing the budget

Scroll down to "Personnel Costs." Click "+" to add a new row.

Entries will populate in the budget summary at the top of the page.

Enter budget justification.

Repeat for all budget categories.

Budget Detail Justification

The budget table on the top of this page is generated from expenses entered in the budget categories below. Please scroll down to the budget categories and click "+" to enter your expenses. Please note you must manually calculate and enter any indirect costs in the budget category section at the bottom of this page. For each budget category, provide all necessary justification. There is no character limit on the budget justification, though it should be concise.

The per year direct cost maximum is: \$250,000.00

The total direct cost maximum is: \$750,000.00

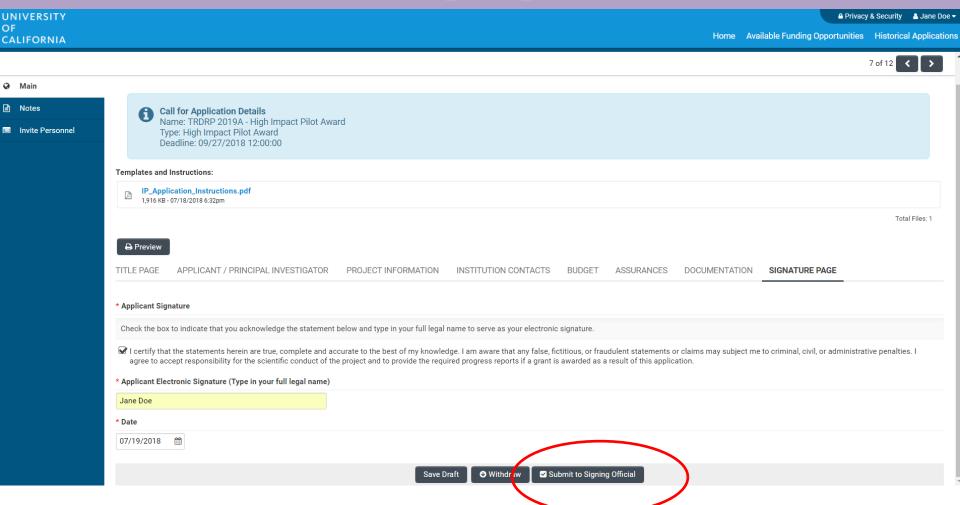
	Year 1	Total
Personnel Costs	\$2,000	\$2,000
Student Tuition Fees, Graduate Student Stipends	\$0	\$0
Other Project Expenses	\$0	\$0
Equipment	\$0	\$0
Travel Expenses	\$0	\$0
Subcontracts	s	0 \$0
Service Contracts and Consultants	\$0	\$0
Direct Costs	\$2,000	\$2,000
Modified Total Direct Costs (MTDC)	\$2,000	\$2,000
Indirect Costs (IDC)Total	\$0	\$0
Total Expenses	\$2,000	\$2,000

1. Personnel Costs (Salary and Fringe)

	Salaries and Fringe Benefits	Year1	Total	
	Salary 1	\$2,000	\$2,000	K
Y		\$2,000	\$2,000	
	+			

For each person supported by this grant, describe their contribution to the project.

Submit to Signing Official





Biomonitoring Initiative: Questions and Additional Information

Applications are due no later than March 2, 2023 (12 pm noon PT)!

Useful links:

- SmartSimple application system: https://rgpogrants.ucop.edu
- Webinar "How to use SmartSimple to Submit a Partnered Application"
- Novel Approaches to Predict or Prevent the Influences of Environmental Chemicals on Breast Cancer Risk: https://www.cbcrp.org/funding-opportunities/sri/biomonitoring.html
- Additional funding opportunities: <u>cbcrp.org/funding-opportunities/index.html</u>

For programmatic questions, contact Sharima Rasanayagam, CBCRP Program Officer:

• Sharima.Rasanayagam@ucop.edu

For questions about Smart Simple, technical issues, or application instructions and forms, contact Research and Grants Program Office Contracts and Grants unit:

RGPOgrants@ucop.edu

