



Special Research Initiatives Evaluation Peer Review Committee

Meeting #2
June 7, 2022

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Today's Agenda

- Welcome Back
- Summary of First Meeting
- Assessment of Progress Toward Goals
 - *Long term outcomes*
- Committee Conclusions and Recommendations
- Next Steps

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WELCOME BACK

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Peer Review Committee Chair

Gwen Collman
Senior Advisor
National Institute of
Environmental Health
Sciences



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Peer Review Committee Members



Clement Adebamowo
Director For Global Health Cancer
Research
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Medicine



Dezheng Huo
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Director - UNC Center for
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UNC Gillings School of Global
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Alexandra White
Environment and Cancer
Epidemiology Group Head
National Institute of Environmental
Health Sciences

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Special Research Initiatives (SRI)

- In 2004, CBCRP launched its **Special Research Initiatives (SRI)**, with the overarching goal of supporting California-based coordinated, directed, and collaborative research in two areas:
 - *The effects of the environment on the development of breast cancer; and*
 - *Disparities in breast cancer.*
- **Vision:** To identify and support research strategies that increase understanding of, and create solutions to, environmental links to breast cancer and disparities in breast cancer, including solutions to reduce suffering and move us closer to eliminating the disease.
- **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.*

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SUMMARY OF FIRST MEETING

PROCESS AND MEDIUM-TERM OUTCOMES

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Review committee assessment, questions, and conclusions

Process/Short Term Outcomes

1. What investment did the CBCRP make in SRI?
2. How were the SRI initiatives identified? How were the SRI initiatives structured?
3. What types of projects were funded in the SRI?
4. Did SRI build on existing data but avoid duplicating funding strategies by other research funders?
5. Did SRI choose topics based on the most up-to-date knowledge and opinion of experts?

Medium Term Outcomes

1. Were the goals of each initiative met? Did the grants within these initiatives meet their goals?
2. Do the research findings from the SRI grants lead to increased knowledge to reduce the burden of breast cancer?
3. Do the research findings from the SRI grants lead to increased opportunities to move these fields forward in research and/or advocacy?
4. How did the structure of SRI impact the research initiated within each initiative?
5. How did the SRI funded grants leverage California's unique and diverse, geography, demographics, and research resources?

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Process/Short Term Outcomes:
1. What investment did the CBCRP make in SRI?

Assessment	Conclusions
<ul style="list-style-type: none"> Overall, the grants and distribution of funds were well-chosen and closely aligned with SRI objectives. Within disparities, the overall percentages of applicants and funded grants were good, although immigrant topic area had challenges generating fundable proposals. For environment, the topics were well-received and allowing applicants to revise proposals based on reviewer comments strengthened the research. "The topics are tough...they're really tough areas of breast cancer epidemiology in terms of how to directly measure exposures to environmental chemicals and then studying disparities". Compared to the time that the awards were made, "the initiatives were very well structured for that time" 	<ul style="list-style-type: none"> Overall, CBCRP made an impressive commitment to SRI with well-chosen topics and initiatives. The SRI topics chosen and initiatives funded were relevant and ambitious.
Questions	Responses
<ul style="list-style-type: none"> Were the number of applications as expected? How did the word get out? What was the context? 	<ul style="list-style-type: none"> CBCRP didn't know what to expect since it hadn't been done before, but not surprised to find low numbers since questions were narrow, and investigators were asked to do a lot with little. CBCRP sent announcements to C&G offices across the state, previous recipients, and mailing list. Steering committee also distributed to investigators who they felt would be suitable.

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Process/Short Term Outcomes:
2. How were the SRI initiatives identified? How were the SRI initiatives structured?

Assessment	Conclusions
<ul style="list-style-type: none"> The formal 5-phase approach worked well. Many of the identified gaps are still important today. 	<ul style="list-style-type: none"> SRI initiatives were identified using a process that involved leadership, literature review, and stakeholders. SRI initiatives included disparities, environment and a combined category.
Questions	Responses
<ul style="list-style-type: none"> More information on how the science advisors and stakeholders were selected and engaged More information on the regional meetings 	<ul style="list-style-type: none"> Stakeholders, Regional Meetings: Please see <i>SRI Flyer</i>, <i>SRI Meeting Summary</i> documents (Google Drive folder) The science advisors were selected in 2 ways: <ul style="list-style-type: none"> Steering committee was selected by CBCRP staff based on interviews with key informants (Google Drive folder) and by a snowball method if an initial invitation was refused. Steering Committee then brainstormed a list of possible advisors and together created a prioritized list of invitees.

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Process/Short Term Outcomes:

3. What types of projects were funded in the SRI?

Assessment	Conclusions
<ul style="list-style-type: none">• SRI funded a lot of the gaps in the large document, leading the way in this kind of research.• There was a need to find a way to fund disparities research since not many institutions did at the time.	<ul style="list-style-type: none">• SRI projects were well-described and fit within the initiatives.

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Process/Short Term Outcomes:

4. Did SRI build on existing data but avoid duplicating funding strategies by other research funders?

Assessment	Conclusions
<ul style="list-style-type: none">• While the question is challenging to conceptualize since there is no counter-factual, the data make a good case.• There were definite increases in disparities and environment research projects which is positive since this is an understudied area.• California research is probably not as likely to be funded by NCI.	<ul style="list-style-type: none">• Challenging question to answer since we do not know if these projects would have been picked up by other funders.• The future funding from the SRI investigators indicates some challenges in receiving more funding.

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Process/Short Term Outcomes:

5. Did SRI choose topics based on the most up-to-date knowledge and opinion of experts?

Assessment	Conclusions
<ul style="list-style-type: none">• SRI was successful in moving people into breast cancer research.• SRI encouraged research on both disparities and environment.	<ul style="list-style-type: none">• The identified topics were important and under-studied.

Questions	Responses
<ul style="list-style-type: none">• Was there dedicated support after the SRI?• Were researchers more competitive after the SRI?	<ul style="list-style-type: none">• There was no dedicated support, but some projects applied and were funded in the next round of initiatives.

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Process/Short Term Outcomes Recap

1. What investment did the CBCRP make in SRI?
2. How were the SRI initiatives identified?
How were the SRI initiatives structured?
3. What types of projects were funded in the SRI?
4. Did SRI build on existing data but avoid duplicating funding strategies by other research funders?
5. Did SRI choose topics based on the most up-to-date knowledge and opinion of experts?



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Medium Term Outcomes:

1. Were the goals of each initiative met? Did the grants within these initiatives meet their goals?

Assessment	Conclusions
<ul style="list-style-type: none">• All 9 initiatives have publications, although two projects did not.• This questions is difficult to address because there are no reviews of continuation applications.	<ul style="list-style-type: none">• The initiatives met their goals.

Questions	Responses
<ul style="list-style-type: none">• Is there a final report from each project? Were any of the grants continued?	<ul style="list-style-type: none">• Yes, final reports from each project are available on the website. Scroll down to the links under "Special Research Initiatives": http://cbrp.org_206-217-207-112_preview.sknet20.cloudgppnetwork.com/research/byAwardtype.asp.• There was no dedicated support, but some projects applied and were funded in the next round of initiatives.

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Medium Term Outcomes:

2. Do the research findings from the SRI grants lead to increased knowledge to reduce the burden of breast cancer?

Assessment	Conclusions
<ul style="list-style-type: none">• While Breast Cancer Survivorship Consortium publications seem low given the amount of funding, there were challenges.	<ul style="list-style-type: none">• The initiatives clearly contributed to increased knowledge on the specific topics and breast cancer more generally.

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Medium Term Outcomes:

3. Do the research findings from the SRI grants lead to increased opportunities to move these fields forward in research and/or advocacy?

Assessment	Conclusions
	<ul style="list-style-type: none">• The SRI grants led to increased opportunities, particularly in research.• More information is needed to address the advocacy portion of the question.

Questions	Responses
<ul style="list-style-type: none">• Were the findings reported back to communities and individual participants? If so, how?• Has there been documentation or numeric capture of using the findings in policy?	<ul style="list-style-type: none">• Yes, mechanisms for communication with communities varied for each project.• Several of the presentations were given to state policy makers, and the CBCRP director gave testimony that was cited/incorporated into two reports (see slide 63 of this slide deck). CBCRP is not currently aware of any studies being cited in legislation.

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Medium Term Outcomes:

4. How did the structure of SRI impact the research initiated within each initiative?

Assessment	Conclusions
<ul style="list-style-type: none">• The three funding mechanisms drove grant applications and types.• The directed funding for disparities and the environment made an impact.	<ul style="list-style-type: none">• By developing strong initiatives, CBCRP drove research to the Environment and Disparities topic areas.• There was a clear increase in funding over time with the start of the SRI.

Questions	Responses
<ul style="list-style-type: none">• What proportion goes to each funding mechanism?• When did the SRI funding end?	<ul style="list-style-type: none">• SRI funding by mechanism (Cycles 15-17):<ul style="list-style-type: none">• SRI Request for Proposal (RFP)=\$6,652,328 (30%)• SRI Program Directed Awards=\$12,662,595 (58%)• SRI Request for Qualifications (RFQ)=\$2,646,242 (12%)• See slides 27-28 of this slide deck.

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Medium Term Outcomes:

5. How did the SRI funded grants leverage California's unique and diverse, geography, demographics, and research resources?

Assessment	Conclusions
<ul style="list-style-type: none">It is clear that the SRI took advantage of opportunities in California enabling robust research protocols and collaborations.For the race/ethnicity categorizations, it is possible that one study is driving lack of Latinos in the distribution.	<ul style="list-style-type: none">SRI funded grants clearly built on CA-based research resources as well as demographics.California's diversity provided a broad range of resources collaboration opportunities which was evident in the distribution of grants to various institutions across the state and the high number of publications that resulted.

Questions	Responses
<ul style="list-style-type: none">Was the sharing of data sets, registries or labs across institutions easier to accomplish with these types of grants?How many participants did each study contribute to the whole distribution?Did SRI partner with HBCUs or other minority-serving organizations?	<ul style="list-style-type: none">Sharing these types of resources was easier because it was a requirement of the grant.State of CA has only 1 HBCU and 133 minority serving institutions today (unclear if it was similar during the SRI planning phase). CBCRP has started to consider future partnerships.

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Medium Term Outcomes Recap

1. Were the goals of each initiative met? Did the grants within these initiatives meet their goals?
2. Do the research findings from the SRI grants lead to increased knowledge to reduce the burden of breast cancer?
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4. How did the structure of SRI impact the research initiated within each initiative?
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ASSESSMENT OF PROGRESS TOWARD GOALS

LONG TERM OUTCOMES

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Long Term Outcomes

Research

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?
3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?
4. Was the research produced innovative and/or theory generating?
1. Did SRI reach its overarching goal?

Researchers

7. How did the research portfolio change for the researchers who received a SRI grant?
10. Did SRI serve as a pipeline for new investigators interested in these areas?

CBCRP

5. Have we created value by pursuing SRI targeted funding rather than sticking to only investigator-initiated awards?
6. Have we funded research that would not have happened otherwise?
8. How did the SRI influence:
 - CBCRP research portfolio?*
 - CBCRP funding priorities?*

Broad Impact

9. Who benefitted from the research produced by SRI funded grants?

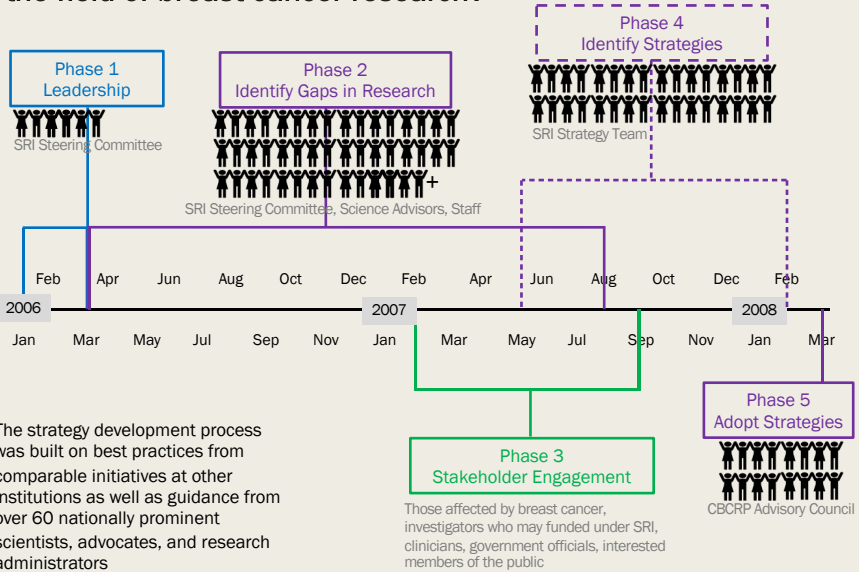
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Long Term Outcomes - Research

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?
3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?
4. Was the research produced innovative and/or theory generating?
1. Did SRI reach its overarching goal?

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?



Data Source: Document Review

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?

SUMMARY

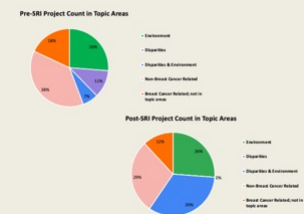
- SRI's research was focused on new directions in the field of breast cancer research
 - At the time, CBCRP conducted a comprehensive review of the state of the science (Attachment 4 Strategy Development Process) that resulted in the identification of research gaps (Attachment 5 Identifying Gaps in Breast Cancer Research).
 - CBCRP identified three topic areas to focus on that could fill those gaps: environment (chemical), disparities, and both environment and disparities.
- The SRI initiative funded research in these emerging fields that linked environmental factors and disparities as causes of breast cancer, and these topics are the ones that other funding agencies did not focus on at the time, and therefore were not funded
- SRI projects were also closely tied to policy requirements and served to expand the science that informs policy formulation and implementation and public health outcomes.

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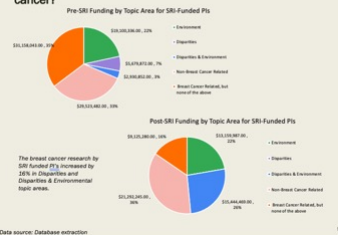
3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

4. Did SRI build on existing data but avoid duplicating funding strategies by other research funders?



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2. Did the research findings from the SRI grants lead to increased knowledge to reduce the burden of breast cancer?



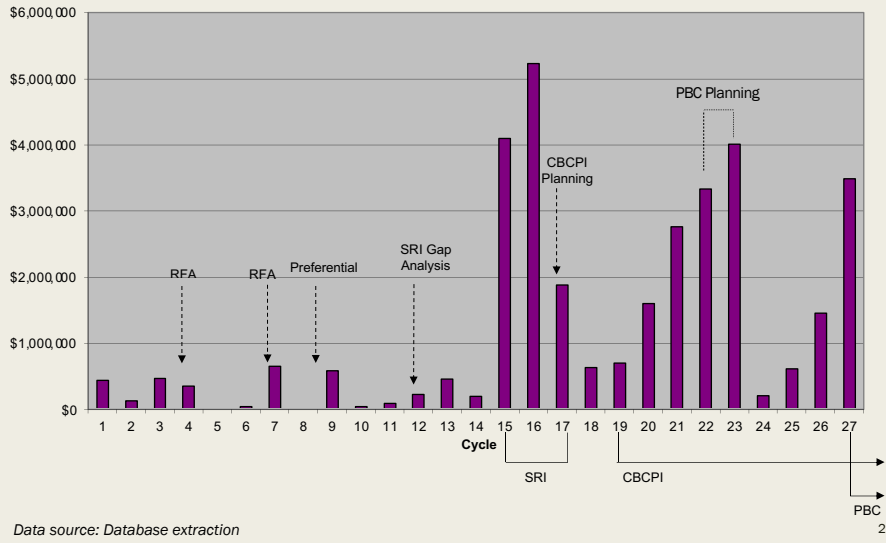
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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

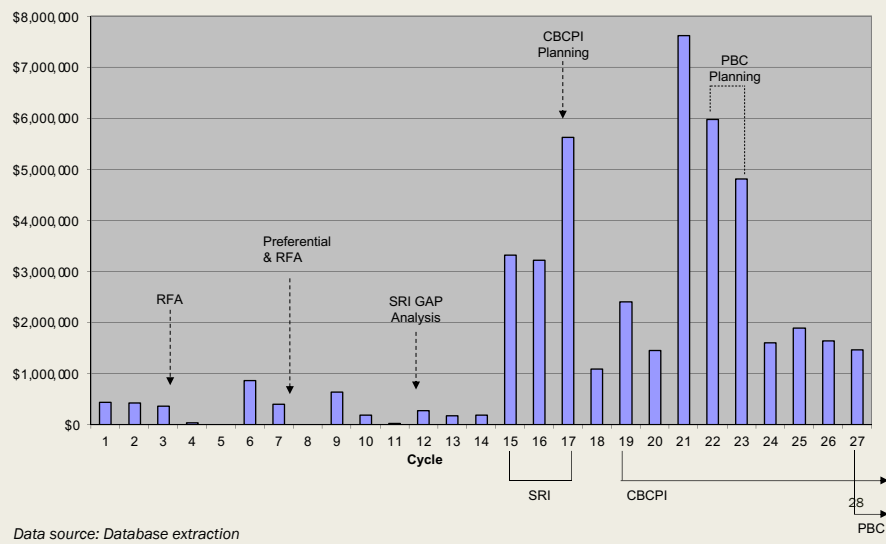
CBCRP Disparities Funding Over Time



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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

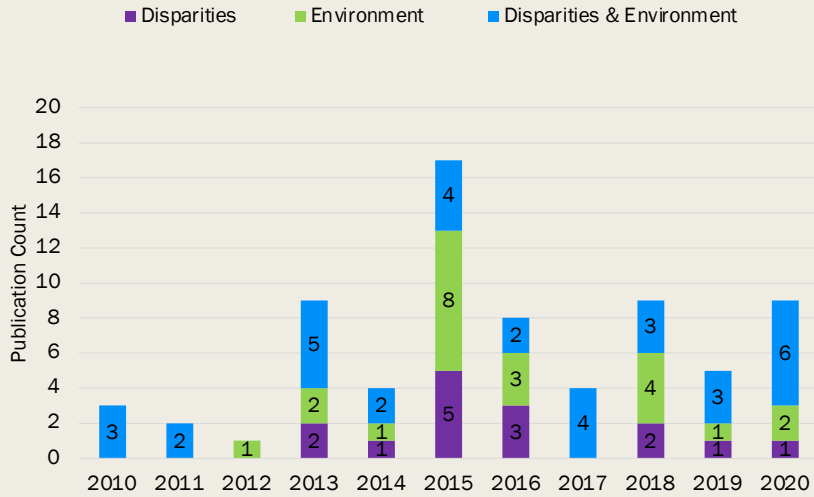
CBCRP Environment Funding Over Time



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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

SRI Publications Over Time



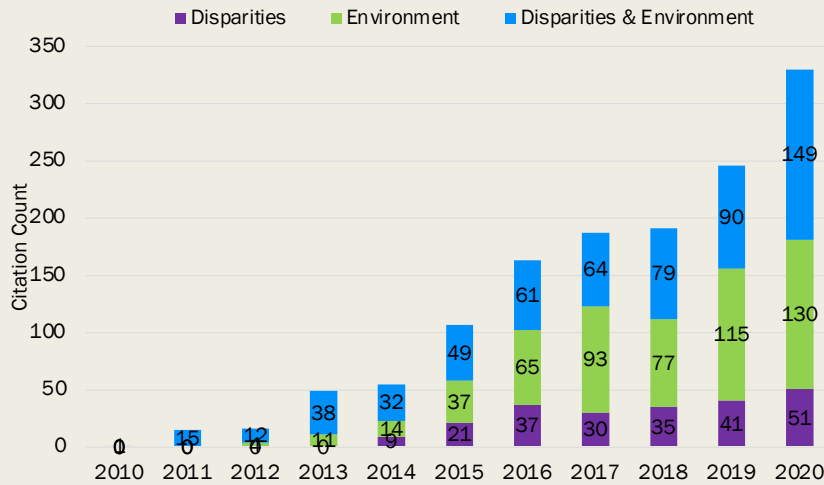
Data Source: Database extraction

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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

SRI Citations Over Time



Data Source: Database extraction

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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

Topic Area	Initiative	Average number of citations per publication	Total
Disparities	Understanding Racial and Ethnic Differences in Stage-Specific Breast Cancer Survival	21.2	24.6
	Demographic Questions for California Breast Cancer Research	-	
	Piloting an Integrated Approach to Understanding Behavioral, Social, and Physical Environment Factors and Breast Cancer Among Immigrants	30.8	
Environment	Toward the Development of a California Chemicals Policy that Considers Breast Cancer	16.7	26.9
	Making Chemicals Testing Relevant to Breast Cancer	28.8	
Disparities & Environment	Statistical Methods to Study Interacting Factors that Impact Breast Cancer	20.7	17.8
	Toward an Ecological Model of Breast Cancer causation and Prevention	14	
	Environmental Causes of Breast Cancer Across Generations	18.8	
	Environmental Exposures & Breast Cancer in a Large, Diverse Cohort	11	
Total			21.9

Data Source: Document review

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3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?

SUMMARY

- Portfolios, Funding
 - *For the PIs funded by SRI, the fraction of their research grants dedicated to the environment and/or disparities increased from 44% before SRI to 59% after.*
 - *Researchers also reported to CBCRP that they have expanded their research portfolios as a result of SRI.*
 - *CBCRP continues to fund work in these topic areas through new funding initiatives*
- Publications, Citations

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4. Was the research produced innovative and/or theory generating?

Project title: New Methods for Genomic Studies in African-American Women (PI: Stram)

- *Novel Statistical method to analyze African American Breast Cancer (AABC) data*
 - Methodological Considerations in Estimation of Phenotype Heritability Using Genome-Wide SNP Data, Illustrated by an Analysis of the Heritability of Height in a Large Sample of African Ancestry Adults
<https://doi.org/10.1371/journal.pone.0131106>
 - The Potential for Enhancing the Power of Genetic Association Studies in African Americans through the Reuse of Existing Genotype Data
<https://doi.org/10.1371/journal.pgen.1001096>
 - Plus other publications that use genome-wide association study (GWAS) methods

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4. Was the research produced innovative and/or theory generating?

Project title: Biologically Relevant Screening of Endocrine Disruptors (PI: Chen)

- *Novel screening assays to identify chemicals that may cause estrogen-dependent breast cancer*
 - AroER Tri-Screen Is a Biologically Relevant Assay for Endocrine Disrupting Chemicals Modulating the Activity of Aromatase and/or the Estrogen Receptor
<https://doi.org/10.1093/toxsci/kfu023>

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4. Was the research produced innovative and/or theory generating?

SUMMARY

- As of June 2021, there were 74 publications with 1495 citations from SRI projects (data presented last session)
- Some SRI projects developed new methods and technologies for breast cancer research.
 - Example 1 - A novel statistical method was developed to analyze African American Breast Cancer (AABC) data, and better understand the difference in individual, genetic susceptibility to breast cancer among African American women
 - Example 2 - Novel assays were developed to help identify chemicals that can contribute to breast cancer
- To encourage new directions in breast cancer research, CBCRP required researchers to collaborate with other grantees to facilitate the exchange of ideas and idea generation with new or different methods and approaches in their studies. Required Investigator Collaborations are described on page 37 of Attachment 6.

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1. Did SRI reach its overarching goal?

SRI Goals: To support California-based coordinated, directed, and collaborative research in two areas:

1. The effects of the environment on the development of breast cancer; and
2. Disparities in breast cancer.

Vision: To fund research that not only increases knowledge about these questions, but also points to solutions that will reduce the suffering from breast cancer and move us closer to eliminating the disease.

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1. Did SRI reach its overarching goal?

Contributions to the Field



74
Publications



1495
Total Citations



758+
Media Mentions



75+
News Mentions



40+
Academic
Presentations



14+
Non-academic
Presentations

Data source: Database extraction, document review

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1. Did SRI reach its overarching goal?

SUMMARY

- For SRI, CBCRP designated 30% of its funding for SRI from 2004-2009 (\$18M). Two additional initiatives have built on SRI:
 - *California Breast Cancer Prevention Initiatives (CBCPI)* – 50% of funding from 2011-2015 through program-directed research (~\$24M)
 - *Preventing Breast Cancer (PBC): Community, Population, and Environmental Approaches* – 50% of funding from 2017-2021 (~\$20M)
- SRI has supported a total of 9 initiatives and 26 projects in disparities, environment, and disparities and environment.
 - This has led to 74 publications across multiple academic journals, 1495 citations worldwide, and 833+ media mentions across news and social media outlets (June 2021)
- The collaboration between researchers and advocates in SRI initiatives allowed for scientific knowledge to be used for chemical policy recommendations in California and for inclusion in policy documents.
- Some researchers and graduate/post-doctoral students who were involved in the research projects continued to conduct breast cancer research similar to their SRI projects and have received funding from several well-known agencies.
- Although these SRI projects may have been finished, they continue to make long-lasting impacts in the scientific and impacted communities.

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Discussion: Long-Term Research Q1-4

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?
3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?
4. Was the research produced innovative and/or theory generating?
1. Did SRI reach its overarching goal?

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Long Term Outcomes - Researchers

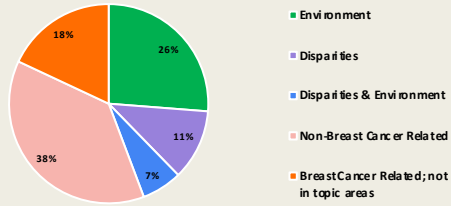
7. How did the research portfolio change for the researchers who received a SRI grant?
10. Did SRI serve as a pipeline for new investigators interested in these areas?

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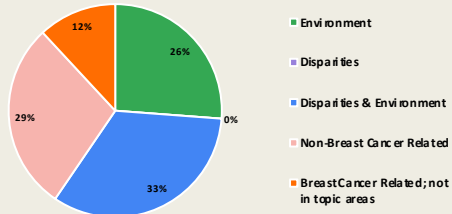
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7. How did the research portfolio change for the researchers who received a SRI grant?

Pre-SRI Project Count in Topic Areas



Post-SRI Project Count in Topic Areas



Data source: Database extraction

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7. How did the research portfolio change for the researchers who received a SRI grant?



Areas investigators received funding for within the last 5 years (as of Feb. 2017)

Environmental (chemical) exposures and breast cancer

Yes 
 No 

NCI
Avon Foundation
NIEHS

Health disparities and breast cancer

Yes 
 No 

NCI
ACS
DoD
Avon Foundation
Komen Foundation

Data source: Survey

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7. How did the research portfolio change for the researchers who received a SRI grant?

SUMMARY

- For some researchers, receiving SRI funding has expanded their portfolio.
 - This is observed in the charts comparing pre- and post-SRI project count, where there is a 16% increase in projects within the three topic areas combined (environment, disparities, both) after SRI, the largest increase in projects related to both disparities and environment.
 - After researchers received SRI funding, some researchers focused their research on these areas (environment, disparities, both) and received funding from different institutions.

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10. Did SRI serve as a pipeline for new investigators interested in these areas?

Perspectives of SRI investigators on the breast cancer prevention pipeline

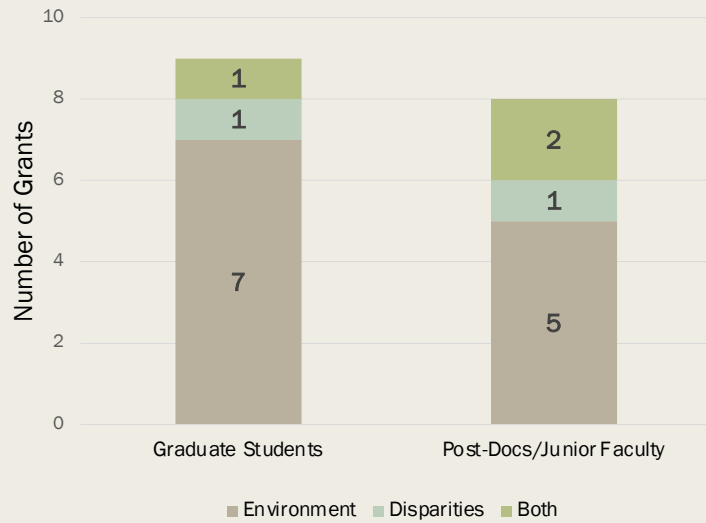
- CBCRP Funding is important for the pipeline
 - *“CBCRP provides funding for younger researchers who are cut out of NIH funding. CBCRP funding brings researchers into the breast cancer field.” (SRI Investigator, Disparities/Environment)*
 - *“CBCRP is important because young people have a better chance of getting funded by CBCRP than NCI...So in CA CBCRP is an important funding source for junior investigators to get pilots and small projects funded – important to get preliminary data funded so they can go to NCI or DOD, to get funding.” SRI Investigator, Disparities)*
- Funding climate + job stability
 - *“Students find this work very interesting but are not interested in getting into this area because there aren’t real jobs at the end. There aren’t a lot of faculty positions where people are working on this, which is an issue for post-docs as well. Though there is personal interest, people don’t see a future in this. This isn’t a priority right now. Talk is where the money is.” (SRI Investigator, Environment)*
 - *Established investigators also are reducing time or changing careers*

Data source: Interviews

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10. Did SRI serve as a pipeline for new investigators interested in these areas?



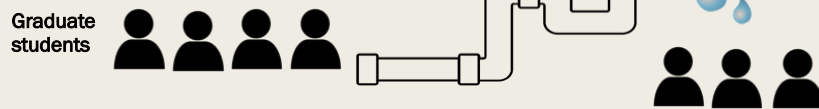
Data Source: Survey

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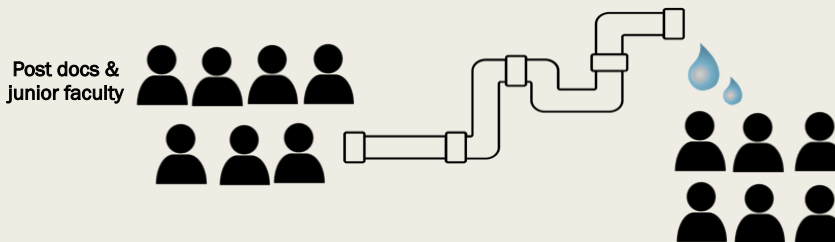
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10. Did SRI serve as a pipeline/pathway for new investigators interested in these areas?

SRI "Research Pipeline"



As of 2017, 3 out of 4 graduate students had gone onto do research in a similar area to their SRI project.



As of 2017, 6 out of 7 post docs and junior faculty had gone on to do research in a similar area to their SRI project.

Data Source: Survey

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10. Did SRI serve as a pipeline for new investigators interested in these areas?

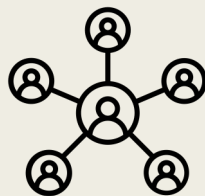
SUMMARY

- SRI served as a pipeline for both experienced and junior investigators interested despite concerns about funding/job stability.
 - According to the survey of SRI-funded PIs, 3 out of 4 graduate students of graduate students and 6 out of 7 of postdoctoral and junior faculty members on SRI projects have conducted future research in similar areas of their SRI projects.

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Discussion: Long-Term Researcher Q7 & Q10



7. How did the research portfolio change for the researchers who received a SRI grant?

10. Did SRI serve as a pipeline for new investigators interested in these areas?

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Long Term Outcomes - CBCRP

5. Have we created value by pursuing SRI targeted funding rather than sticking to only investigator-initiated awards?

6. Have we funded research that would not have happened otherwise?

8. How did the SRI influence CBCRP research portfolio and funding priorities?

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5. Have we created value by pursuing SRI targeted funding rather than sticking to only investigator-initiated awards?

- PI Comments on SRI Targeted funding
 - *No one else would have funded this type of work in California*
 - *I think CBCRP grants really helped initial first grants for the new investigators or the new populations that weren't getting the funding*

Summary

- By conducting the SRI initiative, CBCRP has pushed researchers to study these topics while at the same time giving investigators the opportunity to design and be innovative with how they want to approach and carry out a specific research idea in these topics.

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6. Have we funded research that would not have happened otherwise?

<i>Identifying Gaps in Breast Cancer Research</i>	<i>California Breast Cancer Research Program</i>
California Breast Cancer Research Program Special Research Initiatives	Table of Contents
Identifying gaps in breast cancer research: Addressing disparities and the roles of the physical and social environment	Preface
Editors	Introduction
Julia G. Brody, PhD Executive Director Silent Spring Institute	Section I: Exposures from the Physical Environment and Breast Cancer
Marion (Mbel) H.E. Kavanaugh-Lynch, MD, MPH Director California Breast Cancer Research Program	<i>Overarching Issues</i>
Olufunmilayo I (Funmi) Olopade, MD Walter L. Palmer Distinguished Service Professor of Medicine University of Chicago Medical Center	A. Secondhand Smoke
Susan Matsuko Shinagawa Breast Cancer and Chronic Pain Survivor/Advocate, Intercultural Cancer Council; Asian and Pacific Islander National Cancer Survivors Network	B. Environmental Chemicals/Pollutants
Sandra Steingraber, PhD Author and Distinguished Visiting Scholar Ithaca College	1. Air Pollutants, Fuels and Additives
David R. Williams, PhD Department of Society, Human Development and Health Harvard School of Public Health	2. Persistent Organic Pollutants
	3. Polybrominated Flame Retardants
	4. Pesticides
	5. Solvents and industrial chemicals
	6. Water Contaminants
	7. Hormones in Food
	8. Metals
	9. Exposures from Polyvinyl Chloride
	10. Bisphenol A
	C. Compounds in Personal Care Products
	D. Pharmaceuticals
	E. Infectious agents
	F. Ionizing Radiation
	G. Electric and Magnetic Fields
	H. Light at night
	I. Vitamin D/Sunlight
	Section II: Disparities in Breast Cancer: Domains of Individual-level Social Inequality
	A. Race/Ethnicity
	B. Sexual Minority Women
	C. Disability Status
	D. Culture
	E. Health Insurance
	Section III: Neighborhood Context and Breast Cancer

Data Source: Document review

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6. Have we funded research that would not have happened otherwise?

SUMMARY

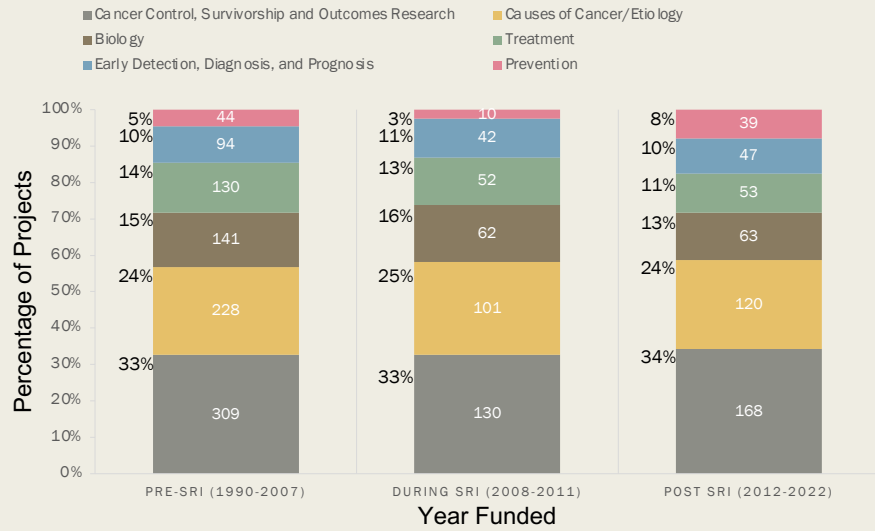
- In order to ensure that we did not duplicate previous studies on the environmental causes of breast cancer and the unequal burden of the disease, and to identify the most promising areas for research in these areas, the CBCRP developed a review of the existing research. Forty experts were involved in drafting our extensive document, Identifying Gaps in Breast Cancer Research.

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8. How did the SRI influence: CBCRP research portfolio?

Projects by Common Scientific Outline Categories



Data Source: Database extraction

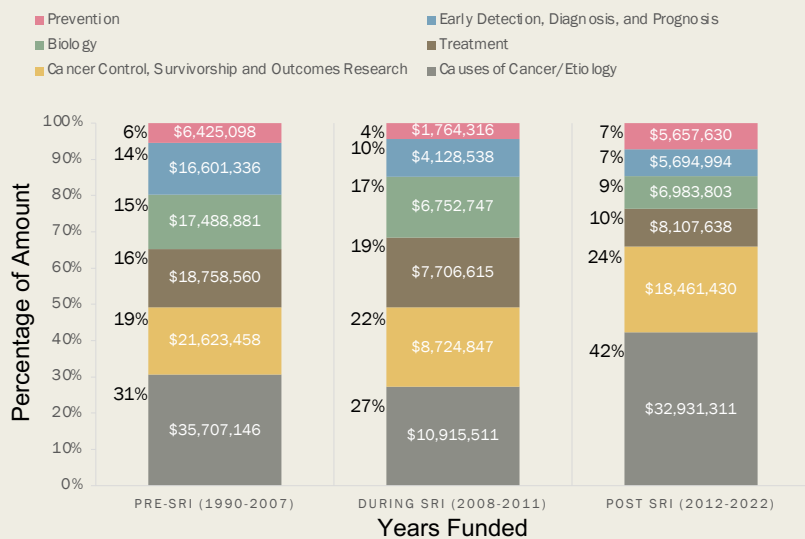
Environmental maps to Causes of Cancer/Etiology
Disparities maps to Cancer Control, Survivorship and Outcomes Research (CCSOR)
Prevention usually maps to Prevention but can go to CCSOR

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8. How did the SRI influence: CBCRP research portfolio?

Amounts by Common Scientific Outline Categories



Data Source: Database extraction

Environmental maps to Causes of Cancer/Etiology
Disparities maps to Cancer Control, Survivorship and Outcomes Research (CCSOR)
Prevention usually maps to Prevention but can go to CCSOR

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8. How did the SRI influence: CBCRP research portfolio?

CALIFORNIA BREAST CANCER PREVENTION INITIATIVES

Supporting coordinated, directed and collaborative research that addresses strategic needs in breast cancer research.

In 2004, CBCRP launched Special Research Initiatives (SRI), which devoted 30 percent of CBCRP research funds to support coordinated, directed and collaborative research on the identification and elimination of environmental causes of breast cancer and the identification and elimination of disparities and inequities in the burden of breast cancer in California. These resulted in many successful research projects (pdf).

In March 2010, the Council decided to build on the existing SRI by devoting 50 percent of CBCRP research funds between 2011 and 2015 to program initiated research. This new effort is titled the California Breast Cancer Prevention Initiatives. The ultimate goal of this funding strategy is to support research that not only increases knowledge about these questions, but also points to solutions that will reduce the suffering from breast cancer and move science closer to eliminating the disease. Approximately \$24 million will be dedicated to supporting directed, coordinated, and collaborative research projects to pursue approaches to:

1. Identify and eliminate environmental causes of breast cancer.
2. Identify and eliminate disparities/inequities in the burden of breast cancer in California.
3. Population-level interventions (including policy research) on known or suspected breast cancer risk factors and protective measures.
4. Targeted interventions for high-risk individuals, including new methods for identifying or assessing risk.

In March 2015, CBCRP's Council approved fifteen (15) concept proposals to stimulate compelling and innovative research in all four topical areas of the CBCPI (environmental causes, health disparities, population-level interventions and targeted interventions for high risk individuals). A series of funding opportunities will be released over the next two years reflecting these concepts.

CBCPI: 2011-2015

PREVENTING BREAST CANCER: COMMUNITY, POPULATION, AND ENVIRONMENTAL APPROACHES

Supporting coordinated, directed research that addresses strategic needs in breast cancer research

The California Breast Cancer Research Program (CBCRP) 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 initiative engages 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, devoting 30% of research funds to research to environmental causes of breast cancer and the unequal burden of the disease. In 2010, CBCRP launched its second round of Program Initiatives, adding population-level prevention interventions as a target area, devoting 50% of its funds to these priority areas.

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 June 2020, CBCRP's Council approved the first four concept proposals to stimulate

PBC: 2015-2021

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8. How did the SRI influence: CBCRP funding priorities?

SUMMARY

- CBCRP has led ongoing investment in the SRI topic areas as seen by the change in pre and post SRI data of projects and funding.
- CBCRP followed SRI with two additional rounds of program-directed initiatives, CBCPI and PBC, which have also prioritized the environment and disparities and have explicitly added prevention as a priority area.

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Discussion: Long-Term CBCRP Q5-Q6, & Q8

5. Have we created value by pursuing SRI targeted funding rather than sticking to only investigator-initiated awards?
6. Have we funded research that would not have happened otherwise?
8. How did the SRI influence CBCRP research portfolio and funding priorities?

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Long Term Outcomes - Broad Impact

9. Who benefitted from the research produced by SRI funded grants?

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9. Who benefitted from the research produced by SRI funded grants?

Perspectives of SRI investigators on SRI impact on pipeline:

*“CBCRP provides funding for younger researchers who are cut out of NIH funding. CBCRP funding brings researchers into the breast cancer field.”
(SRI Investigator, Disparities/Environment)*

“CBCRP is important because young people have a better chance of getting funded by CBCRP than NCI...So in CA CBCRP is an important funding source for junior investigators to get pilots and small projects funded – important to get preliminary data funded so they can go to NCI or DOD, to get funding.” SRI Investigator, Disparities)

Perspectives of advocates on SRI impact on pipeline:

“I think CBCRP grants really helped initial first grants for the new investigators or the new populations that weren’t getting the funding, and how they were about to kind of leverage to get more national funding.”

Data source: Interviews

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9. Who benefitted from the research produced by SRI funded grants?

Perspectives of SRI investigators on the importance and impact on SRI on funding climate and job stability :

“There aren’t a lot of faculty positions where people are working on this, which is an issue. Though there is personal interest, people don’t see a future in this. This isn’t a priority right now. Talk is where the money is.”

“Established investigators are reducing time or changing careers [due to lack of funding]”

Data source: Interviews

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9. Who benefitted from the research produced by SRI funded grants?

Advocate Involvement in SRI

At the time of the SRI, early stages of CBCRP's requirement for advocacy involvement in grants

- 16 of 26 grants with advocates
- 19 advocates involved in SRI grants (*some involved in more than one SRI grant*)
- 7 participate in SRI evaluation (representing 12 grants)
 - **Goal:** To get more detailed information about the outcomes of the funded SRI project(s) from the advocates' perspective and reflection on the SRI and its funded projects
 - Engagement throughout the study
 - Dissemination of study results
 - Opportunities created due to SRI involvement

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9. Who benefitted from the research produced by SRI funded grants?

Perspectives of Advocates on:

- **Decision to Participate**
 - *Level of comfort with researcher and research*
 - *Alignment with mission and values*
 - *Time and ability to support*
 - *Researcher's understanding and appreciation of value of advocate engagement*
- **During Study Implementation and Dissemination**
 - *Advocates felt disengaged and disconnected from both implementation and dissemination*
 - *Unsure of the outcomes and impact*
- **Advocate Involvement Impact on Researcher**
 - *Cultural sensitivity, community engagement*
 - *Importance of community trust and buy-in*
 - *Reflection on personal biases*
 - *Importance of dissemination*

Data source: Focus groups

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9. Who benefitted from the research produced by SRI funded grants?

The screenshot shows the National Academies Press website for the book "Breast Cancer and the Environment: A Life Course Approach". The page includes details such as the number of pages (468), ISBN (978-0-309-22069-9), and DOI (10.17226/13263). It also lists contributors: the Committee on Breast Cancer and the Environment, the Scientific Evidence, Research Methodology, and Future Directions, Board on Health Care Services, and the Board on Health Sciences Policy, Institute of Medicine. A "GET THIS BOOK" button is visible. Below the book information, there is a section for "VISIT THE NATIONAL ACADEMIES PRESS AT NAP.EDU AND LOGIN OR REGISTER TO GET:" with a list of benefits: access to free PDF downloads, 10% off the price of print titles, email or social media notifications, and special offers. A "FIND RELATED TITLES" button is also present. To the right of the website screenshot is the cover of the report "Breast Cancer and the Environment: Prioritizing Prevention". The cover features a silhouette of a person's head in profile, filled with a landscape of green hills and a blue sky with clouds. The title "Breast Cancer and the Environment" is at the top, and "Prioritizing Prevention" is in large white letters. Below that, it says "Report of the Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCCERCC)" and "FEBRUARY 2013".

<http://nap.edu/13263>

https://www.niehs.nih.gov/about/assets/docs/breast_cancer_and_the_environment_prioritizing_prevention_508.pdf

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9. Who benefitted from the research produced by SRI funded grants?

SUMMARY

- People who benefitted from SRI-funded grants include researchers, stakeholders, advocates, and communities impacted by breast cancer.
 - *For researchers, SRI provided them funding and publication opportunities.*
 - *For stakeholders, they had a voice in SRI strategy development and were presented with findings*
 - *For advocates, although some describe friction in the early implementation of advocacy involvement in these projects, advocates made major contributions to both the research and training researchers to build connections with communities that are impacted by environmental contributors and unequal burden that comes with breast cancer*
 - *For communities, SRI funded research offered an opportunity for community-based research and dissemination of findings*

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Discussion: Long-Term Broad Impact Q9

9. Who benefitted from the research produced by SRI funded grants?

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Long Term Outcomes

Research

2. Did the research produced as a result of the SRI stimulate the field of breast cancer research?
3. Did the research produced as a result of SRI stimulate breast cancer research in the areas of environment, disparities, and/or disparities and environment?
4. Was the research produced innovative and/or theory generating?

1. Did SRI reach its overarching goal?

Researchers

7. How did the research portfolio change for the researchers who received a SRI grant?
10. Did SRI serve as a pipeline for new investigators interested in these areas?

CBCRP

5. Have we created value by pursuing SRI targeted funding rather than sticking to only investigator-initiated awards?
6. Have we funded research that would not have happened otherwise?
8. How did the SRI influence:
 - CBCRP research portfolio?*
 - CBCRP funding priorities?*

Broad Impact

9. Who benefitted from the research produced by SRI funded grants?

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COMMITTEE RECOMMENDATIONS

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Special Research Initiatives (SRI)

- In 2004, CBCRP launched its **Special Research Initiatives (SRI)**, with the overarching goal of supporting California-based coordinated, directed, and collaborative research in two areas:
 - *The effects of the environment on the development of breast cancer; and*
 - *Disparities in breast cancer.*
- **Vision:** To identify and support research strategies that increase understanding of, and create solutions to, environmental links to breast cancer and disparities in breast cancer, including solutions to reduce suffering and move us closer to eliminating the disease.
- **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.*

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Questions for the Committee

1. Does the targeted approach of the SRI yield the types of outcomes you would expect? What are the tradeoffs between the targeted approach of SRI and an investigator-initiated approach?
2. Did the SRI nurture research in the field in a way that was sustainable?
3. Should CBCRP consider using this approach in other topic areas within breast cancer research?
4. How can CBCRP best measure impact that began with the SRI?

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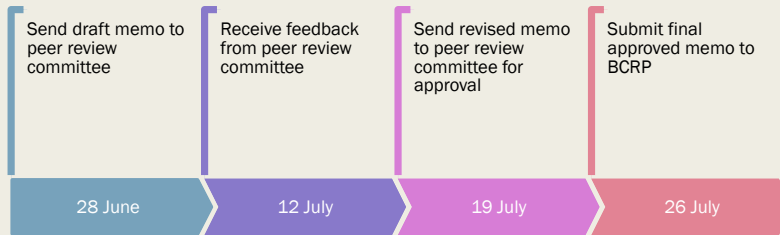
NEXT STEPS

Preparing for the final memo

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Remaining Timeline



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