CDMRP
DEPARTMENT OF DEFENSE
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS

cdmrp.health.mil/bcrp

BREAST CANCER RESEARCH SEMIPOSTAL PROGRAM

PROGRAM HISTORY

As a result of breast cancer advocacy efforts, the Stamp Out Breast Cancer Act (Public Law 105-41)[1] led to the U.S. Postal Service's issuance of a new first-class stamp, the Breast Cancer Research Stamp (BCRS), in 1998. The BCRS became the first semipostal stamp in U.S. history.

The U.S. Postal Service provides the net revenues from sales of the BCRS, which currently costs 85 cents, to two designated funding agencies, the Department of Defense and National Institutes of Health, to support breast cancer research. By law, the U.S. Postal Service allocates 30% of the total amount raised to the DOD and 70% to the NIH. The Breast Cancer Research Stamp Reauthorization Act of 2019 reauthorized the stamp through 2027.

RELEVANCE TO MILITARY HEALTH

Breast cancer is the most common non-skin cancer in women and the deadliest cancer in females under 40.[2,3] Female active-duty service members have a 20%-40% higher incidence rate of breast cancer than females in the general population.[4] The incidence rate of breast cancer for active-duty females is seven times higher than the average incidence rate of 15 other cancer types across all service members.[5] The outcomes of BCRS-funded research ultimately benefit active-duty service members, Veterans, military beneficiaries, and the American public.

[1] https://www.congress.gov/105/plaws/publ41/PLAW-105publ41.pdf

[2] https://gis.cdc.gov/Cancer/USCS/#/AtAGlance/

[3] https://seer.cancer.gov/statfacts/html/aya.html

[4] https://pubmed.ncbi.nlm.nih.gov/19505907/

[5] https://pubmed.ncbi.nlm.nih.gov/27501939/

HIGH-IMPACT RESEARCH AND ACCOMPLISHMENTS SUPPORTED BY THE BCRS

- Demonstrated a relationship between breast cancer incidence and outdoor concentrations of hazardous air pollutants, strongly suggesting that environmental exposure could contribute to an increased risk of breast cancer.[6]
- Advanced understanding of the immune modulated microenvironment of post-partum breast involution that promotes pregnancy-associated breast cancer, revealing new therapeutic strategies to target immunosuppression and enhance the anti-tumor immune response.[7]
- Developed a high-resolution imaging technique to measure the direction that second harmonic generation is emitted to analyze tumor structural changes and predict metastasis of breast cancer.[8]
- Identified predictive biomarkers for response of triple-negative breast tumors to current therapies, providing the opportunity for new targeted therapeutics.[9]

- **175** publications
- **26** patents

[6] Public and Technical Abstracts: Hazardous Air Pollutants and Breast Cancer: An Unexplored Area of Risk

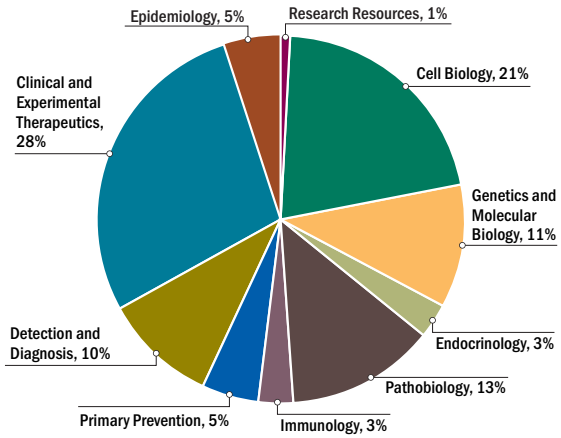
[7] Public and Technical Abstracts: The Immune Modulatory Program of Post-Partum Involution Promotes Pregnancy-Associated Breast Cancer

[8] Public and Technical Abstracts: Prediction of Metastasis Using Second Harmonic Generation

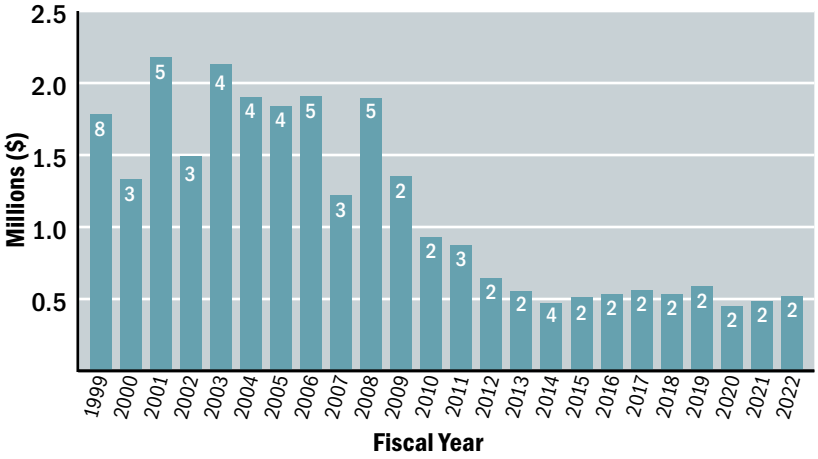
[9] Public and Technical Abstracts: Stabilization of 53BP1 in Triple-Negative and BRCA-Deficient Breast Tumors: A Novel Therapeutic Strategy

PROGRAM PORTFOLIO

The CDMRP Breast Cancer Research Program (BCRP) received BCRS funding between FY99 and FY22 that it used to fully or partially fund 75 awards. The funding mechanisms for these awards support innovative, high-risk, high-reward research that could lead to major advancements in breast cancer. The BCRP used a two-tier review system to review and recommend applications for BCRS program funding. An evaluation of the awards funded through the BCRS program shows that the projects encompass a diversity of research areas.



BCRS Award Portfolio Composition by Percent of Funding Invested FY99-FY22



BCRS Funding and Number of Awards Supported by Fiscal Year

RECENT BCRS-FUNDED PROJECTS

FY	PI	Institution	Proposal Title
FY18	David Potter	University of Minnesota, Twin Cities	Potentiation of Immune Checkpoint Blockade by Inhibition of Epoxyeicosatrienoic Acid-Driven Tumor Respiration
	Abhishek Sharma	Stevens Institute of Technology	A Novel Class of Antagonists for Robust Inhibition of Mutant Estrogen Receptor Action in Endocrine-Resistant Metastatic Breast Cancer
FY19	Jeffrey Frost	University of Texas Health Science Center at Houston	Targeting the Tumor Microenvironment and Metastatic Niche in Breast Cancer
	Hannah Rabinowich	University of Pittsburgh	A New Persistence Mechanism for Drug-Tolerant Breast Cancer Cells
FY20	Weizhou Zhang	University of Florida	Developing a Novel PROTAC-Based NR4A1 Degrader for Breast Cancer Therapy
	Eran Andrechek	Michigan State University	Amplification Events Altering Tumor Microenvironment That Drive Metastasis in HER2+ Breast Cancer
FY21	Sandy Chang	Yale University	Targeting Replication Stress in Triple-Negative Breast Cancer
	Anna Vilgelm	The Ohio State University	Harnessing Innate Immunity to Improve Metastatic Breast Cancer Therapy
FY22	Ming-Ru Wu	Dana-Farber Cancer Institute	Turning Breast Cancer Cells Against Themselves as the Next-Generation Immunotherapy
	Geoffrey Clark	University of Louisville Research Foundation, Inc.	A Direct RAS Pan-Inhibitor as a Novel Strategy for Luminal B Breast Cancer

Point of Contact: CDMRP Public Affairs
usarmy.detrick.medcom-cdmrp.mbx.cdmrp-public-affairs@health.mil