



Research Grant Recipients

*Since our inception in 1995, Friends for an Earlier Breast Cancer Test® has awarded **\$4,125,677** to fund seed grants in the specific area of finding a biological test to detect breast cancer in its earliest stage.*

2017

Total Grants \$159,300

Weill Medical College of Cornell University (New York, NY) \$40,000
“Bioinformatically-identified, site-specific methylation markers as potential blood-based indicators of early stage breast cancer.”
Dr. Manny Bacolod

Central Texas Veterans Research Foundation (Temple, TX) \$39,385
“A Novel exosome isolation method based on ion exchange chromatography.”
Dr. Hosoon Choi

University of Naples (Naples, Italy) \$40,000 over 3 years
“Early Breast cancer diagnosis through aptamer-mediated exosomes detection”
Dr. Gerolama Condorelli

University of California, San Francisco (San Francisco, CA) \$39,915
“Leveraging cancer-specific small RNAs for early detection of high-risk breast cancer”
Dr. Hani Goodarzi

2016

Total Grants \$160,000

University of Washington (Seattle, WA) \$40,000
“Non-contrast Diffusion-weighted MRI Tailored for Early Detection of Mammographically Occult Breast Cancer in Women with Dense Breasts”
Dr. Savannah Partridge

The Felsenstein Medical Research Center/Tel Aviv University (Tel Aviv, Israel) \$40,000
“Circulating hTERT mRNA in serum exosomes: a novel marker for early diagnosis and relapse of breast cancer”
Dr. Orit Uziel

All grants are funded for a one year period unless otherwise noted

Ben-Gurion University of the Negev (Beer-Sheva, Israel) **\$40,000**
"Combinatorial Engineering of Proteolytically Resistant APPI Variants that Selectively Target Human Mesotrypsin for Breast Cancer Imaging"
Drs. Niv Papo & Evette Radisky

The George Washington University (Washington, D.C) **\$40,000**
"Detection of Early Breast Cancer by Circulating MicroRNAs"
Dr. Xiaohui Tan

2015

Total Grants \$200,000

Fox Chase Cancer Center (Philadelphia, PA) **\$40,000**
"Ultra-Deep Sequencing for Detection of p53 and PIK3CA mutations in DCIS and Surveillance of High-Risk Women by Blood as a Liquid Biopsy for Early Diagnosis of Invasive Breast Cancer"
Dr. Paul Cairns

Tulane University (New Orleans, LA) **\$40,000**
"Detection of Early Breast Cancer by Circulating HER4 Extracellular Domain ELISA"
Dr. Frank Jones

University of Louisville (Louisville, KY) **\$40,000**
"Isolation and Characterization of Circulating Tumor Cells for Detection of Early Breast Cancer"
Dr. Lori Millner

Mayo Clinic (Rochester, MN) **\$40,000**
"Pilot Study to Evaluate Dedicated Breast Positron Emission Tomography as a new Imaging Technique for Early Detection of Breast Cancer"
Dr. Michael O'Connor

Indiana University (Indianapolis, IN) **\$40,000**
"Quantitative PCR Analysis of Telomere Fragility in Plasma Circulating and Cell-Free DNA for Early Breast Cancer Detection"
Dr. Hiromi Tanaka

2014

Total Grants \$159,961

University of Massachusetts (Amherst, MA) **\$40,000**
"Detection of micro-scale tumors and metastases with non-toxic bacteria"
Neil S. Forbes

Cleveland Clinic (Cleveland, OH) **\$40,000**
“Microbiomics for Breast Cancer Detection”
Stephen R. Grobmyer, MD, FACS

Washington University in St. Louis (St. Louis, MO) **\$39,961**
“Development of anti-CD44 scFv’s for Early Detection of Breast Cancer by PET Imaging”
\$39,961
Buck E. Rogers, Ph.D.

Case Western Reserve University (Cleveland, OH) **\$40,000**
“Circulating RNAs for the Early Detection of Breast Cancer”
Cheryl Thompson, Ph.D.

2013

Total Grants \$200,000

Mayo Clinic (Rochester, MN) **\$40,000**
“Development and evaluation of a combined molecular breast imaging/breast ultrasound system”
Dr. Carrie Hruska

Ben-Gurion University (Beer-Sheva, Israel) **\$40,000**
“Non-Invasive early detection of breast cancer: developing bi-specific APPI peptides and small molecule conjugates that bind to both avbeta3 integrin and MY1-MMP”
Dr. Niv Papo

Tel Aviv University (Tel Aviv, Israel) **\$40,000**
“Combining genetic and epi-genetic markers for early detection of breast cancer”
Dr. Noam Shomron

Stanford University (Stanford, CA) **\$40,000**
“Highly Sensitive Breast Cancer and Lymphnodes Cereukow Imaging Mediated by Gold Nano-Clusters”
Dr. Lei Xing

University of California, Irvine (Irvine, CA) **\$40,000**
“In vitro evolution of molecular sensors that detect breast cancer at early stage”
Dr. Weian Zhao

2012

Total Grants \$160,000

Roswell Park Cancer Institute (Buffalo, NY) **\$40,000**
“Identification of Novel MicroRNA biomarkers for Early Detection of Breast Cancer”
Dr. Stefano Rossetti

Harvard University (Cambridge, MA)	\$40,000
<i>"Novel Peptides as Candidate Breast Cancer Biomarkers"</i>	
Dr. Alan Saghatelian	
University of North Carolina – Greensboro (Greensboro, NC)	\$40,000
<i>"An Ultrasensitive Detection Platform for Breast Cancer Biomarkers Present in Serum"</i>	
Dr. Marinella Sandros	
University of California – San Francisco (San Francisco, CA)	\$40,000
<i>"Detecting the Early Oncogenic Kinome Signature of Breast Cancer"</i>	
Dr. Laura Van't Veer	

2011 **Total Grants \$160,000**

Mayo Clinic (Rochester, MN)	\$40,000
<i>"Evaluation of Low-dose Molecular Breast Imaging for Detection of Breast Cancer"</i>	
Dr. Carrie Hruska	
Stanford University (Stanford, CA)	\$40,000
<i>"X-Ray Stimulated Fluorescence for Early Detection of Breast Cancer"</i>	
Dr. Dimitre Hristov	
Fox Chase Cancer Center (Philadelphia, PA)	\$40,000
<i>"DNA-Methylation Changes in Premalignant Lesions of the Breast"</i>	
Dr. Sandra V. Fernandez	
University of North Carolina at Chapel Hill (Chapel Hill, NC)	\$40,000
<i>"Epigenetic Field Cancerization in the Development of Basal-like Breast Cancer"</i>	
Dr. William B. Coleman	

2010 **Total Grants \$240,000**

Mayo Clinic (Rochester, MN)	\$40,000
<i>"Evaluation of Molecular Breast Imaging in the Detection of Breast Cancer in Patients with high risk Benign Breast Lesions"</i>	
Dr. Judy Boughey	
Duke University (Durham, NC)	\$40,000
<i>"Diagnosis of Aggressive Breast Cancer with Enhanced Microwave Radiometry: Detection of Rapidly Proliferating Tumors by Noninvasive Deep Temperature Mapping"</i>	
Dr. Paolo Maccarini	

Stanford Univeristy (Stanford, CA)	\$40,000
<i>“Combined Mammography and X-Ray Activatable Nonophosphor Molecular Imaging for Early Breast Cancer Detction”</i>	
Dr. Lei Xing	
Technion-Israel Institute of Technology (Haifa, Israel)	\$40,000/2 yrs.
<i>“Early Diagnosis and Screening of Breast Cancer by an array of Nanosensors”</i>	
Dr. Hossam Haick	
Roswell Park Cancer Institute (Buffalo, NY)	\$40,000
<i>“Identification of Unique Breast Pre-Malignant Signatures”</i>	
Dr. Nicholetta Sacchi	
Roswell Park Cancer Institute (Buffalo, NY)	\$40,000
<i>“A Blood Test for Early Detection of Breast Cancer”</i>	
Dr. Ashwani Sood	

2009

Total Grants \$394,694

University of California at San Diego (San Diego, CA)	\$37,250
<i>“PTHrP: Translation of Molecular Biology to the Development of an Earlier Breast Cancer Test”</i>	
Dr. LJ Deftos	
Edinburgh Napier University (Edinburgh, Scotland)	\$40,000
<i>“Potential of Altered AGP Glycosylation As A Marker for Breast Carcinoma”</i>	
Dr. Kevin Smith	
Sidney Kimmel Cancer Center (San Diego, CA)	\$40,000
<i>“Evaluation of a Protein Microarray-based Profiling Assay of Enzymatic Activity for Breast Cancer Detection”</i>	
Dr. Charles Spruck	
Arizona State University (Tempe, AZ)	\$40,000
<i>“Discovery and Validation of Artificial Recognition Elements for Detection of MUC1 Breast Cancer Biomaker”</i>	
Dr. Kathryn Boltz	
Moffitt Cancer Center (Tampa, FL)	\$37,500
<i>“Identified of Circulating Serum Biomarkers Via Gene Expression Profiling For Breast Cancer Screening”</i>	
Dr. Marie Catherine Lee	
University of Texas (Austin, TX)	\$40,000
<i>“Hyperspectral Microscopic Imaging of Circulating Tumor Cells (CTSCs) Isolated in Microfluidic Channels for Early Breast Cancer Diagnostics”</i>	
Dr. John Zhang	

Duke University (Durham, NC) <i>“Assessment of nuclear Snail-1 protein in early stage breast cancer”</i> Dr. Robin Bachelder	\$39,944
University of Texas - MD Anderson Cancer Center (Houston, TX) <i>“DNA damage as a Biomarker of Risk of Breast Cancer”</i> Dr. Isabelle Bedrosian	\$40,000
Mayo Clinic (Rochester, MN) <i>“Molecular Breast Imaging for Screening of Women at Average Risk of Breast Cancer”</i> Dr. Carrie Hruska	\$40,000
University of California at San Diego (San Diego, CA) <i>“Breast Cancer Detection with Targeted DNA Nanoparticles”</i> Dr. Bradley Messmer	\$40,000

2008

Total Grants \$317,915

University of Virginia (Charlottesville, VA) <i>“Measurement of Aromatase in the Breast: Use for Breast Cancer Risk Assessment and Early Detection”</i> Dr. Sarah Aiyar, <i>et al</i>	\$40,000/2 years
University of Massachusetts (Amherst, MA) <i>”Compact Microwave Array Imaging Chamber for Improved Early Breast Cancer Detection”</i> Drs. Anatoliy Boryssenko and Richard Arenas	\$39,915/15 months
University of North Carolina (Chapel Hill, NC) <i>“Contribution of a Novel BRCA1 Promoter Polymorphism to Increased Breast Cancer Susceptibility”</i> Dr. William Coleman	\$40,000
Duke University (Durham, NC) <i>”Validation of Novel Candidate Genes Involved in Early Breast Cancer Progression”</i> Dr. Joseph Geradts	\$40,000
University of Pittsburgh Cancer Institute (Pittsburgh, PA) <i>”Development of Chimeric Biopolymers as Molecular MRI Contrast Agents to Detect Premalignant Breast Lesions, Breast Cancer, and Metastasis”</i> Dr. Qihong He	\$40,000
University of Texas at Houston (Houston, TX) <i>”Developing a New Serum Assay for Detection of a Potential Novel Biomarker in Early Stages of Breast Cancer”</i> Dr. Wenzheng Zhang	\$40,000

University of Pittsburgh Cancer Institute (Pittsburgh, PA) **\$40,000**
“Biomarkers of Invasive and Metastatic Potential in Breast Cancer in Situ”
Dr. Stephen Grant

University of California at San Francisco (San Francisco, CA) **\$38,000**
“Targeted X-Ray Nano Molecular Imaging Agents for Breast Cancer Early Detection”
Dr. Ella Fung Jones

2007 **Total Grants** **\$470,550**

University of California at San Francisco (San Francisco, CA) **\$39,977**
“Developing tumor-specific uptake of MR contrast agents in breast cancers”
Dr. Heike E. Daldrop-Link

Washington University School of Medicine (St. Louis, MO) **\$40,000**
“A Serum Assay for the Detection of Breast Cancer”
Dr. Timothy Fleming

Indiana University (Indianapolis, IN) **\$37,000**
“Targeting Telomere Dysfunction for Early Detection of Breast Cancer”
Dr. David P. Gilley

Indiana University (Indianapolis, IN) **\$39,300**
“A Cancer Associated Isoform of PCNA in Breast Cancer has Implications as a Potential Biomarker for Disease”
Dr. Robert J. Hickey

Mayo Clinic (Rochester, MN) **\$34,300**
“Serum Biomarkers for Early Detection of Basal-Like Cancer of the Breast”
Dr. Eric W. Klee

Robert H. Lurie Comprehensive Cancer Center (Chicago, IL) **\$40,000**
“A Composite DNA Methylation Biomarker for Detection of Breast Cancer”
Dr. Victor V. Levenson

Purdue University (West Lafayette, IN) **\$40,000**
“Breast Cancer-Specific tNOX Isoform for Early Detection and Diagnosis”
Dr. D. James Morr 

Mayo Clinic (Rochester, MN) **\$40,000**

"Comparison of Magnetic Resonance Imaging and Molecular Breast Imaging in Breast Diagnostic Evaluation"

Dr. Michael K. O'Connor

MD Anderson Cancer Center at the University of Texas (Austin, TX) **\$40,000**

"Proteomic Detection and Validation of Proteins Produced Human Breast Tumors at the Earliest Time for Detection"

Dr. Fredika Robertson

Mayo Clinic Comprehensive Cancer Center (Jacksonville, FL) **\$40,000**

"Defining Protein Kinase D1 As An Early Marker For Breast Cancer"

Dr. Peter Storz

Russian Academy of Medical Sciences (Moscow, Russia) **\$40,000/2 yrs.**

"Development and validation of a differential methylation screening technology applicable for the identification of early breast cancer diagnostic markers"

Dr. Vladimir Strelnikov

Mayo Clinic College of Medicine (Rochester, MN) **\$39,973**

"Candidate Gene Approach for Identification of Novel Breast Cancer Susceptibility Genes"

Dr. Csilla Szabo

2006

Total Grants \$144,664

University of North Carolina at Chapel Hill (Chapel Hill, NC) **\$39,914**

"Detection of a +ACA BRCA1 Promoter Polymorphism in Constitutional DNA Identifies Individuals at Increased Risk for Breast Cancer"

Dr. William Coleman

University of Washington School of Medicine (Seattle, WA) **\$40,000**

"Identifying the Immunologic Signature of Breast Cancer for Use in the Early Detection of Disease"

Dr. Mary Disis

University of Melbourne (Melbourne, Australia) **\$8,250**
"Targeting the Novel Glucose Transporter GLUT12 for the Early Detection of Breast Cancer"
Dr. Suzanne Rogers

State University of New York – Downstate (Brooklyn, NY) **\$39,000**
"BC200 RNA: A Novel Molecular Indicator of Invasiveness for Breast Cancer"
Dr. Anna Iacoangeli

Wake Forest University Baptist Medical Center (Winston-Salem, NC)
Dr. Steven Akman **\$17,500**
Grant funded in conjunction with *Golfers Against Cancer*

2005 **Total Grants \$316,354**

Dana-Farber Cancer Institute (Brookline, MA) **\$40,000**
"Using Protein Microarrays to Identify Early Biomarkers in DCIS"
Dr. Karen Anderson

SUNY Stony Brook (Stony Brook, NY) **\$40,000**
"Breast Cancer Detection and Screening Using Testes Specific Protein 50 (TSP 50) Antibodies"
Dr. Vladimir Jurukovski

Columbia University (New York, NY) **\$40,000**
"Gene Methylation in Tumor DNA in Blood"
Dr. Regina Santella

University of California at Davis (Davis, CA) **\$37,900**
"Serum Glycan Profiling as a Diagnostic Aid in Breast Cancer"
Suzanne Miyamoto

University of Kansas (Lawrence, KS) **\$40,000**
"Centrosomal Biomarker For Early Detection of Human Breast Cancer"
Dr. Jonathan Li

Mayo Clinic (Rochester, MN) **\$40,000**
"Visual and Computer Aided Analysis of Real-time Ultrasound Strain Image Sequences for Non-invasive Diagnosis of Breast Lesions"
Dr. Nicholas Hangiandreou

2003

Total Grants \$177,052

Dana-Farber Cancer Institute (Brookline, MA) \$38,000
"A Proteomic Approach to Early Diagnosis of Breast Cancer"
Drs. Alexander Miron and Lyndsay Harris

Duke University School of Medicine (Durham, NC) \$20,000
"Acoustic Radiation Force Impulse (ARFI) imaging of Breast Cancer"
Dr. Kathryn Nightingale

Georgetown University, Lombardi Cancer Center (Washington, DC) \$40,001/2 yrs.
"Imaging of Carcinogenesis and Cancer Prevention: A study of changes which occur in early breast cancer and how they look on MRI scans"
Dr. Matthew Freedman

The Chaim Sheba Medical Center (Tel Hashomer, Israel) \$40,000
"Nanotechnology for Early Detection of Breast Cancer: Development of Tailored Magnetic nanoparticles"
Dr. Nave Epstein

Wayne State University (Detroit, MI) \$39,051
"Detection of Breast Cancer by Protein Arrays"
Drs. Kathryn Carolin and Michael Tainsky

2002

Total Grants \$276,747

Georgetown University, Lombardi Cancer Center(Washington, DC) \$37,544/2 yrs
"Use of Invadopodia Antigens for Clinical Detection or Metastatic Cancer in Serum and Tissue Samples"
Drs. Ozge Alper and Susette Mueller

Georgetown University, Lombardi Cancer Center(Washington, DC) \$39,389
"Mitochondrial DNA Mutations in Nipple Aspirate Fluid as Molecular Markers for Detection of Breast Cancer"
Dr. Lee-Jun C. Wong

University of California at Los Angeles (Los Angeles, CA) \$40,000
"Nipple Aspiration in Diagnosis of Breast Cancer"
Mai Nguyen

University of California at San Francisco (San Francisco, CA) **\$40,000**
"Protein Signatures of Nipple Aspirate Fluid for Individualized Risk Assessment"
Drs. Maria Pallovicini and Laura Esserman

University of Manitoba (Manitoba, Canada) **\$40,000**
"CTM-OPT: Computed Tomographic mammography One Photon at a Time"
Dr. Richard Gordon

University of Manitoba (Manitoba, Canada) **\$39,814**
"hSBEM in serum: a new marker for the early detection of breast cancer"
Drs. Yvonne Myal and Etienne Leygue

Wake Forest University School of Medicine (Winston-Salem, NC) **\$40,000**
"Serum level of cytotoxic cytokines as indicators for the tumor burdens and stages of breast cancers: an immunological approach for an early detection of breast cancer"
Dr. Zheng Cui

2001

Total Grants \$116,364

Georgetown University, Lombardi Cancer Center (Washington, DC) **\$36,364**
"Profiling immune responses in patients with breast cancer: Identify anti-tumor antigens/antibodies found in the serum of patient with early breast cancer"
Dr. Peter D. Burbelo

University of Alabama at Birmingham (Birmingham, AL) **\$40,000**
"Technetium-99m-labelled Human Anti-EGFR Single-chain Antibody for the Early Detection of Breast Cancer"
Dr. Kevin P. Raisch

University of Iowa Cancer Center **\$40,000/2 yrs.**
"Diagnosis and Prognosis Value of Circulating Breast Carcinoma"
Dr. Emil Racila

2000 **Total Grants \$159,548**

AMC Cancer Research Center (Denver, CO) **\$32,000**
"A Novel Tumor Marker in Early Detection of Breast Cancer"
Dr. Margaret Hanausek

Duke University Cancer Center (Durham, NC) **\$20,000**
"Prediction of Breast Cancer Risk from Parenchymal Patterns in mammograms"
Dr. Cary Floyd

Georgetown University Lombardi Cancer Center (Washington, DC) **\$83,870**
"Electrical Impedance Imaging of the Breast: Explorations"
Dr. Matthew Freedman

University of Pennsylvania Medical Center (Philadelphia, PA) **\$23,678**
"Tissue and Serum Markers of Breast Cancer Development"
Dr. M. Anne Blackwood

1999 **Total Grants \$79,000**

Georgetown University Lombardi Cancer Center (Washington, DC) **\$19,000**
"A Non-invasive Approach to Early Detection Using State of the Art Genetic techniques"
Dr. Bassem Haddad

Mayo Clinic Foundation (Rochester, MN) **\$20,000**
"Circulating sErbB1 and sErbB2 Levels as Breast Cancer Biomarkers"
Dr. Andre T. Baron

Wake Forest University School of Medicine (Winston-Salem, NC) **\$40,000**
"Genetic Polymorphisms in Drug Metabolic Enzymes as Risk Factors for p53 Gene Mutations"
Dr. Mark Miller

1997- 1998

Total Grants \$40,000

Wake Forest University School of Medicine (Winston-Salem, NC) \$40,000
“Biologically-based Early Detection of Breast Cancer”
Dr. Steven Akman