



## Research Grant Recipients

*Since our inception in 1995, Friends for an Earlier Breast Cancer Test® has awarded **\$4,485,521** to fund seed grants in the specific area of finding a biological test to detect breast cancer in its earliest stage.*

**2019**

**Total Grants \$199,844**

**Royal College of Surgeons (Dublin, Ireland) \$39,850**  
*"Network analysis of Epi-genetic alterations for earlier detection of breast cancer"*  
Dr. Sara Charmsaz

**University of Washington (Seattle, WA) \$40,000**  
*"Using a population-based imaging registry to validate an artificial intelligence algorithm for improved screening mammography performance: a pilot study"*  
Dr. Christoph Lee

**University of Colorado Denver (Denver, CO) \$40,000/over 2 years**  
*"Using subnucleosome signature in cell free DNA for early detection of breast cancer"*  
Dr. Srinivas Ramachandran

**Roswell Park Cancer Center (Buffalo, NY) \$40,000**  
*"Harnessing 3D breast ductal carcinoma in situ (DCIS) models to detect biomarkers for liquid biopsies"*  
Dr. Nicoletta Sacchi

**University of Washington (Seattle, WA) \$39,994**  
*"The use of seven autoantibody targets as biomarkers to identify patients with breast atypia as compared to benign lesions by mammography"*  
Dr. Sasha Stanton

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

**2018**

**Total Grants \$160,000**

<b>Stanford University (Stanford, CA)</b>	<b>\$40,000</b>
<i>"Mapping of the single cell level clonal architecture of pre-invasive and benign breast disease for early breast cancer detection"</i>	
Dr. Francisco Beca	
<b>Arizona State University (Tempe, AZ)</b>	<b>\$40,000</b>
<i>"Metabolic Biomarkers for Breast Cancer: Discovery and Initial Cross-Validation"</i>	
Dr. Haiwei Gu	
<b>Memorial Sloan Kettering Cancer Center (New York, NY)</b>	<b>\$40,000</b>
<i>"A Novel Intelligent Breast Exam Tool for Earlier Breast Cancer Detection in Low Resource Populations"</i>	
Dr. Victoria L. Mango	
<b>Hebrew University Institute for Medical Research (Jerusalem, Israel)</b>	<b>\$40,000</b>
<i>"Using pre-mRNA isoforms in saliva as biomarkers for breast cancer diagnosis"</i>	
Dr. Maayan Salton	

**2017**

**Total Grants \$159,300**

<b>Weill Medical College of Cornell University (New York, NY)</b>	<b>\$40,000</b>
<i>"Bioinformatically-identified, site-specific methylation markers as potential blood-based indicators of early stage breast cancer."</i>	
Dr. Manny Bacolod	
<b>Central Texas Veterans Research Foundation (Temple, TX)</b>	<b>\$39,385</b>
<i>"A Novel exosome isolation method based on ion exchange chromatography."</i>	
Dr. Hosoon Choi	
<b>University of Naples (Naples, Italy)</b>	<b>\$40,000 over 3 years</b>
<i>"Early Breast cancer diagnosis through aptamer-mediated exosomes detection"</i>	
Dr. Gerolama Condorelli	
<b>University of California, San Francisco (San Francisco, CA)</b>	<b>\$39,915</b>
<i>"Leveraging cancer-specific small RNAs for early detection of high-risk breast cancer"</i>	
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

**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**  
*“Novel Peptides as Candidate Breast Cancer Biomarkers”*  
Dr. Alan Saghatelian

**University of North Carolina – Greensboro (Greensboro, NC)** **\$40,000**  
*“An Ultrasensitive Detection Platform for Breast Cancer Biomarkers Present in Serum”*  
Dr. Marinella Sandros

**University of California – San Francisco (San Francisco, CA)** **\$40,000**  
*“Detecting the Early Oncogenic Kinome Signature of Breast Cancer”*  
Dr. Laura Van’t Veer

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

**Mayo Clinic (Rochester, MN)** **\$40,000**  
*“Evaluation of Low-dose Molecular Breast Imaging for Detection of Breast Cancer”*  
Dr. Carrie Hruska

**Stanford University (Stanford, CA)** **\$40,000**  
*“X-Ray Stimulated Fluorescence for Early Detection of Breast Cancer”*  
Dr. Dimitre Hristov

**Fox Chase Cancer Center (Philadelphia, PA)** **\$40,000**  
*“DNA-Methylation Changes in Premalignant Lesions of the Breast”*  
Dr. Sandra V. Fernandez

**University of North Carolina at Chapel Hill (Chapel Hill, NC)** **\$40,000**  
*“Epigenetic Field Cancerization in the Development of Basal-like Breast Cancer”*  
Dr. William B. Coleman

**2010**

**Total Grants \$240,000**

**Mayo Clinic (Rochester, MN)** **\$40,000**  
*“Evaluation of Molecular Breast Imaging in the Detection of Breast Cancer in Patients with high risk Benign Breast Lesions”*  
Dr. Judy Boughey

**Duke University (Durham, NC)** **\$40,000**  
*“Diagnosis of Aggressive Breast Cancer with Enhanced Microwave Radiometry: Detection of Rapidly Proliferating Tumors by Noninvasive Deep Temperature Mapping”*  
Dr. Paolo Maccarini

**Stanford Univeristy (Stanford, CA)** **\$40,000**  
*“Combined Mammography and X-Ray Activatable Nonophosphor Molecular Imaging for Early Breast Cancer Detction”*  
Dr. Lei Xing

**Technion-Israel Institute of Technology (Haifa, Israel)** **\$40,000/2 yrs.**  
*“Early Diagnosis and Screening of Breast Cancer by an array of Nanosensors”*  
Dr. Hossam Haick

**Roswell Park Cancer Institute (Buffalo, NY)** **\$40,000**  
*“Identification of Unique Breast Pre-Malignant Signatures”*  
Dr. Nicholetta Sacchi

**Roswell Park Cancer Institute (Buffalo, NY)** **\$40,000**  
*“A Blood Test for Early Detection of Breast Cancer”*  
Dr. Ashwani Sood

**2009**

**Total Grants \$394,694**

**University of California at San Diego (San Diego, CA)** **\$37,250**  
*“PTHrP: Translation of Molecular Biology to the Development of an Earlier Breast Cancer Test”*  
Dr. LJ Deftos

**Edinburgh Napier University (Edinburgh, Scotland)** **\$40,000**  
*“Potential of Altered AGP Glycosylation As A Marker for Breast Carcinoma”*  
Dr. Kevin Smith

**Sidney Kimmel Cancer Center (San Diego, CA)** **\$40,000**  
*“Evaluation of a Protein Microarray-based Profiling Assay of Enzymatic Activity for Breast Cancer Detection”*  
Dr. Charles Spruck

<b>Arizona State University (Tempe, AZ)</b> “Discovery and Validation of Artificial Recognition Elements for Detection of MUC1 Breast Cancer Biomaker” Dr. Kathryn Boltz	<b>\$40,000</b>
<b>Moffitt Cancer Center (Tampa, FL)</b> “Identified of Circulating Serum Biomarkers Via Gene Expression Profiling For Breast Cancer Screening” Dr. Marie Catherine Lee	<b>\$37,500</b>
<b>University of Texas (Austin, TX)</b> “Hyperspectral Microscopic Imaging of Circulating Tumor Cells (CTSCs) Isolated in Microfluidic Channels for Early Breast Cancer Diagnostics” Dr. John Zhang	<b>\$40,000</b>
<b>Duke University (Durham, NC)</b> “Assessment of nuclear Snail-1 protein in early stage breast cancer” Dr. Robin Bachelder	<b>\$39,944</b>
<b>University of Texas - MD Anderson Cancer Center (Houston, TX)</b> “DNA damage as a Biomarker of Risk of Breast Cancer” Dr. Isabelle Bedrosian	<b>\$40,000</b>
<b>Mayo Clinic (Rochester, MN)</b> “Molecular Breast Imaging for Screening of Women at Average Risk of Breast Cancer” Dr. Carrie Hruska	<b>\$40,000</b>
<b>University of California at San Diego (San Diego, CA)</b> “Breast Cancer Detection with Targeted DNA Nanoparticles” Dr. Bradley Messmer	<b>\$40,000</b>

**2008**

**Total Grants \$317,915**

<b>University of Virginia (Charlottesville, VA)</b> “Measurement of Aromatase in the Breast: Use for Breast Cancer Risk Assessment and Early Detection” Dr. Sarah Aiyar, <i>et al</i>	<b>\$40,000/2 years</b>
<b>University of Massachusetts (Amherst, MA)</b> “Compact Microwave Array Imaging Chamber for Improved Early Breast Cancer Detection” Drs. Anatoliy Boryssenko and Richard Arenas	<b>\$39,915/15 months</b>

**University of North Carolina (Chapel Hill, NC)** **\$40,000**  
*"Contribution of a Novel BRCA1 Promoter Polymorphism to Increased Breast Cancer Susceptibility"*  
Dr. William Coleman

**Duke University (Durham, NC)** **\$40,000**  
*"Validation of Novel Candidate Genes Involved in Early Breast Cancer Progression"*  
Dr. Joseph Geradts

**University of Pittsburgh Cancer Institute (Pittsburgh, PA)** **\$40,000**  
*"Development of Chimeric Biopolymers as Molecular MRI Contrast Agents to Detect Premalignant Breast Lesions, Breast Cancer, and Metastasis"*  
Dr. Qihong He

**University of Texas at Houston (Houston, TX)** **\$40,000**  
*"Developing a New Serum Assay for Detection of a Potential Novel Biomarker in Early Stages of Breast Cancer"*  
Dr. Wenzheng Zhang

**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. Daldrup-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



<b>Indiana University (Indianapolis, IN)</b> <i>"A Cancer Associated Isoform of PCNA in Breast Cancer has Implications as a Potential Biomarker for Disease"</i> Dr. Robert J. Hickey	<b>\$39,300</b>
<b>Mayo Clinic (Rochester, MN)</b> <i>"Serum Biomarkers for Early Detection of Basal-Like Cancer of the Breast"</i> Dr. Eric W. Klee	<b>\$34,300</b>
<b>Robert H. Lurie Comprehensive Cancer Center (Chicago, IL)</b> <i>"A Composite DNA Methylation Biomarker for Detection of Breast Cancer"</i> Dr. Victor V. Levenson	<b>\$40,000</b>
<b>Purdue University (West Lafayette, IN)</b> <i>"Breast Cancer-Specific tNOX Isoform for Early Detection and Diagnosis"</i> Dr. D. James Morré	<b>\$40,000</b>
<b>Mayo Clinic (Rochester, MN)</b> <i>"Comparison of Magnetic Resonance Imaging and Molecular Breast Imaging in Breast Diagnostic Evaluation"</i> Dr. Michael K. O'Connor	<b>\$40,000</b>
<b>MD Anderson Cancer Center at the University of Texas (Austin, TX)</b> <i>"Proteomic Detection and Validation of Proteins Produced Human Breast Tumors at the Earliest Time for Detection"</i> Dr. Fredika Robertson	<b>\$40,000</b>
<b>Mayo Clinic Comprehensive Cancer Center (Jacksonville, FL)</b> <i>"Defining Protein Kinase D1 As An Early Marker For Breast Cancer"</i> Dr. Peter Storz	<b>\$40,000</b>
<b>Russian Academy of Medical Sciences (Moscow, Russia)</b> <i>"Development and validation of a differential methylation screening technology applicable for the identification of early breast cancer diagnostic markers"</i> Dr. Vladimir Strelnikov	<b>\$40,000/2 yrs.</b>
<b>Mayo Clinic College of Medicine (Rochester, MN)</b> <i>"Candidate Gene Approach for Identification of Novel Breast Cancer Susceptibility Genes"</i> Dr. Csilla Szabo	<b>\$39,973</b>

**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

<b>University of California at Davis (Davis, CA)</b>	<b>\$37,900</b>
<i>"Serum Glycan Profiling as a Diagnostic Aid in Breast Cancer"</i>	
Suzanne Miyamoto	
<b>University of Kansas (Lawrence, KS)</b>	<b>\$40,000</b>
<i>"Centrosomal Biomarker For Early Detection of Human Breast Cancer"</i>	
Dr. Jonathan Li	
<b>Mayo Clinic (Rochester, MN)</b>	<b>\$40,000</b>
<i>"Visual and Computer Aided Analysis of Real-time Ultrasound Strain Image Sequences for Non-invasive Diagnosis of Breast Lesions"</i>	
Dr. Nicholas Hangiandreou	
<b>Winship Cancer Institute at Emory University (Atlanta, GA)</b>	<b>\$40,000</b>
<i>"Targeted Magnetic Nanoparticle Probes for Non-invasive Imaging of Breast Cancer Using MRI"</i>	
Dr. Lily Yang	
<b>Wake Forest University School of Medicine (Winston-Salem, NC)</b>	<b>\$38,458</b>
<i>"BARC (SCGF) in Breast Cancer Growth and Detection"</i>	
Dr. Suzy Torti	

**2004** **Total Grants \$193,489**

<b>Fox Chase Cancer Center (Philadelphia, PA)</b>	<b>\$40,000</b>
<i>"Benign Breast Registry to Assess Valid Endpoints"</i>	
Dr. Mary Daly	
<b>Mayo Clinic (Rochester, MN)</b>	<b>\$39,900</b>
<i>"Prediction of Invasive Breast Cancer and Breast Cancer Risk in DCIS and Benign Breast Disease by Analysis of Methylated Gene Markers"</i>	
Julian R. Molina, MD, PhD and Lynn Hartman, MD	
<b>Purdue University (West Lafayette, IN)</b>	<b>\$35,289</b>
<i>"Using the local bright feature algorithm to monitor the distribution of the nuclear protein NuMA. A novel approach for earlier detection of breast cancer"</i>	
Sophie A. Lelievre, D.V.M.	

**Washington University (St. Louis, MO)** **\$38,300**  
*"PET Imaging for Early Detection of Breast Cancer with a Radioactive Peptide"*  
Buck E. Rogers, PhD

**University of Missouri at Columbia (Columbia, MO)** **\$40,000/2 years**  
*"DNA Methylation Pattern in Breast Cancer Tissue and matched Nipple Aspirate Fluid/Serum"*  
Dr. Weizhu Zhu

**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

<b><u>2002</u></b>	<b><u>Total Grants</u></b>	<b><u>\$276,747</u></b>
<b>Georgetown University, Lombardi Cancer Center (Washington, DC)</b>		<b>\$37,544/2 yrs</b>
<i>"Use of Invadopodia Antigens for Clinical Detection or Metastatic Cancer in Serum and Tissue Samples"</i>		
Drs. Ozge Alper and Susette Mueller		
<b>Georgetown University, Lombardi Cancer Center(Washington, DC)</b>		<b>\$39,389</b>
<i>"Mitochondrial DNA Mutations in Nipple Aspirate Fluid as Molecular Markers for Detection of Breast Cancer"</i>		
Dr. Lee-Jun C. Wong		
<b>University of California at Los Angeles (Los Angeles, CA)</b>		<b>\$40,000</b>
<i>"Nipple Aspiration in Diagnosis of Breast Cancer"</i>		
Mai Nguyen		
<b>University of California at San Francisco (San Francisco, CA)</b>		<b>\$40,000</b>
<i>"Protein Signatures of Nipple Aspirate Fluid for Individualized Risk Assessment"</i>		
Drs. Maria Pallovicini and Laura Esserman		
<b>University of Manitoba (Manitoba, Canada)</b>		<b>\$40,000</b>
<i>"CTM-OPT: Computed Tomographic mammography One Photon at a Time"</i>		
Dr. Richard Gordon		
<b>University of Manitoba (Manitoba, Canada)</b>		<b>\$39,814</b>
<i>"hSBEM in serum: a new marker for the early detection of breast cancer"</i>		
Drs. Yvonne Myal and Etienne Leygue		
<b>Wake Forest University School of Medicine (Winston-Salem, NC)</b>		<b>\$40,000</b>
<i>"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"</i>		
Dr. Zheng Cui		

<b><u>2001</u></b>	<b><u>Total Grants</u></b>	<b><u>\$116,364</u></b>
<b>Georgetown University, Lombardi Cancer Center (Washington, DC)</b>		<b>\$36,364</b>
<i>"Profiling immune responses in patients with breast cancer: Identify anti-tumor antigens/antibodies found in the serum of patient with early breast cancer"</i>		
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