

***Four Years After the President's  
Cancer Panel Report:  
Recommendations and Next Steps  
Environmental Effects on the Breast***

**Suzanne E. Fenton, Ph.D.**  
**National Institute of Environmental Health Sciences**

**The Collaborative on Health and the Environment**  
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# **“The Mammary Gland: A Tissue Sensitive to Environmental Exposures”**

- **Presented to PCP on Oct 21 of 2008**
- **Brought to their attention –**
  - 1. Early breast development trend in girls**
  - 2. Need for risk assessment to consider mixture of parent and metabolites**
  - 3. Consideration of early life exposures – not the same as adult exposures**
- **Urgent need to incorporate MG as an endpoint in all developmental exposure studies to begin to shed light on the types of environmental compounds and their potential mechanism(s) of action leading to these effects**

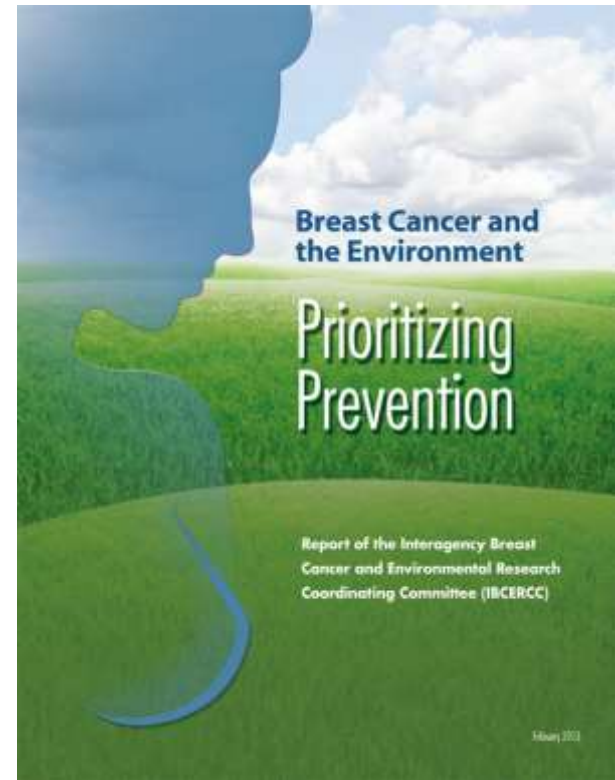
## Progress in Breast Cancer

- **President Bush Signs the National Breast and Cervical Cancer Early Detection Program Reauthorization Act – April 20, 2007**
- **To reduce the burden of breast cancer on women and men of all ethnic groups, Congress passed Public Law 110-354, the Breast Cancer and Environmental Research Act, in 2008.**
- **The Act required the Secretary of the HHS to establish the IBCERCC.**
- **The Committee, developed between 2009 and 2010 and supported by staff from the NIEHS and NCI, was comprised of federal members from agencies involved in research on breast cancer and the environment including the NIEHS, NCI, EPA, the DoD, and the CDC; non-federal academic and advocacy members.**

**The IBCERCC was charged with:**

- 1. Reviewing federal research efforts concerning the environmental and genomic factors related to breast cancer.**
- 2. Identifying scientific advances in breast cancer research and outlining key research questions, methodologies, and knowledge gaps.**
- 3. Developing a comprehensive strategy for accelerating transdisciplinary, innovative, and collaborative research on breast cancer and the environment across federal agencies and in partnership with nonfederal organizations.**
- 4. Determining how to increase public participation in decisions about breast cancer research and the optimal mode of dissemination of information on research progress.**

**2012 National Academies Institute of Medicine report – “BREAST CANCER AND THE ENVIRONMENT - A LIFE COURSE APPROACH”**



# IBCERCC KEY STATEMENTS

- **Prioritize Prevention**
- **Transform How Research is Conducted**
- **Intensify the Study of Chemical and Physical Factors**
- **Plan Strategically across Federal Agencies**
- **Engage Public Stakeholders**
- **Train Transdisciplinary Researchers**
- **Translate and Communicate Science to Society**

*“Prevention is the key to reducing the burden of breast cancer.”*

# California Breast Cancer Research Program Prevention Initiatives

- In March 2010, their council decided to build on the existing Special Research Initiatives by devoting 50% of CBCRP research funds between 2011 and 2015 toward the California Breast Cancer Prevention Initiatives.
- **2014 RFAs: Chemical Safety Testing to Reduce Breast Cancer Risk**
  1. **Develop New Testing Methods for Identifying and Testing Chemicals for their Potential to Contribute to Breast Cancer**
  2. **Identify Synergies Between and Aid in the Translation of Research Outcomes to Policy**
- **Occupational Chemical Exposures & Breast Cancer Risk**

# Progress in Chemical Testing in the Breast

- **Incorporation of methods into National Toxicology Program test guidelines to include appropriate evaluation of male and female mammary glands.**
- **Methods published for making mammary gland whole mounts and evaluation of the whole mounts**
- **Created a developmental atlas of Harlan Sprague Dawley rat mammary gland development**
- **OECD incorporated mammary evaluation into their test guidelines**
- **NIEHS will again fund the Breast Cancer & the Environment Research Program**
- **New funding opportunities in the area of PREVENTION in CBCRP**
- **Guest Editor for January 2015 *Reprod Toxicol* issue:  
18 manuscripts focused on breast cancer/development & environment**

# Where do we still need progress??

- **Coordination of agencies**
- **Enhanced funding in origins of breast cancer**
- **Increased focus on prevention**
  - This should not be defined as preventing someone from dying
  - Enhanced efforts in identifying the environmental factors causing cancer
- **Funding for translational research**
- **Enhanced funding in origins of breast cancer**
- **Long-term follow-up plan by Secretary – right now there is no follow-up plan.**