



Fox Chase Cancer Center • University of Cincinnati College of Medicine
Michigan State University • University of California–San Francisco

THE GOAL: To understand how *early environmental exposures* impact pubertal maturation, development of the mammary gland and breast cancer. BCERC researchers are studying these subjects because early puberty is a risk factor for breast cancer in women.



Grant No. U01 ES/CA 012770

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Cincinnati Breast Cancer & the Environment Research Center

UNIVERSITY OF Cincinnati
Cincinnati Children's Hospital Medical Center

eh.uc.edu/growingupfemale

Cincinnati Breast Cancer & the Environment Research Center

PROJECT 1

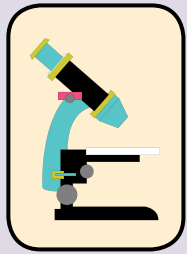
Environmental Impacts on Mammary Gland Development

OUR RESEARCH QUESTIONS:

- Do fatty acids and estrogens in our diet affect body fat?
- Does obesity affect development of the mammary gland in the breast?
- Do diet and/or obesity change the mammary gland's susceptibility to cancer causing chemicals?

OUR RESEARCH METHODS:

Laboratory animals are fed diets rich in fatty acids and estrogens. Scientific techniques are used to see how these



diets affect obesity, development of the mammary gland and how the mammary gland responds to cancer causing chemicals.

PROJECT 2

Environmental and Genetic Determinants of Puberty

OUR RESEARCH QUESTIONS:

- Do diet and/or environmental exposures affect when a girl starts puberty?
- Do a girl's genes and/or her social environment affect when she starts puberty?
- What personal and environmental factors are associated with how a girl matures through puberty?

OUR RESEARCH METHODS:

Young girls are recruited to participate in a study for 3-5 years. Questionnaires, lab tests and physical exams are done twice a year. We measure the girls' physical and psychological development, diet, physical activities and exposures to environmental chemicals.



Growing Up Female

Environmental Factors in Female Development & Disease

COTC

Community Outreach and Translation Core (COTC)

OUR PURPOSE:

We educate breast cancer advocates and the general public about the research being conducted by the scientists in our center. We explain the research findings in non-technical language so people understand and can make informed decisions.

OUR ACTIVITIES:

- discuss next steps in the scientific studies with the researchers
- develop educational materials for families in the *Growing Up Female* study
- assist with explaining research findings to study families
- conduct an annual public education program called *Looking Upstream for Environmental Links to Breast Cancer*
- attend the annual national scientific conference called *Emerging Topics in Breast Cancer and the Environment Research*



OUR COLLABORATING ORGANIZATIONS:

- Breast Cancer Alliance of Greater Cincinnati
- CCHMC Hereditary Cancer Program
- Interfaith Alliance
- Patterns Inc.
- Pink Ribbon Girls
- Sisters Network Cincinnati
- UC Breast & Cervical Cancer Program

OUR FUNDING SOURCES:

- National Institute of Environmental Health Sciences
- National Cancer Institute
- University of Cincinnati:
 - College of Medicine—Office of the Dean
 - Barrett Cancer Center at the University of Cincinnati
 - Barrett Cancer Center Breast Cancer Luncheon (2004)
 - Department of Environmental Health
- Cincinnati Children's Hospital Medical Center
- Western & Southern Financial Group
- Susan G. Komen for the Cure—Greater Cincinnati

CONTACT US:

COTC breast cancer advocates conduct free presentations about the Cincinnati BCERC projects to small groups.

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