

# Risk Policy Report

An exclusive weekly report for scientists interested in environmental policymaking and policymakers interested in science

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## NAS Poised To Advise On New Breast Cancer Risk Research Priorities

The National Academy of Sciences (NAS) is preparing to release its final report on research priorities for breast cancer risk factors, including potential environmental causes, a growing area of concern among some public health advocates who have urged EPA to better take the risks into account in its chemical assessments.

NAS' Institute of Medicine (IOM) will release the report "Breast Cancer and the Environment: The Scientific Evidence, Research Methodology, and Future Directions," Dec. 7. The study will review the standards for measuring and identifying breast cancer risk factors, assess the science regarding the relationship between the environment and breast cancer, consider interaction between genetics and environmental risks, recommend ways women can reduce exposure and identify areas in need of more research, according to the IOM website.

The Susan G. Komen for the Cure foundation requested NAS' assistance in creating a research strategy to assist it in prioritizing funding over the next decade, a member of the foundation's board said after the IOM panel's first meeting in April 2010.

Evidence is mounting for a possible link between environmental risks and exposures, and incidence and susceptibility to breast cancer, an area that is getting more attention from environmentalists who argue that EPA should better take into account breast cancer in chemical risk assessment. These conclusions are spurring interest from the federal government.

Around the time the IOM study began in 2010, EPA and other federal agencies formed the Interagency Breast Cancer and Environmental Research Coordinating Committee, with the aim to develop recommendations for the National Institutes of Health (NIH) and other agencies to "improve existing research programs related to breast cancer research" and a "plan to expand opportunities for collaborative, multi-disciplinary research," according to a National Institute of Environmental Health Science statement from the announcement.

At the interagency committee's first meeting in October 2010, several federal health officials decried the existing regulatory chemical testing system of two-year rodent bioassays to test industrial chemicals and pesticides that exist in the environment. The officials argued that the current test methods do not assess mammary tissue and therefore are not examining breast cancer endpoints, and do not examine critical *in utero* and childhood exposures. Panelists also faulted the National Cancer Institute (NCI) and NIH for inadequate emphasis in allocating research grants to environmental exposures that may cause cancer and other health issues.

The intergovernmental panel has since broken into a series of subgroups that are crafting recommendations for NIH and other agencies, on topics ranging from research process to research translation and policy implications.

Environmentalists have been pointing to research showing that exposure can not only cause breast cancer, but can also increase susceptibility to contracting the cancer, and have called on EPA to address the issue.

In a June editorial in the journal *Environmental Health Perspectives*, researchers at the Silent Spring Institute (SSI), a group that seeks to address environmental causes of breast cancer, and others published an editorial that calls on EPA and other federal agencies to amend research protocols to address several data gaps in their breast cancer and mammary gland research, especially with regard to the extent to which chemical exposure may heighten susceptibility to breast cancer.

In the editorial, titled "Testing Chemicals for Effects on Breast Development, Lactation, and Cancer," the authors call for EPA to include susceptibility to breast cancer as an end point in its testing, including procedures for dosing during development of the mammary gland; improved assessment of mammary gland development, structure and function; and increased assessment of the male mammary gland.

These recommendations have already been implemented by the National Center for Toxicological Research in several studies done in conjunction with the National Toxicology Program (NTP) but they still need to be integrated into standard protocols at NTP, EPA and the Organization for Economic Cooperation and Development, the editorial says.

— Jenny Hopkinson