

The University of Washington SBRP Research Translation and Outreach Core provides Agency Seminars and continuing education opportunities to professionals interested in environmental health and hazardous waste site topics. Ongoing Activities with Government Agencies include:

- Agency Seminar Series
- Consultation on Seafood Safety Messages
- *Research Summaries*, a tool to share information on site-specific topics

Representatives from community groups and government agencies learn about the lower Duwamish River Superfund site during a boat tour co-sponsored by SBRP.



Youth from neighborhoods surrounding a Superfund site tour the UW and participate in a hands-on lab simulation measuring contaminants in soil samples.

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UW Superfund Basic Research Program



Using scientific research to help cleanup hazardous waste and reduce risk to our communities



University of Washington
School of Public Health
and Community Medicine

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The University of Washington (UW) Superfund Basic Research Program (SBRP) is focused on reducing neurotoxic risks by examining the interaction between genetic factors and exposures to hazardous waste site contaminants.

The Superfund Basic Research Program is made up of a network of university grants funded by **the National Institute of Environmental Health Sciences**. Program research is designed to seek solutions to the complex health and environmental issues associated with the nation's hazardous waste sites.

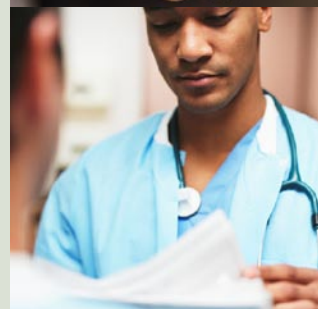
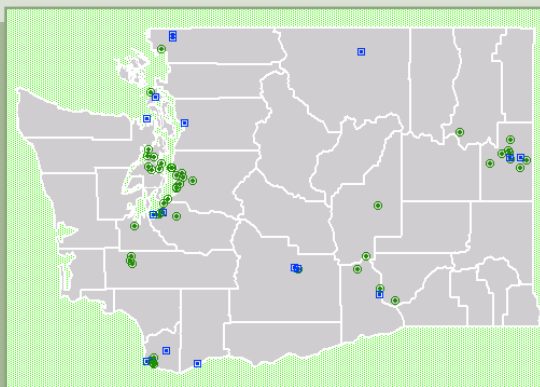
The Superfund Program was established by Congress in 1980, to locate, investigate and clean up the worst hazardous sites in the nation. Research conducted by the Superfund Basic Research Program (SBRP) is coordinated with the Environmental Protection Agency.

The primary objectives of the SBRP include obtaining information on the various hazardous substances at Superfund sites, assessing the risks that those substances pose to human health, and developing biomarkers for assessing chemical exposures and toxic risks to humans.

The SBRP Research Translation and Outreach Core at the UW works with communities concerned about hazardous waste sites and shares research findings from the University of Washington and other sources with stakeholders. The core acts as a liaison between agencies, tribal nations, and community organizations.

The core also supports technology transfer activities by helping program investigators move their research findings into the field. This often involves patenting techniques or tools that have been developed through the SBRP. Examples of research projects that are candidates for patents include quantitative biomarkers of exposure as well as commercialization of transgenic plants for solvent cleanup.

The SBRP Research Translation and Outreach Core is working at several Superfund and hazardous waste sites around Washington State. Hazardous waste sites in Washington may be under the Superfund federal program or the state Model Toxics Control Act (MTCA).



CURRENT SBRP RESEARCH PROJECTS

Projects are directed at addressing issues in vulnerable populations such as children, fetuses and the elderly, as well as focused on clean up of Superfund sites.

1. Heme Pathway Polymorphisms in Mercury Neurotoxicity in Adults and Children — Scientists are investigating how genetic differences affect individual sensitivity to the neurobehavioral effects of mercury.

2. Paraoxonase: Biomarkers of Susceptibility to Environmentally induced Diseases — Scientists are investigating the role of two paraoxonase genes (PON1 and PON2) in modulating susceptibility to organophosphorus insecticide toxicity, and in various neurodegenerative diseases, including Parkinson's disease.

3. Environmental and Genetic Risk Factors for Parkinson's disease — In this epidemiology study, scientists are working with an elderly population and characterizing the genetic traits and environmental exposures that may increase Parkinson's disease risk.

4. Biotransformation Gene-Environment Interactions in Coho Salmon Neurotoxicity — Scientists hope to create an early warning system for potential adverse human health effects by examining Coho salmon exposed to contaminants commonly found at Superfund sites.

5. Phytoremediation of Organic Pollutants Using Transgenic Plants — Scientists are developing poplar trees that are able to remove solvents as well as neurotoxic pesticides from the soil.

SBRP Outreach to Tribal Nations and Community Organizations includes:

- Educational Tours of Superfund Sites
- UW Lab Tours
- Co-sponsorship of Public Meetings
- Development of Risk Communication Materials