

DRAFT

API's Shanghai Health Study: Potential Benefits for World Health

An API health study of oil workers in Shanghai, China could produce results that will benefit the worldwide fight against cancer. API has launched the study to better understand the possible link between benzene exposure and the risk of bone marrow cancers. “Issues that have complicated benzene health risk assessment for decades could be clarified in Shanghai,” says Lorraine Twerdok, an API senior scientist who is coordinating the study.

Twerdok explains that a recent National Cancer Institute study of oil workers in Beijing found evidence that benzene exposure causes Non-Hodgkins Lymphoma (NHL), a type of bone marrow cancer. A link between benzene exposure and Acute Myelogenous Leukemia (AML) has previously been established. “If benzene exposure causes this additional health effect, we need to know a lot more about it to protect our workers and the public,” Twerdok says. “This is a good example of API seeing a research need and stepping up to the plate.”

API learned that Shanghai had unusually good worker exposure records going back many years, as well as qualified investigators in local scientific, medical and regulatory groups. Six API member companies committed to support a seven-year, \$21.8 million project on a subscription basis, with API committing an additional \$500,000 to help launch the effort.

The study is being conducted by leading experts, coming from such well-known institutions as the University of Colorado Health Sciences Center and Fudan University Medical Center in Shanghai. They are applying cutting-edge, 21st century technologies in ways that will not only advance understanding of benzene-induced disease, but may also identify potential prevention strategies.

In order to stand up to scientific scrutiny, the study must be large, well-managed, and incorporate the latest technology. A Scientific Review Panel made up of leading experts from relevant fields has reviewed and endorsed the research protocols. The protocols have also undergone a thorough analysis to ensure that they meet international standards for research involving humans. An Ethics Panel, comprised of bioethicists from the U.S., China and Europe, helps provide oversight for the project.

A key to the project's success is local partnerships. Collaborators on these studies include researchers from the Medical School at Fudan University, and the Chinese equivalents of OSHA and the Centers for Disease Control. Following Chinese tradition, the project was launched in a formal ceremony that received significant coverage in the *Shanghai News*, which prompted the largest hospital in the city to join the project.

Looking ahead, Twerdok is optimistic: "Not only will we learn about benzene health effects, but we will also add to our knowledge of the basic process through which bone marrow cancers develop," she says. "These results will benefit not only oil workers in China and the U.S. but the health of people worldwide."