

Federal nanotech risk research plan still comes up short

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An improved but still flawed government-wide plan for nanotechnology risk research is the result of a broken system. Federally-funded studies essential to managing possible risks from this cutting-edge technology should be guided by a top-down strategy tied to projected commercialization, expected human and environmental exposures, and the regulatory decision-making process.

The National Nanotechnology Initiative's (NNI) Nanotechnology Environmental and Health Implications (NEHI) Working Group recently released its strategy for nanotechnology environmental, health and safety research. The strategy outlines an improved focus on risk research for more than 20 federal agencies, including the Environmental Protection Agency (EPA), the Food & Drug Administration (FDA) and the Consumer Product Safety Commission (CPSC).

Earlier drafts of the strategy received widespread criticism from industry officials, policy experts and congressional lawmakers for being merely a list of general nanotechnology risk research categories. The new strategy makes substantial strides towards identifying prioritized research needs and assigning lead agencies to address these needs.

Also just released, the new EPA Office of Research & Development nanotechnology risk research plan appears to be in lock step with the NEHI strategy. The EPA plan includes important studies on risk assessment methods and life-cycle analysis to determine the eventual fate of nanomaterials.

But major hurdles still stand in the way of the public, industry and government obtaining a better understanding of the risks posed by nanomaterials — and how to limit those risks. Necessary resources for nanotechnology risk research are few and far between in relevant oversight agencies such as the EPA, FDA and CPSC. In addition, a limited investment by the NNI on occupational exposure research can only increase dangers to those most susceptible — workers.

“The truth is that while the NEHI made significant strides in this latest effort to present an improved nanotechnology risk research strategy, only about five of the more than 240 identified risk research projects focus on exposure assessment — which directly affects workers. These are the people who are on the front line and most likely to be exposed to potentially hazardous nanomaterials,” says David Rejeski, the director of the Project on Emerging Nanotechnologies (PEN).

“The document also fails to employ a ‘top-down,’ strategic approach aimed at directing funds and research at the places where there’s likely to be the most risk,” according to Rejeski. “The NEHI structure and plan are still broken. The plan is a collection of individual agency research programs and not a strategic approach appropriate to a technology projected to be incorporated into \$2.6 trillion worth of products by 2014.”

An earlier analysis by PEN shows that in FY2005, the U.S. government spent only about one percent of the overall \$1.2 billion federal nanotechnology research investment on highly relevant risk research. For more information, see: www.nanotechproject.org/inventories/ehs .

The current strategy suggests that things have improved, but according to Rejeski “only 40% of the listed research projects are highly relevant to understanding potential nanotechnology risks—the remaining 60% have only tangential relevance. Transparency over what is being done and

what needs to be done is essential to strategic planning. The cited \$68 million invested in nanotechnology risk research in fiscal year 2006 is an inflated estimate of work that directly addresses the issues, and that can only further confound the formulation of an effective strategic plan.”

Source: Project on Emerging Nanotechnologies

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