Rice expert calls for coordination in nanotechnology research

October 31 2007

Nanotechnology holds great promise for the future of cancer therapy and water treatment, but concerns about the safety of nanoproducts may limit these important technological developments, Vicki Colvin said today in comments to the U.S. House Committee on Science and Technology.

Colvin, director of Rice University's Center for Biological and Environmental Nanotechnology (CBEN) and executive director of the International Council on Nanotechnology (ICON), was an expert witness at the hearing "Research on Environmental and Safety Impacts of Nanotechnology." The hearing relates to the current direction of the National Nanotechnology Initiative (NNI).

Colvin told the committee she was providing her individual opinions, which have been informed by ICON's work with diverse international stakeholders on nanotechnology research needs in the areas of environment, health and safety (EHS). ICON also hosts a free, searchable database of EHS research papers.

"There is an urgency to nano-EHS research that affects the entire NNI investment," she said. "Innovation in nanotechnology is being threatened by the uncertainty about its risks. We need this innovation more than ever right now."

She called on the National Nanotechnology Initiative to release a detailed strategy for nano-EHS research no later than fall 2008.

"Going from a climate of uncertainty to one of confidence in managing nanotechnology risk is a massive undertaking that will take years to fully develop," Colvin said. "It will also take careful planning and coordination among agencies in this government and abroad. The ultimate plan would be most effectively organized by two, maybe three, overarching outcomes that stakeholders agree will give us more confidence in managing risks."

Colvin emphasized the importance of unifying "researchers' languages, methods and materials," which she referred to as "research harmonization" tools.

"If you fund five teams to help understand nanotube toxicity and they get five different answers, you are actually worse off because your research creates uncertainty rather than combat it," she said.

Colvin said there is a real need for government intervention.

"If left to ourselves, we might harmonize as a community in five to 10 years -- too long to wait for nanotechnology's innovation. The good news is that the U.S. government can, if it is thoughtful about the mechanisms, help researchers fix this problem quickly and for relatively low cost."

Source: Rice University