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NEW STUDY REVEALS PUBLIC ATTITUDES ON NANOTECHNOLOGY

Public Welcomes Potential Advances; Seeks Effective Management of Possible Risks

WASHINGTON—Americans welcome new potential life-saving and -enhancing applications promised by nanotechnology. But at the same time, they voice concern over a lack of research into nanotechnology's potential long-term human health and environmental effects and want to ensure that the government and private sectors are equipped and willing to effectively manage any would-be risks.

These are some of the findings in a new study released today by The Project on Emerging Nanotechnologies. The Project on Emerging Nanotechnologies at the Woodrow Wilson International Center for Scholars was created in partnership with The Pew Charitable Trusts in April 2005.

The study, *Informed Public Perceptions of Nanotechnology and Trust in Government*, is the most up-to-date, in-depth look at U.S. public perceptions of nanotechnology. Its author is Dr. Jane Macoubrie, a leading social scientist in communications studies and a senior advisor to the Project.

The report, based on a series of representative experimental issues groups held this summer, reveals that the public most anticipates major medical breakthroughs from nanotechnology and new consumer products that improve quality of life. People also want nanotechnology to help advance environmental protection, lower energy costs, and provide better food and nutrition products.

Macoubrie's results show that the public is clearly interested in and excited about the potential of nanotechnology, which exploits the unique behavior of materials and devices when engineered at a scale of roughly between 1 and 100 nanometers (a nanometer is one billionth of a meter, or about 1/100,000 the thickness of a human hair).

But people are concerned about the lack of consumer awareness of nanotechnology and of the estimated 500-700 nanotechnology products already on the market. The public also is troubled by potential unknown human health and environmental consequences, and by possible unintended uses.

Scientists and engineers are working to harness nanotechnology to help provide the world with new energy sources, quantum computing, and drugs to treat cancerous tumors before they metastasize. Currently sold products claiming to use nanotechnology or nanomaterials include paints, cosmetics, pharmaceuticals, clothing, and computer screens. The National Science Foundation (NSF) predicts that the market for nanotech products and services will reach \$1 trillion by 2015. Eventually, nanotechnology is expected to transform virtually every aspect of the economy and life.

The biggest hurdle may be convincing a skeptical public that oversight by government and industry will be swift, rigorous and independent of outside influences. Some respondents offered past examples of what they saw as “failed” oversight to support their belief that nano oversight might be less than what is needed.

“Thorough pre-market product safety testing was a key way people wanted government and industry to act to improve trust,” Dr. Macoubrie said. “Numerous named examples ranging from Vioxx to dioxin have created a widespread perception that industry pushes new products to market without adequate safety testing, and people feel industry too often has put its own interests ahead of consumer safety.”

A majority of study participants, 55 percent, say that government oversight beyond voluntary standards is needed to manage any possible health and environmental risks. Only 11 percent feel voluntary standards, which have been a key part of government and industry discussions about nanotechnology oversight so far, would be adequate.

Dr. Macoubrie also found that 76 percent of study participants believe that banning new nanotechnologies, as some nongovernmental organizations (NGOs) have called for until more is known about the technology, is overreacting.

“At this critical juncture, it is important that government, corporations, science and engineering leaders understand what the public wants and expects in terms of benefits from and oversight of nanotechnology,” said David Rejeski, director of the Project on Emerging Nanotechnologies.

“If this industry is to grow to its promise of one trillion dollars by 2015, the federal government and industry need to put as much energy into building public trust as they do into developing new nano applications,” said Rejeski. “In the end, the kinds of safety measures and disclosure the public wants make sense in terms of both long-term corporate strategy and good public policy.”

The **Woodrow Wilson International Center for Scholars** is the country’s living, national memorial to President Wilson. It was established by Congress in 1968 and is headquartered in Washington, D.C. The center establishes and maintains a neutral forum for free, open and informed dialogue. It is a nonpartisan institution, supported by public and private funds, and engaged in the study of national and world affairs.

The **Pew Charitable Trusts** serves the public interest by informing the public, advancing policy solutions and supporting civic life. The **Project on Emerging Nanotechnologies** joins two other Trust-supported science and technology policy projects—the Genetics and Public Policy Center at Johns Hopkins University and the Pew Initiative on Food and Biotechnology at the University of Richmond.

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