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U.S. STATES TURN TO NANOTECHNOLOGY FOR JOBS, INVESTMENT

New Lux Research report ranks U.S. states on economic development from nanotech:
Massachusetts, California, and Colorado lead

Washington, D.C. – January 25, 2005 – U.S. states poured more than \$400 million into nanotechnology research, facilities, and business incubation programs in 2004 – on top of greater than \$1 billion in federal government spending – making nanotech the largest publicly-funded science initiative since the space race. But states' efforts vary wildly in scope, effectiveness, and impact, according to a new report from Lux Research entitled "Benchmarking U.S. States for Economic Development from Nanotechnology." Lux Research Managing Director F. Mark Modzelewski will present the report in an exclusive briefing to the U.S. Department of Commerce tomorrow.

"Multiple stakeholders – including state and local officials, federal representatives, large corporations, start-ups, investors, and universities – have a vested interest in making nanotechnology efforts succeed," said Modzelewski. "Biotechnology created more than 400,000 jobs from 1979 to 1999. Nanotechnology promises a far greater economic impact because it can affect not just biologically derived products, but all manufactured goods. Also, it's not just new jobs that are at risk from nanotech; existing ones in industries impacted by nanoscale science are on the line as well."

To rank U.S. states on their ability to develop their economies through nanotechnology, Lux Research constructed a quantitative assessment tool that ranked all 50 states on 16 criteria. Lux Research independently assessed states' level of nanotechnology activity – including metrics like state nanotech spending, the status of a state nanotech initiative, companies active in nanotechnology in the state, and in-state nanotech patents – as well as states' general technology development strength, which includes metrics like R&D inputs, size of technology and science workforce, concentration of high-tech companies, and corporate taxation and regulatory burdens. States were ranked on a relative basis according to their populations, so a single nanotechnology center in New Hampshire has a greater impact than the same center would in Texas. The study found that:

- States vary widely across the metrics assessed by Lux Research. For example, New York has the greatest state-level funding of more than \$150 million in 2004 while 20 states including New Hampshire and Utah committed almost nothing; California boasts the highest number of nanotech patents with over 200, but 11 states have none to date.
- The top states combine a high level of nanotech activity with a strong track record in commercializing advanced technologies – but they aren't without flaws. Number-one-ranked Massachusetts has excelled in nanotech because of its leading universities and high concentration of technology entrepreneurs, but does not have a coordinated statewide initiative; #2 California is vulnerable to high taxes and regulatory hurdles that encourage businesses to elsewhere, and has seen leadership shake-ups at the California NanoSystems Institute; and #3 Colorado has committed little state-level funding, relying instead on federal appropriations and individual companies.
- A number of up-and-coming states are moving in on today's leaders. Number 11 Washington state has developed one of the first nanotechnology degree programs at the University of Washington, #13 Pennsylvania has built a large number of regional alliances with corporations and universities throughout the mid-Atlantic through its Ben Franklin Partners initiative, and #15 Minnesota boasts stellar R&D both at the University of Minnesota and at corporations like 3M and Cargill Dow.

"Leading states have three things in common," Modzelewski commented. "First, they involve all relevant stakeholders in developing nanotechnology initiatives rather than leaving the effort to universities. Illinois Governor Blagojevich's administration has done a particularly strong job in partnership with the Daly administration in Chicago, corporations,

start-ups, the universities, non profits and investors. Second, they focus on commercialization from the outset – as California did when it recruited entrepreneur Derrick Boston to lead the commercialization effort for the California NanoSystems Institute. Third, they play to strengths. For example, Arizona exploited assets donated by Motorola to develop nanotech efforts in electronics, where it already has a concentration of research activity.”

The report is available immediately to clients of Lux Research’s Nanotechnology Strategies advisory service. For information on how to become a client, contact Rob Burns, Vice President of Sales, at (646) 723-0708. Special terms are available for public sector institutions.

Lux Research’s linear ranking of U.S. states for economic development from nanotechnology follows:

- 1 Massachusetts
- 2 California
- 3 Colorado
- 4 Virginia
- 5 New Mexico
- 6 New Jersey
- 7 Connecticut, Maryland (tie)
- 9 Illinois
- 10 New York
- 11 Washington
- 12 New Hampshire
- 13 Pennsylvania
- 14 Texas
- 15 Minnesota
- 16 Arizona
- 17 Oregon
- 18 Vermont
- 19 Georgia, Michigan (tie)
- 21 Delaware
- 22 Rhode Island, Utah (tie)
- 24 Indiana
- 25 Oklahoma
- 26 North Carolina
- 27 Idaho
- 28 Nevada
- 29 Ohio
- 30 Kansas, Montana (tie)
- 32 Wisconsin
- 33 Iowa
- 34 Tennessee
- 35 Florida
- 36 Nebraska
- 37 Maine
- 38 Kentucky, Louisiana, Wyoming (tie)
- 41 Missouri
- 42 Alabama, South Carolina (tie)
- 44 North Dakota
- 45 West Virginia
- 46 South Dakota
- 47 Alaska, Arkansas, Hawaii, Mississippi (tie)

About Lux Research:

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