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**Federal Investment in Basic Research Yields Outsized Dividends – Innovation, Companies, Jobs
New Report Traces Origins of 100 Companies to Federally Funded University-Based Research**

How can the United States foster long-term economic growth? A new report suggests that one of the best ways is through investment in the basic research that leads to innovation and job creation. *“Sparking Economic Growth: How federally funded university research creates innovation, new companies and jobs”* released today by The Science Coalition identifies 100 [“success stories”](#) – examples of companies that are the result of federal investments in basic research. Collectively, these 100 companies employ well over 100,000 people and have annual revenues approaching \$100 billion. The companies also are helping to address critical issues in the area of medicine, technology, energy, environment and national security – leading the way toward a healthier, more sustainable and secure future.

“There is no question that the public benefit gained from funding basic research is exponentially greater than the initial investment,” said Susan Desmond-Hellmann, Chancellor of University of California San Francisco. “The success stories highlighted in this report demonstrate that fact and are a reminder that the continued scientific and technological leadership of the United States – and our economic well-being – depends on consistent, strong funding for research.”

The *Sparking Economic Growth* report identifies 100 companies that trace their founding to breakthrough research conducted at a university and sponsored by a federal agency. These success stories include global industry leaders like [Google](#), [Genentech](#), [Cisco Systems](#), [SAS](#) and [iRobot](#), as well as relative newcomers such as advanced battery manufacturer A123 Systems; network security company [Arbor Networks](#); AIDS vaccine developer [GeoVax Labs](#); and [Sharklet Technologies](#), which has developed a novel surface technology based on the qualities of shark skin to combat hospital-acquired infections.

The report illustrates the substantial economic benefits the U.S. reaps when companies are created as a result of discoveries in federally funded university laboratories. One example of this return on investment is [TomoTherapy Incorporated](#), based in Madison, Wisconsin. A \$250,000 grant from the National Institutes of Health’s National Cancer Institute to two researchers at the University of Wisconsin-Madison enabled the development of the core technology behind TomoTherapy: a highly advanced radiation therapy system that targets cancerous tumors while minimizing exposure and damage to surrounding tissue. Each year the technology is used to help improve the outcomes of tens of thousands of difficult to treat cancer patients around the world.

“That original investment generates many times its value in salaries and taxes returned to both the U.S. and Wisconsin governments,” says University of Wisconsin-Madison professor and TomoTherapy Co-founder and Chairman Rock Mackie. TomoTherapy employs 600 people.



While the 100 success stories highlighted in the report are just a small sample of the many companies created from federally funded university research, they highlight the exponential value of this investment.

“University-launched startups can be powerhouses for value creation, becoming public companies at a far greater rate than the average for new businesses,” according to Krisztina “Z” Holly, vice provost for innovation at the University of Southern California (USC). “Higher education can play a crucial role not just in spurring pioneering ideas, but in creating entrepreneurs who turn breakthroughs into innovations.” The results benefit everyone, she says. Holly points to 24 USC startup companies that currently employ 500 full-time workers, more than half of whom are in Los Angeles. Sixteen of these companies have raised at least \$148 million in financing over the past two years, during the height of the recession.

According to Stephen Forrest, vice president for research at the University of Michigan, research universities are integral to the economic vitality of their home states as well as to the nation. “At the University of Michigan, we are involved in every phase of economic development, from the basic research that sparks innovation to teaching the skills that enable entrepreneurs and innovators to succeed. We're collaborating with industry on R&D efforts and helping people and organizations transform sound ideas into economic solutions. We believe that this deep involvement is part of our mission to make both the State of Michigan and the United States competitive and secure in this period of rapid globalization.”

The Sparking Economic Growth report is available at www.sciencecoalition.org/successstories/ along with a database of companies created from federally funded university research. The searchable database also allows users to sort companies by federal funding agency, university affiliation, type of innovation, number of employees and a variety of other parameters. The database will be updated periodically with additional success stories and is intended to be a “living” resource of examples of companies created from federally funded university-based research.

The Sparking Economic Growth report and the associated website content were developed by The Science Coalition (TSC) to illustrate one way in which federal investment in basic research helps to stimulate the economy. The companies highlighted were self-selected by TSC member universities and represent only a small sampling of the many companies that are the result of federally funded university-based research.

The Science Coalition is a non-profit, nonpartisan organization of 45 of the nation’s leading public and private research universities. It is dedicated to sustaining the federal government’s investment in basic research as a means to stimulate the economy, drive innovation and secure America’s global competitiveness. Learn more at www.sciencecoalition.org.