



UTAH POLICIES AND PROGRAMS

HIGHLIGHTS

- *Utah's biopharmaceutical industry supported 34,000 jobs and contributed \$6.3 billion to the state's economy, including direct, indirect and induced impacts*
- *Utah's biopharmaceutical industry added jobs at almost twice the national growth rate from 1996 to 2006*
- *Since 2006, Utah has invested \$15 million annually in the Utah Science, Technology and Research Initiative, which is aimed at making strategic investments in the state's university research infrastructure*

Utah's Biopharmaceutical Industry

Utah has a mid-sized and growing biopharmaceutical sector providing 6,400 jobs in 2006.¹ The reach of the industry extends widely and supported \$6.3 billion in 2006 in total state economic output, including its direct, indirect, and induced impacts. Utah's biopharmaceutical firms have added jobs at a rapid rate with a 5.9 percent compound annual growth rate (CAGR) during the decade prior to 2006, compared with a 3.1 percent CAGR for the national sector. The State's biomedical research institutions support innovation, with 1,076 clinical trials underway in 2008.

Utah's Approach to Growing the Biopharmaceutical Industry

Life sciences is one of seven industry clusters targeted by the Utah Governor's Office of Economic Development,² and biomedical innovation and brain medicine are two of the six "innovation focus areas" identified by the Utah Science, Technology and Research Initiative (USTAR),³ the state's signature program for technology-led economic development.

For two decades, Utah has run a program that provides funding to commercialize university-based technology (the Centers of Excellence Program described below) and achieved some success in spinning off biopharmaceutical start-up companies. Ultimately, however, the state recognized that larger-scale investments were going to be required. As a result, the legislature created USTAR in 2006 to make investments in facilities at both the laboratory and full-building scale, to assemble large interdisciplinary research teams, and to provide commercialization and outreach services statewide.

"The Life Sciences industry is very strong in Utah, employing in excess of 27,000 people with salaries that average 147% of the state's average. Across the nation, and globally, Utah is a recognized leader in medical devices and pharmaceuticals, and both sectors continue to grow. In GOED [Governor's Office of Economic Development] we continue to develop emerging sectors and engage in activities to grow the entire industry."

Utah Governor's Office of Economic Development,
2008 Annual Report.
[http://goed.utah.gov/site-media/pagemedia/files/
Annual_Report_Final_Print_Copy_2008.pdf](http://goed.utah.gov/site-media/pagemedia/files/Annual_Report_Final_Print_Copy_2008.pdf)

Biopharmaceutical Sector Performance Measures	UT	US
Direct Employment, 2006	6,351	686,442
Direct Employment Growth (CAGR), 1996-2006	5.9%	3.1%
Average Annual Wages (Direct Employment), 2006	\$55,811	\$88,929
Total Supported Employment (incl. Direct), 2006	34,016	3,233,920
Total Economic Output, 2006 (\$ billions)	\$6.3	\$294.6
Direct Output per Direct Employee, 2006	\$409,225	\$128,925
Active Clinical Trials, 2008	1,076	21,795

Source: Archstone Consulting, *The Biopharmaceutical Sector's Impact on the U.S. Economy*, prepared for PhRMA, 2009.

CAGR = Compound Annual Growth Rate

Major State Initiatives to Attract and Grow the Biopharmaceutical Industry

USTAR

Funded at \$15 million a year plus a \$33 million supplement in 2009 from Recovery Act sources, USTAR is

- Providing funding to recruit research teams to the University of Utah and Utah State University (USU), including for a team focused on medical devices and biopharmaceuticals.
- Building state-of-the-art interdisciplinary research and development facilities at University of Utah and USU.⁴ As in other states, these buildings are intended to be magnets for industrial collaboration. Both universities have buildings under construction. The Sorenson Foundation has contributed \$15 million, which will be combined with USTAR funds to build the 193,000 square-foot Sorenson Molecular Biology Building at the University of Utah, anticipated to be the first of four multidisciplinary facilities to be constructed on the 11-acre quadrangle between the university's upper and lower campuses.⁵
- Providing advice on the Small Business Innovation Research/Small Business Technology Transfer program and modest grants for proof-of-concept work through a Technology Outreach Program, which has offices at universities in each region of the state.

During the first two years of the USTAR program, USTAR researchers started four companies based on technologies that they were able to develop with USTAR funding and two firms associated with faculty who were recruited to Utah with USTAR funding relocated to the state.

BioInnovation Gateway and InnovaBio

The **BioInnovation Gateway** (BIG) is a business incubator being constructed at Granite Technical Institute, a school in the state's Career and Technical Education system.⁶ BIG will provide 25,000 square feet of wet and dry labs and office space for up to seven life science start-up companies. Interns at the secondary and collegiate level will receive academic credit for working with any of the incubator's resident companies, under the supervision of professional staff. The project received support from a \$583,000 Workforce Innovation in Regional Economic Development (WIRED) grant from the U.S. Department of Labor, coordinated by the Governor's Office of Economic Development. In addition, USTAR provided \$250,000 to help fund construction of the facility.

A USTAR researcher at USU is leading a study to determine if prevention of cholesterol absorption is more effective when a drug, ezetimibe, is combined with a diet rich in phytosterols. The market for cholesterol-lowering drugs is estimated to be \$20 billion a year. This study could help inform the development of new treatments.

USTAR Update 2009
www.utahinnovation.com

InnovaBIO is a student-run, professionally supervised, fully equipped, contract research organization (CRO) based at Salt Lake City Community College. Similar to BIG, students receive academic credit for participation. This program also received funding from Utah's WIRED grant.

Utah Centers of Excellence (COE)

Created in 1986, Utah's COE program provides funding awards of up to \$250,000 a year for several years to university/industry projects intended to commercialize promising technology in the university's intellectual property (IP) portfolio. In 2007, the legislature provided the program with authority to provide direct grant awards to existing or start-up companies licensing university-owned IP; although these awards are typically smaller, in the range of \$50,000 to \$100,000.⁷ All COE awards require a one to one match from the participating company, and a significant number have been in the biopharmaceutical area.

COE Success Story

A biopharmaceutical company that spun-out from the Center for Cancer Genetic Epidemiology, a Utah COE, at the University of Utah, develops novel healthcare products to address some of the most pervasive diseases, such as cancer and Alzheimer's. Their products include predictive cancer products in addition to drug therapeutics.

The company was formed in 1991 and went public in 1995, with an initial public offering valued at \$54 million. In 2005, the company earned revenues of \$82 million with 760 full-time employees and a median salary of \$58,000. Approximately 660 of those employees reside in Utah. As of February 2007, the company was valued at \$1.51 billion.

GOED Centers of Excellence
20th Anniversary Report 1986–2006
www.goed.utah.gov

Utah Fund of Funds

To provide capital to spur life science start-up companies, Utah created a Fund of Funds. The legislature in 2003 authorized the issuance of \$100 million in tax credits to back institutional fixed-income investment in a fund of funds to be managed by a nonprofit corporation advised by a private-sector advisor.⁸ The fund was created to invest in venture-capital partnerships committed to sourcing deals in-state and spending a certain number of days in-state whether or not they are based in Utah. In 2008 the legislature added \$200 million more in tax-credit authority.⁹ Of the 24 venture capital partnerships selected for investment to date, at least seven declare specific interest in the life sciences, and several more invest in multiples technology areas, including the biosciences. Last year, the state calculated that \$127 million had been invested in Utah companies by the venture capital partnerships in the fund of funds, leveraging an additional \$365 million through syndication with other funds.¹⁰

¹ Archstone Consulting, *The Biopharmaceutical Sector's Impact on the U.S. Economy*, prepared for PhRMA, 2009. The biopharmaceutical sector is defined as including pharmaceutical and medicine manufacturing and scientific research and development services. The bioscience sector is broader and includes medical devices and agricultural feedstocks and chemicals in addition to biopharmaceuticals. Some states use the term life sciences or biomedical sciences, which often include hospitals and health care institutions as well.

² Utah Governor's Office of Economic Development, <http://goed.utah.gov/targeted-industries/>.

³ USTAR, "Research Clusters", <http://www.ustar.utah.edu/clusters.html>.

⁴ innovationUTAH, "About USTAR", <http://innovationutah.com/aboutustar/legislative.html>.

⁵ Sorenson Legacy Foundation, Press Release, 10/27/2008, http://sorensonlegacyfoundation.org/news/press_release/5.

⁶ innovationUTAH, "Bioinnovations Gateway" http://innovationutah.com/TOIP/salt_lake_county/saltlakecounty.html.

⁷ Centers of Excellence, "Updates for 2008-09 Fiscal Year" <http://alt.goed.utah.gov/COE/documents/UpdatedProgramGuidelines2008-09.pdf>.

⁸ Utah Fund of Funds, "2008 Annual Report" http://goed.utah.gov/site-media/page-media/files/Annual_Report_Final_Print_Copy_2008.pdf.

⁹ Utah Fund of Funds, "2008 Annual Report" http://goed.utah.gov/site-media/page-media/files/Annual_Report_Final_Print_Copy_2008.pdf.

¹⁰ Utah Fund of Funds, "2008 Annual Report" http://goed.utah.gov/site-media/page-media/files/Annual_Report_Final_Print_Copy_2008.pdf.

PhRMA 2010