

Gov creates new authority to secure firms in bio, high-tech

Phoenix Business Journal

July 23, 2010

According to Arizona's Bioscience Roadmap, commissioned and coordinated by the Flinn Foundation, the state needs to focus on four strategies to develop a strong bioscience hub. Here are those strategies and how Arizona has fared since the March report.

Build research infrastructure

- Banner Alzheimer's Institute received two federal stimulus grants worth \$9.1 million to more than double its research space and purchase a cyclotron, used to create the radioactive elements used in molecular imaging. The institute received another \$4.5 million in private foundation funding for research on Alzheimer's prevention and non-medical support services.
- ASU's Biodesign Institute earned a \$3.1 million grant from the National Institutes of Health to study, in collaboration with investigators at the University of Arizona and the Phoenix Veterans Administration Health Care System, the pre-symptomatic detection of Type 2 diabetes. Meanwhile, UA and Northern Arizona University began a \$333,000 collaborative study of the effect of altitude on Type-1 diabetics.
- A consortium of researchers led by ASU secured \$6 million in funding from the U.S. Department of Energy to test the viability of algal biofuels as replacements for petroleum-based fuels.
- UA purchased for \$3 million a research building in Oro Valley previously occupied by drugmaker sanofi-aventis, which recently opened a new, much larger facility nearby. UA said that it will use the new space to house a drug-discovery and development center, as well as provide incubator space for start-up companies.
- The Translational Genomics Research Institute and its Michigan affiliate, the Van Andel Research Institute, won \$5 million in federal stimulus and private grant funding for a novel study of cancer in dogs. The study could yield medical applications in both veterinary and human oncology.
- The Healthcare Transformation Institute, a nonprofit organization focused on making the health-care delivery system more effective and efficient, was launched under the leadership of ASU professor Denis Cortese, previously the Mayo Clinic president and CEO; and Patrick Soon-Shiong, founder and chairman of Abraxis BioScience Inc. The institute is funded jointly by Soon-Shiong, ASU, and UA.

Build critical mass of firms

- Celgene Corp., a biotechnology company with a market value of roughly \$22 billion, established a foothold in Arizona with the \$2.9 billion purchase of Abraxis BioScience Inc., a Los Angeles-based firm that recently opened a \$70 million advanced manufacturing facility in Phoenix.
- St. Joseph's Hospital and Medical Center and Phoenix Children's Hospital announced an agreement to unite their pediatric services. St. Joseph's will move most of its pediatric services to the new Phoenix Children's hospital tower, while some Phoenix Children's research programs will move to St. Joseph's.

- UA spinoff Valley Fever Solutions Inc. received a \$3 million NIH grant to continue production and clinical trials of the drug nikkomycin Z, a promising treatment for Valley Fever, which infects an estimate 100,000 Arizonans annually.
- Tempe-based Kinetic Muscles Inc. won a \$2.8 million NIH grant to conduct clinical trial of its Hand Mentor device for rehabilitation of stroke victims. The target group for the test will be rural patients, for whom traditional rehabilitation is particularly difficult to obtain and especially expensive.
- The Flagstaff-based Northern Arizona Center for Emerging Technologies welcomed two new resident clients: Flagship Biosciences LLC, which provides digital histopathology services; and PathoGene LLC, a spinoff of NAU and TGen North developing molecular diagnostic tools for the detection and investigation of infectious diseases.
- Agricultural biotech firm Monsanto Co. purchased a facility in Casa Grande to use for research and development related to biotech cotton. The firm expects to employ a staff of 50 at the site, and stated its plan to expand operations at its Eloy and Maricopa locations as well.
- Scottsdale-based Medicis Pharmaceutical Corp., which designs aesthetic and dermatology products, announced plans to add 100 employees over the next year and said that it is considering building a second 150,000 square-foot facility at its north Scottsdale headquarters.
- Predictive Biomarker Sciences Inc., a startup firm in Mesa owned partly by TGen, completed its first contract drug analysis for a Canadian firm, using computer imaging to assess the preclinical drug candidate's activity against live cancer cells.
- Banner Health and Mayo Clinic were both ranked among the top 10 health systems in the United States on measures of clinical performance in a study by Thomson Reuters. Scottsdale Healthcare was among the study's top 50 health systems.

Enhance business environment

- By executive order, Arizona Gov. Jan Brewer created the Arizona Commerce Authority, a public-private partnership designed essentially as a replacement for the state Department of Commerce. Gov. Brewer granted \$10 million in federal stimulus funding to the group, which will be overseen by a board of Arizona business leaders and will concentrate on attracting and retaining aerospace, bioscience, solar energy, and defense firms.
- The Tucson-based Critical Path Institute's Coalition Against Major Diseases, a consortium of drug makers, patient groups, and representatives of regulatory and research bodies, launched a comprehensive database of records from some 4,000 participants in clinical trials for drugs aimed at treating Alzheimer's disease. The database will be open to all pharmaceutical firms and researchers studying the disease.
- The Innovations technology incubator opened in Chandler, with UA and InNexus BioScience as two of its prominent early tenants. The incubator, housed at a former Intel research site, was made possible by a \$5.7 million investment from the City of Chandler.
- Science Foundation Arizona released a report by the Battelle Technology Partnership Practice finding that in SFAZ's first three years of operation, the public-private partnership used \$50 million in research grants to attract another \$152.8 million in outside support. Over those three years, SFAZ's grants yielded the creation of 1,151 jobs, 16 new companies, 84 patents, and 11 licenses.

- Gov. Brewer signed Senate Bill 1254, updating Arizona's tax credit for research and development. Under the revised law, young companies with fewer than 150 employees that would be unlikely to have taxable income will be able to earn back funds for the R&D tax credits they claim.

Prepare workers, educate citizens

- Construction began on the Health Sciences Education Building on the downtown Phoenix Biomedical Campus. The \$187 million facility will allow the UA College of Medicine-Phoenix to increase the number of medical students it enrolls each year from 48 to 120 students per year. The building will also enable a much larger role for NAU's allied-health programs on the campus.
- ASU ended its partnership with UA on the College of Medicine-Phoenix to refocus resources on other educational priorities. NAU retained its smaller collaborative arrangement with UA, under which NAU allied-health students will train beside UA medical students.
- ASU launched a master's degree in regulatory science and health safety, beginning in Fall, 2010. At NAU, plans were announced to offer a bachelor's degree in biomedical informatics; master's degrees in science education and physician's assistant; and doctoral degrees in nursing practice and occupational therapy. UA established a new department and bachelor's-degree program in biomedical engineering.
- ASU and UA students in the biosciences won a series of major national awards: Josh Niska, an ASU biochemistry major who had conducted research at TGen since he was a high-school senior, was named to *USA Today's* 2010 All-USA College Academic (First) Team. Ben Strauber, an ASU neuroscience and linguistics major, won the internationally competitive Gates Cambridge Scholarship. And four students at both ASU and UA won Goldwater Scholarships, the top undergraduate award in the nation for student in mathematics, the natural sciences, and engineering who intend to pursue research careers. Five of the eight recipients are planning careers in the biosciences.
- Bioscience High School, located on the downtown Phoenix Biomedical Campus, graduated its first class of seniors. Opened in 2006, the specialty school in the Phoenix Union High School District will this fall reach its intended capacity of 400 students.