

# Arizona making strides on Flinn's Bioscience Roadmap

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*According to Arizona's Bioscience Roadmap, commissioned and coordinated by the Flinn Foundation, the state needs to focus on four main strategies to create a strong bioscience hub. Here are those strategies and how Arizona is faring in the first quarter of 2008.*

## **Strategy 1: Build research infrastructure**

- The University of Arizona received one of the largest grants in state history for scientific research. The university's Bio5 Institute will lead a \$50 million, five-year grant to create the iPlant Collaborative, a global center and computer infrastructure that will enable researchers around the world to tackle complex, multidisciplinary plant science challenges. UA will retain 79 percent of the funds, and another portion will flow to Arizona State University. The grant will be eligible for renewal in five years, for a potential total of \$100 million.
- The Arizona Cancer Center at UA received a five-year, \$6.5 million grant renewal from the National Cancer Institute to sustain its Therapeutic Development Program. The NCI award, which UA first won in 1975, will fund several lines of drug development research, including clinical trials related to two promising anticancer drugs developed at the center.
- UA created an endowed faculty position and research fund for the study of rheumatology, funded by a \$6 million bequest from a longtime Tucson doctor. Salvatore Albani became the Charles A.L. and Suzanne M. Stephens chair of rheumatology. He also will direct the Arizona Arthritis Center.
- Researchers at ASU's Biodesign Institute received a four-year, \$1.5 million grant from the National Institute of Allergy and Infectious Diseases to study the capacity of tobacco plants to provide a vaccine or drug to block West Nile virus from attacking a person's central nervous system.
- Banner Alzheimer's Institute announced a partnership with international health care giant AstraZeneca to advance understanding and treatment of Alzheimer's disease. Scientists at the two institutions plan to use brain-imaging methods to study how the disease progresses and affects the brain.
- University Medical Center in Tucson recorded its 1,000th transplant involving the heart or lungs. The hospital's Cardiothoracic Transplant Program has become one of the world's most successful heart and lung programs since it was formed in 1979 by Dr. Jack Copeland.
- The new Applied Research and Development Building at Northern Arizona University was named the "greenest in the state" for being energy-efficient and using sustainable materials. The distinction is made by the U.S. Green Building Council, which gave the building a platinum Leadership in Energy and Environmental Design

rating, the highest possible. The facility houses NAU's Center for Microbial Genetics and Genomics, led by anthrax expert Paul Keim.

### **Strategy 2: Build critical mass of firms**

- Ventana Medical Systems, the Tucson area's largest biotech employer, was purchased for \$3.4 billion by Roche Holding AG, the Swiss pharmaceutical and diagnostics giant that had been angling to acquire Ventana since last June. Roche said Ventana would maintain its headquarters in Oro Valley, and could end up expanding there. Ventana, an international cancer-tissue testing firm with 660 local employees, was founded in 1985 by UA professor Tom Grogan.
- The Molecular Profiling Institute, the first spin-off company of the International Genomics Consortium and the Translational Genomics Research Institute, was acquired for approximately \$40 million by Texas biotech firm Caris Diagnostics. MPI employs 50 in downtown Phoenix and has developed several diagnostic tests to guide disease treatment based on an individual's genomic makeup.
- Provista Life Sciences of Phoenix launched a new blood test for early detection of breast cancer in Arizona patients. The Biomarker Translation Test was designed to assist physicians in making an earlier and more accurate diagnosis of breast cancer when used in conjunction with a mammogram.
- Solis Women's Health, a Texas firm that specializes in screening for and diagnosis of breast cancer, entered the Phoenix market by purchasing BenOra Imaging, a breast diagnostic firm founded in 1982.

### **Strategy 3: Enhance business environment**

- Leading Phoenix-area bioscience and investment professionals announced the formation of the Translational Accelerator LLC, a private, Arizona-based \$20 million bioscience venture capital group. Trac becomes Arizona's first venture fund established to target early-stage bioscience companies. Investments will support firms located in Arizona or those planning to move to the state.
- Patrick Soon-Shiong, chairman and CEO of Abraxis Bioscience, a Los Angeles-based biotechnology company with a growing presence in Phoenix, invested \$21.5 million in two TGen initiatives. The programs take complementary approaches to help propel research discoveries toward commercial viability and clinical applications.
- IR BioSciences Holdings Inc. of Scottsdale struck a deal for \$3 million in debt financing to further develop Homspera, a drug with possible applications including the treatment of infectious disease and cancer.

### **Strategy 4: Prepare work force, educate citizens**

- Helios Education Foundation donated \$6.5 million to support the Helios Scholars internship program at TGen for the next 25 years. The program supports 45 high school, undergraduate and graduate students each summer.
- NAU received a \$3.4 million grant to double the number of math and science teachers it graduates each year. The grant, one of 12 nationwide, will establish NAUTeach, modeled after a successful program at the University of Texas in Austin.

Funding came from the National Math and Science Initiative, supported by the ExxonMobil Corp., and a \$1 million grant from the Helios Education Foundation.

- Freeport-McMoRan Copper & Gold Inc. provided a \$500,000 gift to boost science and engineering programs at NAU and to expand efforts to promote interest in math and science among grade-school students.
- The Arizona State Board of Education bolstered high school graduation requirements for science and math beginning with the freshman class of 2008, a key step toward boosting the state's capacity to provide ready, capable workers for future bioscience and technology positions.