

# Infrastructure projects help stimulate economy, pave way for bio growth

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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 October report.

## Build research infrastructure

- The Arizona Board of Regents approved a plan to invest \$187 million in the downtown Phoenix Biomedical Campus. The bulk of those funds would go toward constructing a 268,000-square-foot health sciences education building, which would enable the University of Arizona College of Medicine-Phoenix in partnership with Arizona State University to train additional medical students, as well as provide space for additional biomedical research.
- In its fifth special session of the year, the Arizona Legislature restored close to \$18.5 million to Science Foundation Arizona. The funding will allow SFAz to fulfill commitments it had made to research and education projects across Arizona in the areas of information and communications technology, sustainability, and the biosciences.
- Several Arizona institutions were part of a team receiving a five-year, \$40.8 million federal contract to develop systems for rapidly measuring individuals' exposure to radiation. The project, directed by Carl Yamashiro of the Biodesign Institute at ASU, also includes researchers from the Phoenix-based Translational Genomics Research Institute, High Throughput Genomics Inc. of Tucson, UA, and Scottsdale Healthcare Research Institute.
- Barrow Neurological Institute at St. Joseph's Hospital and Medical Center in Phoenix opened a new facility for its Muhammad Ali Parkinson Center. The 10,000-square-foot movement-disorders clinic substantially increases the Center's treatment and research capacity.
- A research group that includes scientists from UA's Arizona Genomics Institute decoded the corn genome, a breakthrough that promises new advances in securing and strengthening the global food supply. The researchers' findings, published in the journal *Science*, emerged from a four-year, \$32 million project.
- ASU recruited to its faculty the retired chief executive of the Mayo Clinic, Denis Cortese, who will lead a new program focused on promoting a sustainable U.S. health-care delivery system.
- The BIO5 Institute at the University of Arizona appointed Fernando Martinez as its new director. Martinez, one of the world's foremost authorities on asthma, and the lead investigator on UA's \$44 million component of the National Children's Study, had served as interim director since February, 2009.

## Build critical mass of firms

- After a \$70 million investment to upgrade and expand the former site of Watson Pharmaceuticals, Abraxis Health officially opened its new plant on the west side

of Phoenix. The facility, which will produce the chemotherapy drug Abraxane for Abraxis BioScience, will be one of the world's most sophisticated nanobiologics manufacturers in the world, and will provide up to 200 high-wage jobs.

- Officials from Banner Health and the University of Texas M.D. Anderson Cancer Center broke ground on their 120,000-square-foot joint endeavor in Gilbert, the \$107 million Banner M.D. Anderson Cancer Center, expected to open in the fall of 2011.
- BioAccel (formerly Catapult Bio), a nonprofit organization focused on stimulating economic development in Arizona by assisting in the commercialization of late-stage research, made its first two grants to startup companies. One firm, Casework Genetics, specializes in evaluating complicated forensic DNA evidence, using technology discovered at TGen and the University of California at Los Angeles. The other firm, Mesa-based Kemeta LLC, is developing a palm-sized breath acetone analyzer that measures fat metabolism.
- W.L. Gore & Associates sought approval from the City of Phoenix for \$30 million in recovery-zone bonds to help finance the medical-device manufacturer's \$100 million expansion in north Phoenix. The project, which will include two 100,000-square-foot facilities, is expected to create 1,800 construction jobs over a two-year period and yield as many as 800 new research and manufacturing jobs.
- Yulex Corp., a Maricopa firm that develops medical devices, biofuels, and a range of other products from the guayule plant, was named Green Innovator of the Year at the annual Governor's Celebration of Innovation Awards. Other bioscience-related award winners included ASU's Polytechnic campus in Mesa for its algal biofuels research program, and Ron Shoopman, president of the Southern Arizona Leadership Council and vice chair of Arizona's Bioscience Roadmap, named the William F. McWhortor Community Service Leader of the Year.
- A team of researchers in Flagstaff at TGen North and the startup firm PathoGene asked the Food and Drug Administration for rapid approval of a newly developed flu test that would help health-care workers determine whether patients have seasonal flu or the H1N1 flu, and whether their flu is drug resistant.

#### Enhance business environment

- The University of Arizona broke ground on the Arizona Bioscience Park on Tucson's south side. The multi-use, 54-acre Bio Park will include incubator space for bioscience companies, a bioscience high school, university laboratory space, and residential and office buildings. Funding to initiate infrastructure improvements came from a \$4.7 million grant awarded in late 2009 by the federal Economic Development Administration.
- The Biodesign Institute at ASU hired Lee Cheatham, executive director of the Washington Technology Center in Seattle to serve as Biodesign's operations director and the general manager of the institute's new Impact Accelerator, which focuses on commercializing Biodesign research discoveries.
- A 152-acre former Motorola campus in Chandler's Price Road Corridor took a step closer to rebirth as a science and technology park, as its new owner applied for rezoning the property to accommodate high-tech businesses, research-and-development facilities, and retail and restaurant buildings.
- In Surprise, an angel-investment group was established. The group, which will be based at the city of Surprise's technology incubator, the AZ TechCelerator, will enable investors to meet entrepreneurs launching companies through the incubator.

- The Northern Arizona Center for Emerging Technologies, which opened in late 2008, graduated its first company, biotech startup SenesTech Inc. Formerly NACET's largest client, SenesTech moved into an 8,400 square-foot space at the Flagstaff Airport Business Center, also home to TGen North and Machine Solutions Inc.

Prepare workers, educate citizens

- The BIO5 Institute at UA received a \$750,000 grant from the Helios Education Foundation to implement the Jr. BIOTECH program, which will train and equip middle-school science teachers to lead inquiry-based classroom activities. The program expands the BIOTECH program implemented at numerous Arizona high schools.
- The Arizona Technology Council announced its backing for two Arizona STEM (science, technology, engineering, and mathematics) education initiatives. The Tech Council will take over leadership of Project Lead the Way, a program to create partnerships between schools and businesses that encourage students to consider careers and math and science, and getSTEM-Arizona, an online portal that links teachers with businesses that support technology education. The Tech Council will also host the Arizona Science and Engineering Fair this spring.
- UA opened the Institute for Advanced Telemedicine and Telehealth (T-Health Institute) at the Phoenix Biomedical Campus, positioning Arizona to take a national leadership role in employing new technology in health-care education and the development of strategies to reduce medical errors.
- Phoenix learned it will host the Intel International Science & Engineering Fair, expected to draw 5,000 registrants, in 2013, 2016, and 2019. Phoenix last hosted the event in 2005.
- NAUTeach, a program at Northern Arizona University to steer math and science majors into K-12 education, began its second year with a full introductory class of 68 students--and 50 more on the waiting list.

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