UA establishes institute to spur translational research

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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 January report.

Build research infrastructure

- The University of Arizona formed a Clinical and Translational Science Institute to help move discoveries faster from the laboratory into the clinical setting. The CTSI, which will be led by Fernando Martinez, director of the BIO5 Institute, is also intended to strengthen UA's competitiveness for a $20 million grant from the National Institutes of Health to join the Clinical and Translational Science Award consortium.
- The Arizona Biomedical Research Consortium and the Phoenix-based Translational Genomics Research Institute finalized a revised contract for millions of dollars in state tobacco-tax revenues to continue flowing to TGen through fiscal year 2012. Meanwhile, TGen and the Michigan-based Van Andel Research Institute finalized their strategic alliance and affiliation agreement.
- Researchers from UA joined a team of academic and industry scientists from across the country that received $44 million from the U.S. Department of Energy to develop new sources of algal biofuels and bioproducts. The federal funds will be matched by the private sector and cost-share funds.
- ASU prepared to break ground on the $160 million Industrial Science and Technology Building IV, a multi-use facility of nearly 300,000 square feet. ISTB-IV, to be built adjacent to the Biodesign Institute, will include more than 80 laboratories for biological and chemical research.
- A team of plant scientists at UA decoded the genome of the cassava plant, the primary food crop for more than 700 million people in Africa. Having the complete genome will allow researchers to isolate specific traits and develop varieties of cassava that are more drought- pest- and virus-resilient.
- A research team at the Biodesign Institute at ASU used genetically modified tobacco plants to produce the first plant-derived therapeutic capable of stopping the West Nile virus after infection.
- The UA Foundation purchased for $9.85 million a 2.6-acre site adjacent to the Phoenix Biomedical Campus. A 33,000 square-foot facility on the site, formerly owned by Ribomed Biotechnolgies Inc., will be renovated to house expanded UA research operations.

Build critical mass of firms

- VisionGate Inc., a medical-imaging company focused on early detection of cancer, announced that it would be relocating its headquarters from Seattle to Phoenix. VisionGate, founded by Alan Nelson, director of the Biodesign Institute at ASU, will

occupy space on the Phoenix Biomedical Campus in the building that also houses TGen and the International Genomics Consortium.

- Sanofi-aventis officially opened its new Tucson Research Center in Oro Valley's Innovation Park. The 110,000 square-foot facility is the headquarters for sanofi's combinatorial-chemistry research efforts.
- University Medical Center Corp. and University Physicians Healthcare announced that they will be merging into a single company, tentatively identified as University of Arizona Medicine. William Crist, UA vice president for health affairs, said that the united company will better support the UA College of Medicine, strengthening its research and physician-training operations.
- CardioNet Inc., a Pennsylvania-based firm that makes wireless heart monitors, opened a new facility in Phoenix, initially employing a staff of 20, to serve the company's West Coast customers. CardioNet's devices are manufactured by Jabil Circuit Inc. of Tempe.
- Tempe-based Intrinsic Bioprobes completed licensing agreements for two of its protein biomarkers for diabetes with Ortho-Clinical Diagnostics, a Johnson & Johnson company. The biomarkers were discovered using Instrinsic Bioprobes' proprietary mass-spectrometry-based technology.

Enhance business environment

- A coalition of pharmaceutical companies assembled by the Tucson-based Critical Path Institute to find better treatments for tuberculosis received crucial backing of the U.S. Food and Drug Administration. The FDA will soon release new policy intended to cut the approval time for combinations of experimental drugs from a typical duration of 24 years to just six years.
- Economic impact studies were released by both Mayo Clinic and Scottsdale-based TGen Drug Development Services (TD2). Mayo Clinic's Scottsdale campus generates $747 million in economic impact each year, employing more than 4,600 full-time workers and supporting another 6,000 jobs. TD2, a TGen spinoff, generates $4.3 million in direct economic impact and a total economic impact of $26 million, a total expected to reach $239 million by 2015.
- Science Foundation Arizona released a study of Arizona's technology sector that found technology jobs in Arizona far more stable than the sector at a national level. Arizona's tech sector also fared better than the state's overall employment base, losing 0.1 percent of its jobs in 2008, compared to a 3.2 percent decline in the private sector as a whole. The study also found that for every $1 SFAz invested in research projects, $2.18 was invested by industry partners.
- Arizona Technology Enterprises (AzTE), ASU's technology-commercialization arm, formed an alliance with Japan Technology Group (JTG), which represents eight Japanese universities. JTG will help to market ASU-developed intellectual property in Japan, while AzTE will market the Japanese universities' technologies in the United States. The two groups will also seek joint research opportunities.

Prepare workers, educate citizens

- The Arizona Legislature's Joint Committee on Capital Review gave a favorable review to the Health Sciences Education Building (HSEB), which will allow construction to begin on the critical new facility on the Phoenix Biomedical Campus. HSEB will enable the UA

College of Medicine-Phoenix in partnership with ASU to expand from its current size of 48 students per class to as many as 110 students per class. Construction of the $187 million building is expected to generate 5,300 on-site jobs.

- UA received a competitive $15 million federal stimulus grant from the National Institutes of Health to construct a 22,000-square-foot laboratory support facility to serve researchers from multiple institutions on the Phoenix Biomedical Campus.
- SFAz announced the establishment of the Bisgrove Scholars post-doctoral program to attract promising early-career researchers to Arizona's public universities. SFAz will invest an initial $1.9 million in the program; after five years, SFAz will place an additional $5 million in an endowment for the program, to be matched by $25 million from the universities.
- The UA College of Medicine-Phoenix in partnership with ASU announced that researchers from its nanobiology and nanomedicine programs will occupy space in Chandler's new Innovations Technology Incubator. Separately, both UA and ASU said that they are planning satellite branch campuses of up to several thousand students in Chandler.
- The Vail School District broke ground on its first K-12 school, the Vail Academy and High School, at the UA Science and Technology Park. The school, which will house 225 K-8 students and 225 high-school students, and is the first K-12 school at a university park, emphasizes STEM (science, technology, engineering, and mathematics) education.
- Approximately 700 students from kindergarten through fifth grade attended ASU's Brain Fair on March 22-23 to learn about science and scientific careers. The Brain Fair's developer, behavioral neuroscientist Heather Bimonte-Nelson, recruited 150 student and faculty volunteers and a half-dozen sponsors for the project.