

Arizona institutes play role in lung cancer 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 for a strong bioscience hub. Here are those strategies and how Arizona fared in the third quarter.

Build Research Infrastructure

- Two Arizona research institutes are playing leading roles in a \$200 million bioscience initiative announced by Luxembourg involving three research projects. One component, to develop a diagnostic tool for lung cancer, will be led by the Partnership for Personalized Medicine, involving the Translational Genomics Research Center, the Biodesign Institute at Arizona State University and Dr. Lee Hartwell, president of the Fred Hutchinson Cancer Research Center in Seattle. TGen also will lead another component to create a human-specimen biorepository.
- Lawmakers prepared a tight state budget for fiscal 2009, but spared Science Foundation Arizona, slightly restructuring its funding but leaving its total commitment intact. The budget also includes bonding to pay for \$1 billion in deferred infrastructure repairs and new construction at the state's universities, including \$470 million for two new major research and education facilities at the Phoenix Biomedical Campus downtown.
- The Critical Path Institute in Tucson facilitated a groundbreaking joint agreement by the U.S. Food and Drug Administration and its European counterpart, the European Medicines Agency, to approve new methods for measuring the potential kidney toxicity of drug candidates. The FDA and EMEA now will accept data from seven kidney biomarker tests, or measures of particular proteins, developed by a C-Path consortium of 17 major pharmaceutical firms.
- ASU announced a new endeavor in interdisciplinary scientific research, the Complex Adaptive Systems Initiative, to steer research projects in such fields as synthetic biology, sensor technologies and health care informatics. George Poste, director of the Biodesign Institute since its inception five years ago, will assume a new position as the initiative's chief scientist.

Build Critical Mass of Firms

- Arizona bioscience jobs increased by 21.5 percent from 2001 to 2006, according to a study of U.S. bioscience industry trends released at the 2008 BIO International Convention in San Diego. The national average is 5.7 percent, according to the study, which was conducted by Battelle for the Biotechnology Industry Organization.

The study also reported that bioscience jobs have a multiplier effect, each generating an additional 5.8 jobs. Wages for Arizona bioscience jobs exceeded their counterparts in the state's overall private sector by 35 percent.

- SenesTech Inc. of Flagstaff announced an agreement with the government of Australia to test a new rodent-control product in the Indonesian province of West Java. The project involves humane sterilization of rats that can devastate crops of rice, a staple for about half of the world.
- Amnestix, a TGen spin-off, was purchased by a German drug developer in a \$6.3 million cash and stock deal. Sygnis Pharma AG bought the 2-year-old company, which aims to develop drugs for memory-related disorders.
- Medicis, a Scottsdale pharmaceutical firm, will pay up to \$300 million to buy LipoSonix, a Seattle-based company that uses ultrasound technology to reduce fat cells.

Enhance Business Environment

- The technology community scored a long-sought victory when Arizona legislators passed an expanded research and development tax credit. Beginning in 2009, companies will receive a 22 percent tax credit -- up 2 percentage points -- on R&D expenses up to \$2.5 million, with an additional increase for expenses exceeding that amount.
- The Arizona Economic Resource Organization, a nonprofit created last year to coordinate the state's economic development efforts, received \$325,000 to launch a "fund of funds" to commercialize high technology innovations.
- Arizona sent its largest delegation yet to the BIO International Convention. About 125 delegates represented the state at the June convention in San Diego, which attracted more than 20,000 people from 70 countries and 48 states. The event is organized by the Washington-based Biotechnology Industry Organization.
- Three Arizona bioscience firms received venture capital investments in the second quarter of 2008: Zounds, a hearing-aid developer in Mesa (\$8.7 million); Regenesis Biomedical Inc., a regenerative medicine firm in Scottsdale (\$2.8 million); and Medipacs Inc., an infusion-pump maker in Tucson (\$1.7 million).

Prepare Workers, Educate Citizens

- Gov. Janet Napolitano announced that her office and several public and private partners have formed an organization to strengthen science, technology, engineering and mathematics education in Arizona. The center will be directed by Darcy Renfro, formerly the governor's policy adviser for higher education.
- The city of Phoenix awarded Paradise Valley High School a \$3.2 million grant to build a specialty bioscience high school on its campus in north Phoenix.

An additional \$2.4 million was given to the Phoenix Union High School District to renovate the historic McKinley building on the campus of the district's Bioscience High School in downtown Phoenix.