

Feds award \$59M to International Genomics Consortium

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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 July report.

Build research infrastructure

- The International Genomics Consortium was awarded two federal contracts together worth almost \$59 million to participate in the Cancer Genome Atlas project. IGC will collect, process, and store tissue samples for genomic research, continuing its role as the project's biospecimen core resource.
- The Biodesign Institute at Arizona State University received a \$5.3 million grant from the Defense Advanced Research Projects Agency to design new tools for rapid development of treatments for infectious diseases. Biodesign will employ synthetic antibodies to create therapeutics in as little as seven days.
- A University of Arizona-led research consortium won a \$9.9 million grant from the National Science Foundation to study the genomes of numerous wild-rice species. The group's research will focus on identifying genes that could help improve the rice cereal crop for human and animal consumption.
- ASU received a \$7.7 million grant from the National Institute of General Medical Sciences to join the Protein Structure Initiative and develop research projects to better understand the structures of membrane proteins, which protect the interiors of cells and hold substantial responsibility for protecting against infectious diseases.
- The Translational Genomics Research Institute and ASU began using a new fiber-optic data-transfer link between TGen's facility in Phoenix and the ASU supercomputer in Tempe. The link, developed by Canadian firm Obsidian Strategics, accelerates data transfer by a factor of 100.
- Science Foundation Arizona CEO William Harris and Gov. Jan Brewer jointly announced establishment of the Arizona Center for Algae Technologies, a new research center to be based at ASU's Polytechnic campus. The Center will be launched via \$2 million in discretionary federal stimulus funds and a \$2 million match that SFAz and ASU secure.
- Two pancreatic-cancer researchers at Scottsdale Healthcare— Medical Director Ramesh Ramanathan and Chief Scientific Officer Daniel Von Hoff, who is also TGen's physician-in-chief—were prominently featured in a nationally-broadcast telethon for Stand Up To Cancer, which last year awarded \$18 million to a team co-led by Dr. Von Hoff.

Build critical mass of firms

- UA Healthcare Inc., a new \$1.2 billion UA-affiliated company, was created via the merger of University Medical Center Corp. and University Physicians Healthcare. The new firm operates University Medical Center—including the Arizona Cancer Center's outpatient facilities—and University Physicians Hospital at Kino, as well as the UA College of Medicine's physician faculty practice.

- Vanguard Health Systems Inc. stepped in to purchase the financially troubled Arizona Heart Institute, a statewide network of cardiac-care outpatient facilities, as well as the Arizona Heart Hospital, both of which were founded by heart surgeon and cardiac researcher Edward Diethrich.
- Phoenix-based Provista Diagnostics Inc., which markets blood tests for Alzheimer's disease, dementia, and breast and other cancers, merged with California-based Radient Pharmaceuticals Corp. As a subsidiary of Radient, Provista will retain its Arizona presence, but will have access to certain Radient technologies.
- PathoGene, a Flagstaff-based diagnostics startup specializing in infectious diseases, raised \$750,000, exceeding the target goal for its first round of financing. PathoGene, a client of the Northern Arizona Center for Emerging Technologies, was spun out of research discoveries at Northern Arizona University and TGen North.
- The Celebration Stem Cell Centre, an umbilical-cord blood bank in Gilbert, began accepting blood samples for banking under contracts with three Catholic Healthcare West hospitals in metropolitan Phoenix. The bank will accept blood banked for a fee by parents for possible future medical-treatment purposes, as well as blood donated for research purposes.

Enhance business environment

- Phoenix played host to the fourth annual Algae Biomass Summit, the annual convention of the Algal Biomass Organization. The three-day national convention drew 600 attendees from firms and research groups working on algae-based commercial applications.
- Gov. Jan Brewer awarded a discretionary grant of \$1.5 million in federal stimulus funding to the Arizona Center for Innovation at the UA Science and Technology Park. The award will support development of laboratory space and strengthen mentorship for the incubator's clients.
- The City of Phoenix issued a request for proposals from private-sector companies to build a new bioscience facility of at least 100,000 square feet on the Phoenix Biomedical Campus. The facility, adjacent to TGen and the Arizona Biomedical Collaborative 1 building, would include at least 40 percent laboratory space.
- The Center for Healthcare Innovation and Clinical Trials at ASU's College of Nursing and Health Innovation reached an agreement to become the fifth global prime site partner for Quintiles Transnational Corp., the world's largest manager of clinical trials. The arrangement will enhance the recruitment of Arizona physicians and nurses who can identify patients for participation in various therapeutic developers' clinical trials.

Prepare workers, educate citizens

- The UA College of Medicine and Phoenix Children's Hospital signed an affiliation agreement, enabling establishment of a new academic department, joint research projects, and revenue exchanges to preserve federal funding for graduate medical education.
- The SFAz-managed STEM (science, technology, engineering, and mathematics) Education Initiative, which aims to coordinate and strengthen STEM instruction statewide, received an award of \$100,000 in discretionary federal stimulus funds from Gov. Brewer, supplementing a \$500,000 grant from Freeport-McMoRan Copper & Gold.
- The Center for Research in Engineering, Science and Technology, a specialty high school on the campus of Paradise Valley High School, opened with more than 100 freshman students. The school, funded by a \$3.2 million grant from the City of Phoenix in

partnership with the Western Maricopa Education Center, aims to increase students pursuing STEM careers.

- Chandler Basha High School senior Scott Boisvert received an award of \$10,000 and was named one of 20 national winners of the Davidson Fellowship, a prize for people under age 18 who display excellence in mathematics, science, literature, music, technology and philosophy. Boisvert has conducted research at ASU's College of Life Sciences and at TGen, where he participated in the Helios Scholars internship program.