

WANTED: SPACE FOR 'WET LABS'
SHORTAGE OF FACILITIES IN VALLEY STYMIES INFLUX OF BIOTECH
COMPANIES

Ken Alltucker, The Arizona Republic

Arizona will spend \$1.4 billion to foster a thriving biotechnology economy, yet there is little space for small research companies to conduct business.

Entrepreneurs and scientists with dreams of inventing disease-curing drugs first must tinker with waterlines, sinks and ventilation systems to turn old office buildings or warehouses into labs that can handle their research needs.

Some small biotech companies bypass the Valley altogether because they can't find ready-to-move-in lab space outfitted with basics such as sinks and high-powered air systems.

"At one point, we had at least six companies that were serious about relocating to Greater Phoenix," said Troy Ignelzi, vice president of emerging technologies for the Greater Phoenix Economic Council, the Valley's principal economic development group. "Because of inadequate lab space, we've only been able to land two of those."

A lack of wet-lab space has cost the region high-wage research jobs and has undercut efforts to build the state's 21st-century economy. The critical space shortage is a hurdle that economic-development leaders, science leaders and cities are aware of and are taking steps to address. Among the problems cited by developers: high expense, lack of available land and the general risk of building for unproven companies.

Arizona's buzz

Ignelzi and others say the problem stems in part from Arizona's buzz of biotech activity. More than a half-dozen new Arizona labs with state-of-the-art equipment have sprouted in the past few years to support the state's burgeoning biotech efforts, but the lab space is reserved for hospitals, universities and non-profit research groups such as the Translational Genomics Research Institute.

There is little private lab room, the type of space that can make Arizona home to the next Pfizer or Merck, multibillion-dollar drug companies that drive a region's economy and invent treatments to improve quality of life.

Out-of-state businesses or startups seeking privately owned lab space to mix chemicals or conduct experiments have few options amid the region's concrete menu of box-style warehouses and offices.

Michelle Hanna couldn't find a sliver of laboratory space when she arrived in the Valley six years ago.

So she pieced together a makeshift "wet lab" from a toilet at her brother's Scottsdale warehouse. She later moved her company, RiboMed Biotechnologies, to a doctor's office at 32nd Street and Indian School before buying and converting an old building in downtown Phoenix.

"It was a long path of survival that led me to this building," Hanna said of RiboMed's lab at Seventh and Van Buren streets downtown. Her company works in cancer research. "I showed up here six years ago with five U-Haul trucks full of equipment, and I could find no place to put it."

InSys Therapeutics

Some companies are still searching.

Lake Forest, Ill.-based InSys Therapeutics Inc., a small company developing pain medication for cancer patients, is the type of company that Arizona hopes will power the state's future economy.

The company committed itself to relocating its 10-person corporate office to the Valley within the first six months of 2007. The company is targeting an initial public stock offering next year.

But despite the best effort of economic-development types, InSys has yet to find suitable lab space in the Valley.

"We want to move somewhere that already has new lab space," said Mike Babich, an InSys board member and analyst with InSys investor EJ Financial Enterprises.

Private vs. public

Developers fret over the expense, location and demand associated with such specialized, privately owned space.

Building a basic lab can cost 50 to 75 percent more than constructing a typical office. High-end lab space requires special touches such as fume hoods, gas lines and vacuum lines. Ventilation systems are a basic need so air passes through the lab just once, whisking away potentially harmful particles.

The suggestion of adding more lab space was a critical part of the state's "Bioscience Roadmap" in 2002, a report commissioned by the Flinn Foundation.

Capitalizing on the buzz

In 2003, Arizona lawmakers approved \$440 million to build university research labs. That public investment spawned facilities such as Arizona State University's Biodesign Institute and the University of Arizona's Bio5 Institute.

The theory is that innovation and research conducted at these places and by other research groups such as TGen will attract more federal grants and businesses seeking to capitalize on the buzz of activity.

But developers balk at developing labs on a speculative basis; that is, to build without a tenant, particularly for an industry that is unproven.

"It's a tricky market, an unproven market," said Tom Hornaday, whose company built the \$29 million Collaborative Research Building for Mayo Clinic in Scottsdale. "It's not like building somewhere between MIT and Harvard."

Still, there are far fewer biotechnology companies here than more established research areas such as the San Francisco Bay area or Boston.

Among firms committing themselves to the Valley is global drug development company Covance, which has the financial wherewithal to build its own facility in Chandler.

Risky startups

Developers say they worry about the risky nature of biotech companies. The industry typically spawns cash-starved startups that initially spend most of their budgets on research.

"The reason developers aren't building (lab space) here is they don't feel there's real demand for it," said Lee Chestnut, a San Diego developer who has built three biotech labs in San Diego.

Chestnut's company is an exception. He plans a 250,000-square-foot building at Papago Park Center in Tempe that will include lab and office space.

The exact mix will depend on how successful Chestnut Properties LLC is in luring biocompanies.

The ASU graduate is optimistic enough about the Valley's bioprosects that he is willing to invest \$54 million to build the office, lab space and a 900-car parking garage. Chestnut expects development costs will run even higher, depending on lab requirements and finishing touches.

Hornaday said he'd like to build a lab in downtown Phoenix to follow up the success of his Mayo project in Scottsdale. He believes private companies will want to be downtown near researchers at TGen and others at the 15-acre Phoenix Biomedical Campus.

Yet, "it's hard to make it work financially," Hornaday said.

Solutions in the works

Several municipalities are considering sweetening the pot for developers.

On Monday, Phoenix launched a request for proposals seeking a private developer willing to build lab space on private land. The city wants to gauge interest and may offer financial incentives for a desirable project, said Alana Chavez, economic development specialist in Phoenix's downtown development office.

"We really need to build that infrastructure," Chavez said. "(Companies) want to come here, but when they ask, 'Where do we go?' we have no place to put them."

Suburbia in the hunt

Suburban communities, too, are aggressively courting biotechnology firms for their promise of high-wage jobs.

Surprise and Chandler are studying the possibility of building biotech space. They hired suburban Chicago-based consultant Facilities Solutions Group to write reports on the possibility of building incubator space in those cities. Chandler's report will be completed within a few months, said Richard Mulligan, Chandler's economic development director.

Another possibility is to convert old chip-manufacturing plants into wet labs.

A 2004 report by ASU's Office of Economic Affairs suggested that conversions could be completed more quickly and cheaply than new construction.

Though until developers add more space, entrepreneurs such as Hanna will be left on their own.

Despite the logistical challenges, Hanna's RiboMed Biotechnologies continues to grow thanks to a steady supply of government contracts. She even rents some extra space at RiboMed's headquarters to other budding biobusinesses.

Hanna's for-rent lab space, known as the Phoenix Biotechnology Accelerator, remains the only privately owned wet-lab space available in the Valley.

"We do not yet have a thriving biotechnology industry in Phoenix," Hanna said. "It is starting and it is growing, but you don't have a lot of end users. Unfortunately, without lab space, you can't attract them here. What we really need to do is build more lab space."

Public-sector lab space

The Valley has made major strides in adding mainly medical, institutional and university research-based lab space in recent years. But that space is concentrated in the public sector.

The bulk of funding came from legislation passed in 2003 that set aside \$440 million for

construction of university research facilities. Some major projects completed or planned are:

Translational Genomics Research Institute: The six-story, \$46 million TGen building in downtown Phoenix opened in early 2005. It is owned by Phoenix and leased to TGen. It is the centerpiece of a 15-acre Phoenix Biomedical Campus, with 1 million square feet of office, research and classroom space that eventually will surround TGen.

Arizona Biomedical Collaborative building: A four-story building under construction next to TGen at the Phoenix Biomedical Campus. The building, expected to be complete mid-2007, will add two floors of research space for University of Arizona researchers and two floors for Arizona State University's department of biomedical informatics. Also, the Arizona Board of Regents approved \$1.5 million to study the possibility of adding a second building.

Mayo Collaborative Research Building: Mayo's 110,000-square-foot clinic with lab space in Scottsdale opened in June 2005. Researchers from the Mayo Clinic Cancer Center and Translational Genomics Research Institute are domiciled there. Also, a small Canadian-based biotech firm, InNexus Biotechnology Inc., recently took a 17,000-square-foot space.

ASU's Biodesign Institute: The first two buildings span nearly 350,000 square feet of research space, and two more buildings are planned. The center hosts a range of research topics from nanotechnology to treatments for several diseases.

Bio5 Institute: UA's Bio5 Institute focuses on five areas: agriculture, medicine, pharmacy, basic science and engineering. The research facility, called the Thomas W. Keating Bioresearch Building, will open Dec. 1 and host 30 researchers with more than 60,000-square feet of wet-lab and lab-support space.

University of Arizona College of Medicine: The College of Medicine also will open Dec. 1 with more than 45,000 square feet of wet-lab and lab-support space.

In the works:

Grand Canyon University: Plans a 50,000-square-foot wet lab, but a location has not been determined.

Chestnut Properties LLC: Developer Lee Chestnut expect to soon break ground on a 250,000-square-foot office that includes lab space at Papago Park Center in Tempe. The exact mix of office and lab space will be determined by demand.

Arizona Republic research

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