

MY VIEW

# To the contrary, biosciences making solid progress

I applaud the *Phoenix Business Journal* for proactively covering Arizona's initiative to build a nationally competitive bioscience base. The quarterly insert on Arizona biosciences goes far in capturing activities and developments statewide.

Last week's "By the Numbers" feature, however, misrepresented Arizona's progress in the biosciences. While the Battelle data presented in graphic form generally were accurate, the accompanying text drew sweeping conclusions that simply were off base.

Arizona has made significant progress since the 2002 launch of its strategic plan, Arizona's Bioscience Roadmap. In fact, the first two charts on bioscience employment and companies contradicted the article's conclusion.

Since 2002, Arizona has added nearly 16,000 bioscience jobs, an increase of 23 percent. This growth rate is three times greater than the nation as a whole. Bioscience firms have increased at a similar pace, 22 percent, adding about 140 establishments.

Arizona has one of the fastest-growing bioscience industries in the nation — and, contrary to the article, has more bioscience jobs and firms than Pittsburgh or Salt Lake City, and more firms than St. Louis.

The text further suggests that Arizona hasn't fared well in funding from the National Institutes of Health, the "gold standard" of biomedical research funding. That was the case prior to 2002, when Arizona was losing ground annually to other states in securing NIH funds. The tables since have turned.

Between 2002 and 2007, Arizona's growth in NIH funding outpaced the nation's top 10 states by a 2-to-1 margin. A downturn occurred in 2008, though it was in sync with the rest of the nation, reflecting a reduction in NIH funding nationally. Since 2002, Arizona has increased its NIH market share during a period of fierce competition



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among states for shrinking NIH dollars.

Further, the article suggests that Arizona hasn't made headway on measures of intellectual property emerging from the state universities, based on 2008 data looking similar to 2002. The years in between, however, tell a different story.

For example, licensing revenue in 2006 and 2007 was more than 65 percent higher than in 2002 or 2008. In addition, the universities spun off bioscience startups at an annual rate of 7.5 from 2003 to 2007, compared with three in 2008. Upcoming 2009 data will reveal three

startups announced by the University of Arizona in January 2009, just missing the 2008 cutoff.

These measures make sense only if viewed on a cumulative basis. Changes in pharmaceutical industry licensing and regulatory practices can make single-year comparisons useless.

Since 2002, Arizona has earned a national reputation as an emerging bioscience region. The state has made considerable strides in building its research infrastructure and its ability to turn discoveries into projects, jobs and firms. The biosciences in Arizona account for \$12.1 billion a year in revenue and \$765 million in state and local taxes.

Becoming a nationally competitive region won't happen overnight. The record time is 12 to 14 years in San Diego and Maryland, not including the many years each spent previously to build its research base. Based on six years of data, Arizona doesn't pretend to have arrived, though few states can claim to have made more progress in building bioscience critical mass — both in research and industry base — during this short time.

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