

WHITE PAPER

The Bio Industry in Tucson, Arizona



Commercial Real Estate Group Of Tucson LLC

Our Difference is Your Advantage

A White Paper that answers “Absolutely Yes!” to the question.... Is Tucson, Arizona a Great Place for Bio Companies?

Planning a Biotech or Bioscience Start-Up?

Exploring relocating or expanding to a city where your Bio company can thrive?

Thoughts of San Diego, Boston and Seattle may have come to mind already.

How about Tucson, where the sun shines more than 350 days a year and the business climate promotes successful entrepreneurship?



This White Paper explores what factors are important, and needs to be present in a city for a Bioscience company to be successful. It then provides ample support for the belief that Tucson, Arizona should top the short list.

Contact Michael Coretz, your Tucson commercial real estate partner, for more information.



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A White Paper that answers the question with... **Absolutely YES!**

Introduction

- ▶ When companies are looking for a home for their new Bioscience start-up or relocation or expansion of an existing business, Tucson, Arizona might not be the first city that springs to mind. Why not?

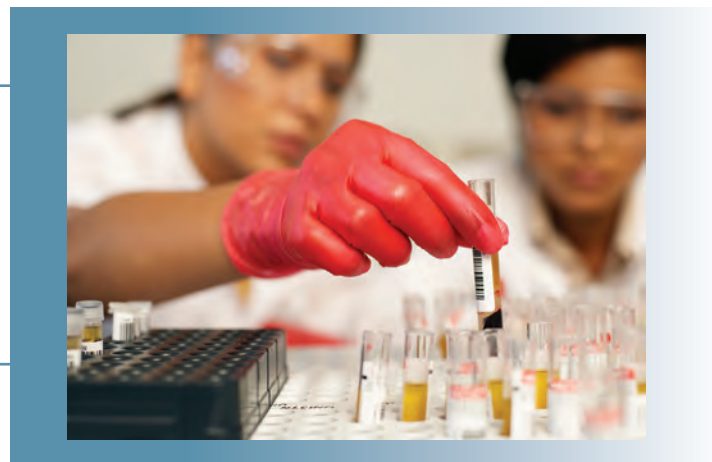
Well, the common thinking is that unless the company is building a golf course, opening a new hotel or involved in selling services to students and faculty at the University of Arizona, Tucson doesn't have the right image, the infrastructure or even the skilled workforce to support company growth. These people may even think its only claim to fame is hot weather. Not so! Tucson boasts many advantages for new and growing companies in almost any industry. In fact, right now Tucson is considered a HOT spot for the Bio Industry.

The Purpose of this White Paper is to provide a clear and persuasive argument for anyone considering a Bio start-up, or planning an expansion, to make sure that Tucson, Arizona is on the "short list" of potential cities. It should remove any doubt that Tucson is not only a great location for a biotech company to call home, but that the city truly welcomes companies involved in the entire Bio Industry.

- ▶ **Biotechnology** is in a relatively nascent stage compared to many other industries and there are numerous opportunities for new applications and inventions. There is great potential in human health technologies to industrial technologies and anything in between. Industry experts predict impressive growth as:

- The diversity and span of product lines continue to increase with the aid of new technology
- Processes and infrastructure are honed
- Products for commercialization continue to emerge.

According to IBISWorld Industry Reports, the US Biotechnology industry is anticipated to continue to grow at an average annual rate of 8.9% to reach \$142.5 billion by 2018.





What Factors are Necessary in the Development of a Biotechnology Presence?

A number of development factors have been identified as advantageous to companies in the Bio Industry. Tucson, Arizona boasts an impressive set of check marks when set against these factors.

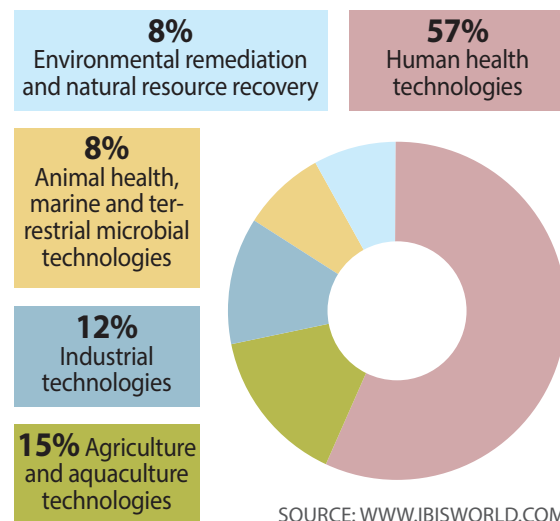
WHAT'S NEEDED	TUCSON, AZ
Availability of Venture Capital and Local Entrepreneurship	✓
Availability of Federal and State Government Funding	✓
Strong Research Presence (University and Government Agencies)	✓
Proximity to Large Private Enterprises in Related Industries	✓
Presence of Highly Skilled Personnel –Often Provided by Universities	✓

A Biotechnology Brief

The major segments of the \$93 billion industry show that there is great diversity in the types of products that are produced.

Over 50% of the industry is focused on Human Health technologies and this segment will become even more important as the population ages. In addition, other established sectors that focus on the environment, agriculture and industrial technologies have much potential to grow.

Products and services segmentation (2013) Total \$93.0bn



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Mandates for Development of Bio Industry

- President Obama's announcement of a \$5 billion award through the National Institutes of Health (NIH) to aid research in a range of diseases is a reason for optimism in the Bio Industry.
- The grants are set to speed development of advanced treatments for diseases and create jobs through 2018.
- Federal grants will speed development of advanced treatments for diseases.

Going Green Spurs Bio Industry Growth

- Several environmental factors will drive industry growth, including:
 - the decreasing use of fossil fuel-based products
 - the ever-growing need for geopolitical security and national energy security
 - the call for environmental sustainability
 - rapid population growth.
- Ethanol production has created unprecedented demand for corn in the past few years, making it a highly lucrative and expensive commodity.

"Booming efficiency: Healthcare reform and agricultural demands will drive growth in Biotechnology."

Biotech Real Estate Needs are Highly Specialized

There are significant differences between creating a state-of-the-art biotech building versus moving into traditional office projects. Even if you're moving into an established building, there are certain parameters that need to be met that some real estate professionals or architects aren't always aware of.

- Biotech work places often require the flexibility to change and adapt to a company's growth and additional personnel. It's well known that the funding for Biotech is sometimes unpredictable and that these companies often depend on short-term government grants or private funding to continue to grow. Having flexible workspace configuration and overall space are key to successfully adapting to changing financial conditions.
- Specialized infrastructure is a crucial consideration. As companies grow, there might be need for more lab space or other specialized areas where scientists can work. Additional issues not often seen in other industries include complex ventilation and plumbing systems, waste management facilities, unusual energy requirements and sound- and vibration-proof facilities. Even the height of the ceilings can be of great importance to some companies.
- A collaborative work space or an impressive high-tech building exterior also may be important to a team of scientists and business development staff.
- Appropriate locations for Biotech companies put them in close proximity to other intellectual resources and other "biotech-research players," such as a university.

Often a whole team of professionals act as the development team. Ranging from scientists, architects, engineers and financiers to building contractors and commercial real estate brokers, the team must understand the special needs of the Biotech industry and help anticipate each tenant's future space needs.





Why Tucson?

Comparing success factors identified for biotechnology companies with how aspects of a city can contribute to that success, it's easy to see why Tucson, Arizona should be included in any start-up or growth plan of a bio company.

- Tucson has more than 100 bioscience companies generating \$6 billion in annual revenues.
- Companies range from small start-ups to global leaders.
- In fewer than a dozen years Tucson has put itself on the bioscience industry map.
- In 2008, *Business Facilities Magazine* named Tucson a "rising biotechnology star" and Arizona was cited among top emerging biotech "hot spots."

Tucson: a "rising biotechnology star"



Availability of Venture Capital and Local Entrepreneurship

- The Tucson Desert Angels funding group has invested over \$23 million in more than 60 presenting companies since 2005.
- Curtis Gunn, Desert Angels chairman, is also a board member of the National Angel Capital Association (ACA).
- *Bloomberg Business Week* explains "Why is Angel Investing Hot in Tucson?", July 2013.
- Tucson is called an "Emerging Entrepreneurial Hub" by *Entrepreneur Magazine*, August 2013.
- *Chief Executive Magazine* calls Arizona "#6 Best State for Business", May 2013.



Availability of Federal and State Government Funding

- SBIR (Small Business Innovation Research) grants have been awarded to many Tucson-based companies.
- ACA (Arizona Commerce Authority) provides numerous funding opportunities in the form of grants and loans.
- National Institutes of Health (NIH) funds Arizona ventures; for example, over \$21.6 million to The University of Arizona Cancer Center.



Strong Research Presence (University and Government Agencies)

- National Science Foundation ranked The University of Arizona #19 among all public universities for research and development (R&D) expenditures.
- The University has spun out more than 30 bioscience companies since 2005.
- AZCI (Arizona Center for Innovation), a tech business incubator, provides facilities and lab space for early-stage ventures.
- Tech Launch Arizona helps University faculty commercialize their inventions.
- The Bio5 Institute, a renowned University-affiliated unit, helps to "harness the collaborative power" of its five core disciplines—agriculture, engineering, medicine, pharmacy and science—to "find solutions to complex, biology-based challenges affecting health and environment."
- The Arizona Bioscience Park has more than 65 acres of business space focusing on technology companies, especially those involved in medical devices and diagnostics.
- Innovation Park is a high-tech center featuring a number of medical and biotech company campuses in the Tucson suburb of Oro Valley. The town does not levy a local property tax. Commercial property is assessed at 25% of fair market value, while residential property is assessed at 10% of fair market value.



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Proximity to Large Private Enterprises in Related Industries

- C-Path (Critical Path Institute), a partnership among the University of Arizona, SRI International and the Food and Drug Administration, is headquartered in Tucson and helps to safely accelerate the drug development process.
- Companies ranging from engineering to manufacturing firms are ready to partner and collaborate.

A local Bio Industry expert cites statistics from the Arizona-based Flinn Foundation. In the last decade, Arizona has exceeded the U.S. averages in three key metrics:

- the number of bioscience firms
- the number of private sector bioscience jobs
- average bioscience wages.

The biosciences industry in Arizona generates over \$30 billion in economic activity.



“Most of us came to Tucson and Southern Arizona for the 350 days of sunshine, the incredible desert and mountain scenery, the rich blend of cultures and the relaxed easygoing way of life. The region is all that and more. The biosciences are alive and well here. We are fortunate enough to have strong academic centers, established and emerging bioscience companies, an entrepreneurial environment and a spirit of cooperation and sharing.”

... Mike Sember, Chairman, BIOSA
(Bio Industry Organization of Southern Arizona).



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To Prove Our Point – Tucson Bioscience Companies

A large number of Bio Industry companies already know that Tucson has what it takes for their success. Here are just a few successful bio companies who call Tucson home.



Ventana Medical Systems, Inc. www.ventana.com

Ventana, as the locals call VMS, is truly a local success story. Launched in 1987 by Dr. Thomas Grogan, a University of Arizona professor and practicing pathologist, the company is a world leader and innovator of tissue-based diagnostic solutions for patients worldwide. In 2008, Ventana became a wholly owned member of the Roche Group and now boasts over 1,500 full-time employees, products registered in 63 countries, more than 200 worldwide patents and almost 300 pending patents.



Sanofi. www.sanofi.us

Sanofi, a diversified global healthcare leader, discovers, develops and distributes therapeutic solutions. The world's third largest pharmaceutical company finished construction in 2009 on a new 110,350-square-foot facility in Innovation Park next to Ventana Medical Systems.

Both companies operate in the Tucson suburb of Oro Valley, a location that allows the companies and their employees to benefit from all that Tucson has to offer.



Accelerate Diagnostics. www.acceleratediagnostics.com

Accelerate is an in vitro diagnostic company that moved from Denver to Tucson in 2012 under its original name of Accelr8. In August 2013, the company announced it had raised \$20 million in funding.



Salutaris Medical Devices, Inc.

www.salutarismd.com) founded in 2008, is a privately held clinical-stage medical device company dedicated to developing minimally invasive patient-centric treatments for vision loss.



SynCardia Systems

www.syncardia.com) founded in 2001, is a privately held manufacturer of the world's first and only FDA-, Health Canada- and CE (Europe)-approved Total Artificial Heart. In March 2011, *Fast Company magazine* ranked SynCardia #20 in its annual list of the "World's 50 Most Innovative Companies" for "giving mobility to artificial heart recipients."



BioVigilant (www.biovigilant.com), a local Tucson company acquired by Tokyo-based Azbil Group in 2009, invented instantaneous microbial detection technology that address environmental monitoring needs in a diverse set of industries, including pharmaceuticals, biotechnology and healthcare.

"Although remaining in Colorado was our first choice, after a careful and deliberate process, the decision to move to Arizona became clear. I was impressed from my first contacts with Pima County, the Tucson Mayor's Office, the state of Arizona and the Tucson Regional Economic Opportunities office. We could tell this was a place that valued our businesses and wanted to help."

Lawrence Mehren Accelr8 President and CEO



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Conclusion

This paper has identified a number of factors that must be present in a city for Bioscience companies to thrive.

Tucson, Arizona rates high on these factors. There are many community leaders, stakeholders and local professionals who are eager to help new or established companies in the Bio industry who want to make Tucson, Arizona their new home.



Resources & Citations:

AzBio. Arizona Bio Industry Association. www.azbio.org

Arizona Technology Council. www.aztechcouncil.org

Bio5 Institute. www.bio5.org

BIOSA. Bio Association of Southern Arizona. <https://www.facebook.com/pages/Biosa/134047433306522>

Bioscience Road Map. www.flinn.org/bio-roadmap

BLCSA. Biosciences Leadership Council of Southern Arizona. www.salc.org

C-Path. Critical Path Institute. www.c-path.org

The Flinn Foundation. www.flinn.org.

The University of Arizona. www.arizona.edu

TuScience: Spotlight on Bioscience. TREO (Tucson Regional Economic Opportunities). www.treoaz.org/bioscience.aspx

Entrepreneur Magazine Names Tucson as an Emerging Entrepreneurial Hub
<http://startuptucson.com/2013/entrepreneur-magazine-names-tucson-emerging-entrepreneurial-hub-2>

Biotech real estate needs are highly specialized
www.bizjournals.com/seattle/stories/2003/09/29/focus12.html?page=all

The BioIndustry in Southern Arizona: A Region of Talent, Technology, and Entrepreneurial Vision.
Mike Sember, Chairman, BIOSA. www.trendreportaz.com

Why is Angel Investing Hot in Tucson?
<http://www.businessweek.com/articles/2013-07-22/why-is-angel-investing-hot-in-tucson>

INDUSTRY REPORT:

Biotechnology Industry in the US. IBIS World Industry Reports. June 2013.
www.ibisworld.com

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