

Big4Bio

PHILADELPHIA

YEAR IN REVIEW

2019



Welcome

to the first edition of Big4Bio's annual Year-in-Review report. In future reports we look forward to expanding the metrics we track as well as following the progress of our key metrics over time.

Looking back over 2019, there is no question that the Greater Philadelphia market has earned its place among the top life sciences clusters in the U.S.

In a year where venture investment was down across the board, VC investments in life sciences companies in Greater Philadelphia nearly tripled. And the value of early stage investments nearly doubled. On top of that, Philadelphia witnessed the largest M&A deal of the year: the \$74 billion take out of Celgene by Bristol-Myers Squibb.

We thank our financial data partner DealForma and JLL who shared their 2019 Life Sciences Industry Outlook with us. We hope you join us as we look forward to tracking the continued growth of the Greater Philadelphia Life Sciences cluster throughout the year.



Tilton Little | Executive Director/Publisher
Big4Bio

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Life Sciences Industry Market Facts

Overview

- Greater Philadelphia, the newest Big4Bio market, ranks third among the four markets in terms of the number of life sciences companies with 1,640, coming in ahead of San Diego with 1,500 companies and just behind the San Francisco Bay Area which boasts 1,700.
- Philadelphia ranks lowest in terms of the number of employees at 54,700, trailing San Diego, which counts a total of 66,000 life sciences jobs.
- However, Philadelphia leads the pack when it comes to life sciences graduates. The region produces 5,600 qualified life sciences grads each year compared to 5,500 in Boston and 4,300 in the San Francisco Bay Area.



1,640
Companies



54,709
Employees



\$127,714
Average Salary



5,645
Life Sciences Graduates



-3.3%
Year-Over-Year Employment Growth



-3.9%
Year-Over-Year Enterprise Growth



\$1B
NIH Funding



10.6 msf
Real Estate Inventory



6.8%
Lab Vacancy Rate



\$28 psf
Rent Per Square Foot

Top NIH Recipients

\$582M
University of Pennsylvania

\$80M
Temple University

\$69M
Thomas Jefferson University

(Sources: JLL Life Sciences Outlook, BioSpace for salary, NIH for top recipients)

Top Stories

Big deals and the prominent role of gene and cell therapy companies in the Greater Philadelphia life sciences market dominate our list of the most-clicked stories since the launch of the Philadelphia newsletter at BIO in June.

1. How a small Philadelphia gene therapy company became part of a \$3B deal

The company is developing two gene therapies to treat, and potentially cure, cystic fibrosis. [Full Article >](#)

2. Innovation at ‘Cellicon Valley’

Innovation is a word that gets used often at Penn, and for good reason. As the fourth-ranked most innovative university in the world, Penn’s 189 research centers and institutes are pushing the boundaries in fields ranging from behavioral psychology to quantum computing. [Full Article >](#)

3. Baudax Bio Launches as a New Pharmaceutical Company Aimed at Advancing Promising, Non-Opioid Analgesic Therapies

Baudax Bio, Inc. (NASDAQ:BXRX) today announced its launch as an independent, publicly traded pharmaceutical company focused on advancing non-opioid analgesics and other products for the hospital and other acute care settings. [Full Article >](#)

4. Zafgen and Chondrial Therapeutics Announce Definitive Merger Agreement

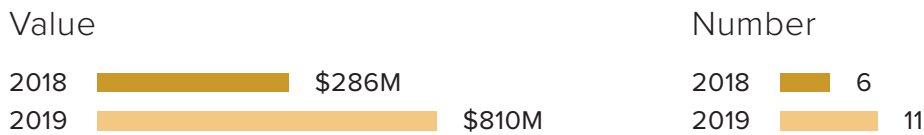
Zafgen, Inc. and Chondrial Therapeutics, Inc., today announced they have entered into a definitive merger agreement under which Chondrial will become a wholly-owned subsidiary of Zafgen and the stockholders of Chondrial Therapeutics will become the majority owners of Zafgen’s outstanding common stock upon the close of the merger. [Full Article >](#)

5. The Wait Is Over: After Multiple Delays, Roche Completes Acquisition of Spark Therapeutics

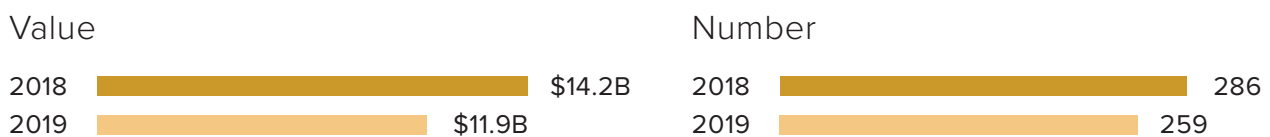
Finally. That’s the collective sigh of relief from investors after Roche announced this morning that its 10-month journey was over and it has finally completed the acquisition of Spark Therapeutics. [Full Article >](#)

Financings

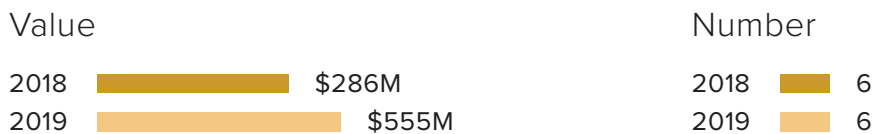
Greater Philadelphia Venture Rounds (Biopharma, Medtech, Diagnostics)



All US Venture Rounds (Biopharma, Medtech, Diagnostic)



Greater Philadelphia Seed and Series A Rounds (Biopharma, Medtech, Diagnostic)



(Source: DealForma)

Based on 2019 venture investment, the Greater Philadelphia area lived up to its reputation as “Cellicon Valley”. Seven of the 11 investment rounds completed in the last year went to cell therapy or gene therapy companies.

The concentration of cell and gene therapy companies in Greater Philadelphia helped the area buck the national trend of lower investment levels in 2019 compared to 2018. In fact, investment levels didn’t only increase in 2019, they more than doubled in terms of value from \$286M in 2018 to \$810M in 2019.

The number of rounds nearly doubled from 6 in 2018 to 11 in 2019. And while the number of early stage deals (Seed or Series A) didn’t increase year-over-year, the value of those deals increased by a whopping 94 percent from \$286M in 2018 to \$555M in 2019. So, it’s no surprise that the biggest deal of the year was a Series A round.

Top Deals

- Century Therapeutics, a cell therapy company targeting cancer, took in a \$250M Series A round in July.
 - Passage Bio completed two venture rounds in 2019. The genetics medicine company that targets rare monogenic central nervous system diseases received \$115.5M in a Series A round in February and a \$110M Series B round in September.
 - Sonnet Biotherapeutics, a cancer antibody company, took in \$100M in a private placement in August.
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M&A

While the quantity of M&A deals in the Greater Philadelphia area could be considered small, they were mighty, including the largest deal of the year: Bristol-Myers Squibb's \$74B buyout of Celgene announced on the first day of the JP Morgan Healthcare Conference in January 2019.

Gene therapy company Spark Therapeutics was acquired by Roche in February. The deal was valued at \$4.3B.

Contract Research Organization Genesis Drug Discovery and Development acquired a majority interest in NexusPharma, which develops patient derived cancer xenograft models for drug development. The value of the deal, which was announced in June, was not disclosed.

2020 Outlook

Presidential election years, fraught with uncertainty, are never good years for investments. But in 2020, when healthcare issues loom large on the political agenda, the investment climate may prove to be particularly challenging for healthcare and life sciences companies.

As Wende Hutton, a General Partner at Canaan Partners, told the attendees at the BIO Investor Forum last fall, in 2020 we have a roster of presidential candidates that span the political spectrum, and the only thing they have in common is that they all paint the biopharma industry as the enemy of the people.

Late last year, the House of Representatives passed a major bill on imposing drug price controls, but, like almost everything in Congress these days, it was a highly partisan piece of legislation that did not gain Republican support. It would be foolhardy to think the issue won't arise again in 2020 either in the form of smaller bills or even in a grand bi-partisan effort.

But legislators should be cautious about taking a blunt object to the complex issue of drug pricing. Efforts to cap or control drug costs will have a direct impact on the availability of new therapies by creating uncertainty among investors regarding their ability to earn a reasonable return on their investment in the long and risky drug development process.

Lawmakers should work with industry stakeholders to create drug pricing reforms that will reduce the out-of-pocket costs to patients, increase transparency and develop a new pricing paradigm for emerging curative therapies.

Additionally, 2020 will bring significant changes at the FDA. A new commissioner will be confirmed early in the year and the Prescription Drug User Fee Act (DPUFA) is up for reauthorization.

Life sciences companies in the Greater Philadelphia area are booming thanks to their leadership in developing new and innovative treatments and cures. It is important that they engage with lawmakers to develop drug pricing policies that both reward innovation and protect patients from unmanageable costs.

Summary

Twenty-nineteen may well prove to have been the breakout year for the Greater Philadelphia life sciences community. In a year that saw venture investment overall, as well as all life sciences investment, decline, Philly life sciences companies saw the value of venture investment nearly triple. Philadelphia is also the home to the largest M&A deal of the year: Bristol-Myers Squibb's take out of Celgene.

The market also enjoys a high level of NIH funding and life sciences graduates that should ensure the future of innovation such as the gene and cell therapies for which the market has become known.

That said, 2020 promises to bring new challenges. Presidential election years always make markets queasy, and the fact that the only thing both parties can seem to agree on is reigning in prescription drug prices doesn't help. But once the election is resolved, the Greater Philadelphia market will be poised to continue on its path to becoming a major life sciences hub.

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