

U.S. Life Sciences Market

2023 Life Sciences Report

U.S. Research Report

Colliers

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Overview

The life sciences market was not immune to macroeconomic trends in 2022. The rising cost of capital, slumping stock market, geopolitical tension, and decades-high inflation all weighed on the industry. General investor sentiment, across asset classes and industries, shifted to a risk-off mindset that clearly affected venture capital (VC) funding and the IPO market. After a blockbuster 2021 in which more than 100 companies went public, only 23 did so in 2022, less than the number offered in Q1 of 2021. Many of 2021's IPOs ended 2022 trading for well below their launch price.

VC investors are still sitting on large sums of uninvested capital, which will keep life sciences companies going. Young biotech and pharmaceuticals companies are spending more conservatively in order to extend their runway between funding rounds. This is causing slower leasing in many markets, and vacancies increased year-over-year. While at first blush a rising vacancy rate is concerning, context is important here. Some markets, such as Boston, operated with a 1% vacancy rate in 2021, which was unsustainable, discouraging business growth and stifling innovation. A more normalized vacancy rate is welcomed by occupiers, who are finding wider availability of ground-up purpose-built and conversion product, as well as second-generation space on a direct and sublease basis.

The tremendous investment in the life sciences in recent years comes with a clear need for the talent so incredibly important to this industry. Other fast-growing industries can hire recent college grads en masse, but the expertise needed in life sciences takes time to be acquired. More training programs at colleges and universities and international migration and recruiting are helping to fill some of these talent gaps. While graduates

matter, holders of advanced degrees, particularly PhDs, are truly driving scientific breakthroughs.

What hasn't changed are the underlying fundamentals of the life sciences industry. As the U.S. population ages, there is an increasing need for medical care and discovery. And continued technological advancements are opening the door for customized or individualized care and treatment for patients. The life sciences industry is inherently volatile: lifesaving and life-changing discovery takes time and substantial capital investment, and is in and of itself, uncertain. Life sciences companies are seeking to create brand-new therapies.

The higher cost of capital is weighing on investment sales, though life sciences is still seen as the top alternative asset class, attracting pension funds and other institutional investors who've carved out a portion of their office allocation for life sciences. This is boosting its liquidity even during an overall slowdown. Continued office-to-lab or cGMP conversions are expected as the office market rebalances.

This report provides an overview on the major life sciences clusters across the U.S. and those now emerging. Their size and scale vary, as shown in the individual market sections as well as in the data supplement section at the end of this report. Life sciences as an industry, and its spaces, are still defined relatively loosely. In the well-established market clusters those definitions are more clear, but in emerging markets definitions of life sciences, healthcare, medical device, and health tech are more ambiguous. This allows for industry specialization, and eventually these nuances could lead to competitive advantages in certain types of science and discovery.



Boston

Massachusetts

Boston continues to bolster its status as a primary life sciences hub. As a one-stop shop, it has one of the biggest inventories of lab and GMP product in the country, a large life-sciences workforce, and an expanding pool of firms providing support services. The market's top-notch research-oriented medical and academic institutions receive huge NIH investments and anchor a robust network of clinical trials. The venture capital ecosystem here helps boost Massachusetts funding levels to among the highest in the nation.

Many of the world's major life sciences organizations are either based here or have a presence. This roster is expanding as newcomers (both domestic and international) continue to set up shop. Lab and GMP tenant demand remains in the millions of square feet.

Developers are very active in Boston, with tens of millions of square feet underway, permitted, and announced projects across the market. However, the dampened leasing outlook and challenging financing environment will prevent some projects from moving forward in the near term. Nevertheless, in 2022 firms such as Takeda, AstraZeneca, Eli Lilly, and Vertex each announced plans to occupy hundreds of thousands of square feet here in future construction.

Investment in life sciences product has recently outpaced that in traditional office, with numerous assets valued at more than \$1,000 per square foot. Cambridge's Kendall Square is still the most highly valued location for tenants and investors, but new hubs are emerging.

Key Statistics (as of Q4 2022)

40.3

Market Inventory MSF

8.0%

Vacancy Rate %

2.3

Net Absorption
2022 SF

\$125.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$350

Fit-Out Costs (\$PSF)*

\$225

TI Allowance (\$PSF)*

23.9

Under Construction MSF

24.5

Proposed MSF

Funding & Talent

11.2

VC Funding 2022
(\$ Billion)

3.0

NIH Funding 2022
(\$ Billion)

5,079

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

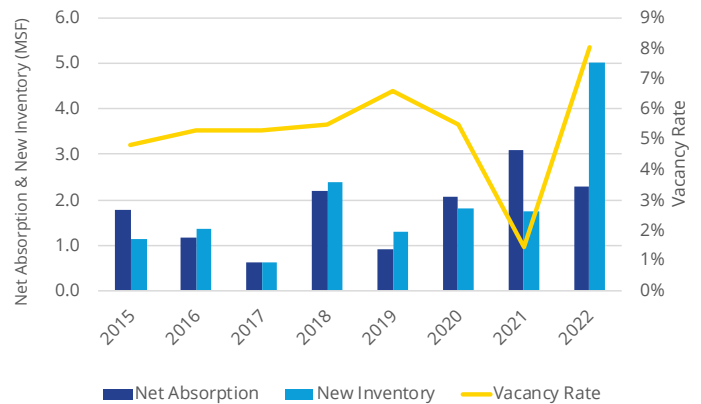
Established/Big Pharma



Newer/Drug Development Companies



Boston Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
290 Binney Street	290 Binney Street	East Cambridge	570,000	AstraZeneca
585 Kendall	585 Third Street	East Cambridge	550,000	Takeda
15 Necco Street	15 Necco Street	Seaport	334,000	Eli Lilly

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
Fenway Center	725 Beacon Street	Fenway/Kenmore	1,000,000	IQHQ	2025 Q1
Alewife Park	28 Whittemore	Alewife	750,000	IQHQ	2023 Q3, 2025 Q3
400 Summer Street	400 Summer Street	Seaport	625,000	WS Development	2023 Q2

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Alexandria Center at Kendall Square	100 Binney	East Cambridge	432,932	CBRE Investment Management	\$1,020
Charles Park	1 Rogers/1 Charles Park	East Cambridge	357,734	Alexandria R.E. Equities	\$815
451 D Street	451 D Street	Seaport	477,000	GI Partners	\$693

Chicago

Illinois

While Chicago has been home to leading pharmaceutical and medical device companies for decades, only recently has it become a life sciences and biotech startup hub. The Chan Zuckerberg Initiative announced plans for a new biomedical research hub. It will connect the University of Chicago, Northwestern University, and the University of Illinois Urbana-Champaign to develop new technologies. Chicago's startups have previously struggled to find conveniently located, high-class lab space. More than 2.7 million square feet of wet and dry lab space is forecast to be delivered here over the next three years, pushing the total third-party lab footprint to over five million square feet.

Chicago has renowned universities and hospital systems, including Northwestern, Rush, University of Chicago, Illinois Institute of Technology, and University of Illinois Chicago, among others. This gives

it an excellent employee base and talent pool for life sciences growth and will contribute to the overall growth of the industry. Chicago has an estimated 87,000 life sciences employees, and that number is growing.

Life sciences growth here has emboldened leading developers, like Trammell Crow Company, Sterling Bay, and other well-capitalized developers, to deliver life sciences buildings. Chicago is fortunate to have multiple developers with bullish capital partners willing to finance speculatively built projects. This is creating the emergence of a hub for biotech startups as well as a destination for relocating companies from markets that are saturated, more expensive, and lack lab space inventory. Chicago has the scientific talent, research universities and hospitals, an affordable cost of living, and now the emergence of clusters of lab space environments.

Key Statistics (as of Q4 2022)

6.5

Market Inventory MSF

15.0%

Vacancy Rate %

0.04

Net Absorption
2022 MSF

\$55.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$250

Fit-Out Costs (\$PSF)*

\$175

TI Allowance (\$PSF)*

0.47

Under Construction MSF

2.3

Proposed MSF

Funding & Talent

1.2

VC Funding 2022
(\$ Billion)

1.2

NIH Funding 2022
(\$ Billion)

3,516

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



New Supply

* Assume new 10-year lease.

Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

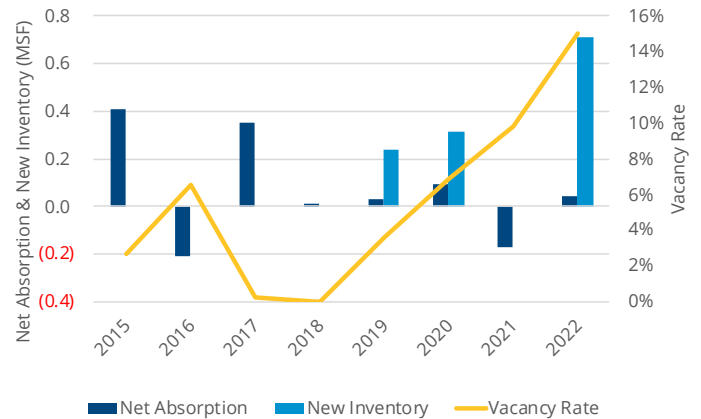
Established/Big Pharma



Newer/Drug Development Companies



Chicago Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Fulton Labs @ West End	1375 W Fulton	Fulton Market	88,000	Xeris Pharmaceuticals
Fulton Labs	400 N Aberdeen	Fulton Market	34,000	Portal Innovations
The Labs	2430 N Halsted	The Labs	31,000	BioLabs

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
University of Chicago Labs	5215 S Harper Ave	Hyde Park (South Chicago)	290,000	Trammell Crow	2024 Q2
Evanston Labs	710 Clark	Evanston (North Suburbs)	180,000	Trammell Crow	2023 Q4

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Illinois Science & Technology Park	8025-8045 Lamon Ave	Skokie (North Suburbs)	286,184	Singerman Real Estate LLC	\$75
Illinois Science & Technology Park	4901 Serle Pkwy	Skokie (North Suburbs)	228,362	TopMed Realty	\$36.2



Denver/Boulder

Colorado

The life sciences sector in the Denver metro has steadily grown over the past several years. Although life sciences tenants dot the metro, they're primarily focused along Denver's Northwest/U.S.-36 Corridor from Broomfield to Boulder. Boulder and the surrounding area offer a highly educated workforce and have long been hotbeds for tech startups, alternative energy and food startups, and other similarly high-buildout uses, so the evolution into life sciences was a natural expansion.

Existing life sciences space around the market has been in high demand and boasts extremely low vacancy as a result. As users continue to relocate and expand here, existing labs and missing infrastructure are often retrofitted to accommodate demand. Due to the highly specific and expensive buildout required for these properties, owner-user projects are common, with companies like AGC Biologics, Terumo

BCT, Syntex Chemicals, Agilent Technologies, and many others owning buildings around the metro.

These high buildout costs, along with higher rents for life sciences buildings and fewer existing options, make life sciences buildings among the few property types where replacement costs are justifiable. Medtronic is finalizing developing a new campus in Lafayette with Ryan Companies, while United Properties is speculatively developing the 200,000-square-foot Boulder Innovation Campus in Louisville. Both are in Denver's Northwest area.

As life sciences users remain very interested in the metro area and the Boulder market specifically, many new ground-up construction projects have been announced and are expected to be underway in the first quarter of 2023. As general office space use continues to drag after the pandemic, life sciences is one of the more active sectors for this market.

Key Statistics (as of Q4 2022)

3.3

Market Inventory MSF

1.0%

Vacancy Rate %

0.5

Net Absorption
2022 MSF

\$45.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$325

Fit-Out Costs (\$PSF)*

\$250

TI Allowance (\$PSF)*

0.5

Under Construction MSF

3.0

Proposed MSF

Funding & Talent

0.9

VC Funding 2022
(\$ Billion)

0.5

NIH Funding 2022
(\$ Billion)

994

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



New Supply

* Assume new 10-year lease.

Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

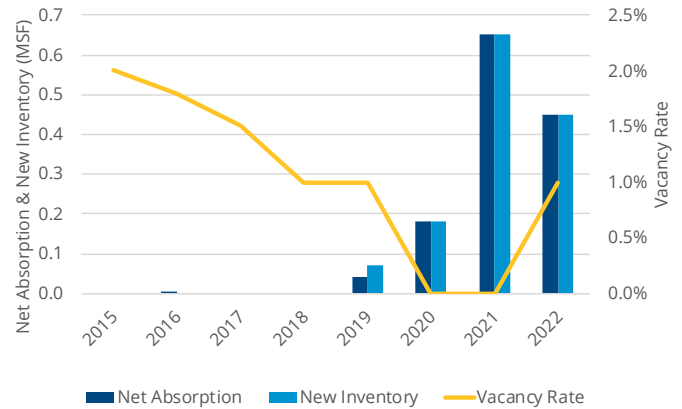
Established/Big Pharma



Newer/Drug Development Companies



Denver/Boulder Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Colorado Tech Center	725 Tech Ct	Northwest	146,318	Umoja Biopharma
Centennial Marketplace	919 W Dillon Rd	Northwest	79,980	Biodesix
10771 E Easter Ave	10771 E Easter Ave	Southeast	73,781	Novus Biologicals

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
CoRE - CO Research Exchange	235 Interlocken Blvd	Northwest	462,000	Lincoln Property Company	TBD
Medtronic Campus	NEC Hwy 287 & W Dillon Rd	Northwest	353,000	Ryan Companies	2023 Q4
Boulder Innovation Campus	1350 & 1452 S 96th St	Northwest	198,720	United Properties	2024 Q1

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Flatiron Park	22 Properties	Boulder	1,111,614	BioMed Realty	\$625.2
Boulder 38	1685-1775 38th St	Boulder	177,216	Breakthrough Properties	\$85.3
1450 Infinite Dr	1450 Infinite Dr	Northwest	160,000	SteelWave	\$30.3



New Jersey

New Jersey's life sciences market has seen rapid growth from emerging pharmaceutical and biotechnology companies. The state's unique ecosystem includes its strategic location in the heart of the Northeast corridor, talented and experienced workforce, and supply chain infrastructure enabling pharmaceutical and biotechnology companies ease of entry. New Jersey is home to eight of the top 10 R&D companies.

The market for move-in-ready lab space remains tight. Expansions among small and mid-sized life sciences firms kept availability low during the year. Long approval processes for new projects and high construction and debt costs have limited new development and lengthened construction timelines, furthering the shortage of purpose-built lab product.

In recent years, large pharmaceutical companies disposed of their campuses, to investors capitalizing on demand for leasable lab space. However, three companies recently announced major investments to redevelop or expand existing campuses. L'Oreal USA's \$140 million project for a new Research & Innovation (R&I) Center in Clark will replace the company's current facilities and span nearly 250,000 square feet. Roche is expanding on its campus in Branchburg after receiving approvals to build a 56,000-square-foot manufacturing facility and an 85,000-square-foot warehouse. The new facility will house Roche's polymerase chain reaction (PCR) manufacturing facility. At the Princeton West Innovation Campus in Hopewell, BeiGene broke ground on a 400,000-square-foot R&D and manufacturing center that will include biologic manufacturing and late-stage research and clinical development of innovative cancer medicines.





Key Statistics (as of Q4 2022)

18.2 Market Inventory MSF	5.6% Vacancy Rate %
0.2 Net Absorption 2022 MSF	\$45.00 Avg. NNN Asking Rent (\$PSF/Year)
\$200.00 Fit-Out Costs (\$PSF)*	\$70.00 TI Allowance (\$PSF)*
0.4 Under Construction MSF	4.1 Proposed MSF

Funding & Talent

0.5 VC Funding 2022 (\$ Billion)
0.4 NIH Funding 2022 (\$ Billion)
3,325 Biomed Graduates 2021

Market Outlook (next 12 months)

-  Vacancy
-  Demand
-  Rents
-  New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

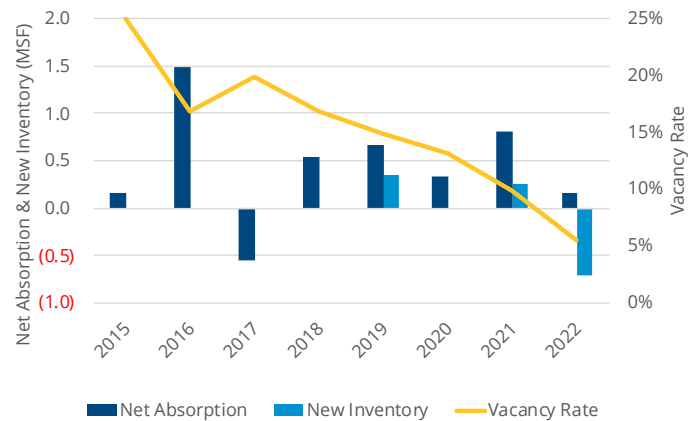
Established/Big Pharma



Newer/Drug Development Companies



New Jersey Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Warren Corporate Center	400/500 Warren Corporate Center	East I-78	361,718	PTC Therapeutics
5 Giralda Farms	5 Giralda Farms	Morristown	250,000	Bristol Myers Squibb
95 Corporate Drive	95 Corporate Drive	East I-78	118,208	Cellares

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
L'Oreal R&D Center	30 Terminal Avenue, Clark	Route 78/Union	250,000	L'Oreal	2024
Roche	1080 US Highway 202 - Bldg. 2	Somerset County	85,000	Roche	2023
Roche	1080 US Highway 202 - Bldg. 1	Somerset County	56,000	Roche	2023

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
ON3	200 Metro Boulevard	Route 46/23/3	332,818	Cantor Fitzgerald & Co.	\$132
700 US Highway 202/206	700 US Highway 202/206	East I-78	117,022	Maxin Properties	\$39
Technology Center of Princeton	350 Carter Road	Princeton	78,992	Warren Avenue Investors	\$34



New York City

New York

The life sciences sector has grown substantially in New York City in recent years, to 4.9 million square feet across Manhattan, Brooklyn, and Queens. Recent city and state government initiatives have fostered this growth. In Q3 2022, Harlem Biospace (wet lab incubator space for early-stage small and mid-sized life sciences companies) announced that it would open a second location in the Mink Building at 1361 Amsterdam Avenue. Recognizing the importance of supporting the growing life sciences industry in New York State, the New York City Regional Economic Development Council recommended this project for a \$1.5 million grant from Empire State Development. Also in Q3 2022, the city and state launched several initiatives: the City of New York announced awards of \$15 million to the City College of New York (CCNY) and \$11.6 million to the Mount Sinai Health System CCNY,

to bring on line the “City Innovations Collaborative,” an incubator for commercial and academic life sciences innovation and research at the Taystee Lab Building at 450 West 126th Street. There are also plans for the SPARC Kips Bay, which will transform Hunter College’s Brookdale Campus into 1.5 million square feet of academic, public health, and life sciences space.

Looking ahead to notable 2023 deliveries, at 125 West End Avenue in Manhattan, Taconic Partners and Nuveen Real Estate are converting the former ABC studio/office building to a 517,000-square-foot, purpose-built research and laboratory complex. Meanwhile, in Long Island City, Longfellow Real Estate Partners is converting the former 214,000-square-foot industrial building at 43-10 23rd Street into Class A lab and research space.

Key Statistics (as of Q4 2022)

4.9

Market Inventory MSF

20.2%

Vacancy Rate %

0.3

Net Absorption
2022 SF

\$1115.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$400

Fit-Out Costs (\$PSF)*

\$175

TI Allowance (\$PSF)*

0.73

Under Construction MSF

1.5

Proposed MSF

Funding & Talent

3.3

VC Funding 2022
(\$ Billion)

2.7

NIH Funding 2022
(\$ Billion)

4,529

Biomed Graduates
2021

Market Outlook (next 12 months)

⊖ Vacancy

⊖ Demand

⊖ Rents

⊕ New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

Established/Big Pharma



Newer/Drug Development Companies



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
The Cure	345 Park Ave S, New York, NY	Midtown South	55,000	NYU Langone Health
521 West 57th Street	521 West 57th Street, New York, NY	Midtown	50,525	Mount Sinai Health System
45-18 Court Square	45-18 Court Square, Queens, NY	Queens	46,179	Opentrons

Two Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
West End Labs	125 West End Ave, New York	UWS	516,531	Taconic Partners	2023 Q3
The Hatch	43-10 23rd St, Long Island City	Queens	214,013	Longfellow Real Estate Partners	2023 Q3



Orange County

California

Orange County's life sciences industry has become one of the primary drivers of economic growth there, with more than \$46.6 billion in annual economic activity and 162,000-plus supported jobs. The county is considered a hub in the medical device/diagnostics market, including such firms as Edwards Lifesciences and Masimo.

The Irvine Company recently announced plans to build a four-building, 532,000-square-foot life sciences complex next to UC Irvine, Academy Point. Located in the UCI Research Park, it will join over 60 established

life sciences companies with direct access to UC Irvine and its leading life sciences ecosystem.

Planet Innovation recently expanded its device manufacturing capacity by moving into a 68,000-square-foot production facility in Irvine. Located in the Irvine Spectrum submarket, it will double the company's total footprint in the United States. RxSight expanded its Aliso Viejo footprint by adding 11,000 square feet a few buildings over from its HQ, and now occupies 120,000 square feet in four facilities in Orange County.





Key Statistics (as of Q4 2022)

10.1 Market Inventory MSF	6.5% Vacancy Rate %
0.0 Net Absorption 2022 MSF	\$24.00 Avg. NNN Asking Rent (\$PSF/Year)
\$200 Fit-Out Costs (\$PSF)*	\$75 TI Allowance (\$PSF)*
1.2 Under Construction MSF	0.5 Proposed MSF

Funding & Talent

0.3 VC Funding 2022 (\$ Billion)
0.2 NIH Funding 2022 (\$ Billion)*
1,674 Biomed Graduates 2021

Market Outlook (next 12 months)

-  Vacancy
-  Demand
-  Rents
-  New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

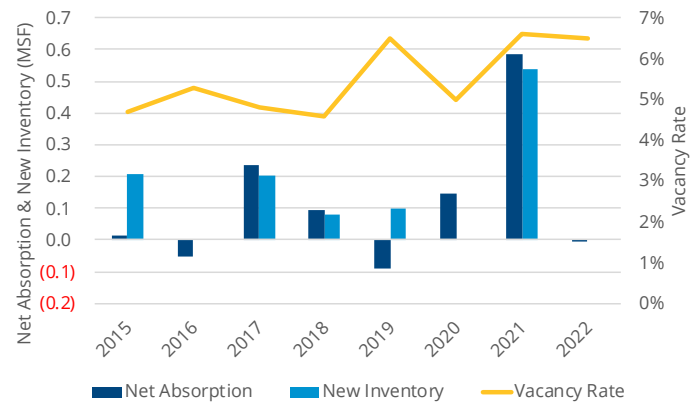
Established/Big Pharma



Newer/Drug Development Companies



Orange County Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Lakeview Business Park	80 Technology	Irvine Spectrum	67,940	Planet Innovation
Sand Canyon Business Center	15535 Sand Canyon	Irvine Spectrum	53,980	Pathnostics
Columbia Corporate Center	100 Columbia	South County	42,106	RxSight

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
Innovation Office Park	Progress Drive	South County	700,000	Irvine Company	2023/2024
Academy Point	UCI Research Park	Airport Area	532,000	Irvine Company	2025 Q2

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
3501 W. Segerstrom Avenue	3501 W. Segerstrom Avenue	Airport Area	66,600	Robinson Pharma	\$25



Philadelphia

Pennsylvania

A strong pipeline of companies is growing in the Philadelphia cluster, building on the early momentum of gene and cell therapies developed in the research institutions. With the strong investment from NIH and research institutions, the growing pipeline of early-stage companies is projected to be sustainable for the foreseeable future. This demand is being met with four million square feet of new purpose-built lab space and conversions that have been announced or are under construction.

As a major center for developing gene and cell therapies, Philadelphia has strong and growing demand for clinical- and pre-clinical-scale manufacturing. Over the last two years, the lack of local biomanufacturing capacity has been noted as a challenge to the accelerating growth of the Philadelphia cluster.

However, this is being addressed by large-scale conversion and ground-up construction in urban Philadelphia, such as the Budd Bioworks and two new cGMP manufacturing projects at the Navy Yard. Spark Therapeutics, a Philadelphia-grown company now a division of Roche, is under construction on a 500,000-square-foot biomanufacturing facility in University City. Wu-Xi STA has begun the first 600,000 square foot phase of a one-million-square-foot-plus pharmaceutical manufacturing campus in Middletown, Delaware.

As a newer entrant into the biomanufacturing sector, Philadelphia offers a significant opportunity for companies looking to establish a manufacturing presence in the U.S. or on the East Coast, providing a strong pipeline of new and planned manufacturing facilities and existing and newly minted talent.

Key Statistics (as of Q4 2022)

22.8

Market Inventory MSF

3.3%

Vacancy Rate %

0.9

Net Absorption
2022 MSF

\$65.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$250

Fit-Out Costs (\$PSF)*

\$135

TI Allowance (\$PSF)*

2.7

Under Construction MSF

9.7

Proposed MSF

Funding & Talent

1.7

VC Funding 2022
(\$ Billion)

1.3

NIH Funding 2022
(\$ Billion)

3,732

Biomed Graduates
2021

Market Outlook (next 12 months)

⊖ Vacancy

⊖ Demand

↑ Rents

↑ New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

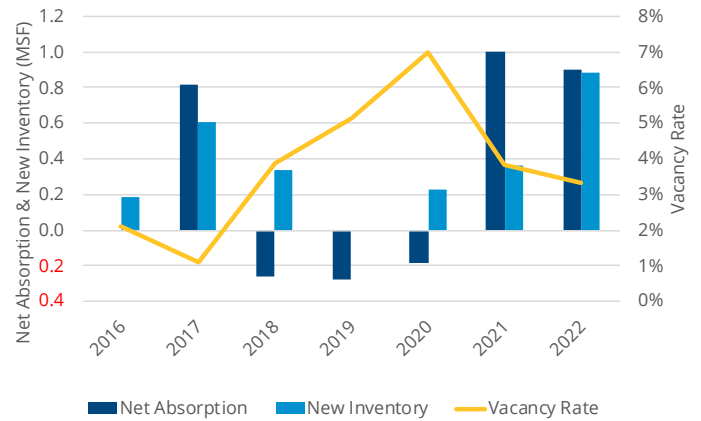
Established/Big Pharma



Newer/Drug Development Companies



Philadelphia Life Sciences Market: 2016-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
3201 Cuthbert Street	3201 Cuthbert Street	Urban Philadelphia	90,910	SmartLabs
Spring House Innovation Park	727 Norristown Road	I-276 Corridor	77,008	Merck
240 Sierra Drive	240 Sierra Drive	Route 202 Corridor	63,500	Früh

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
WuXi STA Middletown	1091 Industrial Drive	I-95 South	600,000	STA Pharmaceuticals USA	2024 Q2
Spark Gene Therapy Innovation Center	3001 Chestnut Street	Urban Philadelphia	500,000	Spark Therapeutics/Roche	2025-2026
Schuylkill Yards	3151 Market Street	Urban Philadelphia	441,000	Brandywine Realty Trust	2024 Q3

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
466 Devon Park Drive	466 Devon Park Drive	Route 202 Corridor	155,200	Hines	\$57
425 Privet Road	425 Privet Road	I-276 Corridor	120,090	Griffith Properties	\$12.1
1850 N. Gravers Lane	1850 N. Gravers Lane	I-276 Corridor	76,290	Spaulding & Slye Investments	\$7.7

Raleigh-Durham

North Carolina

The Raleigh-Durham area, “The Triangle,” remains a top life sciences location, surrounded by world-renowned researchers, top-tier universities, and strategic partnerships. Home to the largest research park in the United States, Research Triangle Park, the area has continued to grow in the life sciences sector and beyond. North Carolina has been repeatedly named one of the best states for business, and Raleigh was placed in the top three hottest job markets earlier in 2022 by the Wall Street Journal and Moody’s Analytics.

This past year saw major investment sales and new developments, particularly in the RTP / I-40 Corridor

submarket. The largest of the year was for Park Point in Research Triangle Park, a 663,000-square-foot life sciences campus, for \$380 million. Developers Starwood Capital Group and Trinity Capital Advisors announced and began to build a new life sciences campus. At an estimated value of \$1 billion, the campus will be called “Spark LS” and already has interest from potential life sciences job creators. The life sciences industry has proven resilient in a tumultuous environment, and demand for space here presses on from startups and large established tenants alike.

Key Statistics (as of Q4 2022)

17.6

Market Inventory MSF

8.4%

Vacancy Rate %

0.9

Net Absorption
2022 MSF

\$34.50

Avg. NNN Asking Rent
(\$PSF/Year)

\$275

Fit-Out Costs (\$PSF)*

\$150

TI Allowance (\$PSF)*

0.3

Under Construction MSF

2.3

Proposed MSF

Funding & Talent

1.7

VC Funding 2022
(\$ Billion)

1.7

NIH Funding 2022
(\$ Billion)

2,474

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

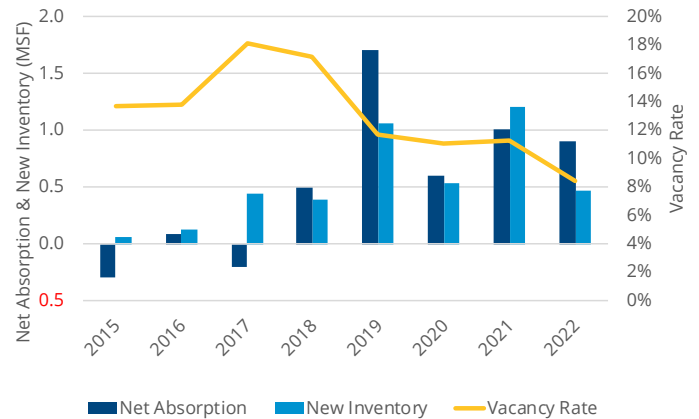
Established/Big Pharma



Newer/Drug Development Companies



Raleigh-Durham Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Syngenta Biotechnology	9 Davis Dr	RTP/RDU	204,924	Syngenta
Edge (East)	4001 E Hwy 54	RTP/RDU	156,114	Confidential
Biogen @ Hopson Rd	3798 Hopson Rd	RTP/RDU	120,000	Biogen

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
Biogen @ Hopson Rd	3798 Hopson Rd	RTP/RDU	120,000	McDonald York Building Company	2023 Q2
Midtown BioCenter	350 E Six Forks Rd	Six Forks/Falls of Neuse	100,000	East West Partners	2023 Q2
AMS Exchange 55	420 Green Oaks Pkwy	Southern Wake County	52,101	Holly Springs Economic Development	2023 Q2

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Park Point	4001 Chapel Hill Rd	RTP/RDU	662,607	CBRE Capital Partners	\$380
Triangle Business Center	Stirrup Creek Dr	RTP/RDU	445,000	Lincoln Harris	\$141
TW Alexander Bioprocessing Building	78 TW Alexander Dr	RTP/RDU	142,600	Oxford Properties Group	\$21

San Diego

California

San Diego's life sciences industry has nearly 23 million square feet of total inventory, primarily in and around San Diego's "Golden Triangle" in the north part of the city (19 million square feet) and in San Diego's North County (three million square feet). Demand has been strong over the past 12 years, and availability has dropped to under 7%. Since 2017 inventory has increased by 14% due to new construction and conversions.

Nearly 3.3 million square feet of new life sciences construction or renovations are underway countywide. San Diego also has another 7.8 million square feet proposed for development.

In 2023, the completion of the renovated Campus at Horton Downtown San Diego project will total

743,000 square feet, in a former regional mall built in the mid-1980s. This mixed-use project includes retail and creative office space along with 426,000 square feet of dedicated life sciences space. Also, IQHQ will complete a brand-new 1.8-million-square-foot five-building mixed-use project along the bayfront. Over 1.6 million square feet of the new RaDD "Research and Development District" will be life sciences space.

Large life sciences developers such as Alexandria Real Estate Equities, BioMed Realty/Blackstone, Healthpeak Properties, Longfellow Real Estate Partners, Breakthrough Properties, and IQHQ continue acquiring properties for redevelopment or conversion throughout the county, but the pace has slowed from that in 2020 and 2021.

Key Statistics (as of Q4 2022)

22.9

Market Inventory MSF

6.5%

Vacancy Rate %

0.6

Net Absorption
2022 MSF

\$78.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$275

Fit-Out Costs (\$PSF)*

\$225

TI Allowance (\$PSF)*

3.3

Under Construction MSF

7.8

Proposed MSF

Funding & Talent

6.2

VC Funding 2022
(\$ Billion)

1.2

NIH Funding 2022
(\$ Billion)

3,367

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

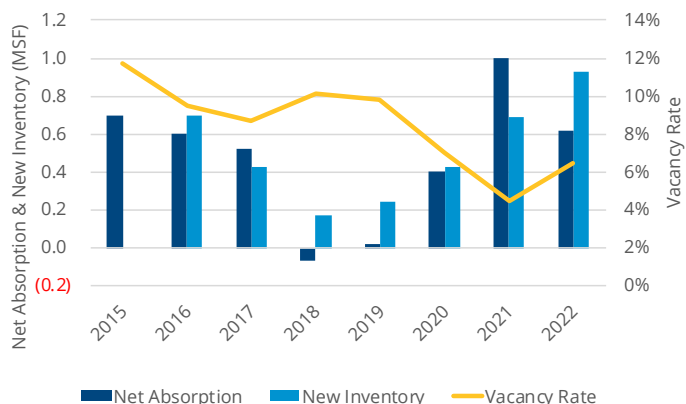
Established/Big Pharma



Newer/Drug Development Companies



San Diego Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Campus Point 4	Campus Point Dr	UTC	427,000	Bristol Myers Squibb
Aperture	6040 Edgewood Bend Ct	Del Mar Heights	525,000	Neurocrine Bioscience
One Alexandria Square North	11255 N Torrey Pines Rd	Torrey Pines	309,000	Altos Labs

Three Largest Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
RaDD (Research & Development District)	937 N Harbor Dr	Downtown/CBD	1,632,000	IQHQ	2023 Q3
The Campus at Horton (Bldg 100 & 300)	324 Horton Plz	Downtown/CBD	426,000	Stockdale Capital	2023 Q2
Torrey View	11220 El Camino Real	Del Mar Heights/Carmel Valley	520,000	Breakthrough Properties	2023 Q3

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Ionis Pharmaceuticals	2850 & 2855 Gazelle Ct	Carlsbad	246,000	Oxford Properties Group	\$258
The Aventine (Atrium & Hyatt Regency)	3777 La Jolla Village Dr & 8930 University Center Ln	UTC	326,822	IQHQ	\$227
Governor Pointe Business Park	6200 & 6220 Greenwich Dr	Governor Park	231,987	Breakthrough Properties	\$145



San Francisco Bay Area

California

The San Francisco Bay Area life sciences sector remains a top-performing asset type. The pandemic accelerated its growth here, and venture capital has continued to fuel one of the most robust life sciences markets nationally. Although venture capital funding dropped year-over-year, it is still at historical highs. However, the types have changed to later-stage-funded companies with strong financial track records, instead of earlier-stage startups.

The San Francisco Peninsula market takes the lion's share of total inventory in the Bay Area, 18.9 million square feet. The East Bay follows, at 12.1 million square feet, with the remainder in Silicon Valley, at

nine million square feet, and San Francisco, at 6.4 million square feet.

Compared to others in the Bay Area, life sciences assets boast some of the lowest availability figures. Due to such a resilient product, developers continue to expand their life sciences footprints, with more than eight million square feet of product under construction.

The outlook remains optimistic as the Bay Area continues to grow for future life sciences users and developers attempt to satiate the demand of tenants for high-quality life sciences product.

Key Statistics (as of Q4 2022)

46.1 Market Inventory MSF	9.4% Vacancy Rate %
-1.0 Net Absorption 2022 MSF	\$95.40 Avg. NNN Asking Rent (\$PSF/Year)
\$400 Fit-Out Costs (\$PSF)*	\$200 TI Allowance (\$PSF)*
8.6 Under Construction MSF	54.7 Proposed MSF

Funding & Talent

14.5 VC Funding 2022 (\$ Billion)
2.1 NIH Funding 2022 (\$ Billion)
3,985 Biomed Graduates 2021

Market Outlook (next 12 months)

- Vacancy
- Demand
- Rents
- New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

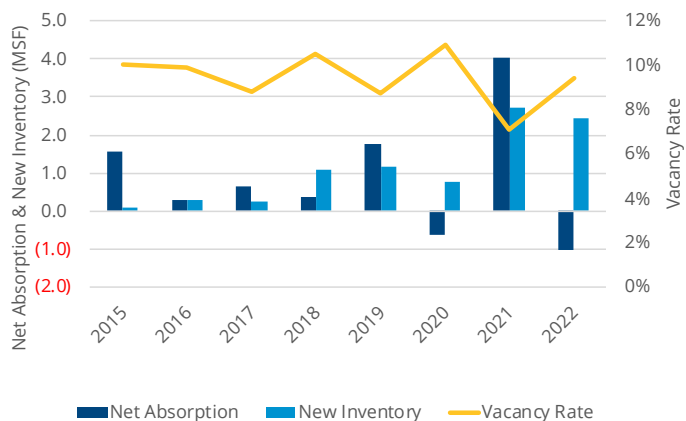
Established/Big Pharma



Newer/Drug Development Companies



SF Bay Area Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
ACLS Millbrae Campus	30-201 Rollins Rd, 101 Harriet Tubman Rd 3	SF Peninsula	285,000	Eikon Therapeutics
Emerystation Research Campus	5850, 5885, 6121 Hollis St Emeryville, CA 94608	East Bay	162,186	Amyris, Inc.
Vantage	480 Forbes Blvd	SF Peninsula	154,000	Astellas

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
Kilroy Oyster Point	375-379 Oyster Point Blvd	SF Peninsula	900,000	Kilroy Realty	2023 Q1
Southline	30 Tanforan Ave	SF Peninsula	670,000	Lane Partners	2024 Q2
Elco Yards	111-1601 El Camino Real	SF Peninsula	592,000	IQHQ	2024 Q4

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
75-7300 Shoreline Ct	75-125 Shoreway Rd, 7000 Shoreline Ct	SF Peninsula	407,000	GI Partners	\$388
Palo Alto Technology Center	3301-3307 Hillview Ave	Silicon Valley	292,013	Alexandria Real Estate Equities	\$267.6
San Carlos Research Center	120-150 Industrial Rd	SF Peninsula	229,640	Graymark Capital JV BentallGreenOak	\$190

Seattle

Washington

Despite a national slowdown in life sciences funding — on the heels of a record-breaking 2021 — Seattle can count significant successes on the real estate leasing side indicating its status as an emerging market. Several major leases have been signed since the start of 2022 at two new properties, and developers do not appear intimidated by the slowing venture capital market. Two recent developments are Oxford Properties' Boren Labs and BioMed's Dexter Yard. Boren Labs has six of nine floors leased, and Cornea Gen, Gentio Bio, Tune Therapeutics, and Icosavax collectively lease almost 100,000 square feet of space in the 140,000-square-foot building. Dexter Yard has more than 300,000 square feet leased in the 500,000-square-foot building, to Shape Therapeutics, Parse Biosciences, Outpace, AI2, and Monod Bio. The largest lease was Shape Therapeutics' 120,000 square feet, leaving the other tenants leasing smaller spaces, the types of deals expected to continue with less funding.

More than 1.2 million square feet of space is under construction or being renovated in Lake Union and double that amount is in planning or close to starting construction. Part of this can be explained by demand for space by life sciences companies. While nationally, there has been a slowdown of activity, Seattle is an emerging market and unaccustomed to the scale of leasing taking place in major life sciences markets, like Boston or the Bay Area. The leasing at Boren Labs and Dexter Yard took place within 12 months of completion. In an August 2022 Puget Sound Business Journal interview, BioMed Realty revealed that one of its two proposed projects could break ground in 2023 on a speculative basis. These are T6 Innovation Center and Denny Park South, totaling 1.1 million square feet of speculative life sciences space.

Key Statistics (as of Q4 2022)

8.8

Market Inventory MSF

11.6%

Vacancy Rate %

0.0

Net Absorption
2022 MSF

\$75.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$350

Fit-Out Costs (\$PSF)*

\$200

TI Allowance (\$PSF)*

1.2

Under Construction MSF

3.5

Proposed MSF

Funding & Talent

1.7

VC Funding 2022
(\$ Billion)

1.3

NIH Funding 2022
(\$ Billion)

1,802

Biomed Graduates
2021

Market Outlook (next 12 months)



Vacancy



Demand



Rents



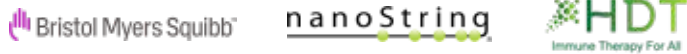
New Supply

* Assume new 10-year lease, 1st generation space.

Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

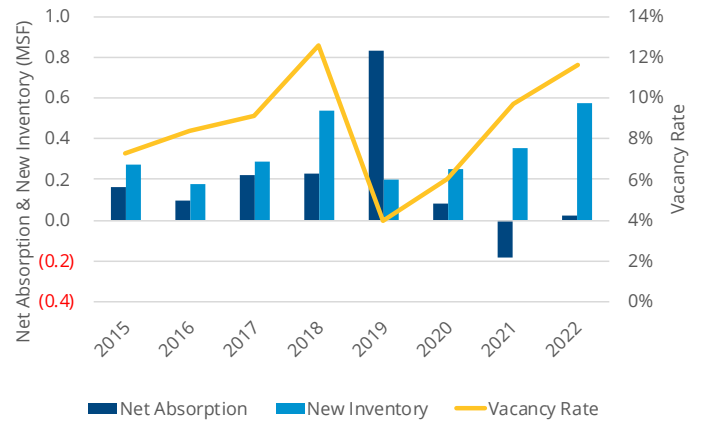
Established/Big Pharma



Newer/Drug Development Companies



Seattle Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
1916 Boren Ave	1916 Boren Ave	South Lake Union	124,000	Seattle Children's
Unison Elliott Bay	501 Elliott Ave W	South Lake Union	83,000	Sonoma Biotherapeutics
Dexter Yard	700 Dexter Ave N	South Lake Union	34,000	Parse Biosciences

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
eleven50	1150 Eastlake Ave E	South Lake Union	312,000	Alexandria	2023 Q2
701 Dexter	701 Dexter Ave N	South Lake Union	227,000	Alexandria	2023 Q4
222 Fifth Ave N	222 5th Ave N	South Lake Union	191,000	LPC/Invesco	2024 Q3

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Project Procton	21717-21823 30th Dr SE	Bothell	144,900	Confidential	\$54
10809 120th Ave NE	10809 120th Ave NE	Bothell	61,438	Toll Brothers, Inc.	\$23
ICO Genex	454 N 34th St	South Lake Union	16,020	Frederick Hagen Jr	\$5

Suburban Maryland

Maryland

The Suburban Maryland/DMV area has continued to attract life sciences companies due to the educated labor pool, real estate, and labor costs. Other drivers in the region are numerous federal agencies including the Food and Drug Administration and the National Institutes of Health and the labs associated with them. Notable companies such as Astra Zeneca, GlaxoSmithKline and MilliporeSigma are well established in the market.

Expansions continued in 2022, highlighted by two notable deals. Horizon Therapeutics' expansion for an East Coast research and development hub for 192,000 square feet is now under construction at Traville Gateway. More recently, at the same campus, MilliporeSigma just announced plans to expand its biosafety testing with a new 250,000-square-foot facility in Rockville. While leasing is strong, it has slowed from the height of the pandemic, when there

was unprecedented demand for life sciences space; the decreased response from the COVID-19-related vaccines and therapies sector is partially responsible. Despite the slowdown, life sciences vacancies are in the single digits in contrast to those for office, in the upper teens.

Construction of new life sciences facilities has been strong, with multiple projects underway. A mix of new-construction projects and conversions of existing office space has persisted as the life sciences sector continued to outpace office demand. This is especially true along the I-270 corridor, known as DNA Alley, where numerous projects are underway. The corridor also has many other future options for conversion, including a number of obsolete office and flex buildings engaging life sciences tenants given the tepid office environment.

Key Statistics (as of Q4 2022)

11.4

Market Inventory MSF

5.7%

Vacancy Rate %

-0.1

Net Absorption
2022 MSF

\$50.00

Avg. NNN Asking Rent
(\$PSF/Year)

\$225

Fit-Out Costs (\$PSF)*

\$140

TI Allowance (\$PSF)*

1.9

Under Construction MSF

4.5

Proposed MSF

Funding & Talent

1.4

VC Funding 2022
(\$ Billion)

0.3

NIH Funding 2022
(\$ Billion)

1,070

Biomed Graduates
2021

Market Outlook (next 12 months)

--- Vacancy

↑ Demand

--- Rents

↑ New Supply

* Assume new 10-year lease, 1st generation space.
Source: Colliers, National Institutes of Health, PitchBook, EMSI

Top 3 Companies in the Market

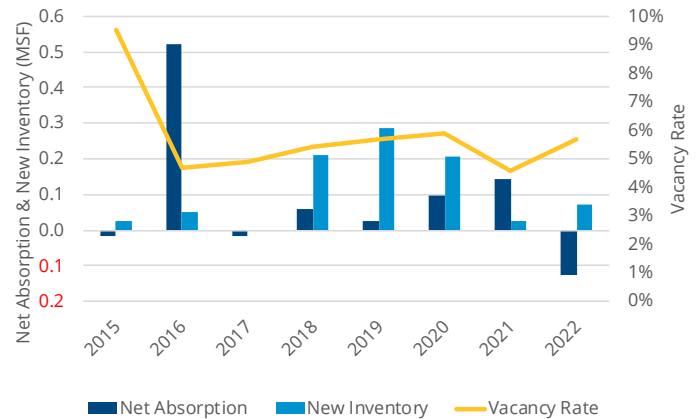
Established/Big Pharma



Newer/Drug Development Companies



Suburban Maryland Life Sciences Market: 2015-2022



Three Largest/Impactful Leases Signed (12 months ending Q4 2022)

Property Name	Address	Submarket	SF Leased	Tenant
Traville Gateway	9820 Darnestown Rd	North Rockville	250,000	MilliporeSigma
Traville Gateway	9810 Darnestown Rd	North Rockville	192,000	Horizon Therapeutics
Shady Grove Life Sciences Center	9704 Medical Center Dr	North Rockville	122,601	MacroGenics

Three Largest/Important Projects Under Construction

Property Name	Address	Submarket	Size SF	Developer	Completion (Year/Quarter)
Progress Labs at 700 N Frederick Ave	700 N Frederick Ave	Gaithersburg	619,800	Matan	2023 Q1
Traville Gateway	9820 Darnestown Rd	North Rockville	365,000	Alexandria	2023 Q4
Monument Innovation Center	735 Watkins Mill Rd	Gaithersburg	135,000	Monument Realty	2023 Q3

Top Investment Sales By Value (12 months ending Q4 2022)

Property Name	Address	Submarket	Size SF	Buyer	Price (\$ Million)
Key West Life Science Center	9713 Key West Ave	North Rockville	128,394	MetLife Investment Management	\$71
1 Preserve Parkway	1 Preserve Parkway	Rockville	191,000	Longfellow Real Estate Partners	\$61
Research Square	150-1550 Research Blvd	North Rockville	84,937	Altus Realty	\$26



Houston

Texas

The prominent institutions and professional talent continue to drive the expansion of healthcare, biotechnology and life sciences sectors in the nation's fourth-largest city, Houston. Proud to claim the largest medical complex in the world, the Texas Medical Center (TMC), Houston, provides a natural springboard for creating new life sciences companies with discoveries through the 61 TMC institutions that provide clinical healthcare, research, and education. The TMC aspires to nurture cross-institutional collaborations, creativity, and innovation. However, that is just the starting point in this nine-county metro area with more than 1,760 life sciences companies, cutting-edge hospitals, medical facilities, and research

institutions, with a workforce of more than 320,500 people in the related fields.

The TMC Innovation Institute provides a campus for numerous life sciences-focused incubator and accelerator programs. The National Institutes of Health (NIH) provide funding alongside the TMC Venture Fund, venture capital, and private equity investors seeking key scientists and medical researchers in this center of medicine and related science. Some of the more notable projects around the city include TMC3, a 37-acre research campus that is part of the Texas Medical Center, and Levit Green, which will have 270,000 square feet of laboratory, research, and office space.



Minneapolis-St. Paul

Minnesota

In Minneapolis-St. Paul, the life sciences workforce has grown 17% since 2017 while life sciences vacancies have fallen into the low single-digits.. Much of this comes from the area's legacy and growing medical device community, which is the most concentrated in the nation. In fact, Plymouth, MN, has the highest concentration of medical device companies in the world. Fifteen of the largest 20 medical device companies in the world have operations in Minneapolis-St. Paul, and this clustering encourages complex medical device innovation. Minnesota is the top ranked state in the U.S. for FDA PMA approvals, at a rate six months faster than average.

Investors, consultants, contract manufacturing, pre-clinical, CROs, packaging, sterilizations, etc., have contributed a robust ecosystem of over 30,000 life sciences employees in Minnesota. While medical devices have dominated the market, the biotech community also has increased its demand for space. The ecosystem has evolved to support pharmaceutical and cell therapy companies attracted by the biomedical cluster, cheaper cost of living and talent, and other resources that have made the market a center for medical devices.



New Haven

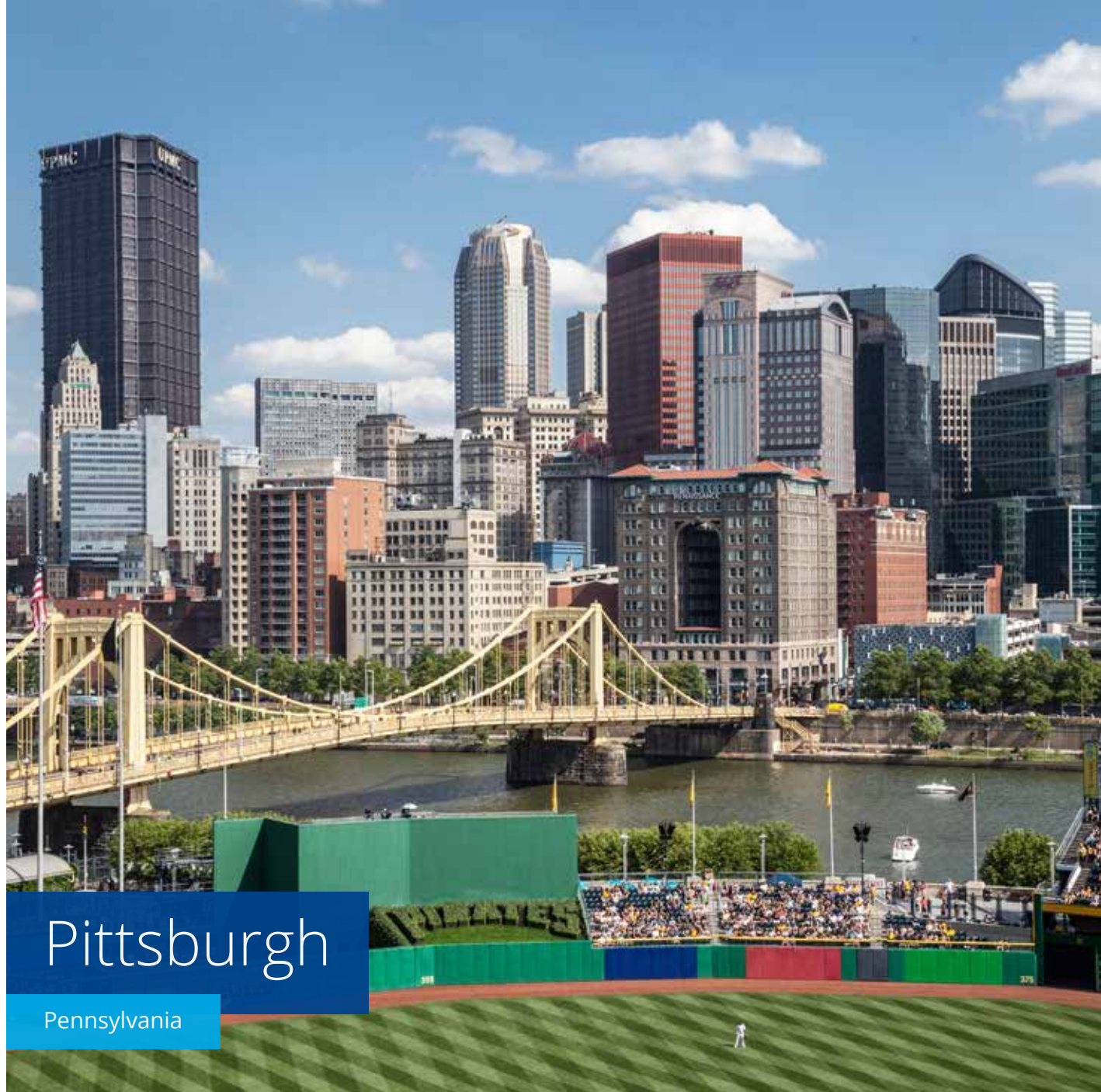
Connecticut

Yale University keeps spinning out new life sciences ventures at a rate of nearly one per month. Many of these companies prosper and grow, accounting for much of the area's demand. And the university itself and Yale New Haven Hospital are both big users of privately owned lab space. A shortage of available lab space and continuing high demand have together pushed up life sciences rents over the last year in New Haven. Rents have soared in recent years, since there's no finished lab space available and only limited space to readily build out as labs.

The 525,000-square-foot building at 101 College Street, developed by Winstanley Enterprises, is 90%

leased and scheduled to complete in 2024. Leasing remains strong in the handful of smaller properties being converted to life sciences use. Developers have been scouring the city for buildings that could be repurposed as labs.

The nationwide slowdown in venture capital lending to life sciences startups does seem to have affected demand somewhat, and sales have slowed. Nonetheless, there's been strong growth for established companies, and overall conditions remain bullish.



Pittsburgh

Pennsylvania

Pittsburgh has become a life sciences hub, transformed by research, technology, and startups into a center for innovation. Cutting-edge medical research at the University of Pittsburgh and globally recognized artificial intelligence and robotics assets at Carnegie Mellon University have created an advanced life sciences sector unique in the global marketplace.

The Pittsburgh region's advancements in biotech, therapeutics, and pharmaceutical and medical devices attract top talent and R&D investment dollars from

outside of the region. In one such example, Baltimore-based Wexford Life Sciences recently converted a 355,000-square-foot industrial building into a hub of research and is also developing an additional 10-story 300,000-square-foot life sciences building on Pitt's campus. Cambridge-based ElevateBio has also emerged as the new strategic partner of both Pitt and the RK Mellon Foundation to construct an 80,000-square-foot specialized biomanufacturing facility, creating 170 full-time jobs.



Salt Lake City

Utah

Salt Lake City is widely recognized as a top emerging life sciences market. Lab-specific commercial real estate, supportive local governments, an educated population, collaborative universities, and a world-class outdoor lifestyle all contribute to putting Utah on the radar of outside life sciences companies. Utah is focusing on industry infrastructure and new lab-specific development sites to attract life sciences and biotech industry growth.

Utah's bioscience industry ranked sixth per capita in venture capital investment in the United States and is one of the fastest growing job markets on a percentage basis. Medical device manufacturers are the largest life sciences sector in Utah, employing

more than 19,000 and second in the nation for medical device employment concentration. The life sciences industry accounts for 8% of Utah's GDP, with an ecosystem of more than 1,100 existing companies. Notable life sciences companies located in Utah include Stryker, BioMerics, MeritMedical, BD, Bio Fire, ThermoFisher Scientific, Edwards, ARUP Laboratories, Recursion, and Scientia Vascular.

Due to the proximity to the University of Utah and Research Park, downtown amenities, housing, and Salt Lake International Airport, 6th South and the Granary District are new development sectors attracting life sciences companies.



St. Louis

Missouri

St. Louis has historically been well known in the healthcare and education sectors, which over the past few decades have paved the way for the city's emergence in the life sciences sector. Established companies such as Bayer, MilliporeSigma, and Mallinckrodt have been in St. Louis for many years, while startups are beginning to put down roots in a market with continued growth. At the heart of this growth are nonprofit companies like Cortex Innovation Community and BioSTL, which have been cultivating and investing in St. Louis life sciences startups since early 2000, providing innovative office/lab spaces and funding.

In 2022, BioGenerator (the investment arm of BioSTL) invested in 18 St. Louis startups developing products in the life sciences. BioGenerator has a total portfolio investment of \$2 billion in follow-on capital since its inception and includes growing companies such as Benson Hill, MediBeacon, Arch Oncology, Geneoscopy, CoverCress, Sentiari, and Wugen. These companies are succeeding in St. Louis due to its high-end talent pool from Washington University, St. Louis University, and University of Missouri in St. Louis. Washington University alone has established itself as a top contributor in medical research. U.S. News ranks Washington University as the 11th best medical school for research.

Market Fundamentals

Market Inventory (M Sq Ft)

San Francisco Bay Area	46.1
Boston	40.3
San Diego	22.9
Philadelphia	22.8
New Jersey	18.2
Raleigh-Durham	17.6
Suburban Maryland	11.4
Orange County	10.1
Seattle	8.8
Chicago	6.5
New York City	4.9
Denver	3.3

2022 Absorption (M Sq Ft)*

Boston	2.3
Raleigh-Durham	0.9
Philadelphia	0.9
San Diego	0.6
Denver	0.5
New York City	0.3
New Jersey	0.2
Chicago	0.0
Orange County	0.0
Seattle	0.0
Suburban Maryland	-0.1
San Francisco Bay Area	-1.0

*In existing buildings only

Vacancy Rate

Denver	1.0%
Philadelphia	3.3%
New Jersey	5.6%
Suburban Maryland	5.7%
San Diego	6.5%
Orange County	6.5%
Boston	8.0%
Raleigh-Durham	8.4%
San Francisco Bay Area	9.4%
Seattle	11.6%
Chicago	15.0%
New York City	20.2%

Source: Colliers



Average NNN Rent

Boston	\$125
New York City	\$115
San Francisco Bay Area	\$95
San Diego	\$78
Seattle	\$75
Philadelphia	\$65
Chicago	\$55
Suburban Maryland	\$50
Denver	\$45
New Jersey	\$45
Raleigh-Durham	\$35
Orange County	\$24

Under Construction (M Sq Ft)

Boston	23.90
San Francisco Bay Area	8.60
San Diego	3.30
Philadelphia	2.70
Suburban Maryland	1.90
Seattle	1.20
Orange County	1.20
New York City	0.73
Denver	0.50
Chicago	0.47
New Jersey	0.40
Raleigh-Durham	0.30

Proposed (M Sq Ft)

San Francisco Bay Area	54.7
Boston	24.5
Philadelphia	9.7
San Diego	7.8
Suburban Maryland	4.5
New Jersey	4.1
Seattle	3.5
Denver	3.0
Chicago	2.3
Raleigh-Durham	2.3
New York City	1.5
Orange County	0.5

Funding & Talent

VC Funding

(\$ bn)

San Francisco Bay Area	\$14.50
Boston	\$11.20
San Diego	\$6.20
New York City	\$3.30
Philadelphia	\$1.70
Seattle	\$1.70
Raleigh-Durham	\$1.70
Suburban Maryland	\$1.40
Chicago	\$1.20
Denver	\$0.90
New Jersey	\$0.50
Orange County	\$0.30

NIH Funding

(\$ bn)

Boston	\$3.00
New York City	\$2.70
San Francisco Bay Area	\$2.10
Raleigh-Durham	\$1.70
Philadelphia	\$1.30
Seattle	\$1.30
San Diego	\$1.20
Chicago	\$1.20
Denver	\$0.50
New Jersey	\$0.40
Suburban Maryland	\$0.30
Orange County	\$0.20

Biomed Graduates

Boston	5,079
New York City	4,529
San Francisco Bay Area	3,985
Philadelphia	3,732
Chicago	3,516
San Diego	3,367
New Jersey	3,325
Raleigh-Durham	2,474
Seattle	1,802
Orange County	1,674
Suburban Maryland	1,070
Denver	994

Source: Colliers, PitchBook, National Institutes of Health, EMSI



Combined Market Statistics & Rankings

	Boston	Chicago	Denver	New Jersey	New York City
Market Inventory Rank	40.3 2	6.5 10	3.3 12	18.2 5	4.9 11
2022 Absorption Rank	2.3 1	0.0 8	0.5 5	0.2 7	0.3 6
Vacancy Rate Rank	8.0% 7	15.0% 11	1.0% 1	5.6% 3	20.2% 12
Average NNN Rent Rank	\$125 1	\$55 7	\$45 9	\$45 10	\$115 2
Under Construction Rank	23.9 1	0.5 10	0.5 9	0.4 11	0.7 8
Proposed Rank	25 2	2 9	3 8	4 6	2 11
VC Funding Rank	\$11.20 2	\$1.20 9	\$0.90 10	\$0.50 11	\$3.30 4
NIH Funding Rank	\$3.00 1	\$1.20 8	\$0.50 9	\$0.40 10	\$2.70 2
Biomed Graduates Rank	5,079 1	3,516 5	994 12	3,325 7	4,529 2

Source: Colliers, PitchBook, National Institutes of Health, EMSI



Orange County	Philadelphia	Raleigh-Durham	San Diego	San Francisco Bay Area	Seattle	Suburban Maryland
10.1 8	22.8 4	17.6 6	22.9 3	46.1 1	8.8 9	11.4 7
0.0 9	0.9 3	0.9 2	0.6 4	-1.0 12	0.0 10	-0.1 11
6.5% 6	3.3% 2	8.4% 8	6.5% 5	9.4% 9	11.6% 10	5.7% 4
\$24 12	\$65 6	\$35 11	\$78 4	\$95 3	\$75 5	\$50 8
1.2 7	2.7 4	0.3 12	3.3 3	8.6 2	1.2 6	1.9 5
1 12	10 3	2 10	8 4	55 1	4 7	5 5
\$0.30 12	\$1.70 5	\$1.70 7	\$6.20 3	\$14.50 1	\$1.70 6	\$1.40 8
\$0.20 12	\$1.30 5	\$1.70 4	\$1.20 7	\$2.10 3	\$1.30 6	\$0.30 11
1,674 10	3,732 4	2,474 8	3,367 6	3,985 3	1,802 9	1,070 11

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