

U.S. LIFE SCIENCES CBRE RESEARCH

LEADING LIFE SCIENCE CLUSTERS

THE BIO-BOOM INTENSIFIES



CBRE

EXECUTIVE SUMMARY

- Boston-Cambridge, the San Francisco Bay Area and San Diego remain the nation's top three life sciences clusters, while Pittsburgh and Houston are top new emerging ones.
- While life science employment was down by just 1.3% in July from its peak in March, it was 1% higher than a year ago compared with the 7.6% decline in total nonfarm employment. Biotech R&D employment has been particularly strong, up by 4.9% from a year ago and outpacing tech employment growth.
- Total venture capital funding for the life sciences industry for the year ending Q2 2020 was a record \$17.8 billion. The San Francisco Bay Area and Boston-Cambridge accounted for more than half of the total.
- National Institutes of Health funding to major universities and institutions for health-care research is forecast to grow by 6% this year to \$42 billion.
- Total commercial laboratory space has grown by 12% this year to 95 million sq. ft. Another 11 million sq. ft. is currently under construction. Despite the increased supply, lab rents are rising as tenant demand remains very strong.
- Reflecting a broad pullback in commercial real estate investment, lab/R&D property sales totaling \$9.6 billion for the year ending Q2 2020 fell by 18% from the same period a year ago. However, pricing remains intensely competitive. The bulk of sales transactions (66%) were in the top three life sciences markets of the San Francisco Bay Area, Boston-Cambridge and San Diego.
- A continued positive outlook is underscored by new growth drivers, such as government emphasis on the life science industry's pivotal role in combating the COVID-19 pandemic, onshoring trends and rapid expansion of biomanufacturing.





OPPORTUNITIES IN A NATIONAL CRISIS

The life sciences industry has been thrust into the spotlight as the United States faces its greatest public health crisis in a century. Investors have a heightened interest in the life sciences industry as it works to develop a vaccine and effective treatments for COVID-19, along with other medical breakthroughs. This in turn is creating new opportunities for commercial real estate.

The industry has displayed remarkable resilience to the economic downturn, with new sources of demand and a flood of venture capital to support various initiatives. Across the various U.S. life sciences lab clusters, our data shows a market undeterred by disruption and, if anything, recharged for an intensified expansion.

After a brief pullback in demand early in the crisis, demand for lab space has grown through mid-2020 as supply struggles to meet demand. Consequently, vacancies in most lab markets remain at or near record lows

and rents are rising rapidly. Biotech R&D employment reached a record in June as more venture capital was invested in life sciences opportunities in Q2 2020 than ever before.

Various megatrends support the industry's growth as well. An aging global population that is living longer than ever requires more and more life sciences innovations. While near-term aggregate demand for the industry's goods and services has been impacted by the recession, the long-term outlook is favorable. Heightened awareness and appreciation for the solutions offered by the life sciences industry may unleash more government resources to support it.

The crisis has also exposed U.S. reliance on global supply chains and overseas manufacturing, particularly by the life sciences sector. As a result, the industry is moving to onshore some manufacturing and operational facilities to the U.S., which should translate into more demand for domestic space.



TMC³ Bioresearch Campus, Houston, TX, Courtesy of Texas Medical Center.



2020 U.S. LEADING & EMERGING LIFE SCIENCE CLUSTERS

Thirteen leading markets are fueling the bulk of growth in the U.S. life sciences industry. These markets offer the nation's largest and most concentrated life sciences and R&D employment bases, the largest inventories of leasable laboratory space, and capture most of the funding from the National Institutes of Health and venture capitalists.

Boston-Cambridge and the San Francisco Bay Area are the top two U.S. life sciences markets, with unparalleled talent bases, inventories of laboratory space, research universities and funding. San Diego ranks third, with some of the nation's most prestigious health-care institutions and fastest-growing rents for lab space.

The next tier of preeminent markets includes the Washington, D.C.-Baltimore region, Raleigh-Durham (including Research Triangle Park) and New Jersey. These markets have played a significant historical role in the life

sciences industry, and they are also rapidly adapting to an increased focus on biologics and biomanufacturing.

Another tier of markets consists of three of the largest, most prestigious centers of health-care research in the nation: Philadelphia, New York City and Seattle. In Philadelphia, the strong legacy of a large pharmaceutical presence in the suburbs has pivoted to a burgeoning hub of activity in the downtown, where many of the region's leading research institutions are located. For New York City and Seattle, aggressive expansion within the urban core continues to propel their stature as key life sciences markets.

Other rapidly evolving life sciences markets include Los Angeles, Chicago, Orange County, CA and Denver-Boulder. Chicago and Denver, for example, are experiencing particularly strong growth, as new speculative lab developments accommodate surging tenant demand.

FIGURE 1: U.S. TOP LIFE SCIENCE CLUSTERS

1. Boston-Cambridge
2. San Francisco Bay Area
3. San Diego
4. Washington, D.C. - Baltimore
5. Raleigh-Durham
6. New Jersey
7. Philadelphia
8. New York City
9. Seattle
10. Los Angeles
11. Chicago
12. Orange County, CA
13. Denver-Boulder

Source: CBRE Research, Q3 2020.

Note: Ranked by size, growth and concentration of life sciences employment, concentration of R&D life sciences employment, size of laboratory inventory, and amount of NIH and life sciences venture capital funding.

FIGURE 2: U.S. TOP 10 EMERGING CLUSTERS

1. Pittsburgh
2. Houston
3. Austin
4. Detroit
5. Phoenix
6. Dallas/Ft. Worth
7. St. Louis
8. Atlanta
9. Portland
10. Minneapolis

Source: CBRE Research, Q3 2020.

Note: Ranked by size and growth of life sciences employment, concentration of R&D life sciences employment, amount and growth of life sciences venture capital funding and NIH funding.

U.S. LIFE SCIENCE EMPLOYMENT TRENDS

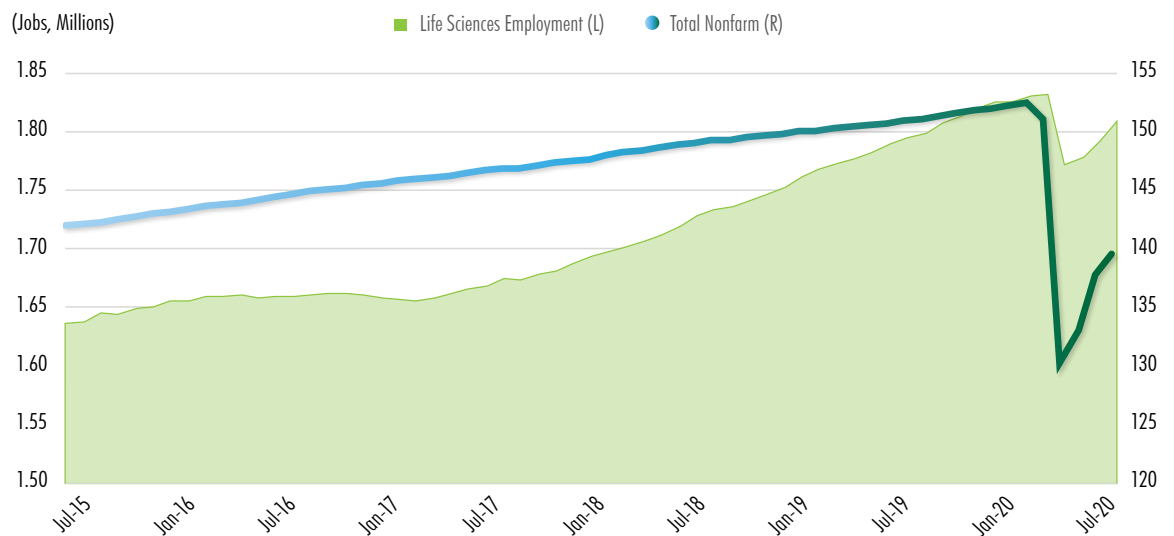
While life sciences employment has not gone unscathed by the recession, it has been less affected than other industries—down by just 1.3% through July since peaking in March. Still, life sciences employment was 1% higher in July than a year ago, while total nonfarm employment was 7.6% lower (Figure 3).

Biotechnology research & development

has seen explosive growth over the past several years (Figure 5). This sector has been instrumental in driving urban-core demand as the industry pivots to various large molecule breakthroughs.

After an insignificant employment loss of a few hundred workers in May, the biotech R&D segment reached its highest level of

FIGURE 3: U.S. LIFE SCIENCES & TOTAL NONFARM EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, Q3 2020.

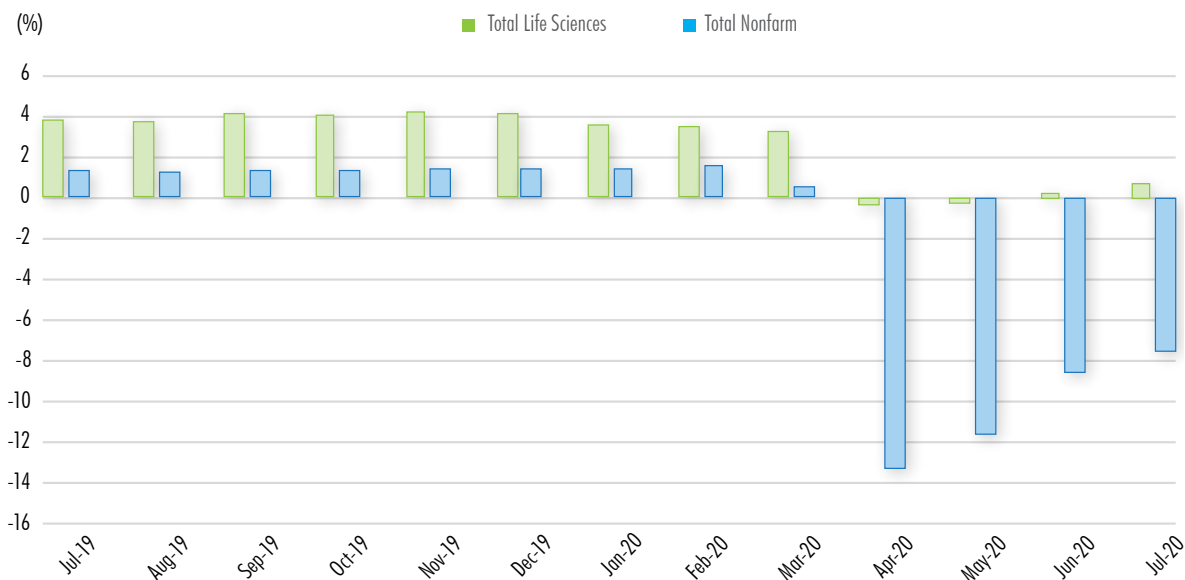
Note: Life Sciences employment consists of the following NAICS categories: Manufacturing (pharmaceuticals and medicines) (3254), Electromedical apparatus (334510), Analytical laboratory instruments (334516), Irradiation apparatuses (334517), Surgical and medical instruments (339112, 339113), Medical, Diagnostic and Testing laboratories (54138, 6215) and R&D in the physical, engineering and life sciences (54171) as obtained on a county level from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages.

employment in July. Testing, medical and diagnostic lab employment was less resilient, down by 5.5% since February.

The relative resilience of the life sciences industry thus far in the recession, especially by the biotech R&D sector, has contributed to ongoing favorable lab market fundamentals.

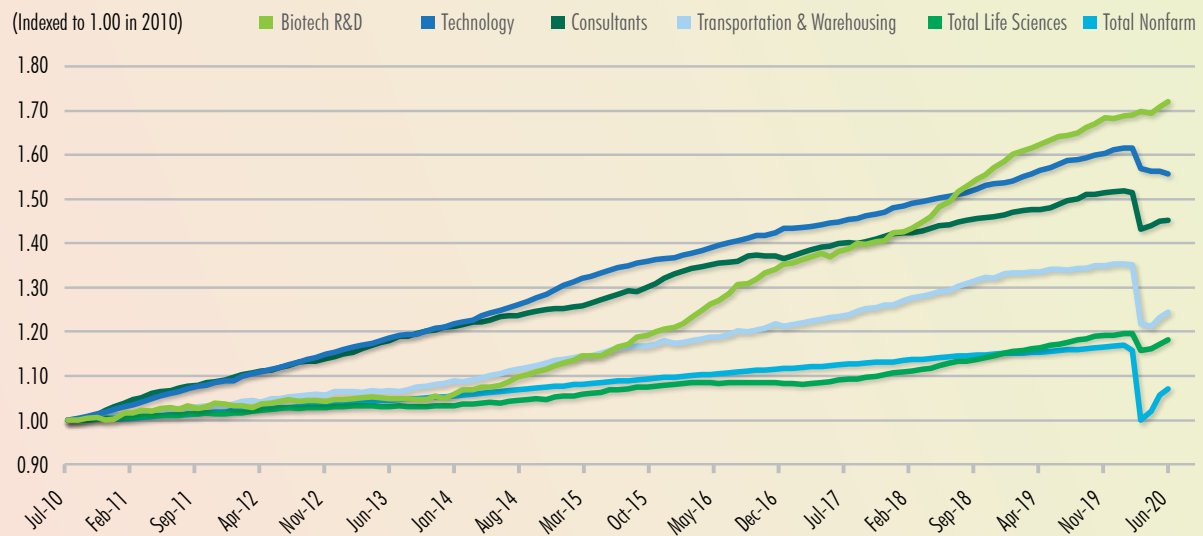
The San Francisco Bay Area and Boston-Cambridge offer the two largest life sciences employment bases in the U.S., and both grew at a faster pace than all other markets over past year. The R&D component has been the key driver behind this growth and is one reason why Pittsburgh and Houston have become up-and-coming markets.

FIGURE 4: ONE-YEAR CHANGES IN U.S. LIFE SCIENCES & TOTAL NONFARM EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, Q3 2020.

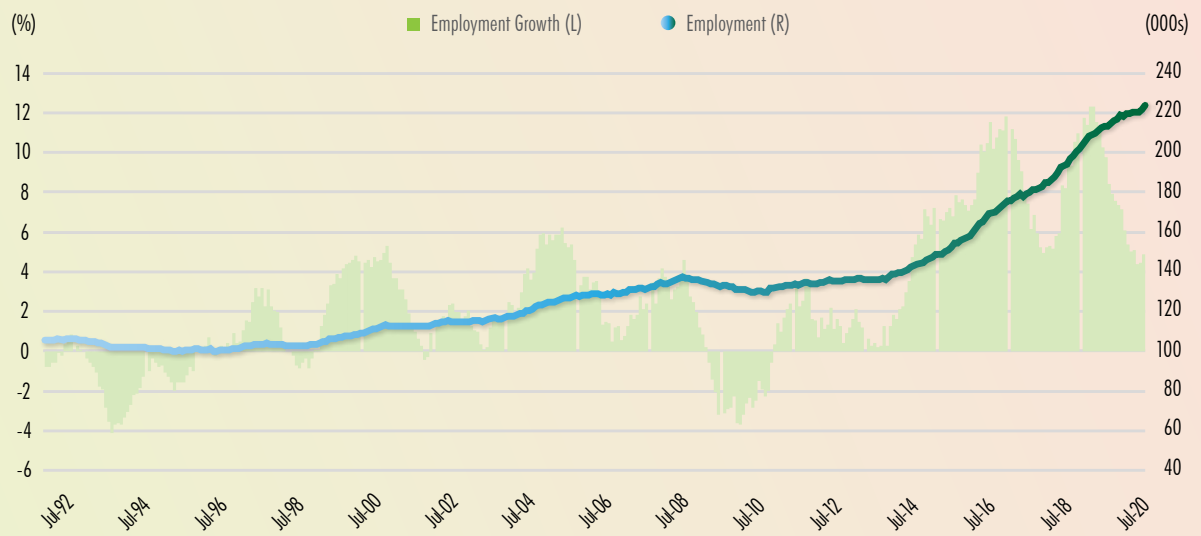
FIGURE 5: SELECT FASTEST-GROWING EMPLOYMENT SUBSECTORS



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

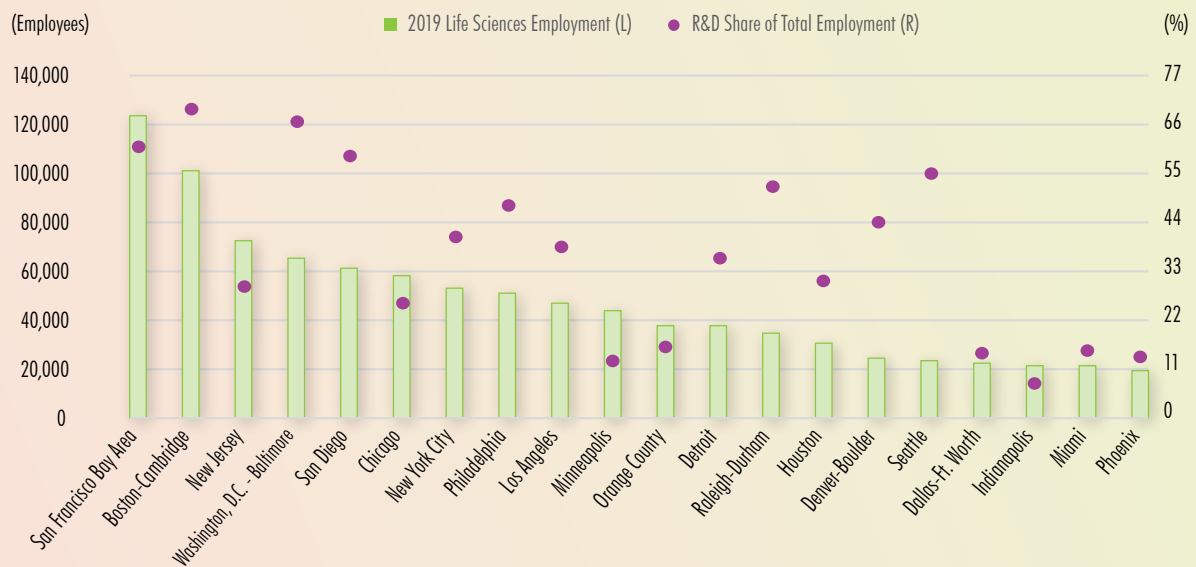
Note: Employment levels indexed to 1.00 in July 2010. "Consultants" reflects US BLS industry subsector "Management and Technical Consulting Services"; "Technology" reflects US BLS industry subsectors "Computer Systems Design and Related Services", "Data processing, hosting, and related services", "Internet publishing and broadcasting and web search portals".

FIGURE 6: U.S. BIOTECHNOLOGY R&D EMPLOYMENT



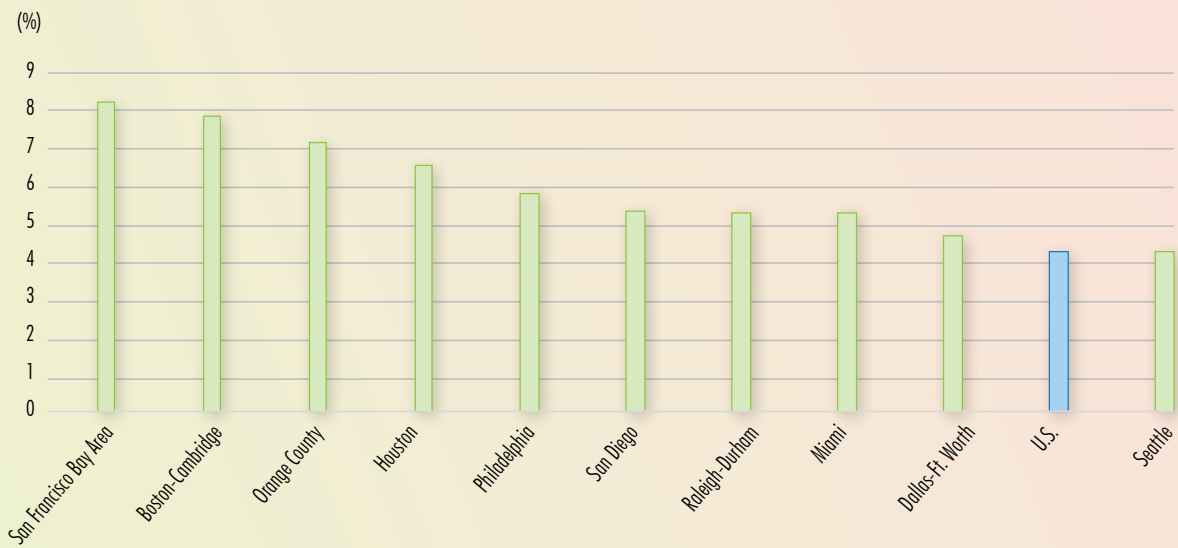
Source: U.S. Bureau of Labor Statistics, Q3 2020.

FIGURE 7: LARGEST U.S. LIFE SCIENCES CLUSTERS BY EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

FIGURE 8: FASTEST-GROWING MAJOR LIFE SCIENCES CLUSTERS



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

Note: Market with Total Life Sciences Employment >20K. One-year change in Total Life Sciences Employment 2018-2019.

LIFE SCIENCE VENTURE CAPITAL FUNDING TRENDS

The U.S. life sciences industry had its largest quarterly total of venture capital investment in Q2 2020, continuing a run of consecutive quarterly records since Q4 2019. The rolling annual total of life sciences venture capital investment ending Q2 2020 reached a record

\$17.8 billion. The surge is in direct contrast to U.S. venture capital investments in all other industries, which have been declining (on a rolling annual basis) since Q3 2019.

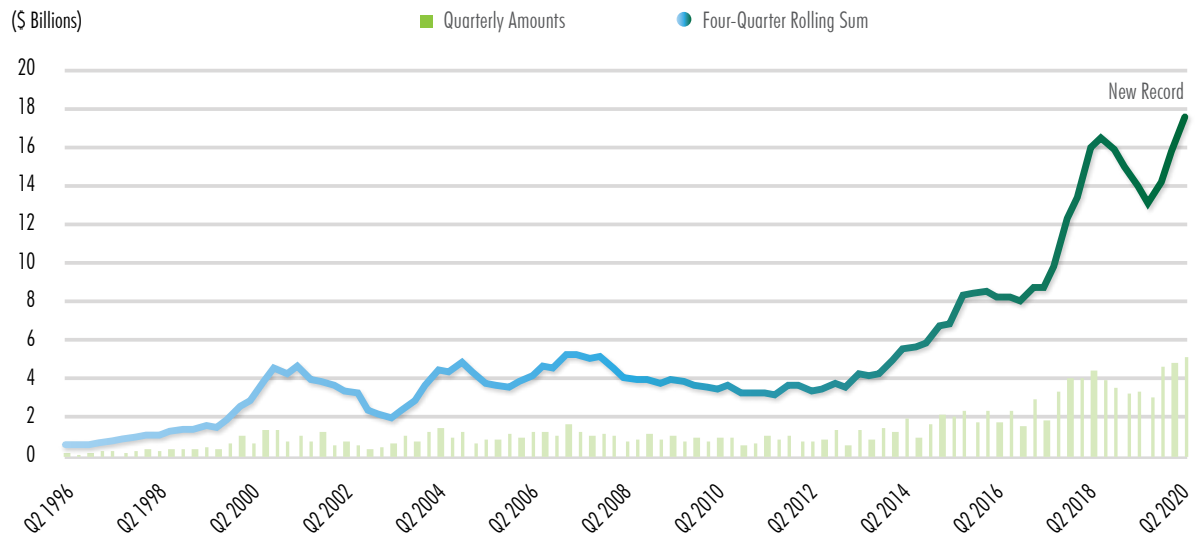
The record-breaking amount of venture capital funding to the industry portends future employment growth. Life sciences venture capital funding growth has historically preceded employment gains by about one year (Figure 9), so total life sciences employment should increase in 2021.

The San Francisco Bay Area and Boston-Cambridge combined accounted for 54% of all life sciences venture capital investment in the U.S. for the year ending Q2. Most of the major markets continue to attract above-average venture capital, but New York City and Los Angeles/Orange County have experienced notably rapid growth in local venture capital investments over the past few years.



Seaport Labs, Boston, MA.

FIGURE 9: U.S. LIFE SCIENCES VENTURE CAPITAL FUNDING



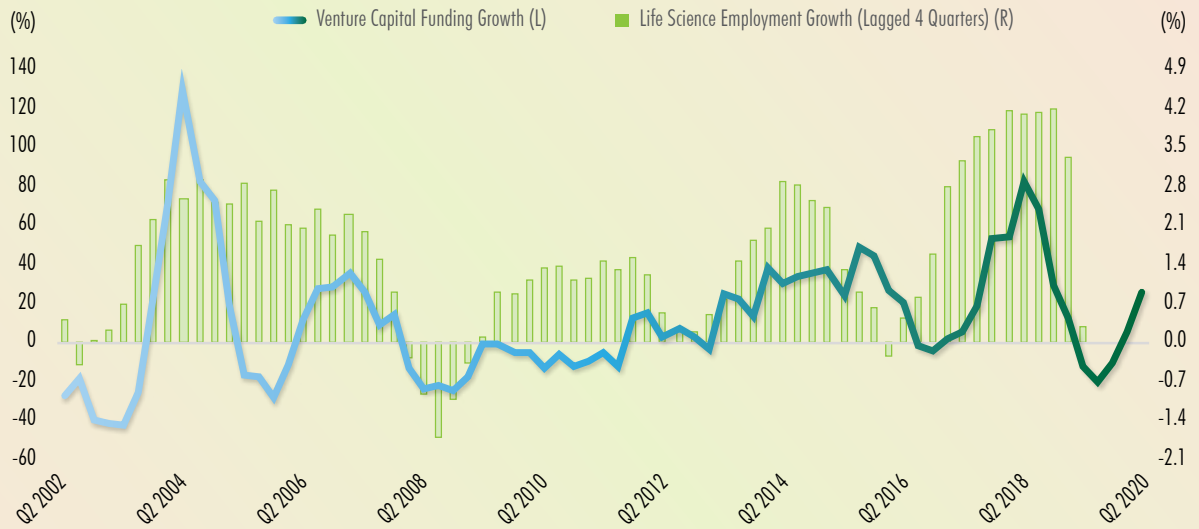
Source: PwC/CB Insights MoneyTree™ data explorer, Q3 2020.

Note: Investments in Biotechnology, Pharmaceuticals/Drugs, Drug Development, Drug Discovery and Disease Diagnosis.



Pittsburgh, PA.

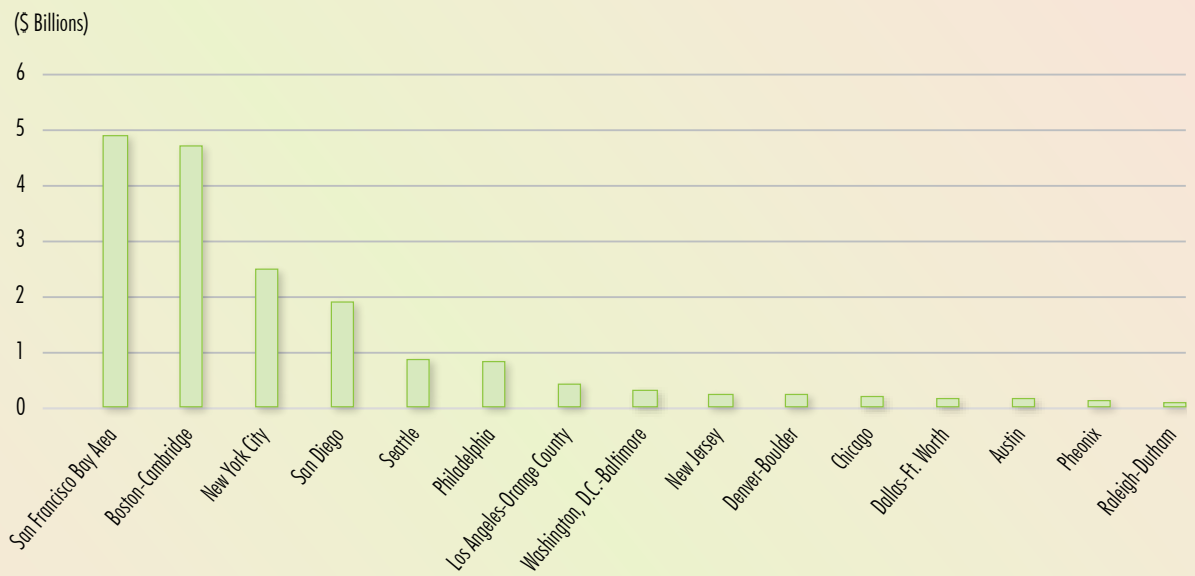
FIGURE10: MORE GROWTH ON THE WAY - VC FUNDING LEADS EMPLOYMENT



Source: PwC/CB Insights MoneyTree™ data explorer, U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

Note: Year-over-year changes in 4-quarter rolling sum of VC funding in Biotechnology, Drug Development, Drug Discovery, Disease Diagnosis, and Pharma/Drugs and 4-quarter average of Total Life Sciences Employment. Life Sciences Employment growth lagged by 4 quarters.

FIGURE 11: LIFE SCIENCES VENTURE CAPITAL INVESTMENTS BY MARKET



Source: PwC/CB Insights MoneyTree™ data explorer, U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

Note: 4-quarter annual sum through Q2 2020.



San Francisco, CA.

NIH FUNDING TRENDS

Another major driver behind the surge in life sciences demand has been the billions of dollars funneled to major universities and research institutions for health-care research from the National Institutes of Health (NIH). As the industry transforms itself, this funding

has been instrumental in creating new innovations that have spawned numerous private enterprises.

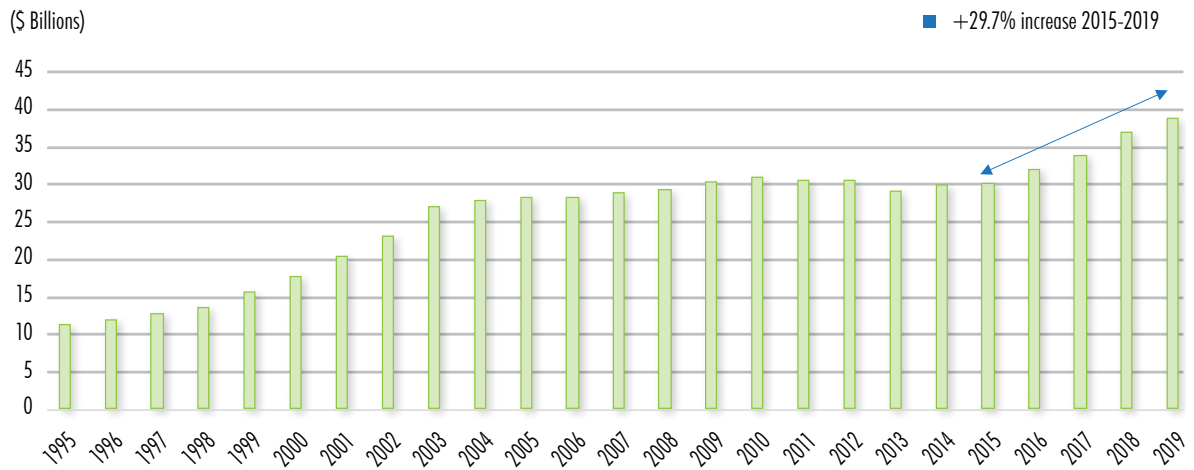
NIH funding grew by 29.7% between 2015 and 2019, or an annual average of 6.7%. Projections for fiscal year 2020 show another 6.0% growth. In contrast, NIH funding had been stagnant between 2003 and 2015 when funding grew at an average annual rate of just 0.9%.

Roughly 47% of all NIH funding goes to life sciences markets in the Northeast Corridor—from Boston-Cambridge to Washington, D.C.-Baltimore—and in California.



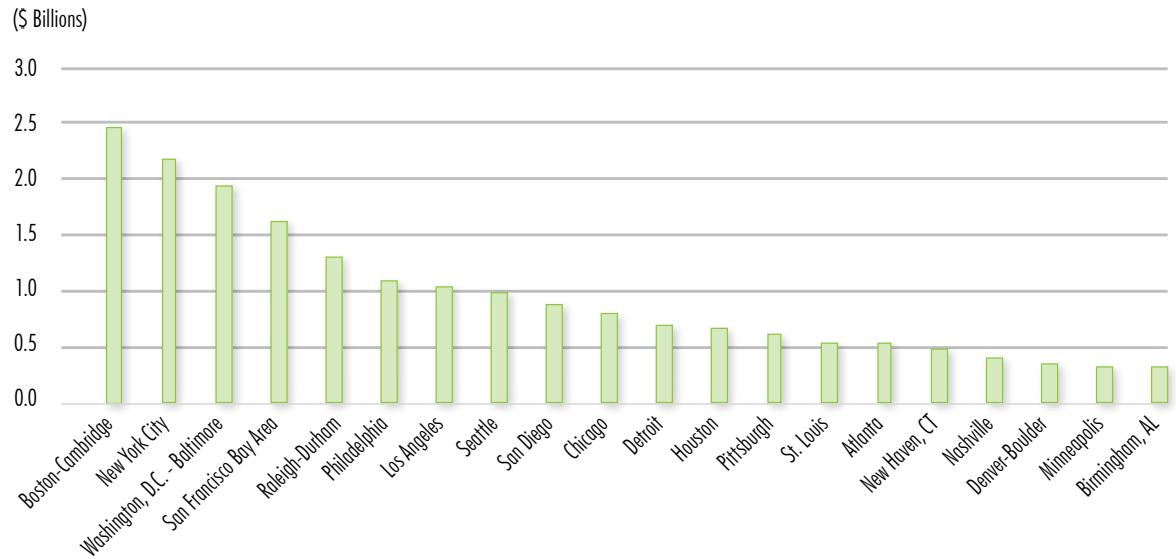
Fulton Labs, Chicago, IL.

FIGURE 12: NATIONAL INSTITUTES OF HEALTH (NIH) FUNDING



Sources: NIH Budget Office, *Appropriations History by Institute/Center (1938 to Present)*, at https://officeofbudget.od.nih.gov/approp_hist.html. The FY2020 and FY2021 program levels are based on NIH, "FY2021 Budget Request by IC (Summary Table)," at <https://officeofbudget.od.nih.gov/pdfs/FY21/br/5-SupplementaryTables.pdf>, with FY2021 request amended to reflect budget request amendment in letter from Michael R. Pence, President of the Senate, to Donald Trump, President of the United States, March 17, 2020, at <https://www.whitehouse.gov/wp-content/uploads/2020/03/Letter-regarding-additional-funding-to-support-theUnited-States-response-to-COVID-19-3.17.2020.pdf>. Inflation adjustment reflects the Biomedical Research and Development Price Index (BRDPI), updated January 2020, at <https://officeofbudget.od.nih.gov/gbiPriceIndexes.html>.

FIGURE 13: TOP 20 MARKETS FOR 2019 NIH FUNDING



Source: NIH, CBRE Research, Q3 2020.

Note: Amounts above \$20 million.



Bridgeside Pointe, Pittsburgh, PA.



FIGURE 14: TOP 2019 RECIPIENTS OF NIH FUNDING

Institution	Funding (Millions)	City	State
Johns Hopkins University	\$764	Baltimore	MD
University of California, San Francisco	\$685	San Francisco	CA
University of Michigan at Ann Arbor	\$591	Ann Arbor	MI
University of Pennsylvania	\$582	Philadelphia	PA
Duke University	\$571	Durham	NC
University of Pittsburgh	\$546	Pittsburgh	PA
University of Washington	\$527	Seattle	WA
Stanford University	\$526	Stanford	CA
Washington University	\$524	Saint Louis	MO
University of North Carolina	\$510	Chapel Hill	NC
Massachusetts General Hospital	\$500	Boston	MA
Yale University	\$489	New Haven	CT
University of California, San Diego	\$488	La Jolla	CA
Columbia University Health Services	\$479	New York	NY
University of California, Los Angeles	\$452	Los Angeles	CA
Leidos Biomedical Research, Inc.	\$419	Frederick	MD
Icahn School of Medicine at Mount Sinai	\$394	New York	NY
Emory University	\$382	Atlanta	GA
Brigham and Women's Hospital	\$338	Boston	MA
Northwestern University	\$333	Chicago	IL
University of Alabama at Birmingham	\$328	Birmingham	AL
New York University School of Medicine	\$314	New York	NY
University of Wisconsin-Madison	\$314	Madison	WI
Fred Hutchinson Cancer Research Center	\$305	Seattle	WA
University of Minnesota	\$303	Minneapolis	MN

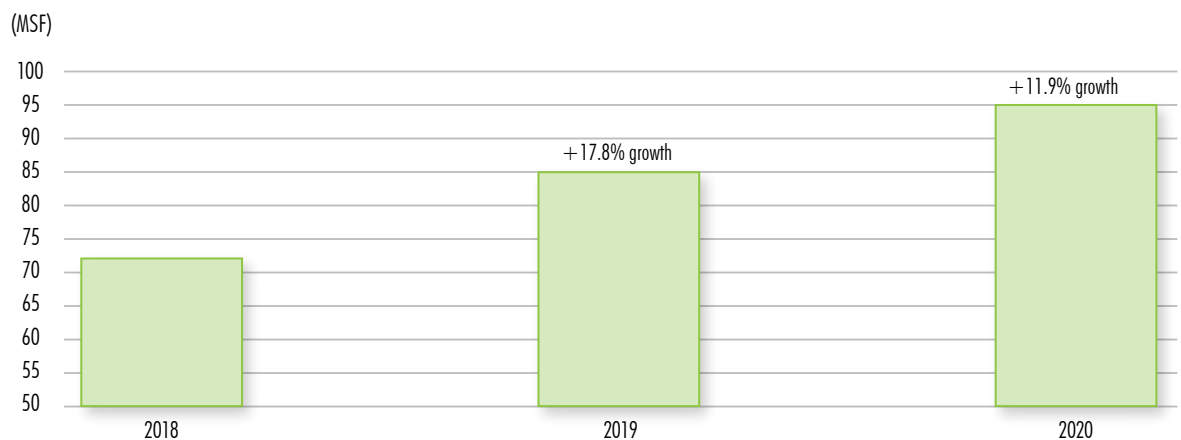
Source: NIH, CBRE Research, Q3 2020.

2020 U.S. LIFE SCIENCE LAB MARKET TRENDS

The inventory of commercial laboratory space is rapidly growing to meet increased demand. Since early 2019, the amount of lab space in the nation's top five life sciences markets grew by 11.9% to 95.0 million sq. ft. (Figure 14). In contrast, the inventory of conventional office space in the U.S grew by roughly 2.0% over that period. As of mid-2020, another 11 million sq. ft. of lab space is under construction in these markets.

Boston-Cambridge and the San Francisco Bay Area maintain the largest inventories of leasable lab space in the U.S. and have the largest pipelines of new supply (Figure 15 and 16). However, New York City, Chicago and Denver-Boulder have the highest levels of new construction as a share of existing inventory, reflecting significant demand growth in those rapidly developing smaller markets. There also has been a notable increase in

FIGURE 15: LIFE SCIENCES LABORATORY INVENTORY (TOP 5 U.S. CLUSTERS)



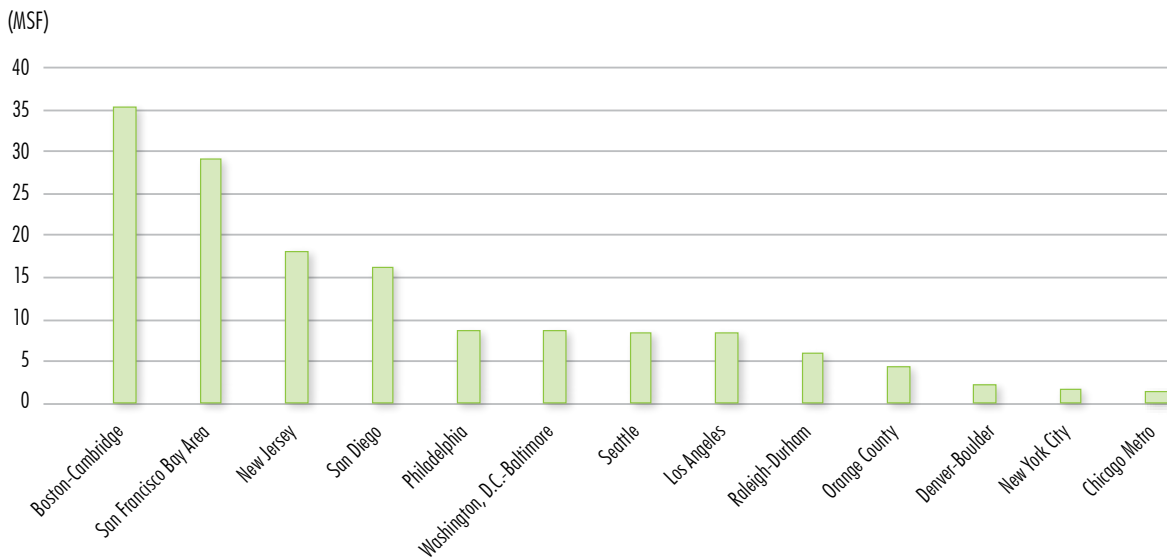
Source: CBRE Research, Q3 2020.
 Note: Top 5 clusters include Boston-Cambridge, San Francisco Bay Area, San Diego, Washington, D.C.-Baltimore and Raleigh-Durham.

conversions of other property types to labs. The industry’s shift to biologics, which present less environmental risks than chemistry-based solutions, has led to lab space being developed or proposed in unconventional locations like Lower Manhattan and Downtown San Diego, and in multi-story buildings.

Substantial expansion of lab inventories, coupled with the significant pipeline of new

construction, might warrant some concern in the current economic environment. However, current requirements for space far outpace total speculative construction (Figure 17). Favorable supply-and-demand dynamics equate to rising rents and low vacancy in almost all leading life sciences markets and this is expected to continue in 2021.

FIGURE 16: LIFE SCIENCES LABORATORY INVENTORY BY MARKET



Source: CBRE Research, Q3 2020.

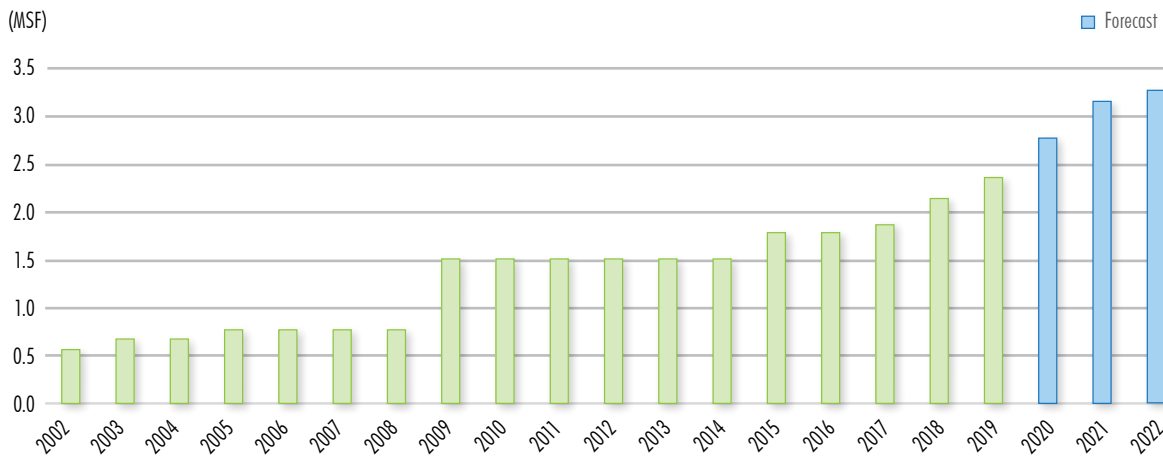


Celularity, New Jersey.

THE BIOMANUFACTURING BOOM

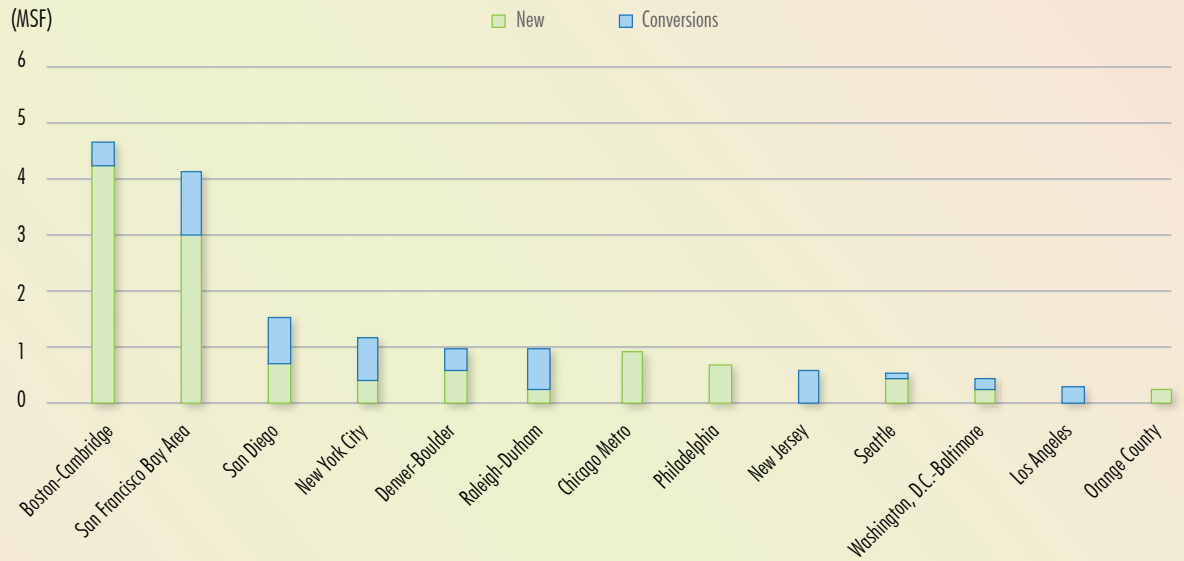
The successes in large molecule research associated with the shift toward more personalized medicine have spawned overwhelming demand for biomanufacturing space. This may usher in a period of rapid growth like that of high-quality laboratory space over the past several years. Demand for biomanufacturing space is particularly strong in Boston-Cambridge, San Diego, Washington, D.C.-Baltimore, Raleigh-Durham and New Jersey, where tenants are seeking about 3.5 million sq. ft. of space.

FIGURE 17: ESTIMATED BIOMANUFACTURING INVENTORY IN BOSTON-CAMBRIDGE MARKET



Source: CBRE Research, Q3 2020.

FIGURE 18: NEW SUPPLY OF LIFE SCIENCES LABORATORY SPACE BY MARKET

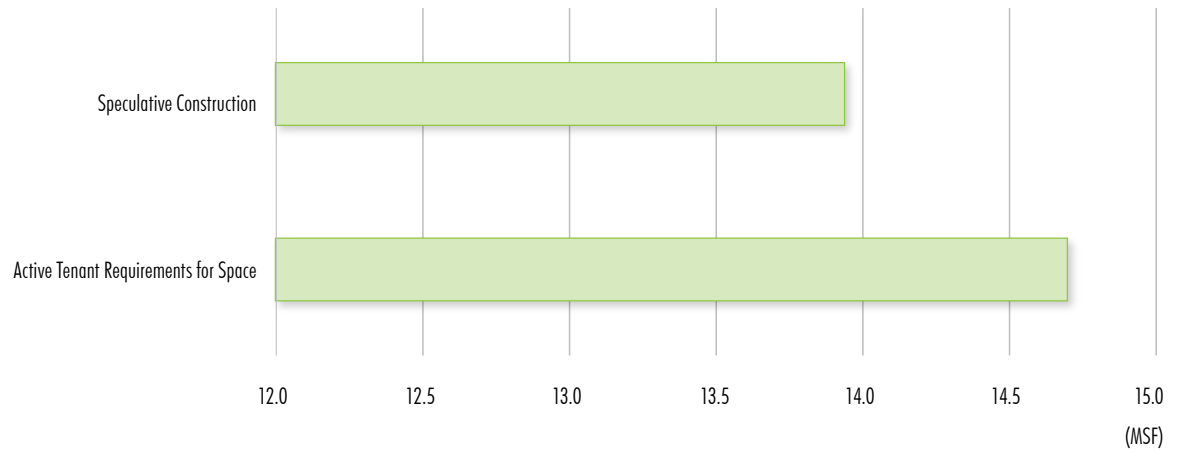


Source: CBRE Research, Q3 2020.



San Diego, CA.

FIGURE 19: SUPPLY VS. DEMAND OF LIFE SCIENCES LABORATORY SPACE



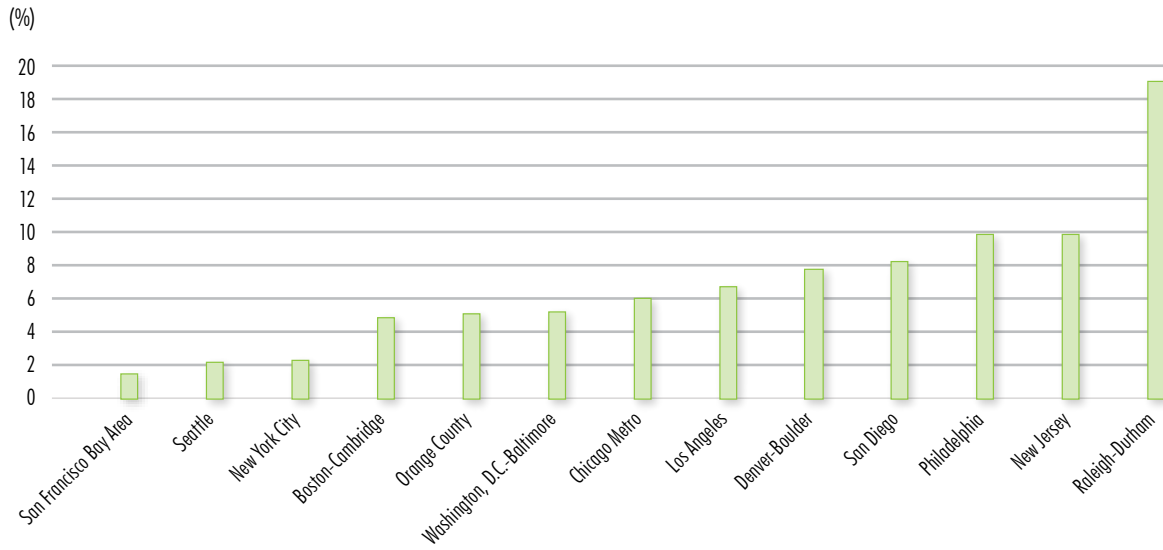
Source: CBRE Research, Q3 2020.

Note: Totals for 13 leading clusters.



Fulton Labs, Chicago, IL.

FIGURE 20: METRO LIFE SCIENCES LABORATORY VACANCY RATES



Source: CBRE Research, Q3 2020.

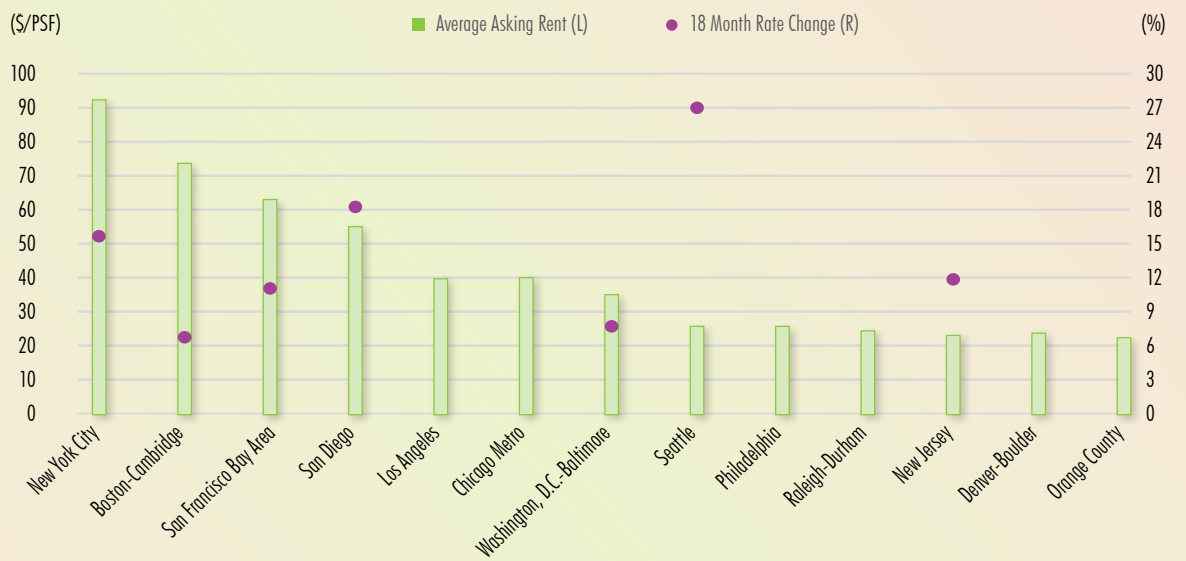


Alexandria GradLabs™, San Diego, CA.



The Cove-Oyster Point, San Francisco, CA.

FIGURE 21: METRO LIFE SCIENCES LABORATORY AVERAGE ASKING RENTS (NNN)



Source: CBRE Research, Q3 2020.

Note: No 18-month change available for L.A., Chicago, Philadelphia, Raleigh-Durham, Denver-Boulder and Orange County.

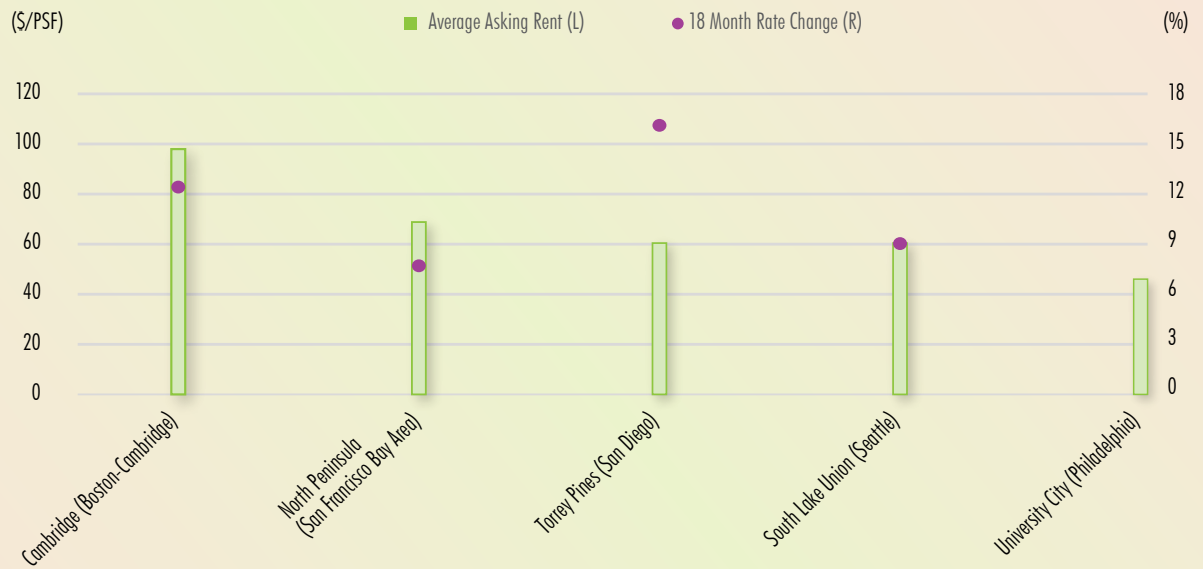


New York, NY.



Cambridge, MA.

FIGURE 22: SELECT LAB SUBMARKET AVERAGE ASKING RENTS (NNN)



Source: CBRE Research, Q3 2020.

Note: No 18-month change available for University City, Philadelphia.

2020 U.S. LIFE SCIENCE INVESTMENT SALES

Commercial real estate investors have been increasingly attracted to the life sciences sectors over the past 20 years. For the year ending Q2 2020, sales of lab/R&D properties totaled \$9.6 billion—a ninefold increase from the year ending Q2 2001. Over the same two

comparison periods, sales of conventional office properties (excluding lab/R&D) grew by a factor of 5.3 (Figure 21). While sales of both lab/R&D and conventional offices moderated over the past several years after a significant increase in transaction activity following the Global Financial Crisis (GFC), sales volume of lab/R&D properties was still higher as recently as Q3 2019 than the pre-GFC peak in 2007. In contrast, sales of conventional office properties have remained significantly below their pre-GFC peak in 2007.

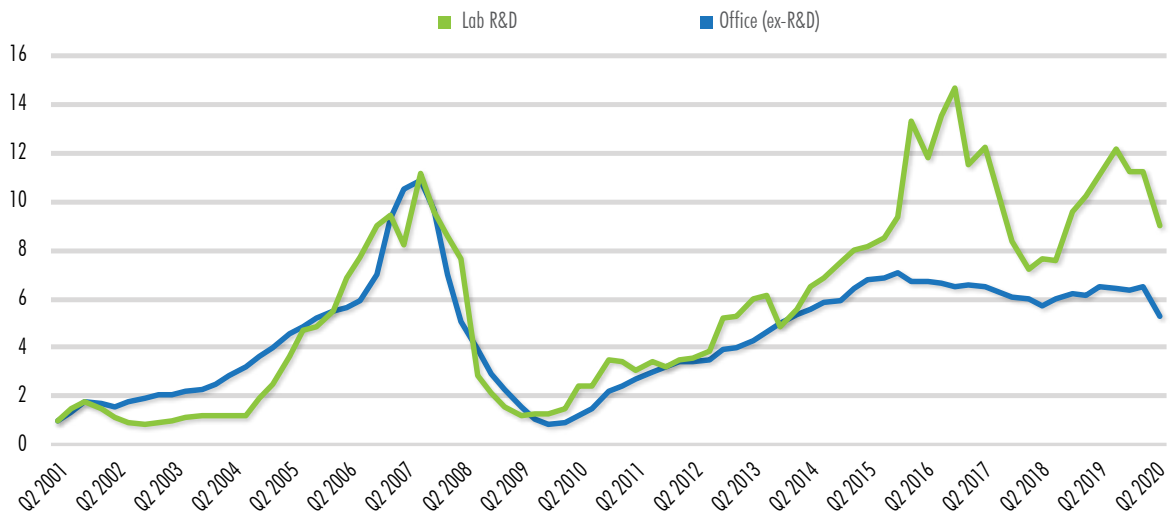
Pricing for lab/R&D properties remains aggressive. Lab/R&D cap rates have been lower than conventional office cap rates since 2015, a trend never exhibited before on a consistent basis and demonstrating strong investor demand for life sciences properties.

The bulk of sales transactions (66%) continue to occur in the top three life sciences markets of the San Francisco Bay Area, Boston-Cambridge and San Diego (Figure 23). The share of total lab/R&D sales transactions by these markets has fluctuated between 50% and 80% over the past 18 years for an average of 65%.

4 Martin Luther King, Jr. Boulevard, Baltimore, MD.



FIGURE 23: U.S. PROPERTY SALES VOLUME INDEXED



Source: Real Capital Analytics, CBRE Research, Q3 2020.

Note: (4-Qtr. sum of volume indexed to 1.0 in Q2 2001)



G1 (Lincoln Yards), Chicago, IL

FIGURE 24: U.S. CAP RATES BY PROPERTY TYPE



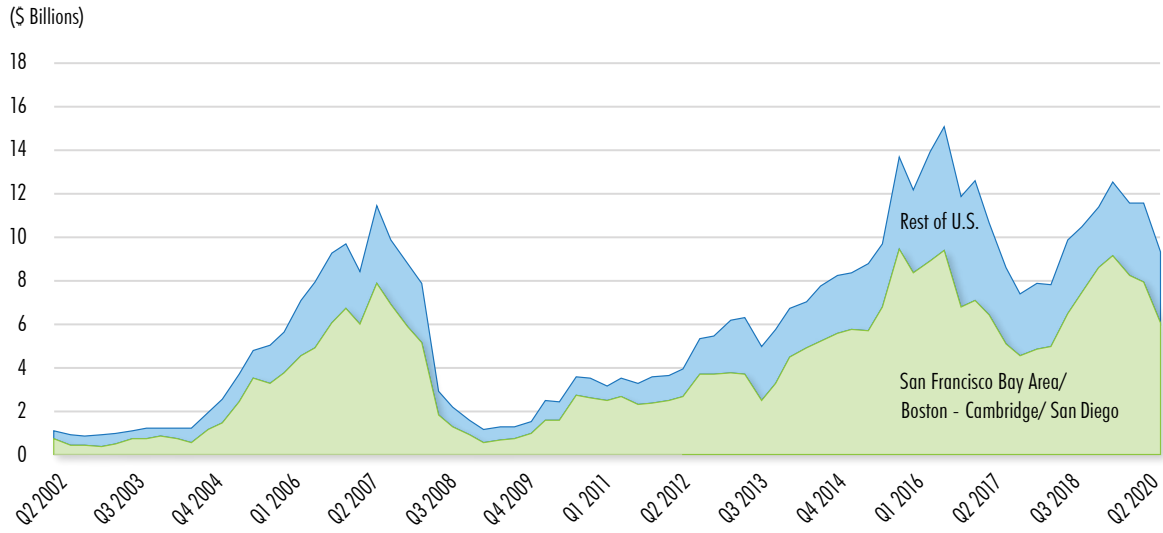
Source: Real Capital Analytics, CBRE Research, Q3 2020.



Keystone Science Center, Raleigh Durham, NC.



FIGURE 25: LAB/R&D PROPERTY SALES BY MARKET (4-QTR ROLLING SUM)



Source: Real Capital Analytics, CBRE Research, Q3 2020.



The Cove-Oyster Point, San Francisco, CA.

BOSTON-CAMBRIDGE

OVERVIEW

Boston-Cambridge remains the nation's premier life sciences market, owing to its leading research universities attracting the largest amount of NIH funding, the largest inventory of cutting-edge laboratory space and the seemingly insatiable demand by companies to participate in the local ecosystem.

RENTS & VACANCY

The Boston-Cambridge lab market remains tight, with a vacancy rate of just 4.9% in Q2 2020. In the Cambridge submarket alone, a 2.6% vacancy rate helped push average asking rents up by 12.4% since early 2019. Further rent growth and extremely tight vacancy are expected.

SUPPLY

New lab projects totaling 4.3 million sq. ft. were under construction in Q2 2020, including a 581,000-sq.-ft. build-to-suit in the Seaport. More than one-third of all current construction is in the Seaport, helping solidify its growing status among life sciences tenants. The metro's supply pipeline has more than doubled since early 2019.

DEMAND

As of Q2, nearly 110 tenants were seeking a total of 3.7 million sq. ft. of lab space, up slightly from the beginning of the year. Compared with a year ago, the number of tenants seeking space has grown by 83%, while total space required is down marginally.

COVID-19 EFFECT

More than 50 companies in the Boston-Cambridge market can apply their science and technology to COVID-related products, which has created a marginal boost to demand.

EMPLOYMENT

Total life sciences employment in Boston-Cambridge grew by 7.7% between 2018 and 2019, fueled by a 15.0% jump in R&D employment—the largest increase since at least 2002.

VENTURE CAPITAL FUNDING

Boston-Cambridge life sciences companies secured \$1.9 billion in venture capital funding in Q2 2020, the largest amount since 1995

NIH FUNDING

Boston-Cambridge continues to attract the largest amount of NIH funding of any U.S. life sciences market, with \$2.5 billion in fiscal year 2019.

OTHER

Tenants continue to spread across the metro to suburban submarkets like Somerville, South Boston, Watertown, Lexington and Waltham. The intersection of artificial intelligence and life sciences continues to emerge, allowing for the advancement of research in new products, diagnostics and drug candidates.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory SF	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Cambridge	14,826,480	2.6%	\$97.21	12.4%
Boston	8,676,282	3.4%	\$82.36	1.3%
Route 128 - Core	8,603,091	7.9%	\$56.68	25.0%
Route 495 - Core	3,092,416	11.8%	\$28.70	12.9%
Total (Core Submarkets)	35,198,269	4.9%	\$73.88	6.9%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
200 West Street	Route 128 West	Boston Properties	260,000	Spec 2020 delivery
51 Sleeper Street	Seaport	Nan Fung Intl. Properties	149,121	Spec 2020 delivery
1 Winthrop Square	CBD	Nan Fung Intl. Properties	114,343	Spec 2020 delivery
20 Maguire Road	Route 128 West	Griffith Properties	101,000	Spec 2020 delivery
1560 Trapelo Road	Route 128 West	Phase3	65,000	Spec 2021 delivery

Source: CBRE Research, Q2 2020.

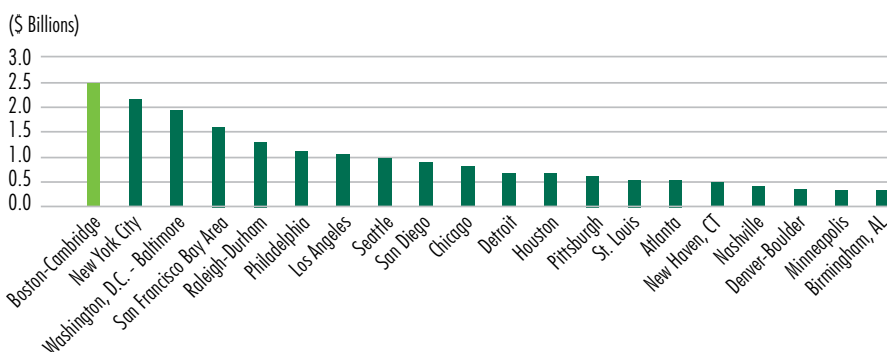
Significant Lease Deals

Tenant	Submarket	Sq. Ft.	Type
Foundation Medicine	Seaport	581,000	Relocation/expansion
Bristol Myers Squibb	East Cambridge	360,000	Relocation/expansion
CRISPR Therapeutics	Seaport	260,000	Relocation/expansion
Vertex	Seaport	168,000	Expansion
Blue Rock	East Cambridge	73,000	Relocation/expansion
Kintai Therapeutics	West Cambridge	72,000	Relocation/expansion
Arrakis Therapeutics	Route 128 West	68,000	Relocation/expansion
CRISPR Therapeutics	Framingham/Natick	51,000	Expansion (GMP)

Source: CBRE Research, Q2 2020.

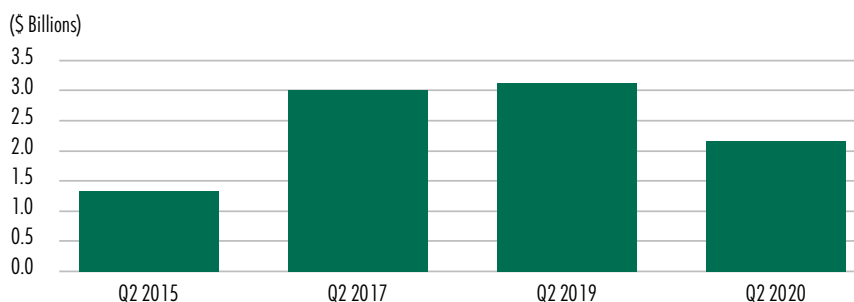
NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#1 in nation: \$2.5 billion (2019)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Arsenal on the Charles, Watertown	857,225 (Portfolio of 11)	\$525,000,000	\$612
35 Cambridgepark Drive, Cambridge	233,000	\$332,500,000	\$1,427
200 Smith Street, Waltham	425,000	\$320,000,000	\$753
51 Sleeper Street, Boston	149,121	\$115,000,000	\$771
1 Winthrop Square, Boston	114,343	\$75,000,000	\$656

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Thrive Sciences	Cambridge	48,000
Zymergen	Cambridge	40,000
Scorpion Therapeutics	Boston	35,000
EQRX	Cambridge	30,000

Demand (Lab Requirements)

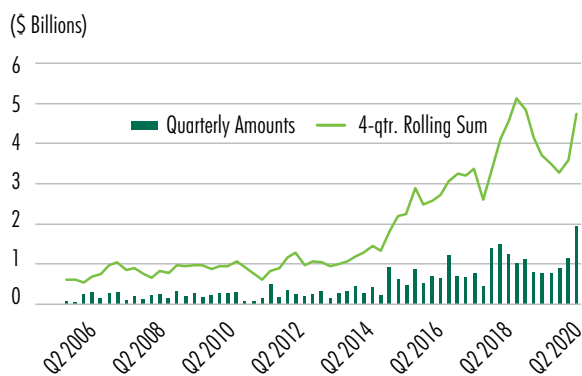
Requirement	Count/SF	18-Mos. Change
Tenants	110	83.3%
Total Sq. Ft.	3,700,000	-5.1%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
400 Summer Street	Seaport	WS Development	581,000	BTS 2023 delivery; 100% pre-leased
225-235 Wyman Street	Route 128 West	FM Global	507,620	Spec 2021 delivery
350 Water Street	East Cambridge	DivcoWest	501,000	Spec 2022 delivery; 100% pre-leased
250 Water Street	East Cambridge	DivcoWest	480,000	Spec 2021 delivery; 75% pre-leased
350 Summer Street	Seaport	WS Development	384,000	Spec 2023 delivery
238 Main Street	East Cambridge	MITIMCo	381,420	Spec 2021 delivery; 100% pre-leased
Boynton Yards	Close-In Suburbs North	DLJ Real Estate Capital Partners	289,000	Spec 2021 delivery
105 West First Street	Seaport	Tishman Speyer	266,000	Spec 2022 delivery; 100% pre-leased
iSQ Phase II	Seaport	Related Beal	265,000	Spec 2021 delivery; 100% pre-leased
201 Brookline Avenue	Fenway	Samuels & Associates	250,000	Spec 2022 delivery; 29% pre-leased
75 Hayden Avenue	Route 128 West	King Street Properties/Health Peak	213,800	Spec 2020 delivery; 100% pre-leased
100 Hood Park	Charlestown/East Boston	Catamount Management	54,000	Spec 2021 delivery

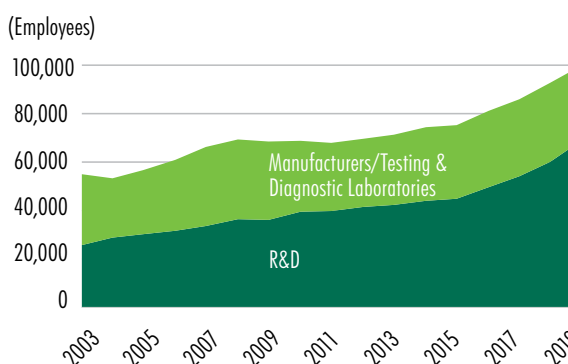
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (Boston CSA)



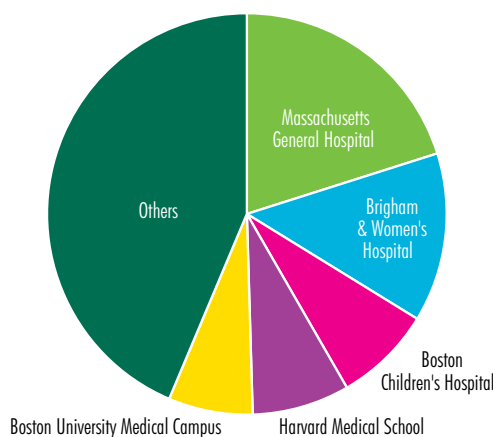
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

DEFINITIONS & NOTES

Employment and NIH data for markets reflect the following geographies:

- Boston-Cambridge: Boston-Cambridge MSA
- New York City: New York City and all New York State counties in the New York MSA
- New Jersey: Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, and Union counties
- Philadelphia: Philadelphia MSA
- Washington, D.C.: Washington, D.C. and Baltimore MSAs
- Raleigh-Durham: Raleigh and Durham MSAs
- Chicago: Chicago MSA
- San Diego: San Diego MSA
- Orange County: Anaheim-Santa Ana-Irvine Metropolitan Division
- Los Angeles: Los Angeles-Long Beach Metropolitan Division
- San Francisco Bay Area: San Francisco-Oakland and San Jose MSAs
- Denver-Boulder: Denver and Boulder MSAs
- Seattle: Seattle-Tacoma MSA

SAN FRANCISCO BAY AREA

OVERVIEW

The San Francisco Bay Area life sciences market has outperformed despite COVID-19's dramatic impact on the region's real estate market. The West Coast's leading life sciences hub experienced the fastest employment growth of any leading market over the past year, attracted a record amount of venture capital in Q2 2020 and has the lowest lab vacancy of any market.

RENTS & VACANCY

The Bay Area has the lowest vacancy rate of life sciences R&D space in the nation at just 1.5%. As a result, overall rent has increased by 11.3% over the past year. Further rent growth is expected the year ahead.

SUPPLY

4.2 million sq. ft. of new lab space is currently under construction (3.0 million sq. ft. of new construction and 1.2 million sq. ft. of conversions).

DEMAND

66 tenants are currently in the market for 2.4 million sq. ft. of lab space—up by 10.0% and 13.8%, respectively, over the past 18 months.

COVID-19 EFFECT

COVID-19's impact on the San Francisco Bay Area life sciences market has been relatively positive. While some new requirements are directly related to COVID-19 research, the most significant impact has been the boost of public and private research funding resulting from raised awareness of biotech value.

EMPLOYMENT

Total life sciences employment in the San Francisco Bay Area rose 8.1% between 2018 and 2019, the fastest growth of any major life sciences hub in the U.S.

VENTURE CAPITAL FUNDING

More venture capital funding was invested in Bay Area life sciences companies over the past year than in any other market. In Q1 2020 alone, the Bay Area attracted an unprecedented \$2.1 billion in venture capital.

NIH FUNDING

For fiscal year 2019, the Bay Area received the nation's fourth largest amount of NIH funding (\$1.6 billion) among life sciences markets.

OTHER

Demand has been led predominantly by regional biotech with a full spectrum of focus (e.g., oncology, regenerative meds, gene therapy). However, Big Pharma remains highly active through local research partnerships and demand is increasing for scale gene therapy biomanufacturing space proximate to the San Francisco Bay Area market.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
North Peninsula*	14,388,118	1.7%	\$68.37	7.5%
South Peninsula**	7,743,117	0.5%	\$65.40	14.7%
Emeryville/Berkeley/Alameda	3,280,884	1.3%	\$60.00	14.3%
Hayward/Union City	1,549,687	7.0%	\$36.00	0.0%
Fremont/Newark	2,241,976	0.0%	\$51.00	25.9%
Total	29,203,782	1.5%	\$63.59	11.3%

*Includes Mission Bay, San Francisco **Includes Silicon Valley

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
Marina Village	Alameda	Local Capital/DRA	300,000	BTS 2020/2021 delivery
Bayshore Tech Park	South Peninsula	Longfellow	250,000	Spec & BTS 2020 delivery
Atrium	Emeryville	Peter Sullivan & Associates	130,000	Spec 2021 delivery
1000 Marina	North Peninsula	Phase 3	115,000	Spec 2020 delivery; 43% pre-leased
1900 Alameda	South Peninsula	Phase 3	102,000	Spec 2021 delivery
Waterfront	Alameda	Stockbridge	100,000	BTS 2020 delivery
Palo Alto Labs	South Peninsula	Longfellow	55,000	Spec 2021 delivery
Gate510	San Leandro	BMR	50,000	Spec 2020 delivery
2910 Seventh Street	Berkeley	Wareham	45,000	BTS 2021 delivery

Source: CBRE Research, Q2 2020.

Significant Lease Deals

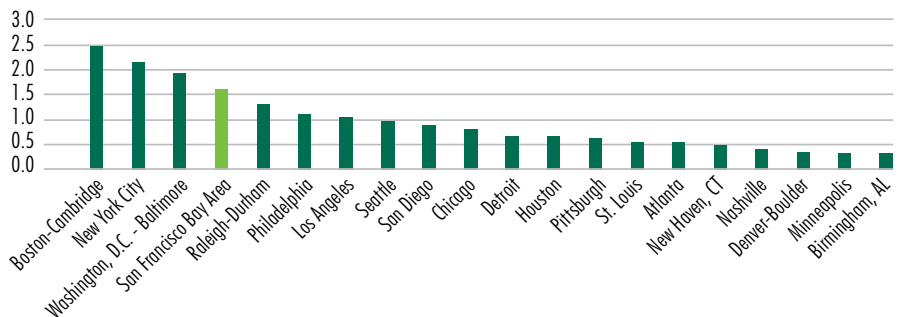
Tenant	Submarket	Sq. Ft.	Type
Zymergen	Emeryville/Berkeley/Alameda	300,000	Relocation
Amgen	North Peninsula	240,000	Relocation
Cytokinetics	North Peninsula	234,892	Relocation
Exelixis	Emeryville/Berkeley/Alameda	220,000	Expansion
Kodiak Sciences	South Peninsula	155,474	Relocation

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#4 in nation: \$1.6 billion (2019)

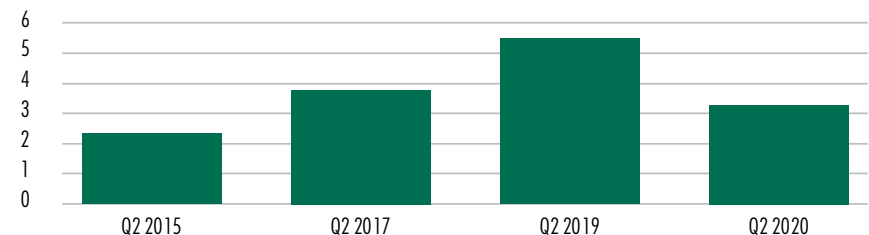
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Bayshore Technology Park	994,101	\$648,000,000	\$652
1804 Embarcadero Road	259,822	\$205,000,000	\$789
150 Industrial Road	229,640	\$99,000,000	\$431
500 Forbes Boulevard	155,685	\$139,500,000	\$896
3412 Hillview Avenue	106,316	\$105,000,000	\$988

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Lyell	North Peninsula	100,000
SmartLabs	North Peninsula	80,000
MAZE	North Peninsula	65,000
Eli Lilly	North Peninsula	60,000
Perfect Day Foods	Berkeley/Emeryville	45,000

Demand (Lab Requirements)

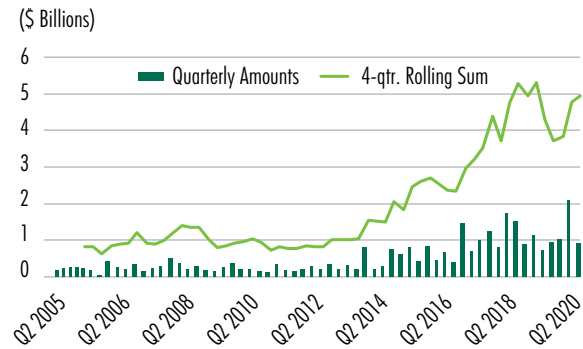
Requirement	Count/SF	18-Mos. Change
Tenants	66	10.0%
Total Sq. Ft.	2,390,000	13.8%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Oyster Point Phase I	North Peninsula	Kilroy	596,584	Spec 2020 delivery; 100% pre-leased
The District	South Peninsula	ARE	526,000	Spec 2020 delivery; 56% pre-leased
Gateway of Pacific Phase II	North Peninsula	BMR	430,000	Spec 2021 delivery; 55% pre-leased
Sierra Pt Phase II/III	North Peninsula	Healthpeak	406,678	Spec 2020/2021 delivery; 64% pre-leased
Gateway of Pacific Phase III	North Peninsula	BMR	350,000	Spec 2021 delivery
201 Haskins	North Peninsula	ARE	315,000	Spec 2020 delivery; 31% pre-leased
South Loop Center	Emeryville/Berkeley/Alameda	SRMERNST	313,000	Spec 2021 delivery; 41% pre-leased
6455 Christie	Emeryville	Harvest	82,000	Spec 2021 delivery

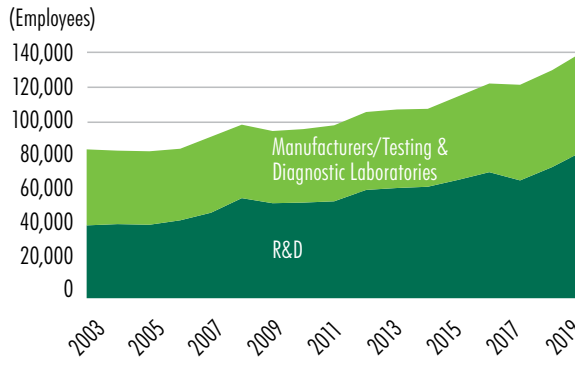
Source: CBRE Research, Q2 2020.

**VENTURE CAPITAL FUNDING
(San Jose-San Francisco-Oakland, CA CSA)**



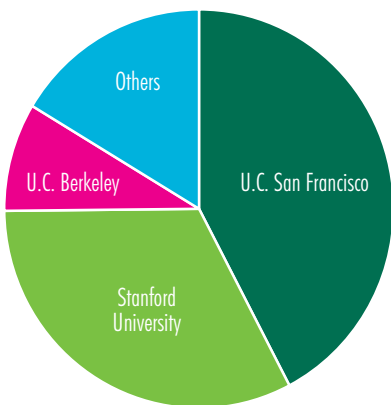
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

SAN DIEGO

OVERVIEW

San Diego, the nation's third-ranked life sciences market, is experiencing some of the strongest momentum of any market in the U.S. Relatively tight supply and a rapidly growing high-tech sector, combined with the largest amount of venture capital funding ever recorded in the region over the past year, have produced some of the fastest growing lab rents in the nation.

RENTS & VACANCY

Average asking lab rents soared by 18.4% since early 2019 across the core markets of San Diego. Vacancy has yet to achieve a record-low this cycle, but this is partly due to some obsolete inventory in a rapidly evolving marketplace.

SUPPLY

New construction totaling 736,000 sq. ft. is relatively modest compared with several other markets.

DEMAND

The amount of lab space sought by life sciences tenants surged by 38.5% over the past 18 months, one of the biggest increases in the U.S.

COVID-19 EFFECT

San Diego has seen a surge in demand since the COVID-19 outbreak in March, growing by 17% since March to more than 500,000 sq. ft. No significant sublease space (over 10,000 sq. ft.) has hit the market.

EMPLOYMENT

San Diego's life sciences employment increased by 5.2% between 2018 and 2019, exceeding the national average of 4.2%.

VENTURE CAPITAL FUNDING

San Diego was one of only a handful of markets to receive a record amount of life sciences venture capital funding over the past year. Q2 2020 was the region's largest quarter ever for life sciences funding (\$796 million).

NIH FUNDING

San Diego ranked ninth in the nation for NIH funding in 2019, totaling \$887 million.

OTHER

San Diego has seen a surge in manufacturing operations. The trend is accelerating and growth is expected to continue due to the inefficiencies in overseas supply chains brought on by COVID-19.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Torrey Pines	5,773,250	9.0%	\$60.12	16.2%
University Towne Centre	3,920,175	5.6%	\$57.24	18.4%
Sorrento Mesa	5,106,096	8.8%	\$51.84	29.7%
Sorrento Valley	1,335,955	11.1%	\$45.48	13.8%
Total	16,135,476	8.3%	\$55.59	18.4%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
Genesis - Morehouse	Sorrento Mesa	Phase 3 Properties	226,402	
Wateridge	Sorrento Mesa	Biomed Realty	123,675	
Moda Sorrento II	Sorrento Mesa	Biomed Realty	105,771	
5505 Morehouse	Sorrento Mesa	Alexandria	77,116	
9877 Waples Street	Sorrento Mesa	Alexandria	63,774	
Creekside - Sorrento Valley	Sorrento Valley	Longfellow	60,356	
Sorrento Gateway	Sorrento Mesa	Healthpeak	57,215	
11425 Sorrento Valley Road	Sorrento Valley	Bioscience Properties	31,119	

Source: CBRE Research, Q2 2020.

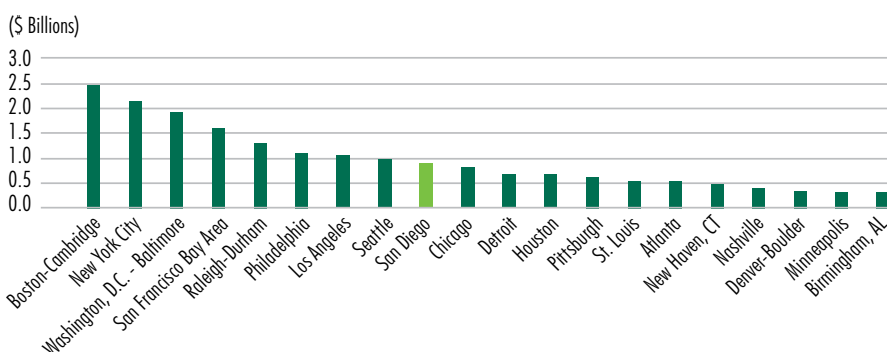
Significant Lease Deals

Tenant	Submarket	Sq. Ft.	Type
Pacira Pharmaceuticals	Torrey Pines	174,318	New/Extension
Mirati Therapeutics	Torrey Pines	118,255	Relocation
Element Biosciences	Sorrento Mesa	104,178	Relocation
Singular Genomics	Torrey Pines	76,778	Relocation
Omniome	Sorrento Mesa	73,500	Relocation

Source: CBRE Research, Q2 2020.

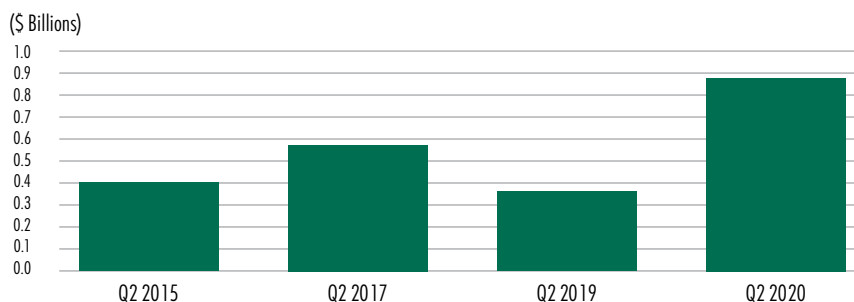
NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#9 in nation: \$0.9 billion (2019)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Genesis/Campus Point Court & Drive	314,135	\$255,000,000	\$812
10770 Wateridge Circle & 6325 Lusk Boulevard	233,570	\$158,500,000	\$679

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Guardant Health	Torrey Pines	36,000

Demand (Lab Requirements)

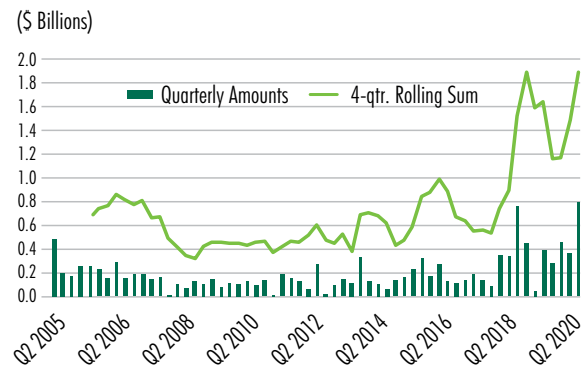
Requirement	Count/SF	18-Mos. Change
Tenants	43	30.3%
Total Sq. Ft.	1,800,000	38.5%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Aperture	DMH/56-Corridor	Gemdale/Lincoln	229,000	Spec 2021 delivery
The Boardwalk	Torrey Pines	Healthpeak	196,000	Spec 2021 delivery; 39% pre-leased
ARE Tech	Sorrento Mesa	Alexandria	176,000	Partial BTS 2022 delivery; 59% pre-leased
Spectrum III	Torrey Pines	Alexandria	146,000	Spec 2021 delivery

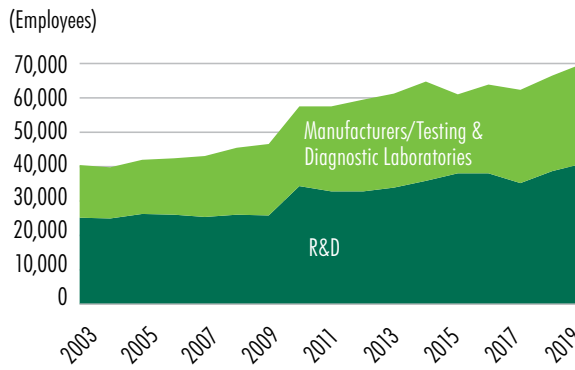
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (San Diego MSA)



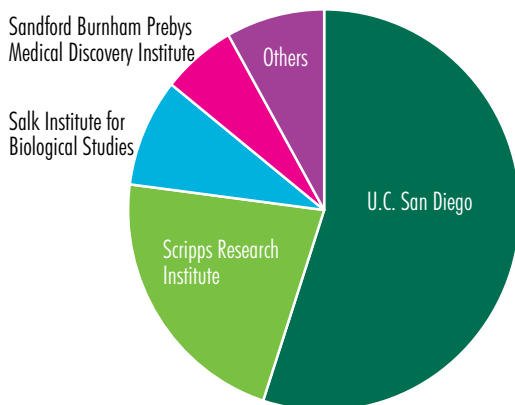
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

WASHINGTON, D.C. | BALTIMORE

OVERVIEW

New development is increasing to meet rising demand in the Washington, D.C.-Baltimore region as cell/gene therapy, immunotherapy, diagnostics and vaccine research companies drive persistent demand for lab space and new biomanufacturing facilities.

RENTS & VACANCY

Market fundamentals remain strong with vacancy rates staying very tight and more supply needed to meet demand. As a result, market rents for first-generation space have risen 8.0% over the past 18 months.

SUPPLY

Construction has ramped up in the Washington, D.C.-Baltimore market with 430,000 sq. ft. of new supply underway, the majority of which is build-to-suit. The market needs more lab space for local tenants to expand.

DEMAND

Demand for life sciences space has grown rapidly since early 2019, particularly from biomanufacturing requirements.

COVID-19 EFFECT

Significant government funding of local companies includes Emergent BioSolutions and Novavax, which received more than \$2 billion this year. Other requirements have arisen due to COVID-19 and the expectation is for more government funding to come.

EMPLOYMENT

The Washington, D.C.-Baltimore life sciences employment base grew by 2.6% between 2018 and 2019, below the national average of 4.2%.

VENTURE CAPITAL FUNDING

Venture capital funding has surged over the past two years. Between Q2 2017 and Q2 2020, this market was one of the fastest growing in the nation for life sciences venture capital funding, despite moderating over the past year.

NIH FUNDING

The D.C.-Baltimore region collected the nation's third-highest amount of NIH funding in fiscal year 2019 (\$1.9 billion), driven by the perennially biggest recipient of funding, Johns Hopkins University.

OTHER

Strong demand is expected to outweigh the moderate supply pipeline, causing rents to near a \$40-per-sq.-ft. average by year-end. A 330,000-sq.-ft. speculative lab development by Wexford in the University of Maryland's BioPark in Baltimore should break ground in the near-term.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN) (1st Gen, Market)	Avg Asking Rent (NNN) Current Availabilities	18-mos Change
Suburban Maryland	6,776,517	6.1%	\$35.00	\$31.25	8.5%
Baltimore	1,811,756	2.1%	\$35.00	\$25.00	6.1%
Washington, D.C.-Baltimore	8,588,273	5.2%	\$35.00	\$30.78	8.0%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
700 Quince Orchard	Gaithersburg	Rock Creek Property Group	120,000	2021 delivery
9900 Belward Campus	Rockville	M&M Investments	50,000	Spec 2020 delivery

Source: CBRE Research, Q2 2020.

Significant Lease Deals

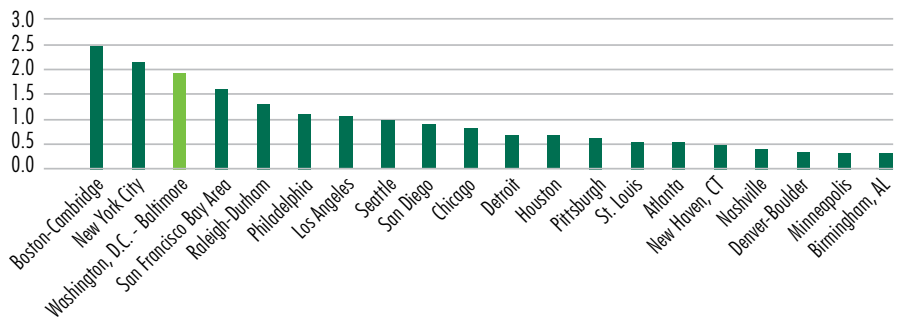
Tenant	Submarket	Sq. Ft.	Type
Supernus	Rockville	136,000	Relocation
Autolus	Rockville	85,000	New
GeneDx	Gaithersburg	83,000	Renewal
Lieber Institute	Baltimore	50,000	Renewal
MacroGenics	Rockville	46,267	Renewal
On Demand Pharmaceuticals	Rockville	44,500	New

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#3 in nation: \$1.9 billion (2019)

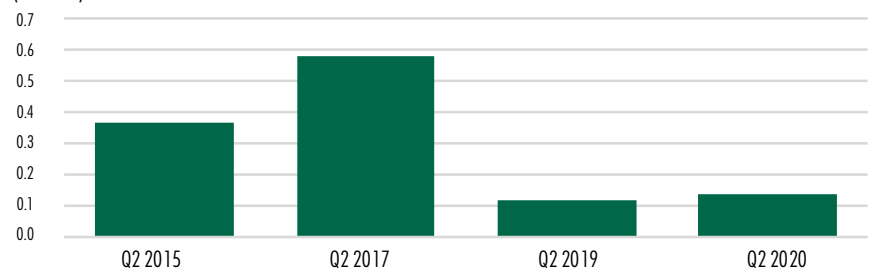
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
25, 35, 45 West Watkins Mill Road	139,000	\$53,250,000	\$383
9605 Medical Center Drive	115,691	\$28,922,750	\$250

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Autolus	Rockville	85,000
Illumina	Baltimore	13,000

Demand (Lab Requirements)

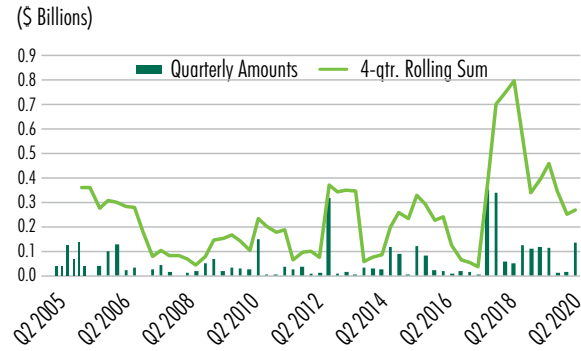
Requirement	Count/SF	18-Mos. Change
Tenants	18	28.6%
Total Sq. Ft.	1,400,000	133.3%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
9800 Medical Center	Rockville	ARE	175,000	BTS 2021 delivery
9950 Medical Center	Rockville	ARE	85,000	BTS 2021 delivery

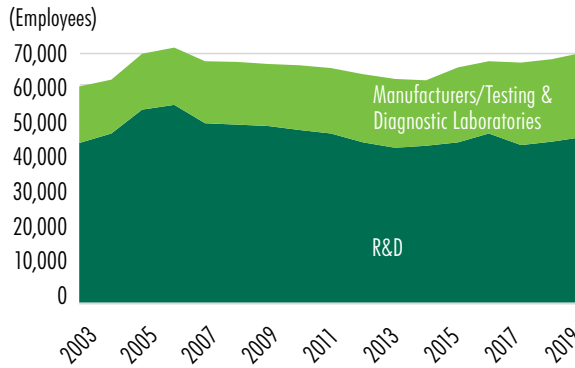
Source: CBRE Research, Q2 2020.

**VENTURE CAPITAL FUNDING
(Washington, D.C.-Baltimore CSA)**



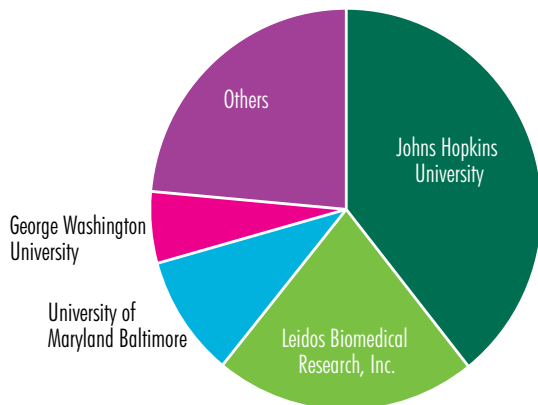
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

RALEIGH-DURHAM

OVERVIEW

Raleigh-Durham's life sciences market is experiencing considerable growth and transformation. Few markets can match its recent employment growth, and developers are responding with various transformative redevelopments and conversions to fuel future growth.

RENTS & VACANCY

Despite continued growth of the local lab inventory, average asking rents remained stable over the past 18 months and vacancy declined by 3.1 percentage points to 19.0%.

SUPPLY

Supply continues to grow in Raleigh-Durham with 980,000 sq. ft. in the pipeline, 8% higher than 18 months ago.

DEMAND

Demand for lab space has surged since early 2019. Tenants are currently seeking 760,000 sq. ft. of biomanufacturing space and 840,000 sq. ft. of wet lab space.

COVID-19 EFFECT

New requirements directly tied to COVID-19 research have not been identified, but some COVID-related research requirements likely are among the surge in local lab demand.

EMPLOYMENT

The exceptionally fast-growing Raleigh-Durham area has experienced above-average growth in its local life sciences employment base. Between 2018 and 2019, total life sciences employment in this market jumped 5.2% versus 4.2% in the U.S.

VENTURE CAPITAL FUNDING

Raleigh-Durham continues to lag in attracting higher amounts of life sciences venture capital as some of its peers. For the year ending Q2 2020, Raleigh-Durham attracted only \$60 million, though 2018 and 2019 were much better when the region had record venture capital funding of more than \$500 million.

NIH FUNDING

Raleigh-Durham's real strength in funding research comes from the NIH, which delivered \$1.3 billion to local institutions in 2019, the fifth-highest market allocation nationally.

OTHER

Major research institutions, cell/gene therapy and agriculture-sciences companies continue to drive rapidly growing demand in this market.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Raleigh-Durham	5,858,196	19.0%	\$24.83	0.3%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
Park Point	RTP	Trinity	700,000	Spec 2021 delivery; 20% pre-leased
Newcastle North	RTP	Longfellow	130,000	Spec 2021 delivery

Source: CBRE Research, Q2 2020.

Significant Lease Deals

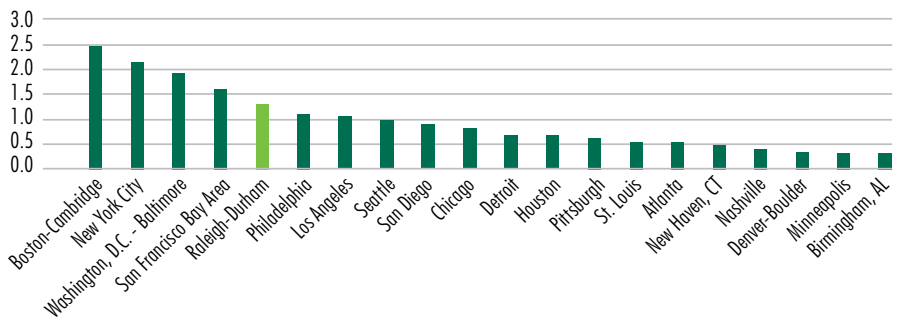
Tenant	Submarket	Sq. Ft.	Type
Eli Lilly	RTP	720,000	New location/Expansion
Duke University	RTP	275,000	New location/Expansion
Grail	RTP	200,000	New location/Expansion
KBI	RTP	185,000	New location/Expansion
Adentes	Sanford	100,000	New location/Expansion

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#5 in nation: \$1.3 billion (2019)

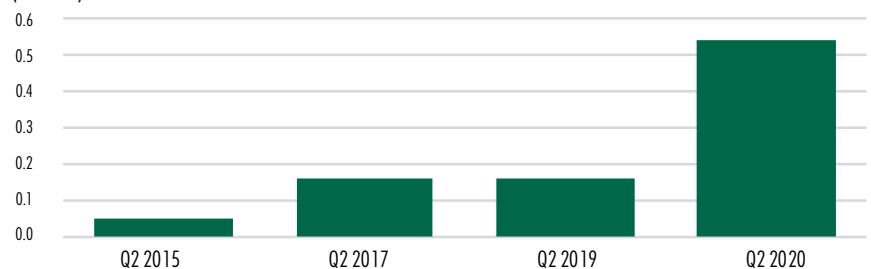
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Parmer RTP	2.3 M	\$590,000,000	\$257
Multi-property purchase by TPG	447,406	\$60,100,500	\$134
Multi-property purchase by Longfellow	397,876	\$64,701,500	\$163
Multi-property purchase by Ventas	175,434	\$80,000,000	\$456

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Lab Corp	Parmer RTP	335,000
Ask Bio	BioPoint	90,000
Arysta	5 Davis Drive	90,000

Demand (Lab Requirements)

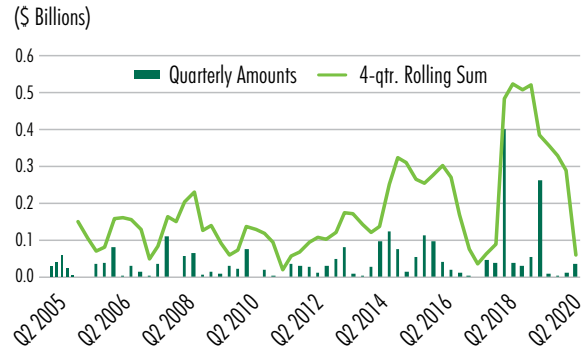
Requirement	Count/SF	18-Mos. Change
Tenants	15	-6.3%
Total Sq. Ft.	840,000	28.2%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
5 Davis Drive	RTP	ARE	150,000	Spec 2021 delivery

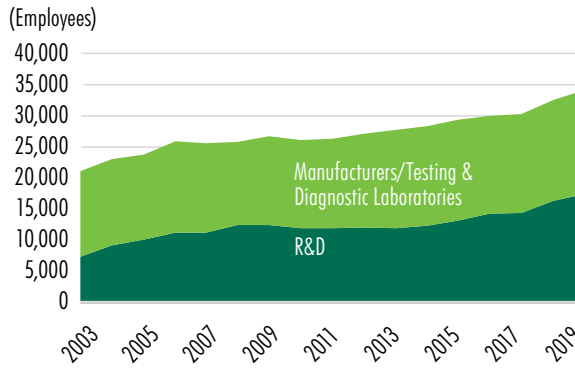
Source: CBRE Research, Q2 2020.

**VENTURE CAPITAL FUNDING
(Raleigh-Durham MSA)**



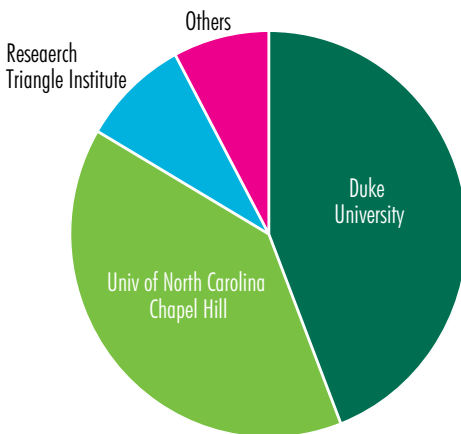
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

NEW JERSEY

OVERVIEW

New Jersey continues to play a leading role in the life sciences industry's ascent with the nation's third-largest inventory of laboratory space. Local lab market fundamentals remain solid, as gene/cell therapy and other small-scale biomanufacturing operations are taking a foothold here.

RENTS & VACANCY

The average asking rent for New Jersey lab space jumped 11.9% over the past 18 months, consistent with growth across the country. Vacancy remained generally stable and is expected to remain so over the next year with a relative lack of new construction.

SUPPLY

Conversions are underpinning supply of new lab and biomanufacturing space in New Jersey. With growing demand for gene/cell therapy and small-scale biomanufacturing, flex/industrial properties in the 60,000- to 120,000-sq.-ft. range are expected to be candidates for conversion over the next few years.

DEMAND

Lab demand is active, especially in the 10,000- to 30,000-sq.-ft. range. The number of tenants seeking lab space increased since early 2019, but their total square footage requirements declined.

COVID-19 EFFECT

There are several new requirements, primarily from start-up and mid-size companies supported by government funding. Several Big Pharma requirements to accommodate rapid growth due to COVID-19 have also occurred, especially in testing and diagnostic areas.

EMPLOYMENT

Life sciences employment climbed 4.0% between 2018 and 2019, near the 4.2% national average.

VENTURE CAPITAL FUNDING

With fewer early-stage companies in New Jersey, life sciences venture capital funding in the state has been relatively low but stable, totaling some \$224 million for the year ending Q2 2020.

NIH FUNDING

New Jersey ranked 32nd for NIH funding in fiscal year 2019, totaling \$193 million.

OTHER

International companies remain active in New Jersey, particularly from China. Gene/cell therapy and oncology remain primary drivers of demand. Biotech is also active.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
New Jersey	18,200,000	9.9%	\$23.50	11.9%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
95 Greene Street	Hudson Waterfront	Thor Equities	340,000	BTS
170 Park Avenue, Florham Park	Morris County	Lone Star Funds	147,000	Biomanufacturing 2020 delivery
2101 Cottontail Lane, Somerset	Somerset County	Owner - User - Legend Biotech	86,000	Biomanufacturing 2021 delivery

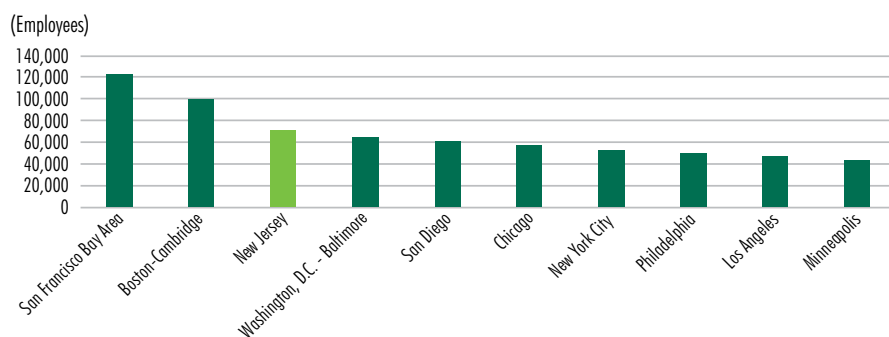
Source: CBRE Research, Q2 2020.

Significant Lease Deals

Tenant	Submarket	Sq. Ft.	Type
CMIC-CMO	Exit 8A - Cranbury	223,936	Expansion
PTC Therapeutics	Princeton	176,000	Relocation
Celularity	Morris County	147,645	Relocation
Genmab	Princeton	88,000	Relocation
Croda	Princeton	61,696	Relocation
CSPC	Princeton	30,000	Expansion

Source: CBRE Research, Q2 2020.

TOTAL LIFE SCIENCES EMPLOYEES BY MARKET



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Arsenal on the Charles, Watertown	857,225	\$525,000,000	\$612
35 Cambridgepark Drive, Cambridge	233,000	\$332,500,000	\$1,427
200 Smith Street, Waltham	425,000	\$320,000,000	\$753
51 Sleeper Street, Boston	149,121	\$115,000,000	\$771
1 Winthrop Square, Boston	114,343	\$75,000,000	\$656

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Rocket Pharma	Cranbury	90,000

Demand (Lab Requirements)

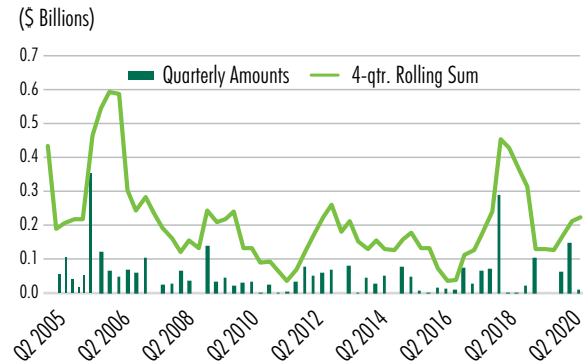
Requirement	Count/SF	18-Mos. Change
Tenants	16	6.7%
Total Sq. Ft.	360,000	-15.3%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
No new construction underway				

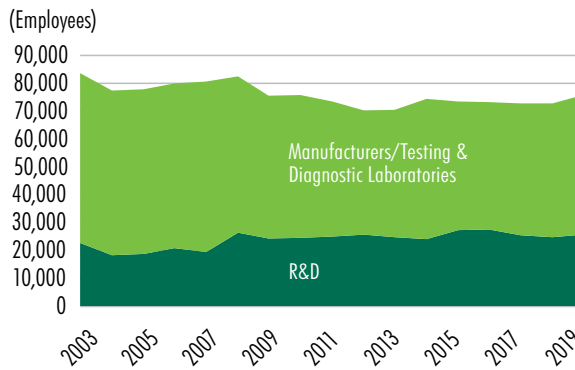
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (New Jersey)



Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

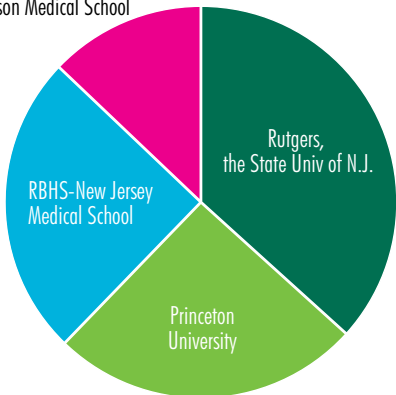
EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS

RBHS-Robert Wood Johnson Medical School



Source: NIH, CBRE Research, Q3 2020.

PHILADELPHIA

OVERVIEW

The Philadelphia life sciences market, recently dubbed “Cellicon Valley,” has some of the strongest momentum of any market in the U.S. Robust employment growth in the sector over the past three years sharply reversed a downward trend over the previous decade, as venture capital funding surged and new development increased.

RENTS & VACANCY

Strong demand has boosted the metro’s average rent by approximately 5% over the past year. Vacancy has remained stable, but there is a clear divergence between the city, where no availability exists in University City and the Navy Yard, and the more dispersed suburbs with an overall vacancy rate of 14%.

SUPPLY

Construction has increased substantially since early 2019 to meet growing demand, partially from a boom in incubators. Just 295,000 of new space was under construction in early 2019, but that more than doubled to 665,000 sq. ft. by Q2 2020.

DEMAND

Demand for life sciences space has surged over the past 18 months, with triple the number of tenants seeking lab space.

COVID-19 EFFECT

An increase in COVID-related requirements has occurred in Philadelphia, but has yet to materialize into actual transactions.

EMPLOYMENT

Philadelphia had one of the biggest increases in life sciences employment of any U.S. market between 2018 and 2019, up by 5.7% compared with the 4.2% national average. R&D employment grew by 12%.

VENTURE CAPITAL FUNDING

Philadelphia has been one of the fastest-growing markets for venture capital funding, totaling \$791 million over the past year—an increase of 83% from the prior year.

NIH FUNDING

Philadelphia ranked sixth for NIH funding in fiscal year 2019, totaling \$1.1 billion.

OTHER

Philadelphia’s deep pool of talent, convenient Northeast Corridor location and strong historical presence of the life sciences industry have attracted a variety of companies, particularly in cell/gene therapy. Tight space conditions in the city have been offset by more available space in the suburbs.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Philadelphia (University City)	1,909,365	0.0%	\$45.71	na
Navy Yard	612,574	0.0%	\$30.00	na
Suburbs	6,097,089	14.0%	\$19.17 (\$25 Cl A)	na
Total Philadelphia Region	8,619,028	9.9%	\$25.82	na

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
No conversions currently undertaken				

Source: CBRE Research, Q2 2020.

Significant Lease Deals

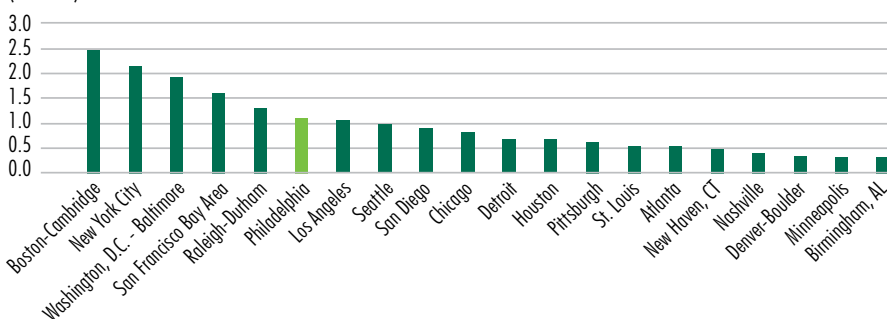
Tenant	Submarket	Sq. Ft.	Type
Iovance Therapeutics	Navy Yard	136,000	New
Charles River Labs	Wayne	58,000	Expansion
Flamma Group	Malvern	39,570	New
Wuxi Biologics	King of Prussia	33,400	New
Century Therapeutics	University City	32,000	Relocation
Limelight Bio	University City	25,000	Relocation
VenatoRX Pharmaceuticals	Malvern	23,735	Relocation

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#6 in nation: \$1.1 billion (2019)

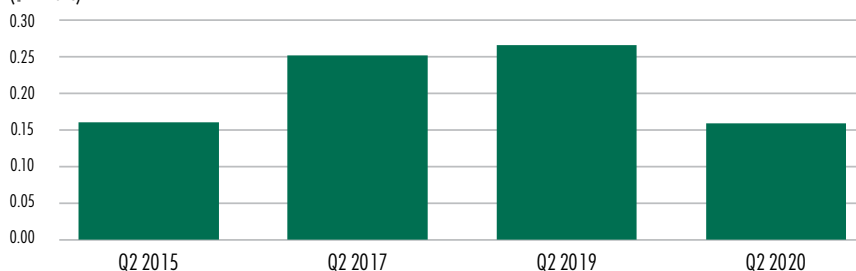
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
1050 Constitution Avenue	175,000	\$61,200,000	\$350
300 Kimberton Road	67,274	\$3,450,000	\$51

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Iovance Therapeutics	Navy Yard	136,000
Amicus	University City	75,000
Flamma Group	Malvern	39,570
Biohaven Pharmaceuticals	Bucks County	21,000

Demand (Lab Requirements)

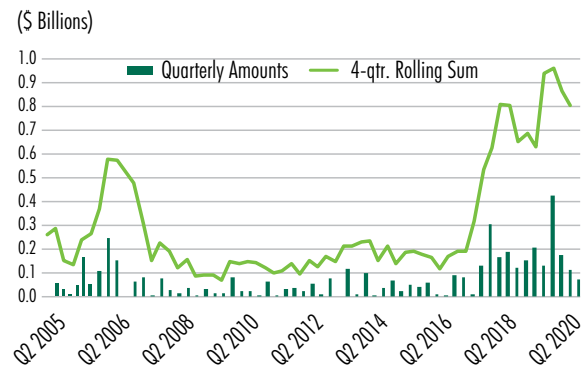
Requirement	Count/SF	18-Mos. Change
Tenants	22	214.3%
Total Sq. Ft.	603,000	169.2%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
One uCity Square	Philadelphia (University City)	Wexford	389,000	Spec 2022 delivery
Iovance Biotherapeutics	Navy Yard	Gattuso Development Partners	136,000	BTS 2021 delivery
Spring House Innovation Park	Spring House	MRA Group	75,000	Spec 2020 delivery
Pennovation Center Expansion	Philadelphia (University City)	MRA Group & University of Penn	65,000	Spec 2020 delivery
PA Biotech Center Expansion	Doylestown	The Pennsylvania Biotechnology Center (PABC)	37,000	Spec 2021 delivery

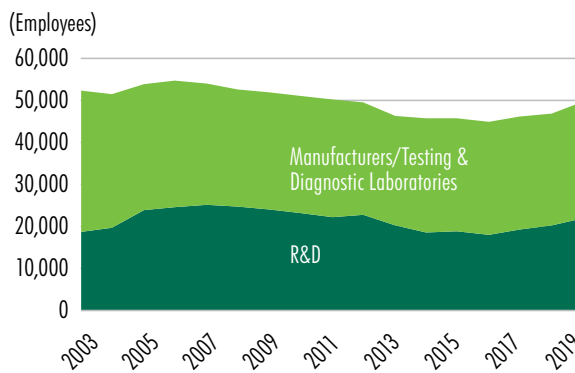
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (Philadelphia)



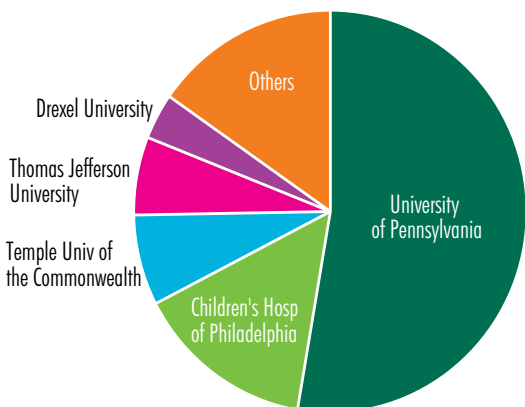
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

NEW YORK CITY

OVERVIEW

New York City's strong momentum as a player in the life sciences industry continues to grow. Several transformative projects under construction will promote the continued formation of life science clusters throughout Manhattan, Queens and Brooklyn.

RENTS & VACANCY

Average asking rates for lab space in New York City increased by 15.8% since early 2019. Like most rapidly growing markets, new supply has caused the vacancy rate to rise over the past year, but the market for occupancy-ready, pre-built lab space remains very tight with a vacancy rate of only 2.3%.

SUPPLY

Approximately 1.1 million sq. ft. of lab space is in the supply pipeline for New York City through 2021, most of which is comprised of conversions, providing a much-needed injection of new lab-capable and lab-exclusive space.

DEMAND

Lab demand has grown significantly since early 2019, both in terms of number of tenants and in total space of about 850,000 sq. ft. as of Q2 2020.

COVID-19 EFFECT

Some COVID-19-related requirements have emerged for rapid occupancy of short-term pre-built space. An uptick in new life science companies is expected as a direct result of COVID-19 research conducted at NYC academic medical institutions.

EMPLOYMENT

New York City's¹ life sciences employment grew by 3.9% between 2018 and 2019, less than the national average of 4.2%.

VENTURE CAPITAL FUNDING

New York City² has been one of the fastest-growing markets for life sciences venture capital funding for several years. For the year ending Q2 2020, funding surged by 149% from the prior year to a record \$2.5 billion, the third-highest market allocation nationally.

NIH FUNDING

New York City¹ ranked second in the nation for NIH funding last year, totaling \$2.2 billion

OTHER

Several ground-breaking transformative projects in New York City will continue to grow this market's stature among major life sciences hubs. Incubators also continue to grow, totaling around 164,000 sq. ft.

¹NYC and NY counties in MSA (New York-Newark-Jersey City NY-NJ-PA) only.

²New York City CSA (New York-Newark, NY-NJ-CT-PA).

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	Avg Asking Rent (NNN)	18-mos Change
Total (Overall NYC)	1,720,748	30.5%	2.3%	\$92.43	15.8%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
Cure - 345 Park Ave South	Manhattan	Deerfield Management	296,610	Spec 2021 delivery
Innolabs	Long Island City	GFP/King Street	266,791	Spec 2021 delivery
Alexandria Long Island City	Long Island City	Alexandria R.E. Equities	186,012	Spec 2020 delivery
525 West 57th Street	Manhattan	Himmel + Meringoff Properties	86,848	Spec 2021 delivery
Mink Building - 1361 Amsterdam	Manhattan	Janus Partners	40,000	Spec 2021 delivery

Source: CBRE Research, Q2 2020.

Significant Lease Deals

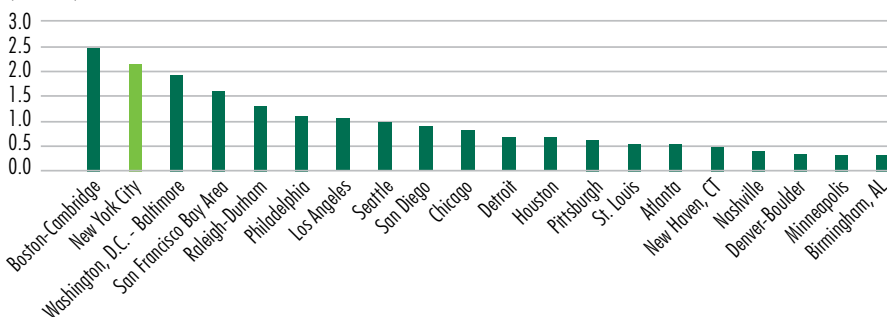
Tenant	Submarket	Sq. Ft.	Type
New York Stem Cell Foundation	Manhattan	23,535	Expansion
MeiraGix	Manhattan	22,000	New
BlueRock Therapeutics	Manhattan	19,647	Expansion
HiberCell	Manhattan	15,094	New
Kallyope	Manhattan	15,000	Expansion

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER¹

#2 in nation: \$2.2 billion (2019)

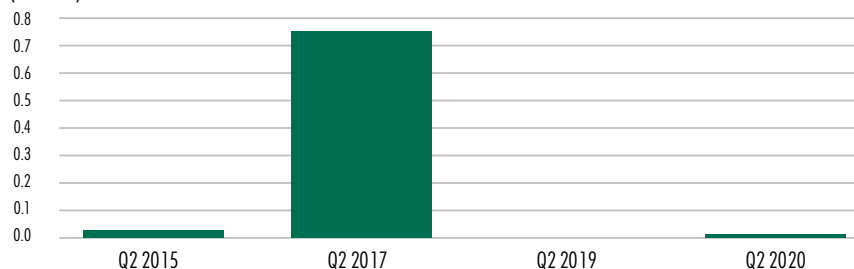
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME¹

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
No significant sales of existing properties			

Source: CBRE Research, Q2 2020.

H1 2020 Notable NYC Active Lab Requirements

Tenant	Approx. Sq. Ft.	Tenant Sector
New Reality	40,000-50,000	Diagnostics
Landos Biopharma	40,000	Drug Development
Charles River Laboratories	30,000	Medical Laboratories & Research
Ovid Therapeutics	15,000-20,000	Drug Development
Protara Therapeutics	9,000-10,000	Drug Development

Demand (Lab Requirements)

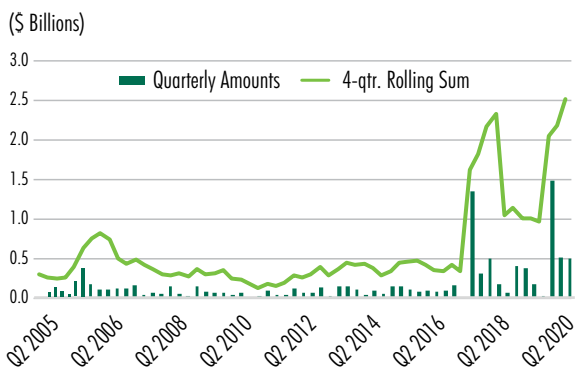
Requirement	Count/SF	18-Mos. Change
Tenants	42	82.6%
Total Sq. Ft.	848,000	54.2%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Taystee Lab Building	Manhattan	Janus Partners	320,526	Spec 2020 delivery

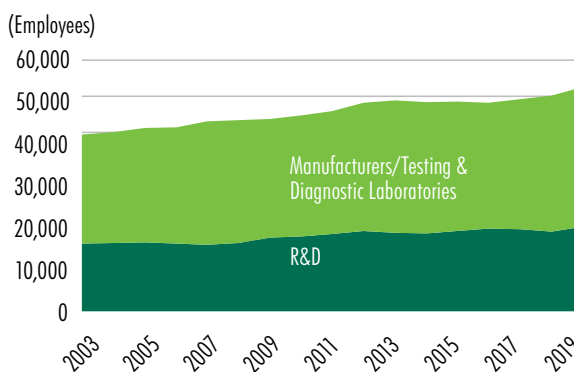
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING²



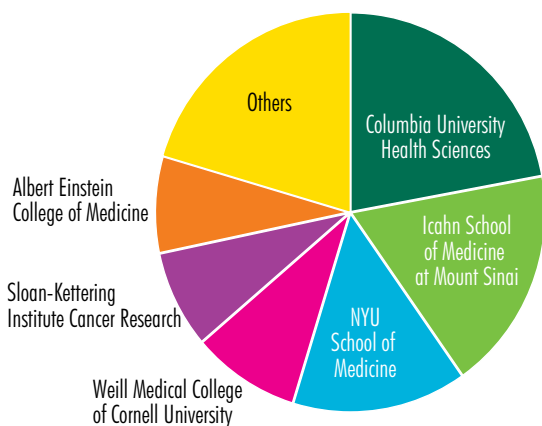
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT¹



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS¹



Source: NIH, CBRE Research, Q3 2020.

SEATTLE

OVERVIEW

Amid a challenging first half of the year, the Puget Sound life science real estate market demonstrated resiliency with continued transaction activity, lower vacancy and increased investor interest.

RENTS & VACANCY

Rents have surged in Seattle over the past 18 months as the region has one of the tightest markets for lab space in the country with a regional vacancy rate of 2.2%. With persistent demand, the lab market is expected to even tighten further in 2020, which should push rents higher.

SUPPLY

Several key projects are under construction to meet strong demand and roughly 2.4 million sq. ft. of lab capable development is in the pipeline for delivery over the next four years, which will elevate Seattle's stature as a life sciences hub.

DEMAND

Tenant requirements for lab space totaled approximately 350,000 sq. ft. as of Q2 2020. The 194,000-sq.-ft. Atrium development and the 100,000-sq.-ft. eleven65 project, both built speculatively by Alexandria Real Estate, were fully preleased, bringing the current Seattle Class A vacancy rate to less than 1%.

COVID-19 EFFECT

While various new requirements for lab space related to COVID-19 have emerged both from inside and outside the market, some of this has been offset by hesitancy on the part of other early-stage existing tenants to expand during the current economic downturn.

EMPLOYMENT

Seattle has been one of the fastest-growing markets for life sciences employment over the past five years, but above-average growth slightly moderated in 2019 to match the national average of 4.2%.

VENTURE CAPITAL FUNDING

Seattle received its largest quarterly amount of life sciences venture capital funding in Q2 (\$613.5 million), raising its rolling four-quarter total to a record \$826 million.

NIH FUNDING

As a major research hub, Seattle ranked eighth in the nation for NIH funding in 2019.

OTHER

Seattle has become a hub of life sciences innovation, with a unique convergence of world-class scientific research and premier technology talent. This synergy offers the opportunity to capture top talent at the forefront of the life science and technology industries in one place. The nexus of this rich ecosystem lies in the heart of Seattle's South Lake Union submarket.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
South Lake Union/Seattle	5,649,646	0.6%	\$60.00	9.0%
Bothell	2,447,695	6.2%	\$23.39	na
Total	8,539,050	2.2%	\$26.13	26.9%

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
1st & Eagle	Waterfront	Elliott Bay	86,000	Spec 2020 delivery; 75% pre-leased

Source: CBRE Research, Q2 2020.

Significant Lease Deals

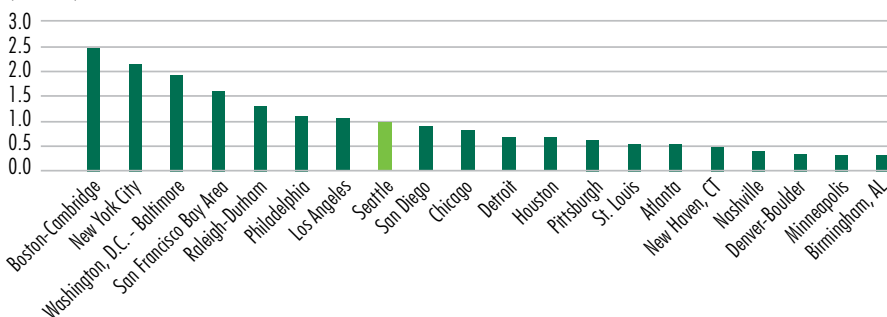
Tenant	Submarket	Sq. Ft.	Type
Adaptive Biotechnologies	South Lake Union	100,000	Expansion
Lyell Immunopharma	Bothell	72,518	Expansion
Juno Therapeutics-Celegene	South Lake Union	34,104	Expansion
Neoleukin Therapeutics	South Lake Union	33,300	Relocation
Alpine Immune Sciences	South Lake Union	27,164	Relocation

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#8 in nation: \$1.0 billion (2019)

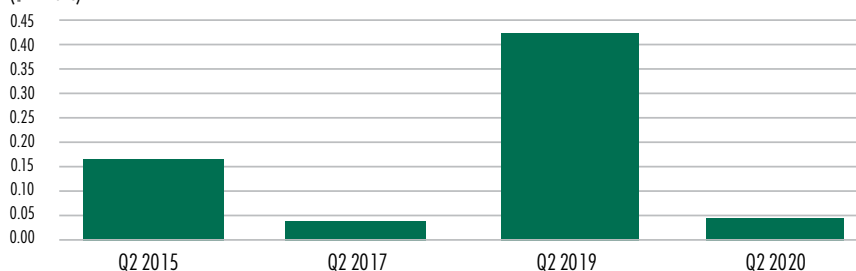
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
Canyon Park East Portfolio	270,000	\$54.6 million	\$203
1st & Eagle	86,000	\$50.7 million	\$590

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
BMS	Multiple	250,000+
Roche	2211 Elliott Ave	12,000

Demand (Lab Requirements)

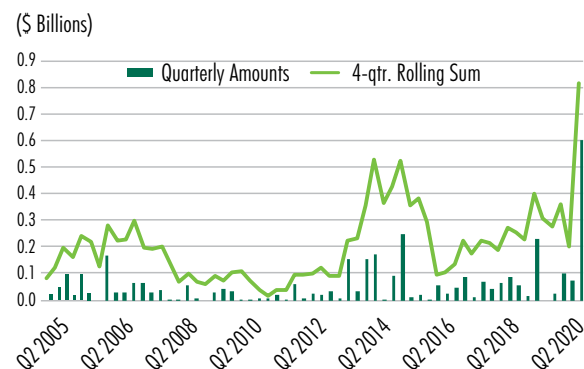
Requirement	Count/SF	18-Mos. Change
Tenants	18	NA
Total Sq. Ft.	350,000	NA

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
400 Westlake	South Lake Union	Martin Selig Real Estate	200,000	Planned 2021 delivery
Dexter Yard	South Lake Union	BioMed Realty	130,000 (500,000 SF total)	Spec 2021 delivery
e1even65	South Lake Union	Alexandria	100,000	Spec 2020 delivery; 100% pre-leased

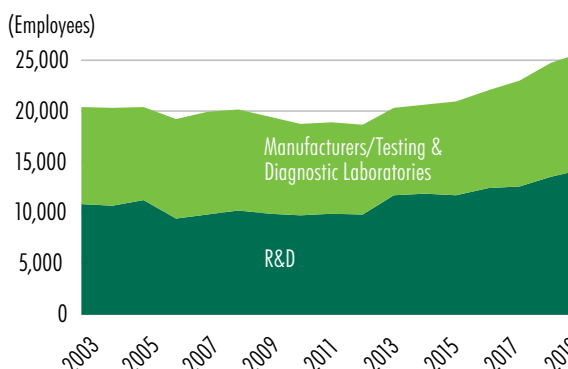
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (Seattle CSA)



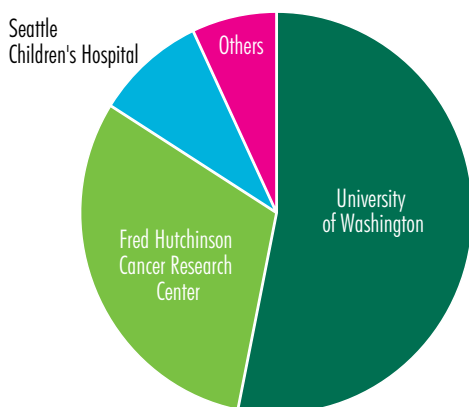
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

LOS ANGELES

OVERVIEW

The L.A. life sciences market saw a surge in venture capital investment over the past year, along with the opening of new incubators and growing supply and demand for laboratory space.

RENTS & VACANCY

A relatively low vacancy of 6.7%, coupled with the expansion of several large life sciences occupiers, should keep the market for L.A. lab space tight and lead to increased rents over the next year.

SUPPLY

L.A. has a relative dearth new construction: Of all major lab markets, L.A. has the least amount of lab supply as a percentage of total inventory. Alexandria Real Estate Equities and HATCHspaces plan to deliver approximately 200,000 sq. ft. of lab space to the market over the next 12 months. Additionally, many landlords are considering converting office space to lab space or acquiring new buildings for conversion to life science uses.

DEMAND

The amount of space sought by lab tenants has increased considerably over the past year. There currently are more than 400,000 sq. ft. of life science tenant requirements in the market.

COVID-19 EFFECT

While leasing across most industries has significantly slowed due to COVID-19, life science tenant demand in Los Angeles has not been negatively impacted. In some instances, life science tenant requirements have grown. For example, a cancer therapy company solely focused on the L.A. market due to its talent base started 2020 with a need for 20,000 sq. ft. of lab and office space. Since then, its space needs have grown to 150,000 sq. ft.

EMPLOYMENT

L.A. life sciences employment growth was sluggish in 2019 declining by 1.3% from 2018.

VENTURE CAPITAL FUNDING

Venture capital funding to the Los Angeles and Orange County markets reached a new record of \$379 million for the year ending Q2 2020.

NIH FUNDING

L.A.'s world-class hospitals and research institutions continue to attract one the nation's largest totals of NIH funding. L.A. ranked seventh in the nation for NIH funding in 2019, with \$1.1 billion.

OTHER

Cell/gene therapy and oncology are the main sources of life sciences demand growth in L.A. Several incubators opened over the past year contributing to increased demand from growing occupiers. Venture capital continues to increase locally and landlords are eager to find life science investment opportunities.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Los Angeles	8,335,629	6.7%	\$40.00	na

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
HATCHspaces	Thousand Oaks	HATCHspaces	120,000	Spec 2021 delivery
6100-6160 Bristol Parkway	Culver City	Alexandria Real Estate Equities	75,941	Spec 2020 delivery
HATCHspaces	Thousand Oaks	HATCHspaces	50,000	Spec 2021 delivery
1280 Rancho Conejo Boulevard	Thousand Oaks	Alexandria Real Estate Equities	33,652	Spec 2020 delivery
1535 Rancho Conejo Boulevard	Thousand Oaks	HATCHspaces	29,197	Spec 2020 delivery
HATCHspaces	Westwood	HATCHspaces	11,000	Spec 2020 delivery

Source: CBRE Research, Q2 2020.

Significant Lease Deals

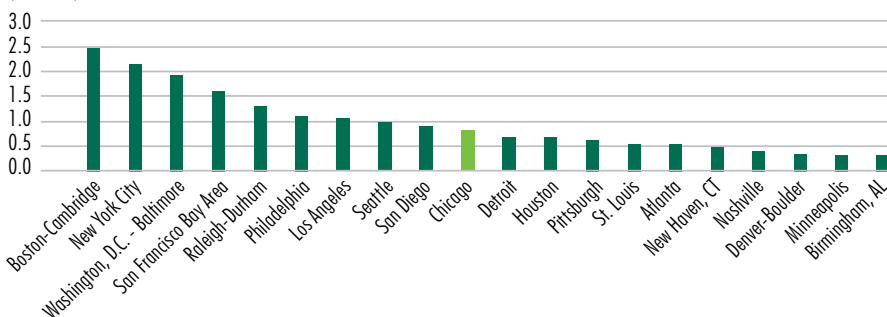
Tenant	Submarket	Sq. Ft.	Type
Kite Pharma	Santa Monica	88,000	Expansion
Armata Pharmaceuticals	Marina Del Rey	35,453	Renewal
Kite Pharma	El Segundo	25,861	Expansion
Coherus Biosciences	Camarillo	25,000	New lease
Arrowhead Pharmaceuticals	Pasadena	24,448	Expansion

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#7 in nation: \$1.1 billion (2019)

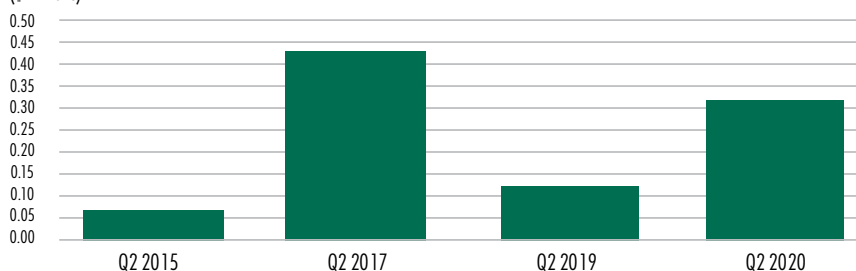
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
39810 Trade Center Drive	423,168	\$142,900,000	\$338
1525-1535 Rancho Conejo Boulevard	160,980	\$26,200,000	\$163
28575 W Livingston Avenue	40,000	\$7,112,000	\$178
519-525 W Terrace Drive	24,948	\$4,690,500	\$188
1214 E Lexington Avenue	7,451	\$800,000	\$107

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Liquid IV	South Bay	15,739

Ongoing negotiations of approximately 143,200 SF by new life science tenants entering the market will support steady growth from existing L.A. life science companies that have totaled 141,088 SF of expansion during the last year.

Demand (Lab Requirements)

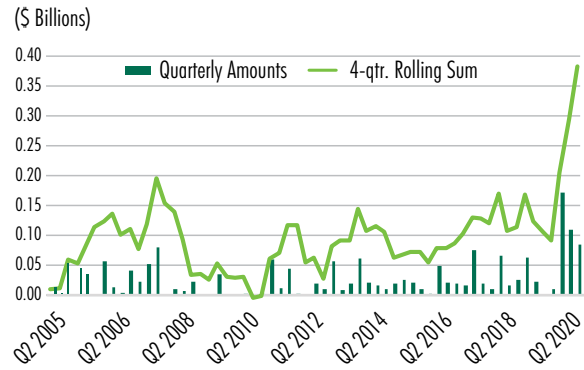
Requirement	Count/SF	18-Mos. Change
Tenants	9	200.0%
Total Sq. Ft.	453,000	466.3%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
No new construction underway				

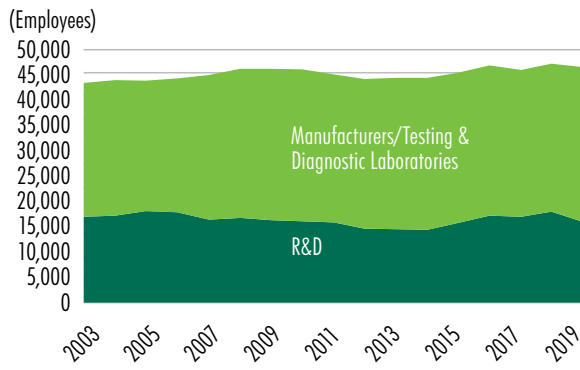
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (LA-Orange County CSA)



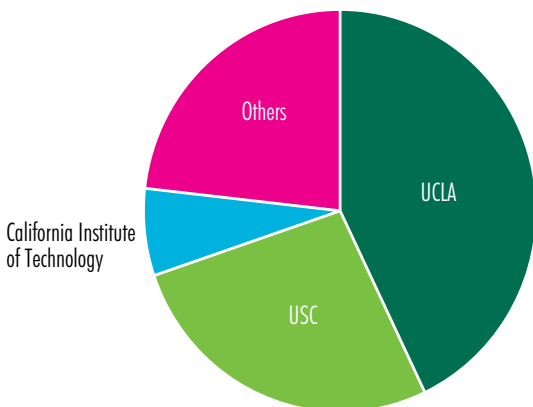
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

CHICAGO

OVERVIEW

Chicago's life sciences sector is gaining momentum as capital floods the market and the development pipeline grows. Unprecedented growth in early-stage capital, real estate supply and C-suite talent position the city well for sustained growth. The local ecosystem is further bolstered by a reasonable cost of living, world-class research institutions and market-leading global pharmaceutical companies.

RENTS & VACANCY

Demand is outpacing supply in Chicago, keeping space availability tight and placing upward pressure on rents until more lab supply is completed.

SUPPLY

Fulton Labs will be a major catalyst for the local industry, providing much-needed top-tier urban lab space for the growing market. This project helped the supply pipeline of lab space grow by 24% since early 2019. Exciting new projects have also been proposed by universities and health-care operators like the University of Chicago partnership with Wexford Life Sciences.

DEMAND

Lab demand has grown significantly over the past 18 months as Chicago gains momentum in funding and institutional collaboration. The number of lab tenants seeking space and the total space associated with those requirements have more than tripled since early 2019.

COVID-19 EFFECT

New requirements for space have surged since March amid the rapid acceleration of the COVID-19 crisis. Strong demand is expected to continue.

EMPLOYMENT

As a large, relatively slow-growth market in transition, Chicago's life sciences employment improved in 2019, growing at a rate of 2.3% from the 1.9% rate in 2018, but remained below the national average of 4.2%.

VENTURE CAPITAL FUNDING

Chicago had the largest percentage increase in life sciences venture capital of any major U.S. market over the past three years. For the year ending Q1 2020, the market received a record \$378 million of life sciences venture capital.

NIH FUNDING

Chicago ranked 10th in the nation for NIH funding last year, totaling \$803 million.

OTHER

Growth-stage capital from private wealth to family funds to institutional capital is investing in local life sciences companies, and developers anticipate an industry growth curve similar to the rapid expansion of Chicago technology firms.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Chicago CBD	248,593	0.0%	\$47.50	na
Chicago Suburbs	1,078,762	7.4%	\$30.00	na
Chicago Metro	1,327,355	6.0%	\$40.00	na

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
No conversions underway				

Source: CBRE Research, Q2 2020.

Significant Lease Deals

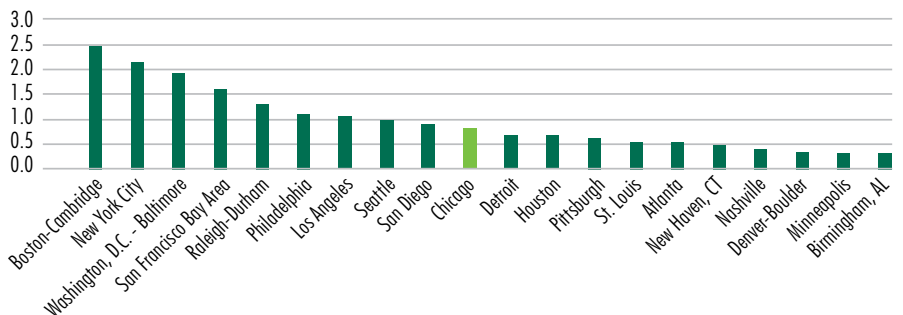
Tenant	Submarket	Sq. Ft.	Type
Abbott	Suburbs	255,000	New
Portal Innovations	Fulton Market	35,000	New
Evozyne	Lincoln Park	30,087	New
Excure, Inc	Lincoln Park	30,085	Relocation
Xeris Pharmaceuticals	Fulton Market	10,782	New
Vanqua Bio, Inc	Lincoln Park	4,179	New

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#10 in nation: \$0.8 billion (2019)

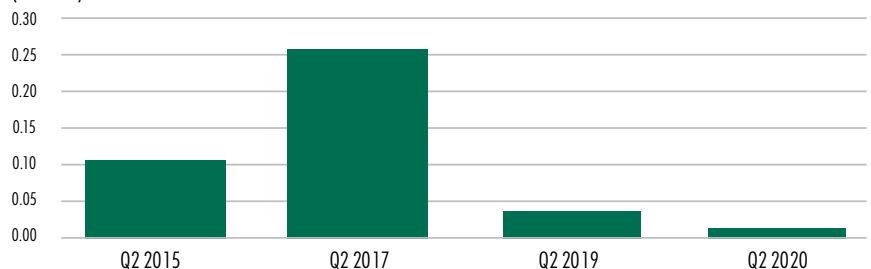
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
1 Horizon Parkway	660,000	\$115,000,000	\$174

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
Cour Pharma	Skokie	5,804

Demand (Lab Requirements)

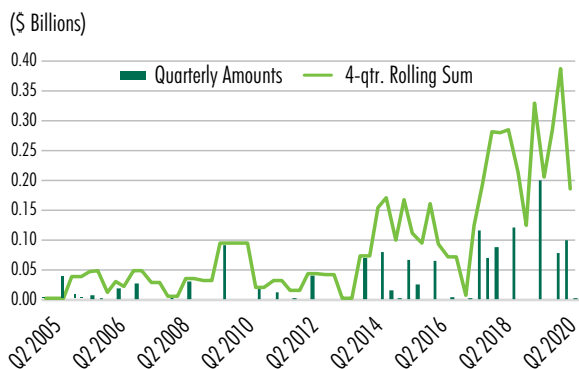
Requirement	Count/SF	18-Mos. Change
Tenants	18	260.0%
Total Sq. Ft.	658,000	276.0%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Fulton Labs	City	Trammell Crow	423,454	Spec; 2021 Delivery
G1 (Lincoln Yards)	City	Sterling Bay	320,000	Spec; 2023 Delivery
West End on Fulton	City	Trammell Crow	300,224	Spec; 2020 Delivery
8030 Lamon Avenue	Suburbs	American Landmark	130,000	Spec; 2020 Delivery
Rosalind Franklin Innovation & Research Park	Suburbs	Rosalind Franklin University	100,000	BTS; 2020 Delivery

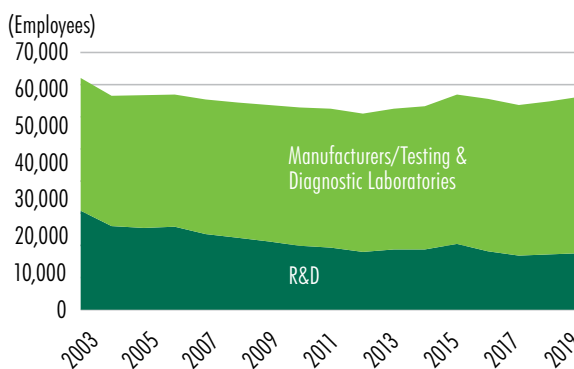
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (Chicago MSA)



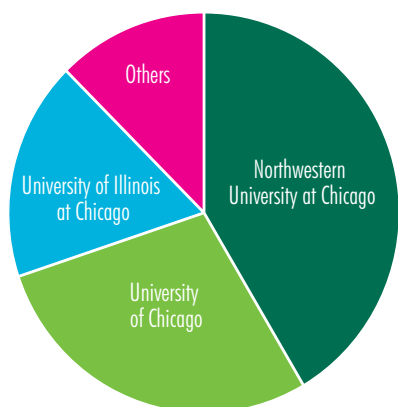
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

ORANGE COUNTY, CA

OVERVIEW

Orange County was the third fastest-growing major market for life sciences employment in 2019, increasing by 7.0%. Driving the market's growth was continued expansion by major medical device and pharmaceutical companies.

RENTS & VACANCY

Low vacancy (5.1%), a lack of new construction and growing demand are expected to push average asking rents higher over the next year.

SUPPLY

A dearth of new construction persists in Orange County, except for one build-to-suit that involved the demolition of an industrial warehouse.

DEMAND

Lab space requirements surged over the past 18 months and are currently just under 500,000 sq. ft.

COVID-19 EFFECT

Market dynamics have been resilient thus far, as a handful of local companies have been involved in the race for a vaccine. Once the pandemic eases, growth by local medical device companies is expected as hospitals return to more activity in elective surgeries.

EMPLOYMENT

Orange County's life sciences employment base surged by 7.0% in 2019, far above the 4.2% national average and the fastest since 2012.

VENTURE CAPITAL FUNDING

Venture capital to the Los Angeles and Orange County markets reached a new record of \$379 million for the year ending Q2 2020.

NIH FUNDING

Just under \$156 million of NIH funding was allocated to the University of California, Irvine in 2019, the market's sole recipient of funding amounts greater than \$20 million.

OTHER

Local medical device giants (comprising 47% of local life sciences space inventory) and pharmaceutical companies continue to drive activity. M&A activity among smaller local companies should persist and attract more venture capital funding to the market.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Orange County	4,506,014	5.1%	\$22.92	na

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
No conversions underway				

Source: CBRE Research, Q2 2020.

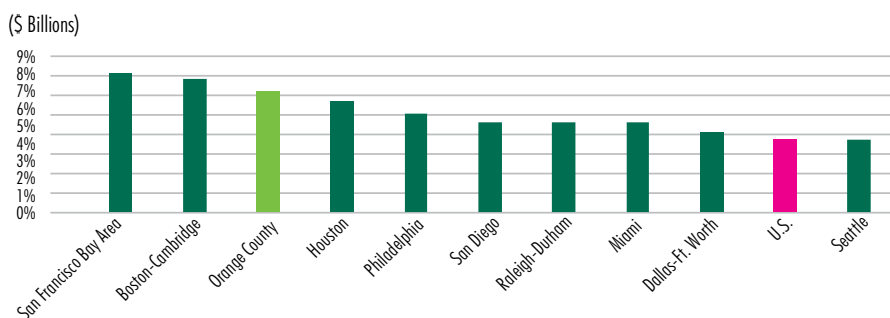
Significant Lease Deals

Tenant	Submarket	Sq. Ft.	Type
Robinson Pharma	Greater Airport Area	197,000	Expansion
Dendreon Pharmaceuticals	West Orange County	184,000	Renewal
Ambry Genetics	South Orange County	111,391	Expansion
Avanir Pharmaceuticals	South Orange County	103,879	Renewal
Robinson Pharma	Greater Airport Area	98,138	Expansion

Source: CBRE Research, Q2 2020.

TOP 10 MARKETS BY LIFE SCIENCES EMPLOYMENT GROWTH

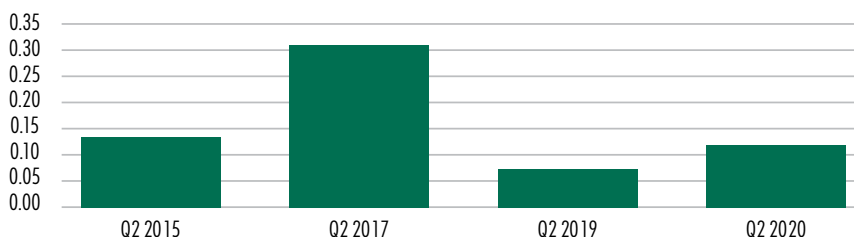
2018-2019 Change; Markets with more than 20,000 Life Sciences Employees



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
20200 Windrow Drive	125,442	29,000,000	\$231
2206 Alton Parkway	30,600	7,904,000	\$258

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
J&J	South Orange County	100,000
Inari Medical	South Orange County	90,000
Neogenomics	South Orange County	50,000
Event Medical	South Orange County	50,000

Demand (Lab Requirements)

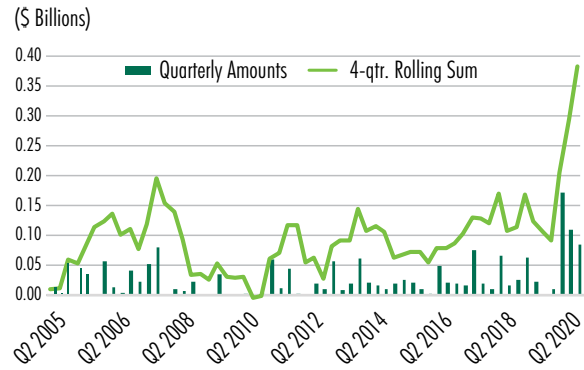
Requirement	Count/SF	18-Mos. Change
Tenants	17	112.5%
Total Sq. Ft.	485,000	26.6%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Edward's Lifesciences	Airport Area	Edward's Lifesciences	239,000	BTS 2020 delivery; 100% pre-leased

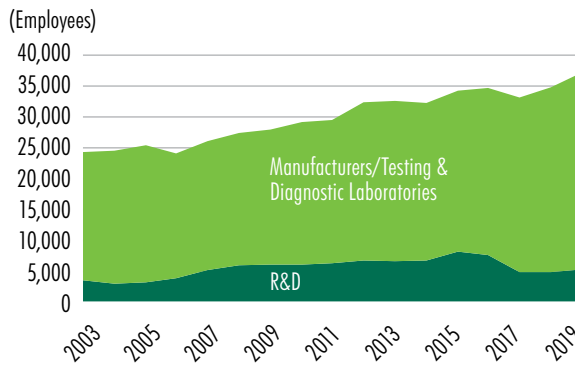
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (LA-Orange County CSA)



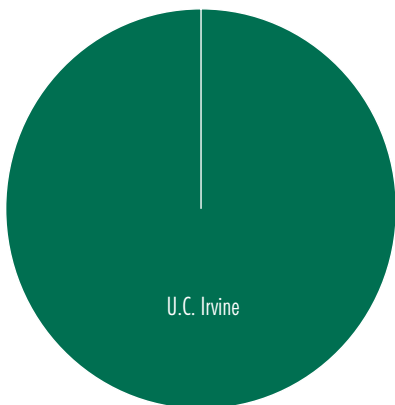
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

DENVER-BOULDER

OVERVIEW

Momentum continues to grow in the Denver-Boulder life sciences market with an ongoing expansion of the industry's labor force, record venture capital investments in 2020, a top-20 destination for NIH funding and strong demand for lab space.

RENTS & VACANCY

Relatively low lab vacancy (7.8%) is expected to fall further over the next year, pushing rents higher.

SUPPLY

Several key projects in the construction pipeline will accommodate Denver-Boulder's ongoing growth, including The Max, a speculative conversion of an office building to labs.

DEMAND

The 800,000 sq. ft. of lab demand in Q2 2020, which has grown over the past year, is very significant for a market the size of Denver-Boulder.

COVID-19 EFFECT

Life science companies were deemed essential through the early stages of this crisis and remained open in a limited capacity. Local and global life science companies in the Denver-Boulder market are actively pursuing and ramping up operations for a COVID-19 vaccine.

EMPLOYMENT

Life sciences employment in the Denver-Boulder market grew relatively slowly at a rate of 3.3% between 2018 and 2019, below the national average of 4.2%.

VENTURE CAPITAL FUNDING

Denver-Boulder has attracted significantly more venture capital over the past few years, culminating in a new record of \$310 million for the year ending in Q1 2020.

NIH FUNDING

Denver-Boulder ranked 18th in the nation for NIH funding last year, totaling \$339 million.

OTHER

Major life sciences companies have made key real estate or local company acquisitions over the past year, positioning the region for stronger growth.

QUICK STATS

Lab Market Stats, Q2 2020

Submarket	Inventory	Vacancy Rate	Avg Asking Rent (NNN)	18-mos Change
Denver- Boulder	2,124,711	7.8%	\$23.93	na

Conversions to Lab

Development Name	Submarket	Developer	Sq. Ft.	Notes
The Max	Longmont	Broe	455,000	Spec

Source: CBRE Research, Q2 2020.

Significant Lease Deals

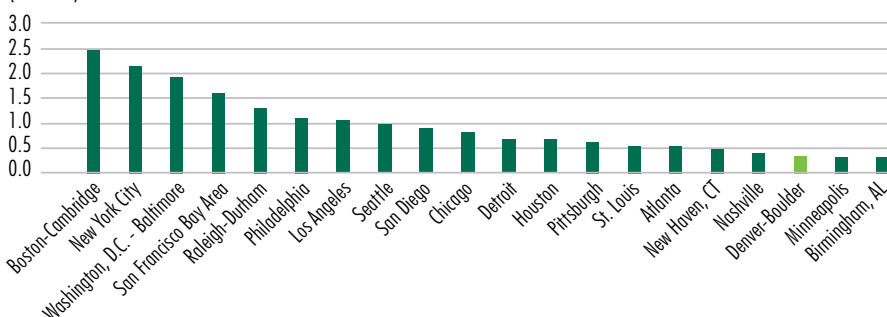
Tenant	Submarket	Sq. Ft.	Type
Pfizer	Boulder	151,384	Expansion/Recast
Eli Lilly	Northwest	113,280	Expansion
ArcherDX	Northwest	52,465	Expansion
Medtronic	Northwest	44,000	Renewal
Somalogic	Boulder	30,887	Renewal
ArcherDx	Boulder	22,623	Expansion
Eli Lilly	Boulder	13,965	Expansion

Source: CBRE Research, Q2 2020.

NIH FUNDING RECIPIENTS BY LIFE SCIENCES CLUSTER

#18 in nation: \$0.3 billion (2019)

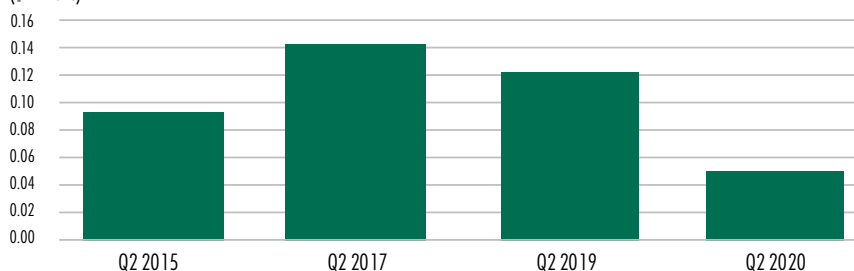
(\$ Billions)



Source: NIH, CBRE Research, Q3 2020.

LAB/R&D PROPERTY SALES VOLUME

(\$ Billions)



Source: Real Capital Analytics, Q2 2020. Note: Annual sales figures of R&D properties.

Significant Sales

Property Address	Sq. Ft.	Price	Price PSF
"Former AstraZeneca facility in Longmont / 4000 Nelson Road, Longmont, CO"	800,000	\$30,000,000	\$38
Former Maxtor property / The "Max"	455,000	\$8,600,000	\$19
Former AstraZeneca facility in Boulder / 5550 Airport Boulevard, Boulder	178,713	\$80,000,000	\$448

Source: CBRE Research, Q2 2020.

New Life Science Tenants to Market

Tenant / Company	Location	Sq. Ft.
AveXis	Longmont	800,000
AGC Biologics	Boulder	178,713

Demand (Lab Requirements)

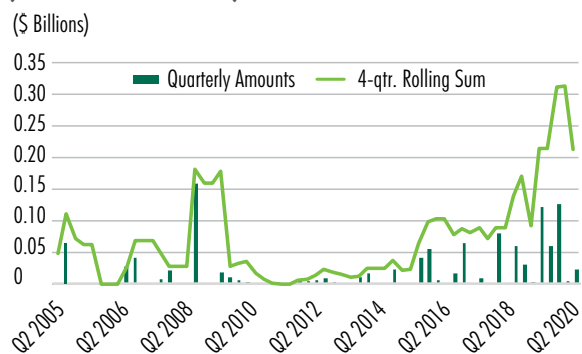
Requirement	Count/SF	18-Mos. Change
Tenants	9	125.0%
Total Sq. Ft.	830,000	207.4%

Construction

Development Name	Submarket	Developer	Sq. Ft.	Notes
Medtronic	Northwest	TBD	500,000	BTS 2021 delivery
Eli Lilly	Northwest	TBD	113,280	BTS 2021 delivery

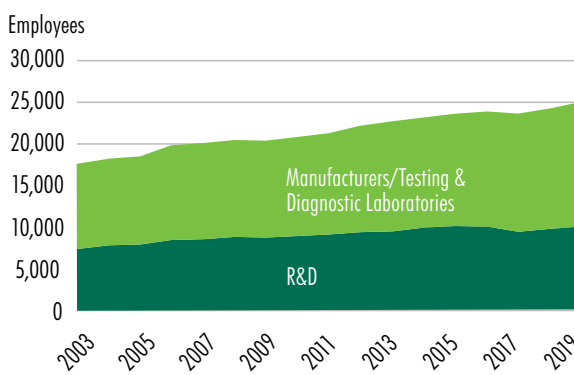
Source: CBRE Research, Q2 2020.

VENTURE CAPITAL FUNDING (Denver Boulder CSA)



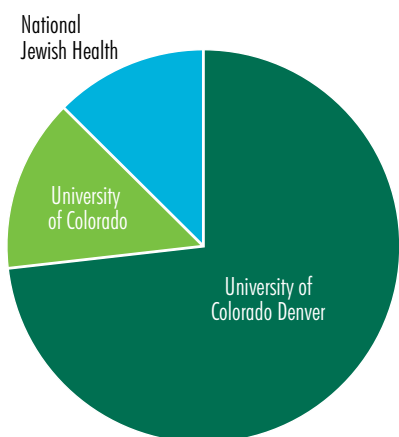
Source: PwC MoneyTree (BioTech, Drug Development & Discovery, Pharma/Drugs, Disease Diagnosis), CBRE Research, Q2 2020.

EMPLOYMENT



Source: U.S. Bureau of Labor Statistics, CBRE Research, Q3 2020.

LOCAL NIH FUNDING RECIPIENTS



Source: NIH, CBRE Research, Q3 2020.

CONTACTS

To learn more about CBRE Research, or to access additional research reports, please visit www.cbre.com/research-and-reports. Additional U.S. Research from CBRE can be found [here](#).

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