

Q4 2024

# U.S. Life Science Market Report



# Market Observations

2024 represents the fourth-highest year on record for U.S. venture funding, and the number of “mega-rounds” has increased materially.

Continued momentum in FDA novel drug and biologics license approvals is signaling investment opportunities in the biotech sector.

Amid labor market headwinds, job openings and wage growth are accelerating in the life science industry. The latter reached its highest rate since 2020 in mid-2024.

The public markets are slowly thawing. The 30 companies that executed initial public offerings in 2024 represents the second consecutive year of modest growth in IPOs.



Tenant demand and leasing stabilized during the second half of 2024, but many occupiers need additional funding to transact.

The sublet market stabilized late in 2024, with availabilities declining by nearly 200,000 SF across the top U.S. markets.

Lingering vacancy in many key life science markets could take several years to work through.

Supply risk continues to abate, with select development sites and existing assets pivoting to housing and office uses.

Liquidity improved noticeably during the second half of 2024, with R&D transaction activity up 22% compared to the previous year.

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## 2025 Life Science Trends to Watch

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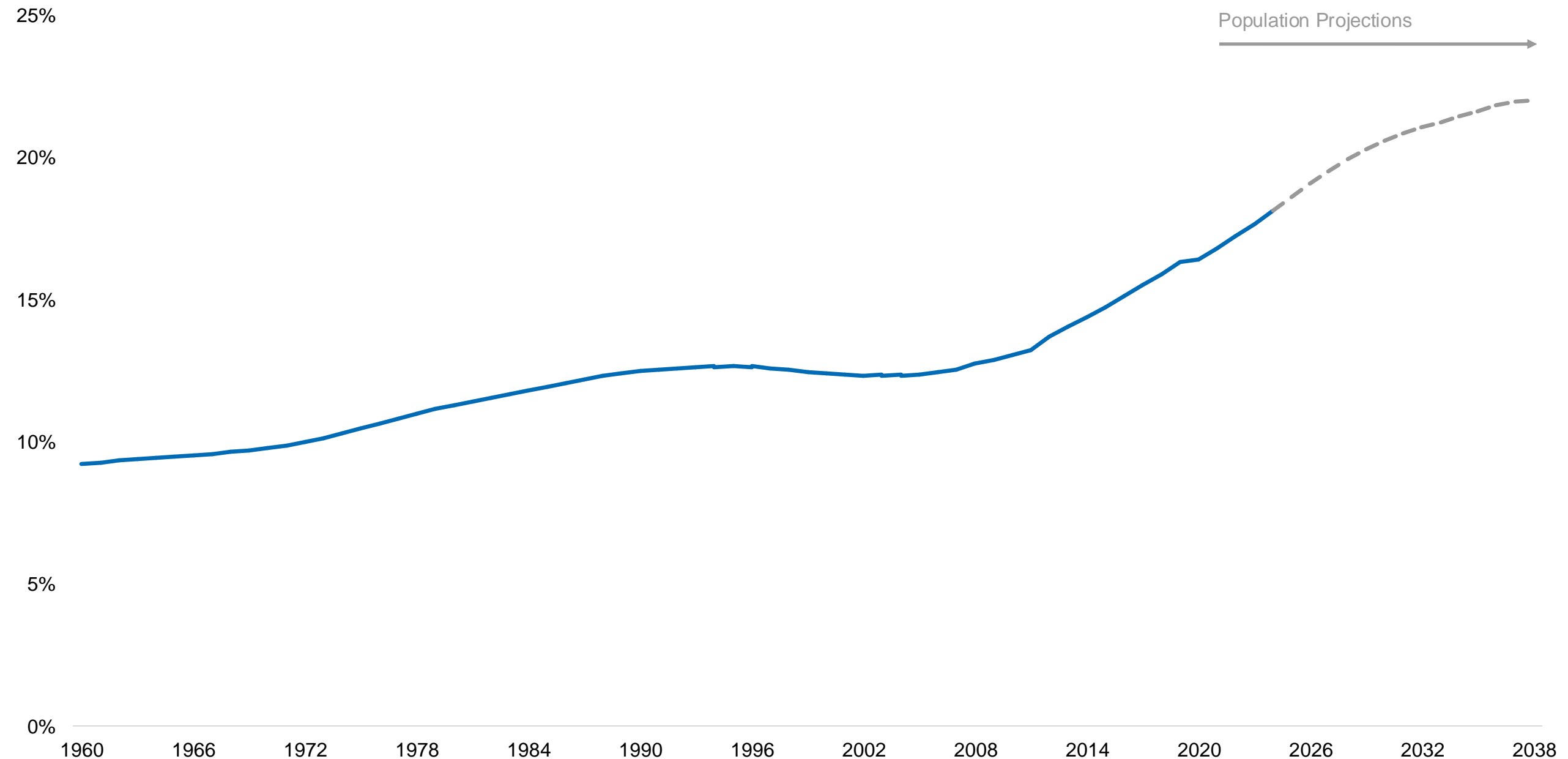
## Demand Drivers



# The Graying of America: U.S. Population is Aging

As of 2024, the percentage of U.S. residents aged 65 and older rose to 18.1%. Much of this growth can be attributed to the aging Baby Boomers, which has historically been the nation's largest generation. Population projections point to accelerated growth among this age cohort. This aging demographic will remain a driving force behind the growing emphasis on healthcare and life sciences.

Percent of U.S. Population Aged 65 and Above



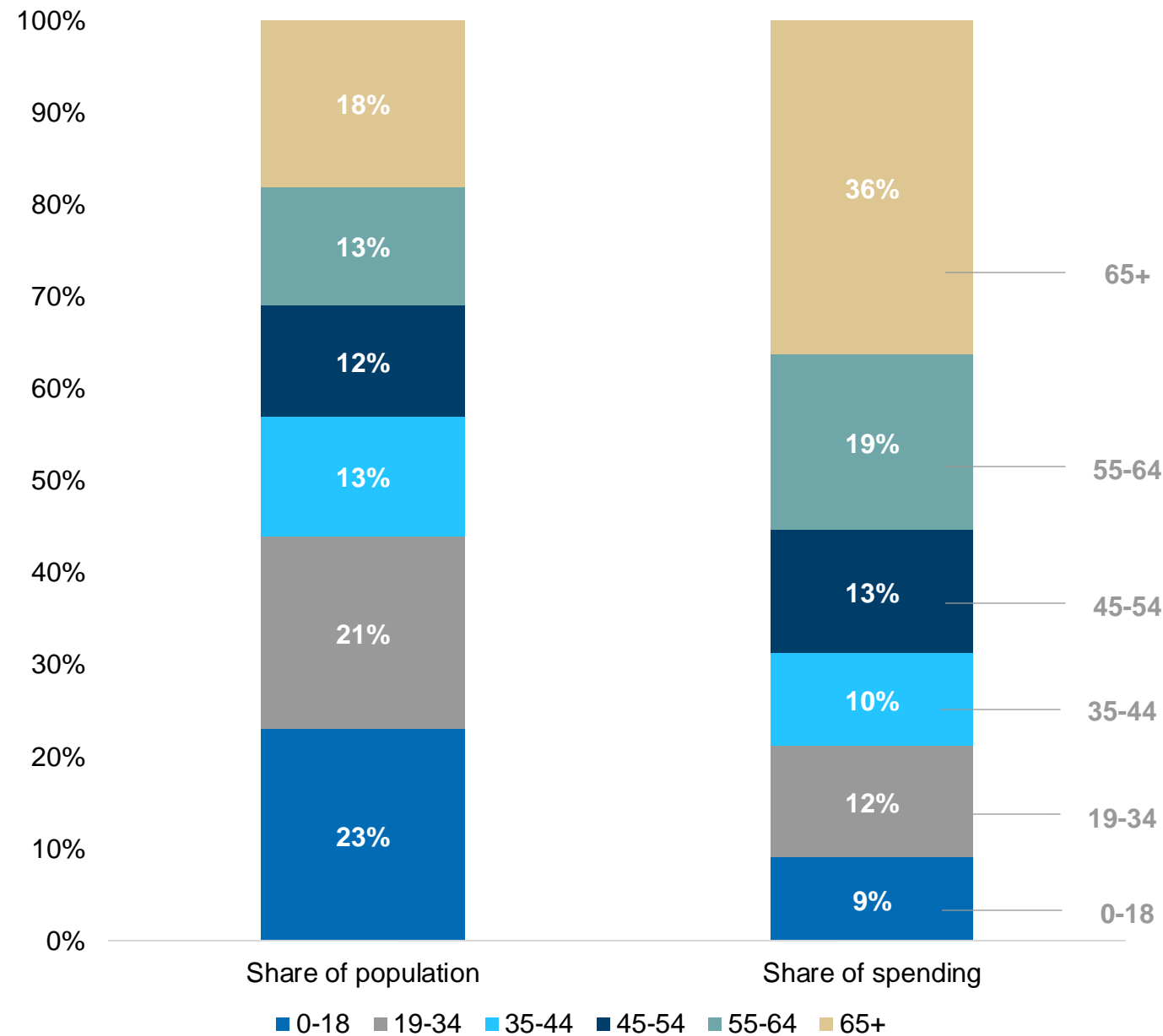
Source: The United Nations Population Division's World Population Prospects, JobsEQ, Newmark Research

As of 2024

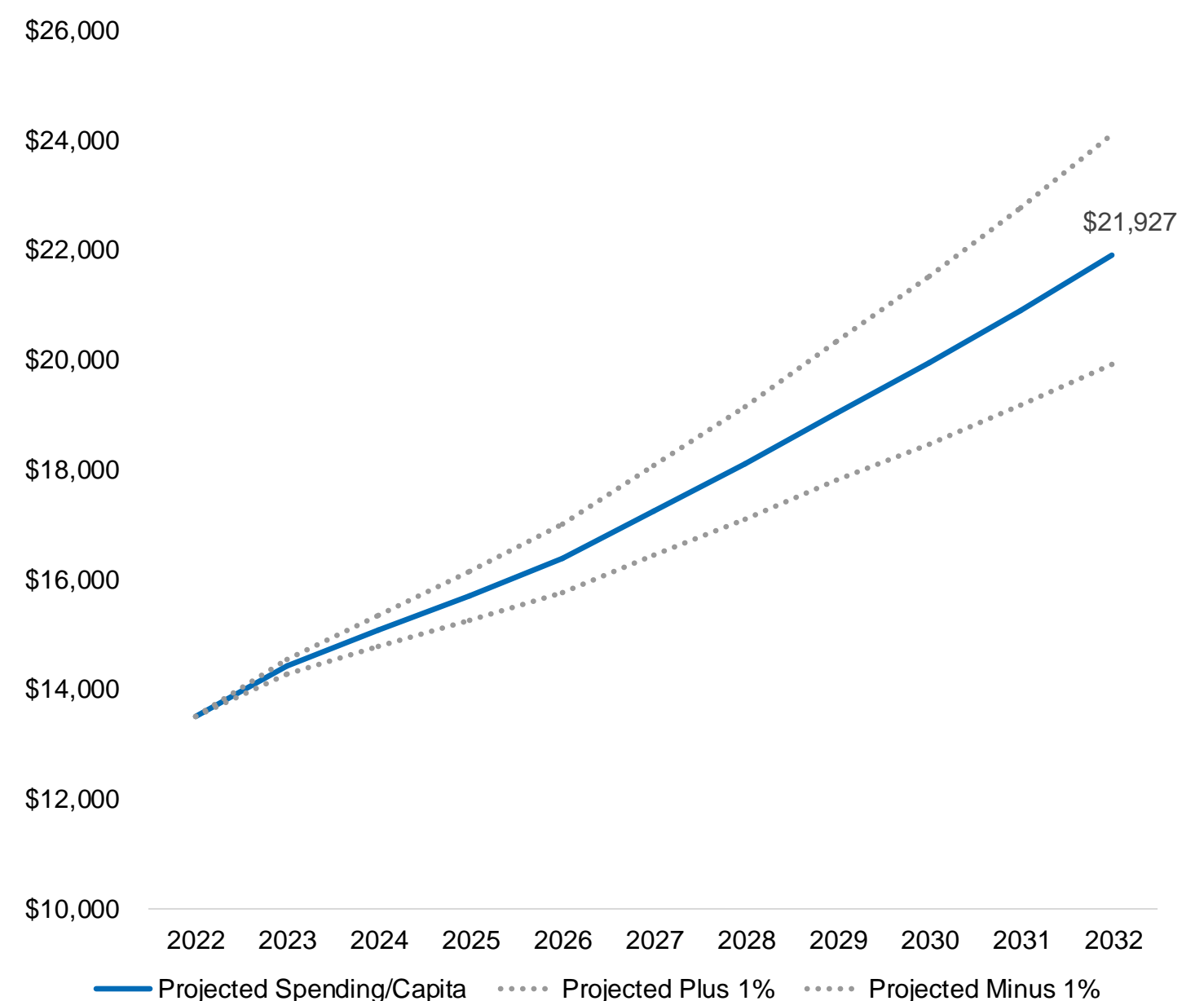
# The Price of Aging: Older Cohorts Maintain Higher Healthcare Costs

Individuals aged 65 years and older account for the greatest share of total healthcare spending. On a per-capita basis, the oldest insured age cohort spends 31.4% more than those aged 55 to 64 years old. As the U.S. population continues to age, healthcare spending will have an increasingly significant impact, likely benefiting the life science sector. Per-capita spending in the base case scenario is projected to increase by 62.5% by 2033 or 4.5% per year.

Share of Total Population and Total Health Spending by Age Group, 2021



Scenarios of Projected Annual Change in U.S. Per Capita Health Spending



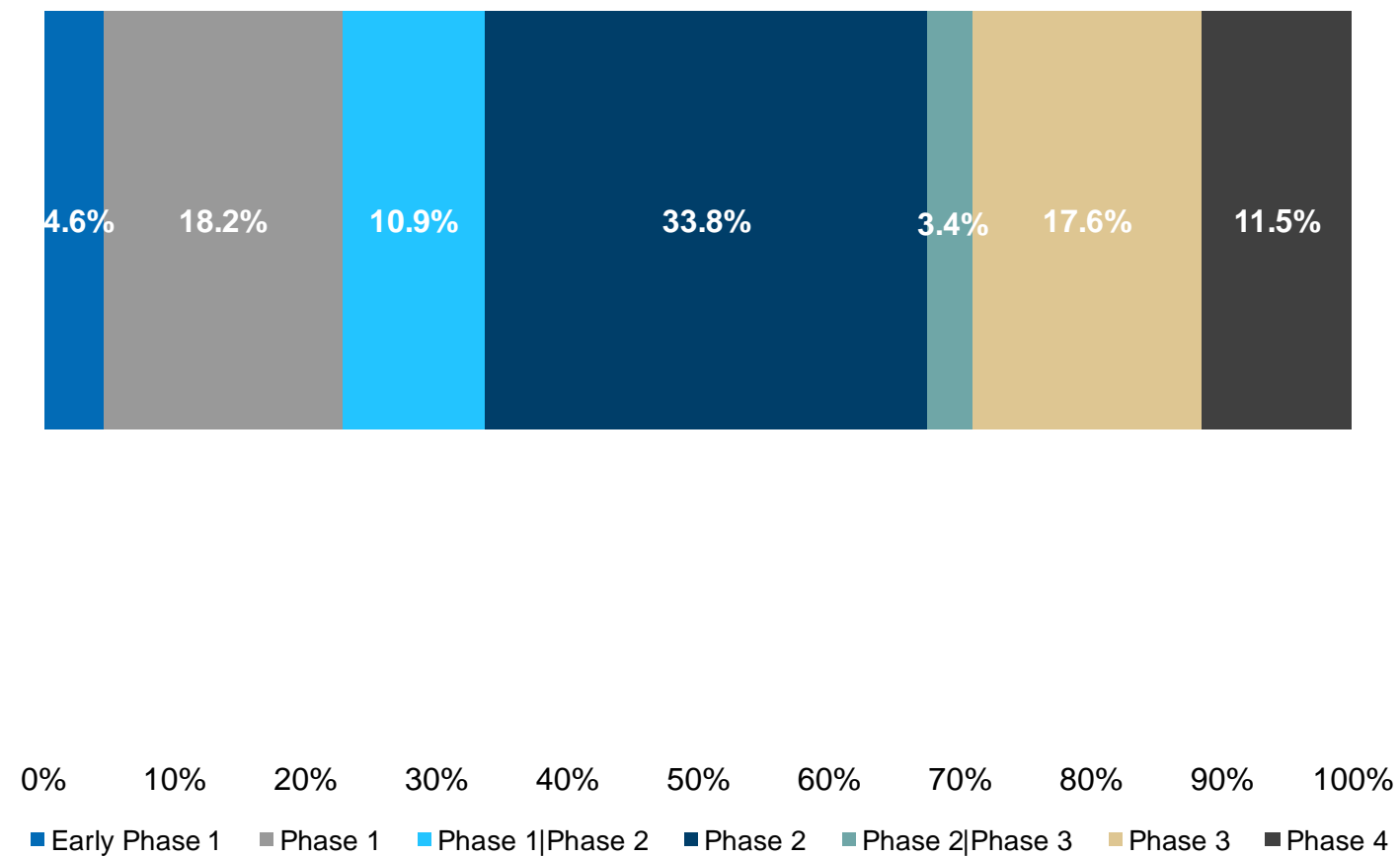
Source: KFF Analysis of Medical Expenditure Panel Survey, KFF Analysis of NHEA, National Health Spending Explorer, Newmark Research

As of 2021-2022

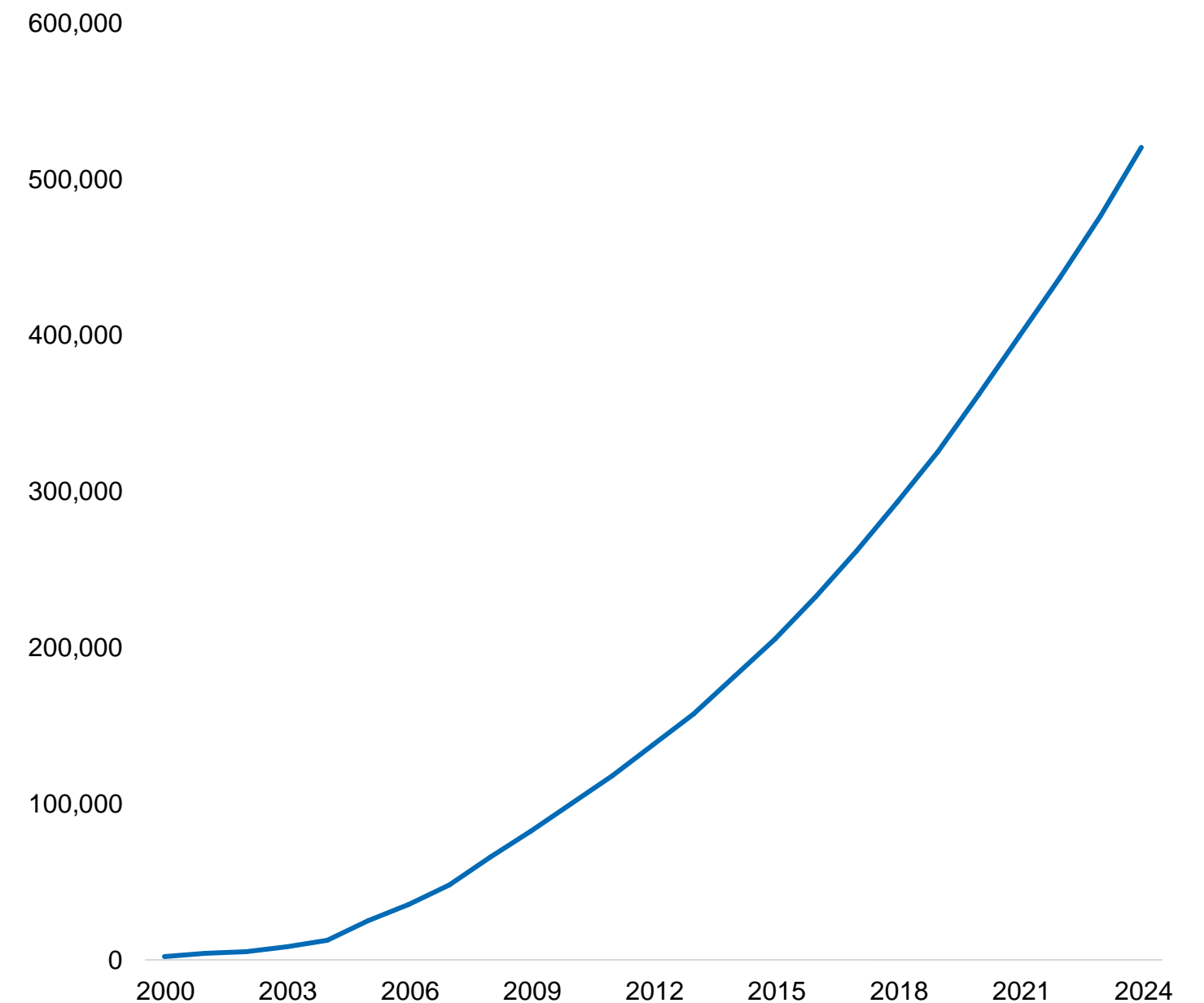
# Growth in Active Clinical Trials Supports Future Lab Demand

Over the last 20+ years, U.S. clinical trials have grown exponentially; the number of registered studies reached a record high in 2024. Life science companies with drugs in any phase of trial could experience greater space needs, but later-stage studies tend to be larger. Clinical trials receive funding from several sources, with private investment and the National Institutes of Health being the primary contributors.

Clinical Trials by Phase



Number of Registered Clinical Studies



Source: ClinicalTrials.gov, Newmark Research

Note: Includes interventional clinical trials with a recruitment status of not yet recruiting, recruiting, enrolling by invitation, and active (not recruiting).

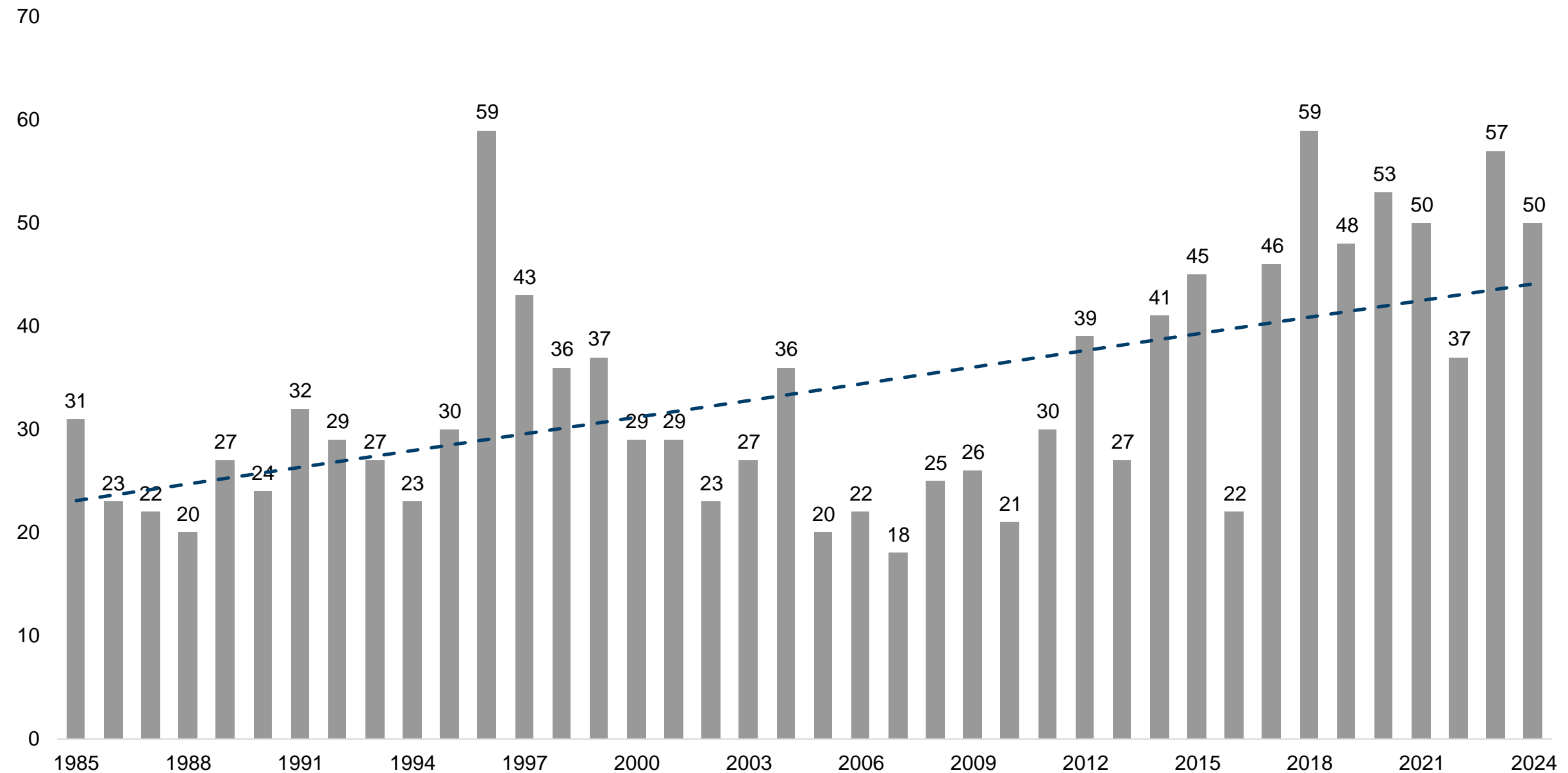
As of Q4 2024



# FDA Approvals Signal Biotech Investment Opportunities

Following a near-record year, the FDA approved 50 drugs in 2024, which is above the long-term average. New drugs and treatments progressing through the pipeline can signify a turning point for biotech companies, with many often needing more research, development and manufacturing space. According to industry sources, an estimated 12% to 14% of drugs entering clinical trials ultimately receive FDA approvals.

FDA Annual New Drug and Biologics License Approvals



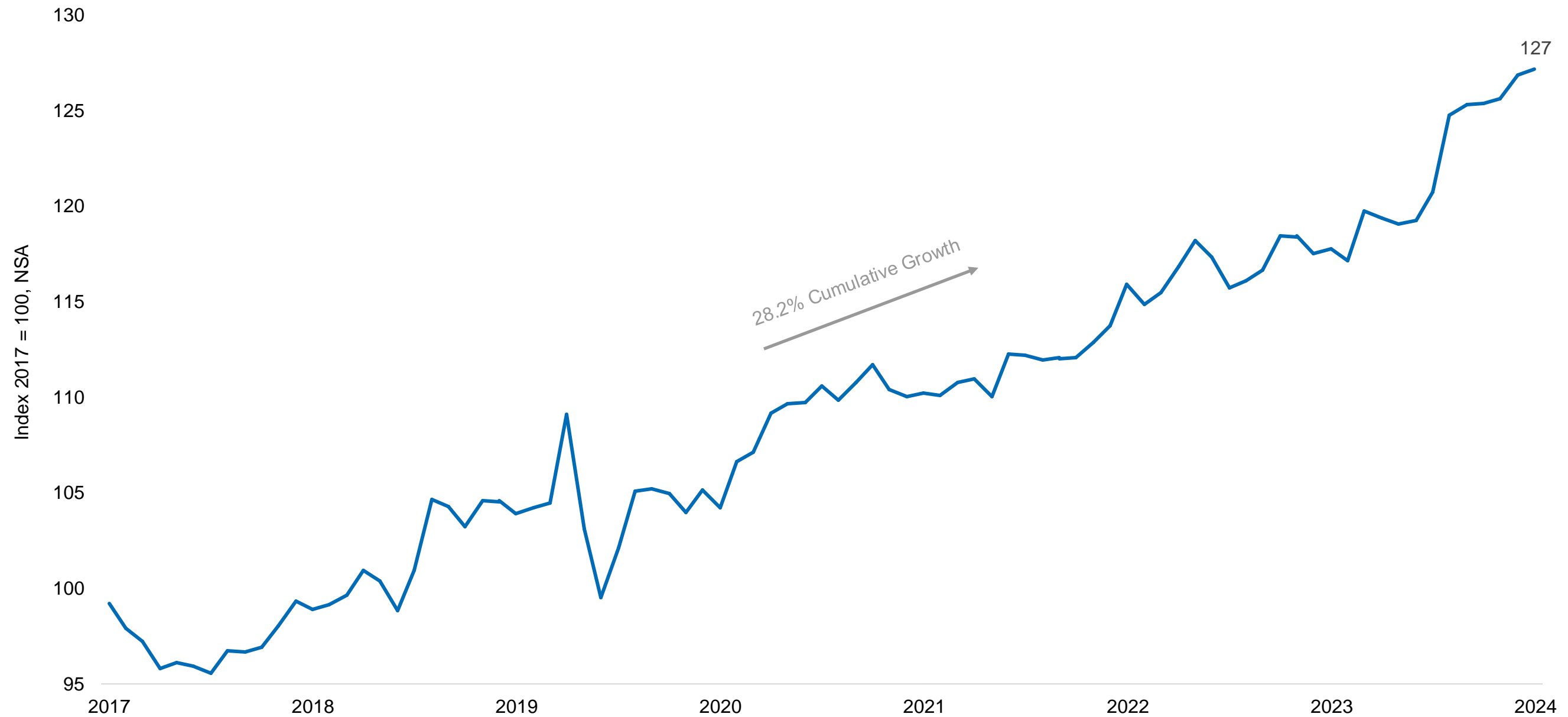
Source: Food & Drug Administration, PharmaShots, MIT, PhRMA, Newmark Research

As of Q4 2024

# Pharmaceutical Manufacturing Production Accelerated Through Year-End

The industrial production of pharmaceuticals and medicine, which measures the real output of U.S.-based establishments, reached a cyclical high at the end of fourth quarter of 2024. Recent federal investments in this space and the growing demand for GLP-1 drugs is driving increased manufacturing capacity. In response, several drug makers are looking to expand operations domestically and overseas.

## Industrial Production: Manufacturing: Non-Durable Goods: Pharmaceutical and Medicine



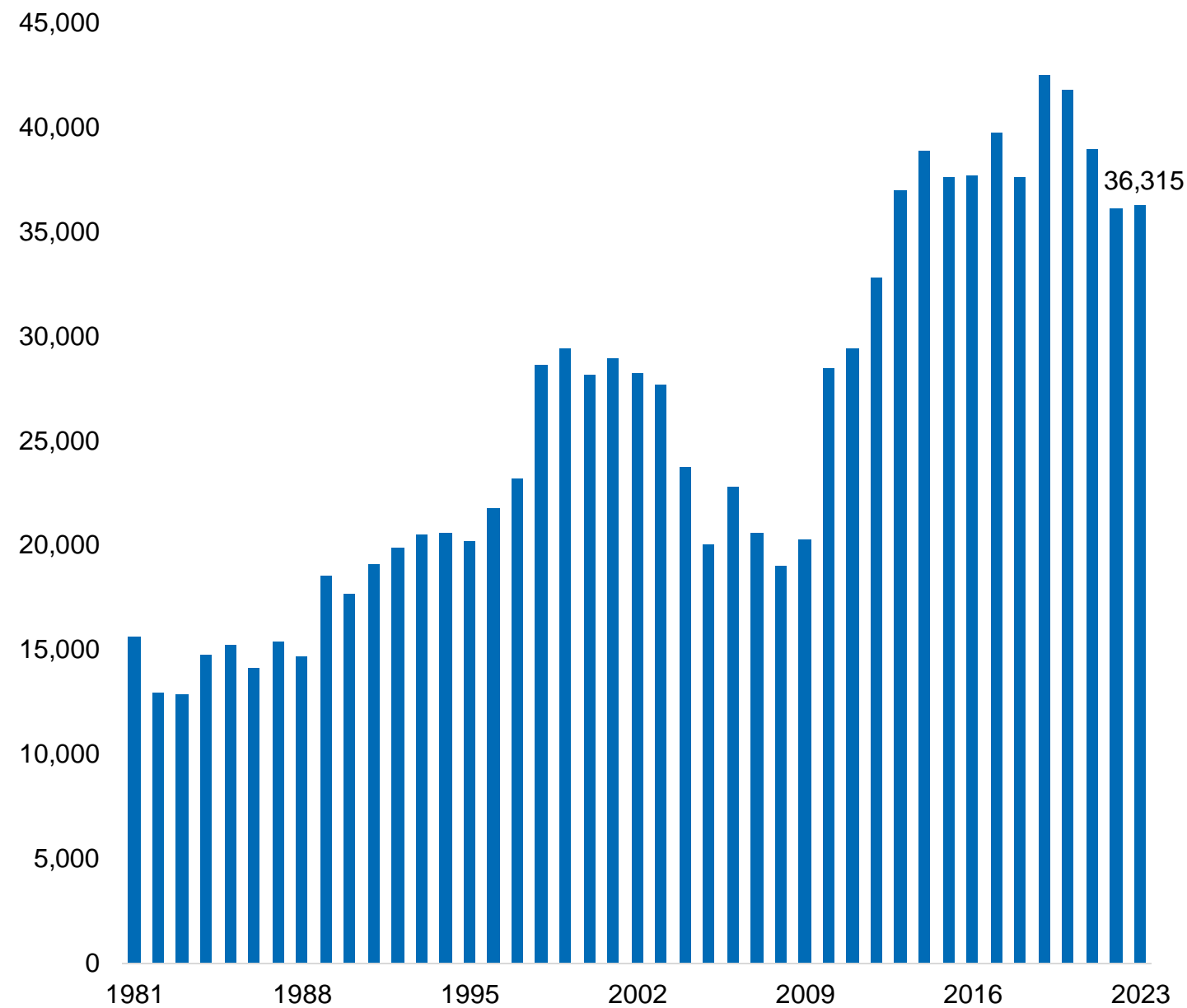
Source: Board of Governors of the Federal Reserve System, Newmark Research

As of December 2024

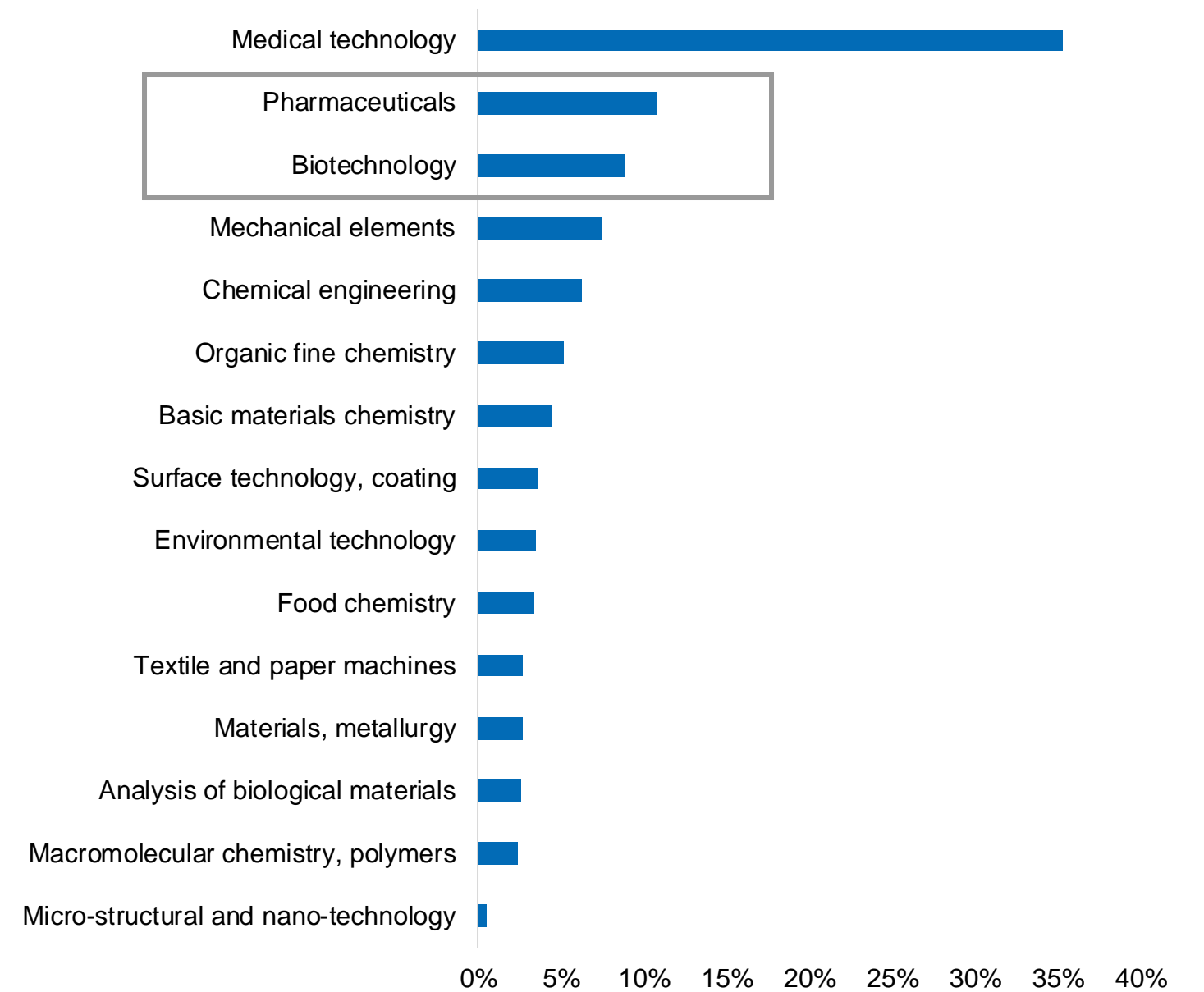
# The Impending Patent Cliff Stands to Reshape the Pharmaceutical Industry

Patents issued for biotech-related fields was relatively static in 2023. The pharmaceutical and biotechnology fields still represent nearly 20% of all biotech-related patents issued. The impending “patent cliff” facing several big pharma companies is fast approaching and represents a key risk for investors. According to PharmaVoice, patents on 190 drugs will expire by 2030, which will ultimately impact sales revenue.

Biotech-Related Patents Issued by Year



2023 Patents by Field of Technology



Source: WIPO Statistics Database, Healthpeak Properties, Newmark Research

As of 2023

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# Imminent Patent Expiry Will Drive More Investment from Big Pharma

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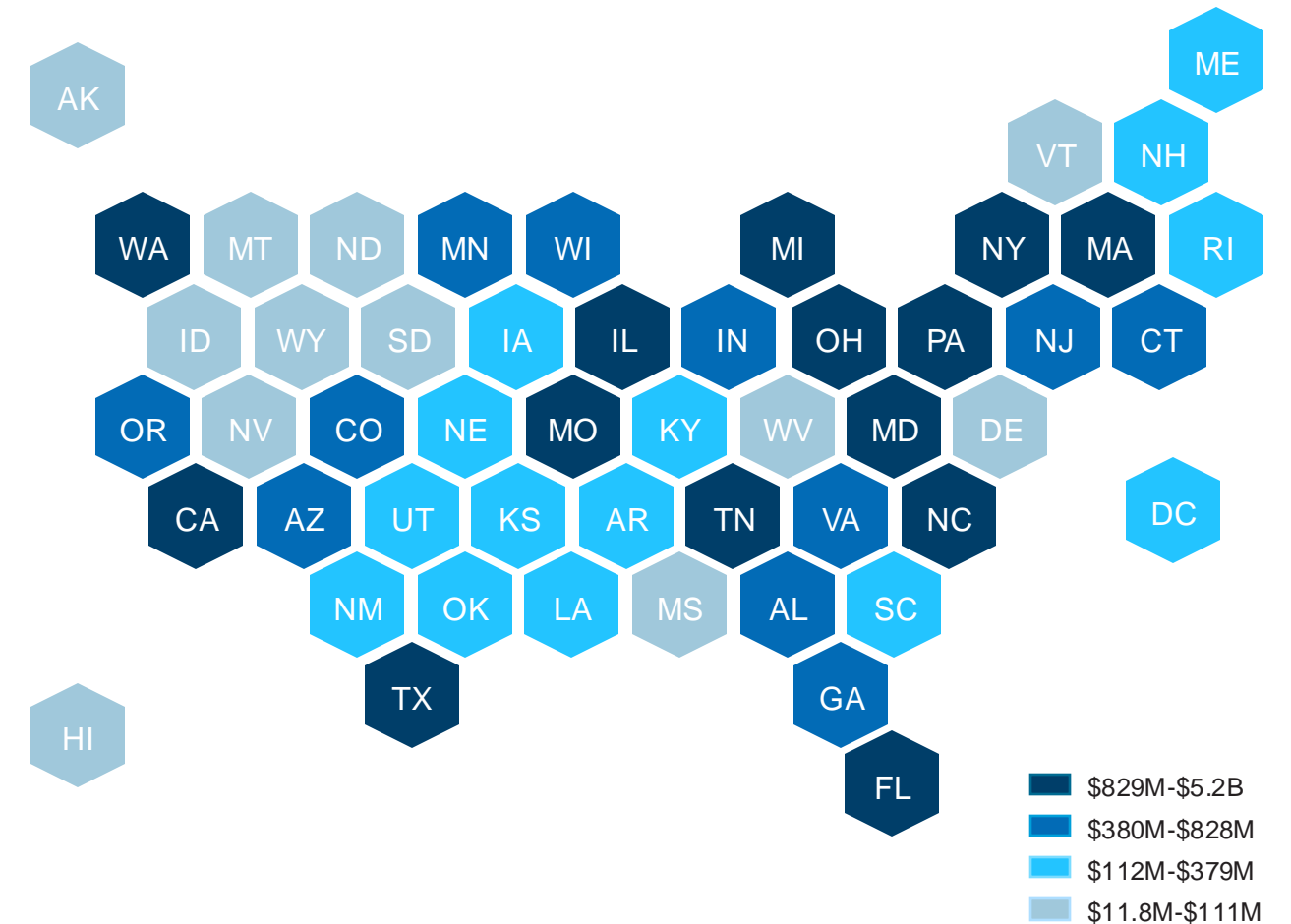
# States with Top Life Science Clusters Dominate Grant Funding

Federal funding for medical research and development is an important part of the U.S. life science ecosystem. It's not surprising, therefore, that states with mature life sciences industries top the list of NIH funding awards. The top five states accounted for 45.3% of NIH funding in the fiscal year 2024, with California leading the way.

Top 10 Hospitals for NIH Funding, Fiscal Year 2024

Rank	Hospital	Location	FY 2024 Funding
1	Massachusetts General Hospital	Boston	\$673M
2	Vanderbilt University Medical Ctr	Nashville	\$546M
3	Brigham and Women's Hospital	Boston	\$407M
4	Boston Children's Hospital	Boston	\$234M
5	Children's Hospital of Philadelphia	Philadelphia	\$175M
6	Cincinnati Children's Hospital	Cincinnati	\$170M
7	Dana-Farber Cancer Institute	Boston	\$164M
8	Beth Israel Deaconess Medical Ctr	Boston	\$147M
9	Seattle Children's Hospital	Seattle	\$123M
10	St. Jude Children's Hospital	Memphis	\$112M

NIH Funding by State, Fiscal Year 2024

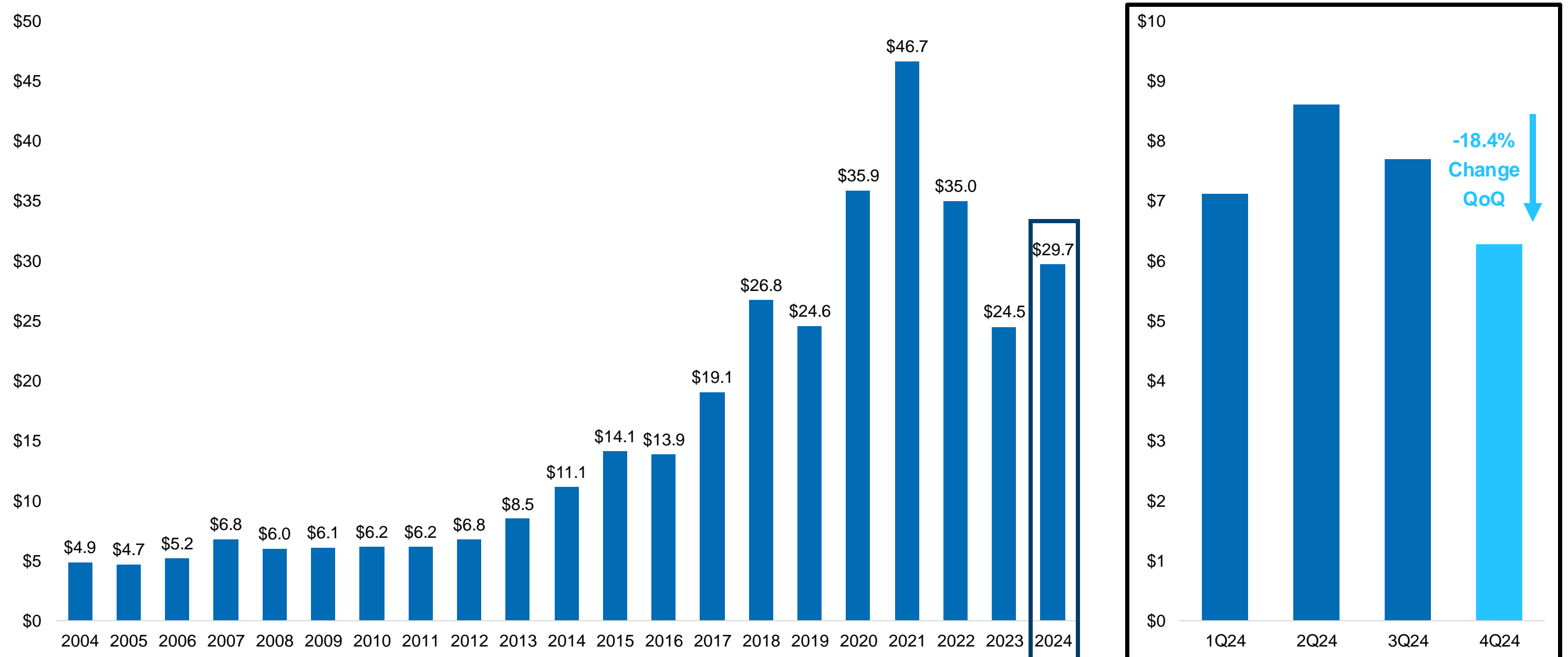


- 5** 5 of the top 10 hospitals for 2024 NIH funding are in Boston.
- \$2.4** The top U.S. hospitals captured \$2.8 billion in 2024 funding
- 46%** The top 5 states received 45.3% of all 2024 NIH funding.
- 11** More than 10 states were awarded \$1.0 billion+ in 2024.

# Despite Slower Second Half, VC Funding Rebounded In 2024

Venture capital funding for U.S. life science companies eased during the last two quarters of 2024, but annual totals reached nearly \$30 billion. This represents the fourth-highest year on record. The average deal size climbed to the highest level on record as well, indicating continued cautiousness among investors. A slow thaw within the capital markets bodes well for the venture capital landscape in the upcoming year.

Annual Life Science VC Funding (2004-2024) in Billions \$



Source: PitchBook, Newmark Research

As of Q4 2024

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## Venture Capital Funding Ends 2024 On Slightly Better Footing

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## Return of the Venture “Mega-Round” in Biotech

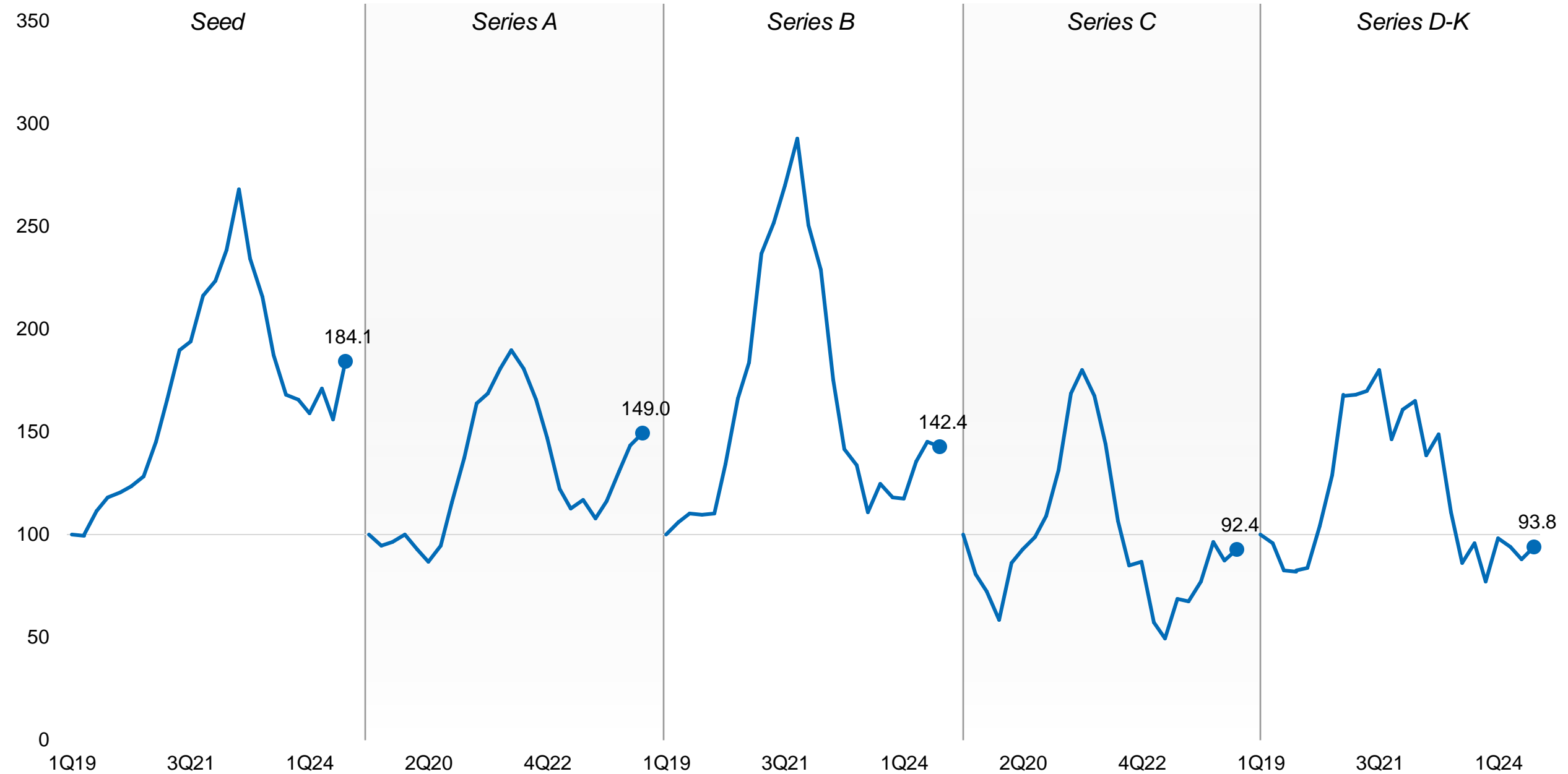
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# Early-Stage Venture Funding is Faring Better

Seed funding for biotech companies is well above 2019 levels, and Series A and B funding continued to improve throughout the last 12 to 18 months as well. Later-stage rounds remain subdued as investors continue to exhibit cautiousness due to limited exit opportunities, lingering concerns about valuations and market volatility.

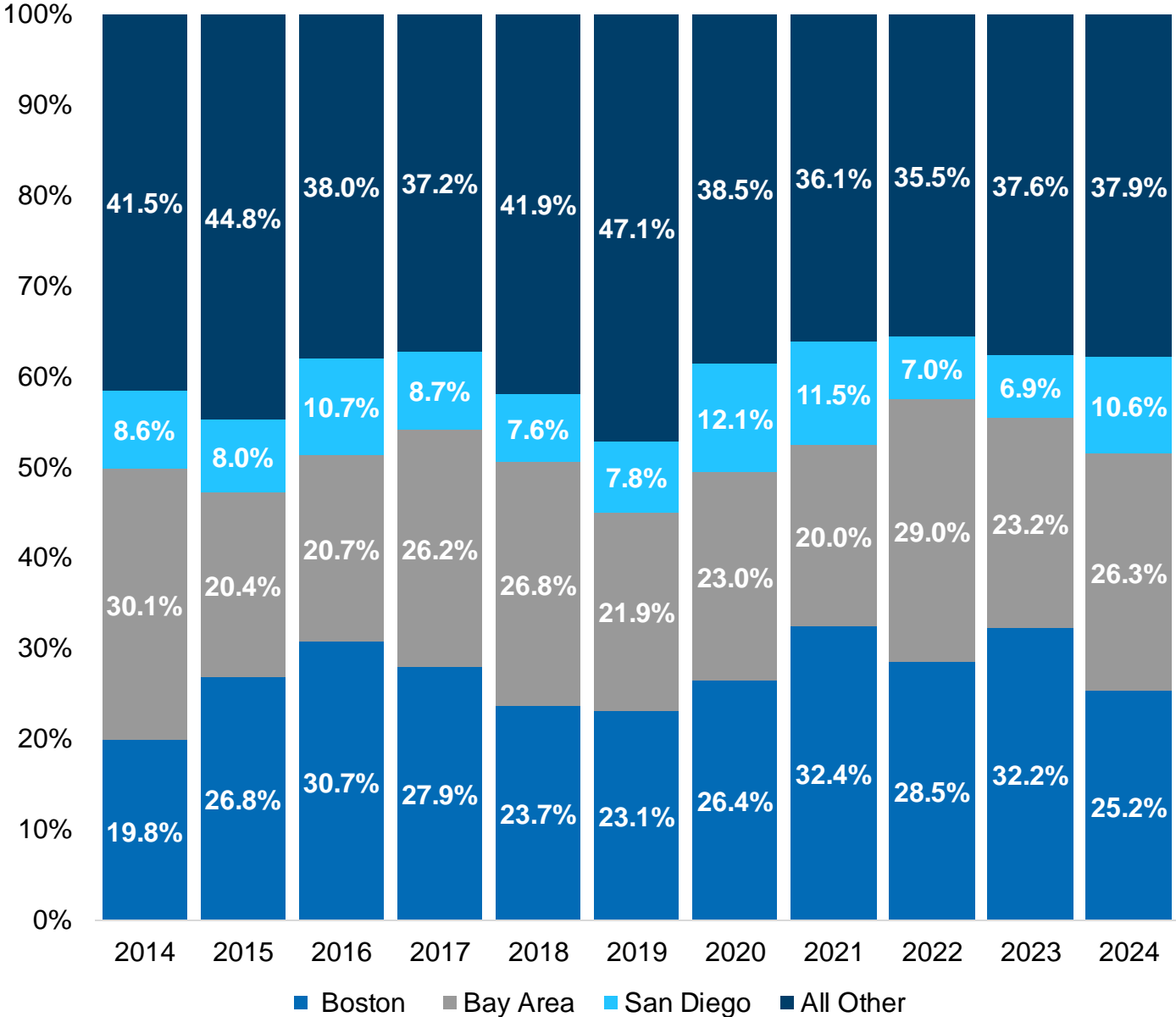
VC Funding by Series | 4-Quarter Moving Average | Indexed to 2019



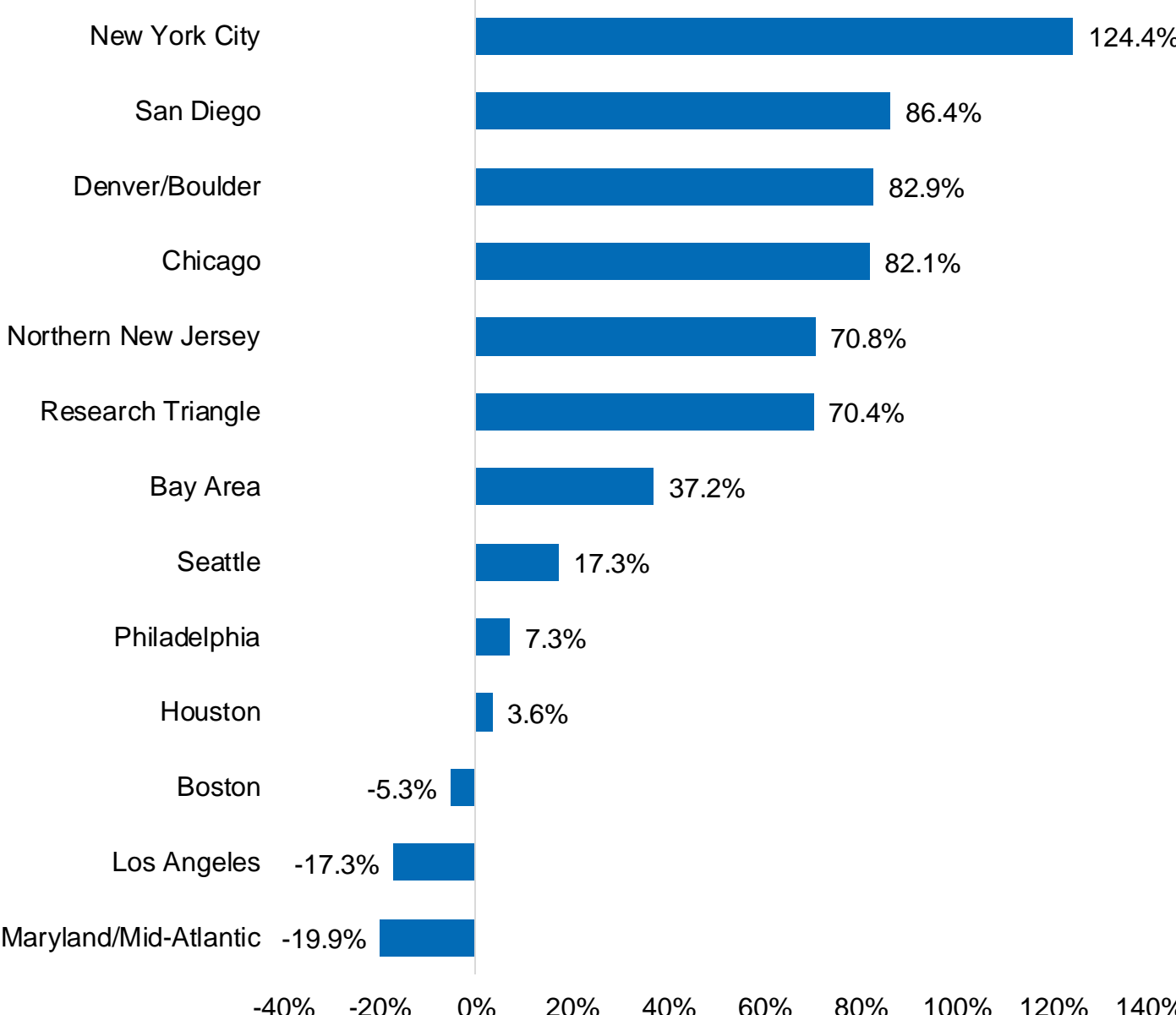
# VC Funding is Trending Positively In Most Markets

The top three life science hubs in the U.S. consistently attract roughly 60% of all venture capital funding annually. In 2024, life science companies based in these three markets raised \$18.5 billion in funding. San Diego's share of total volumes is nearing 11% following marked gains in funding compared to 2023. Boston, Los Angeles, and Maryland/Mid-Atlantic were the only markets to report year-over-year declines in venture funding from 2023 to 2024.

Historical Life Science Funding: Top 3 Clusters as % of Total



YoY Change (%) in VC Funding



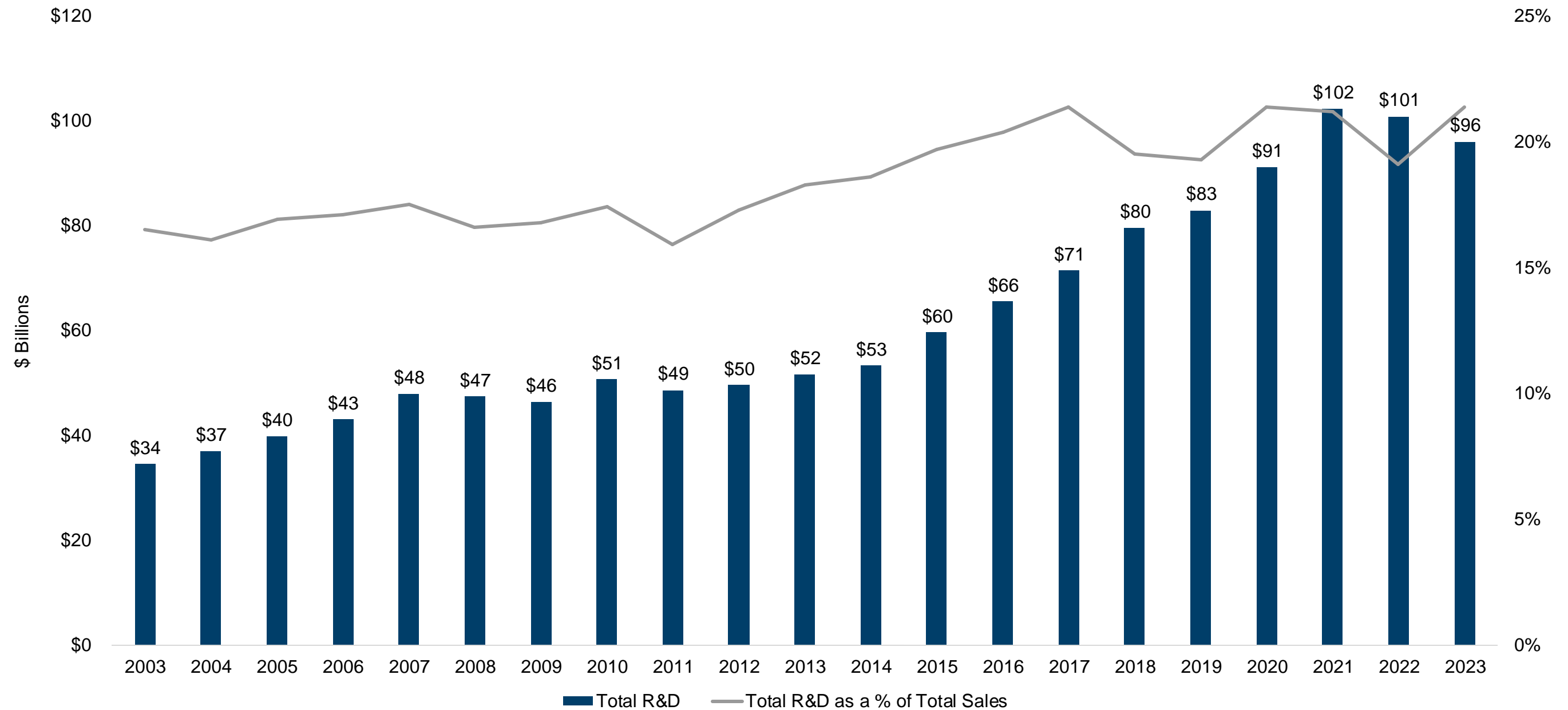
Source: Pitchbook, Newmark Research

As of Q4 2024

# R&D Spending Declines Amid Sector Headwinds

Challenges within the broader life science industry have led many pharma companies to reevaluate spending on research and development (R&D), leading to a modest correction in expenditures from 2021 to 2023. While cuts in costs can lead to less innovation, pharma companies are still spending near-peak levels on R&D.

Domestic Biopharma R&D and R&D Abroad, PhRMA Member Companies



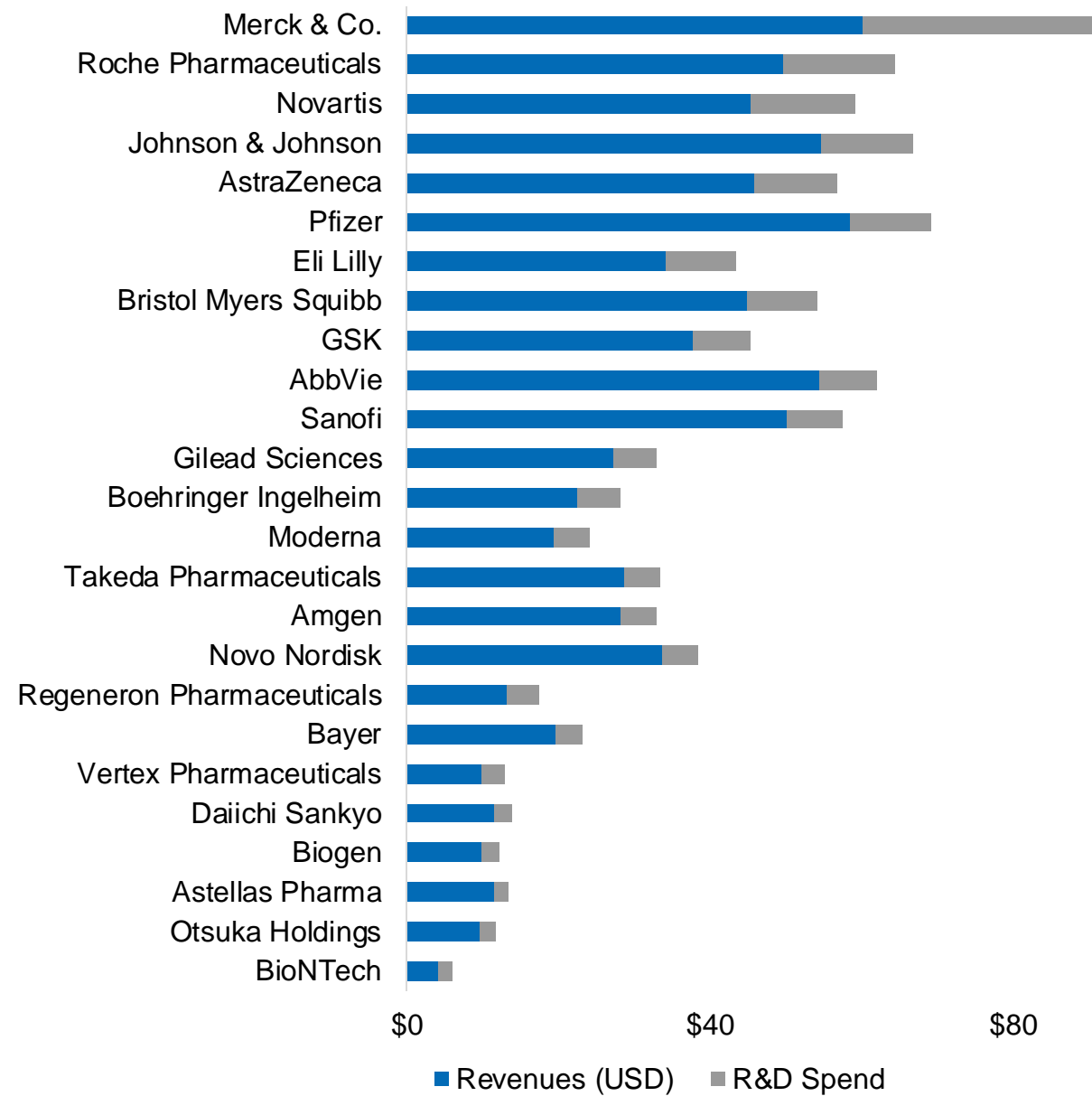
Source: Pharmaceutical Research and Manufacturers of America (PhRMA Member Companies), Newmark Research

As of 2023

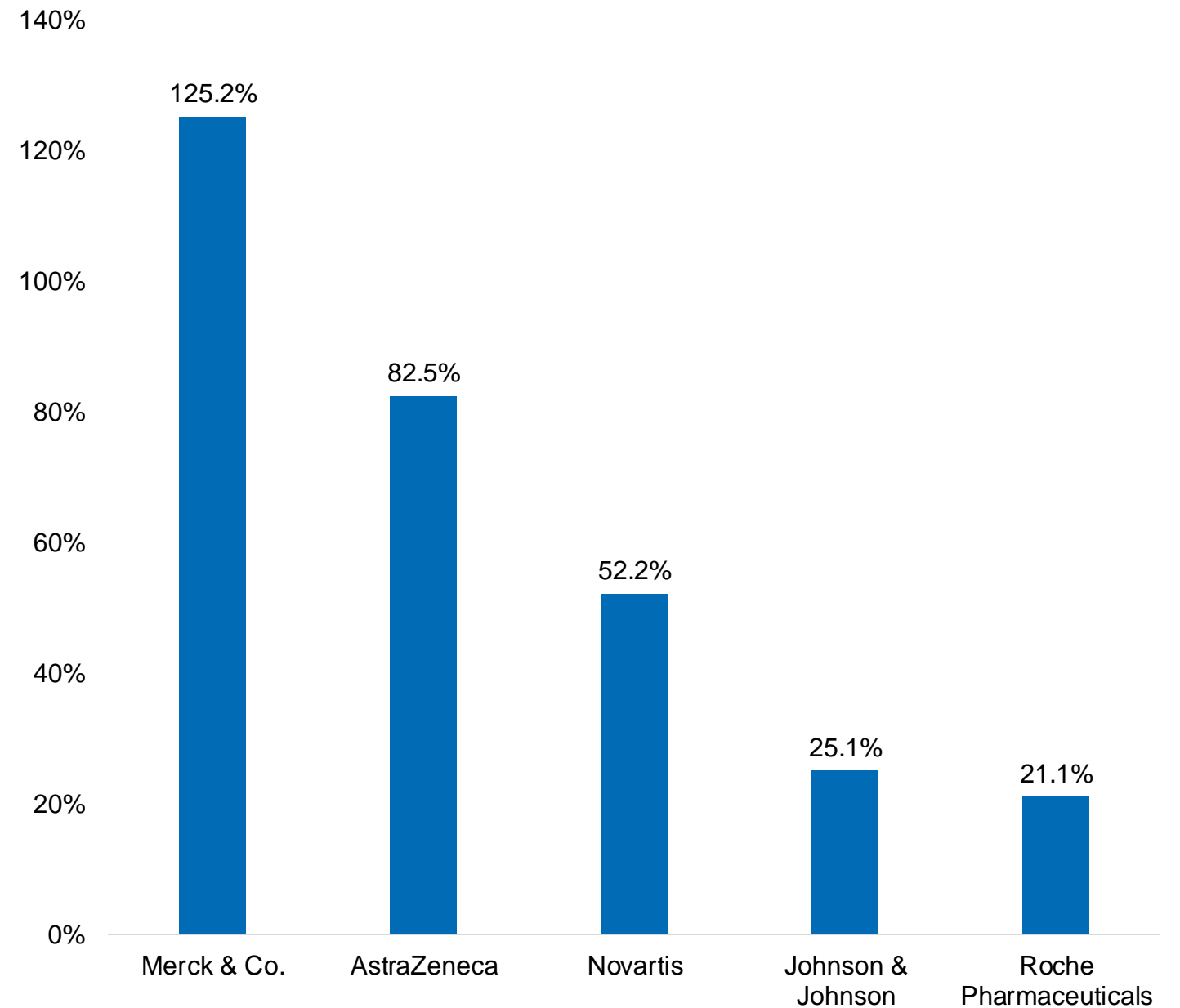
# Top 20 Pharma Companies Post Increase in R&D Expenditures

According to Drug Discovery & Development, most large pharmaceutical companies are dedicating 14% to 30% of revenues to R&D, with Merck & Co. allocating \$30.5 billion for R&D spending in 2023. As the largest source driving life science research and development, a resurgence in spending would bode well for growth this sector.

Select 2023 Revenue and R&D Spending (in billions)



Growth in R&D Spending (2020 to 2023)



Source: Drug Discovery & Development, Newmark Research

As of 2023

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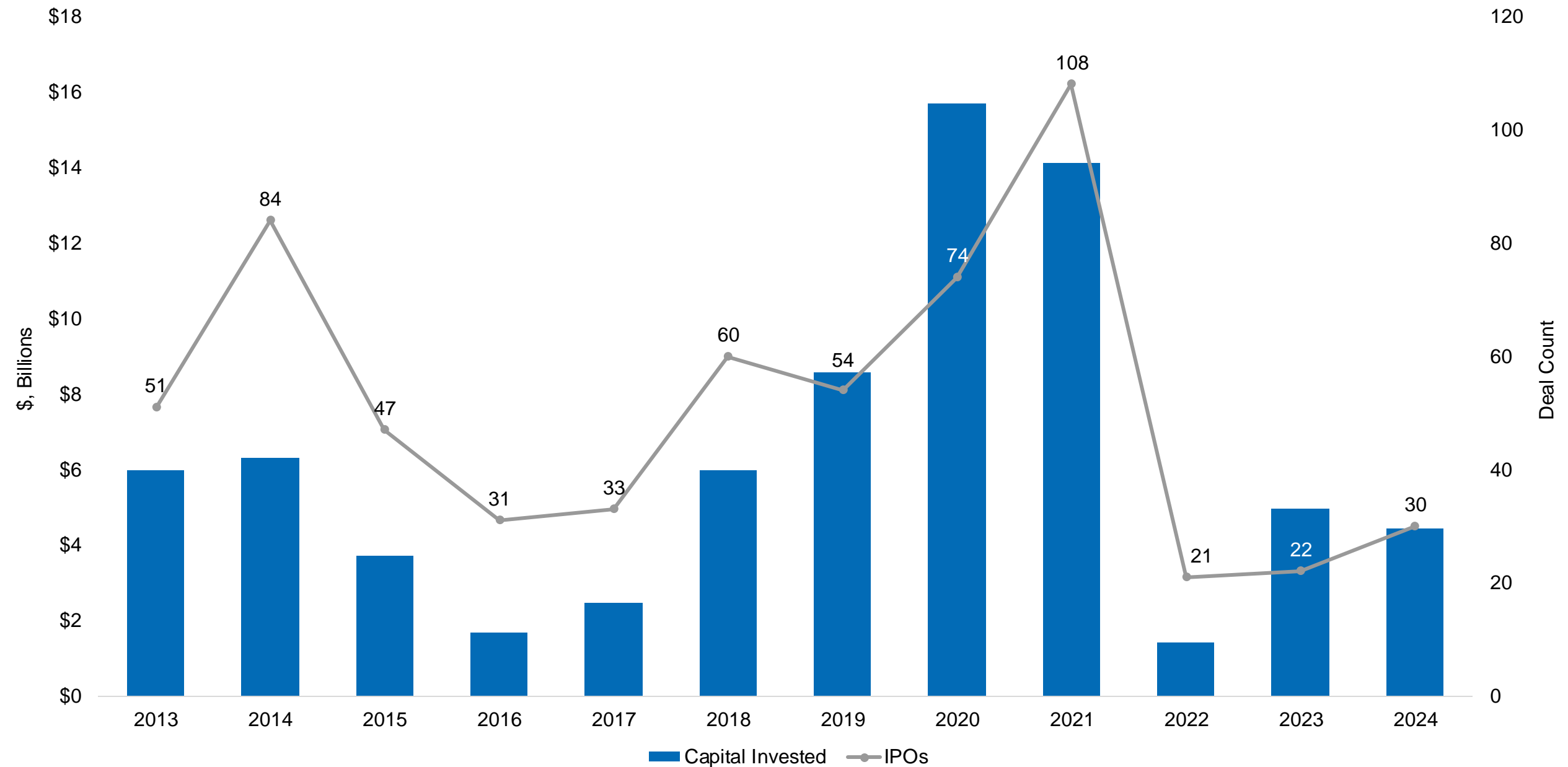
## M&A Momentum Healthy, But Slimmer in 2024

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# The IPO Market Appears To Be Thawing, Signaling Positive Momentum

Initial public offerings in the life science sector are still down significantly from their 2021 highs, and capital raised in 2024 failed to surpass the previous year's total. That said, the number of IPOs has increased modestly for two consecutive years. Looking ahead, planned public listings for early 2025 offer green shoots in the sector.

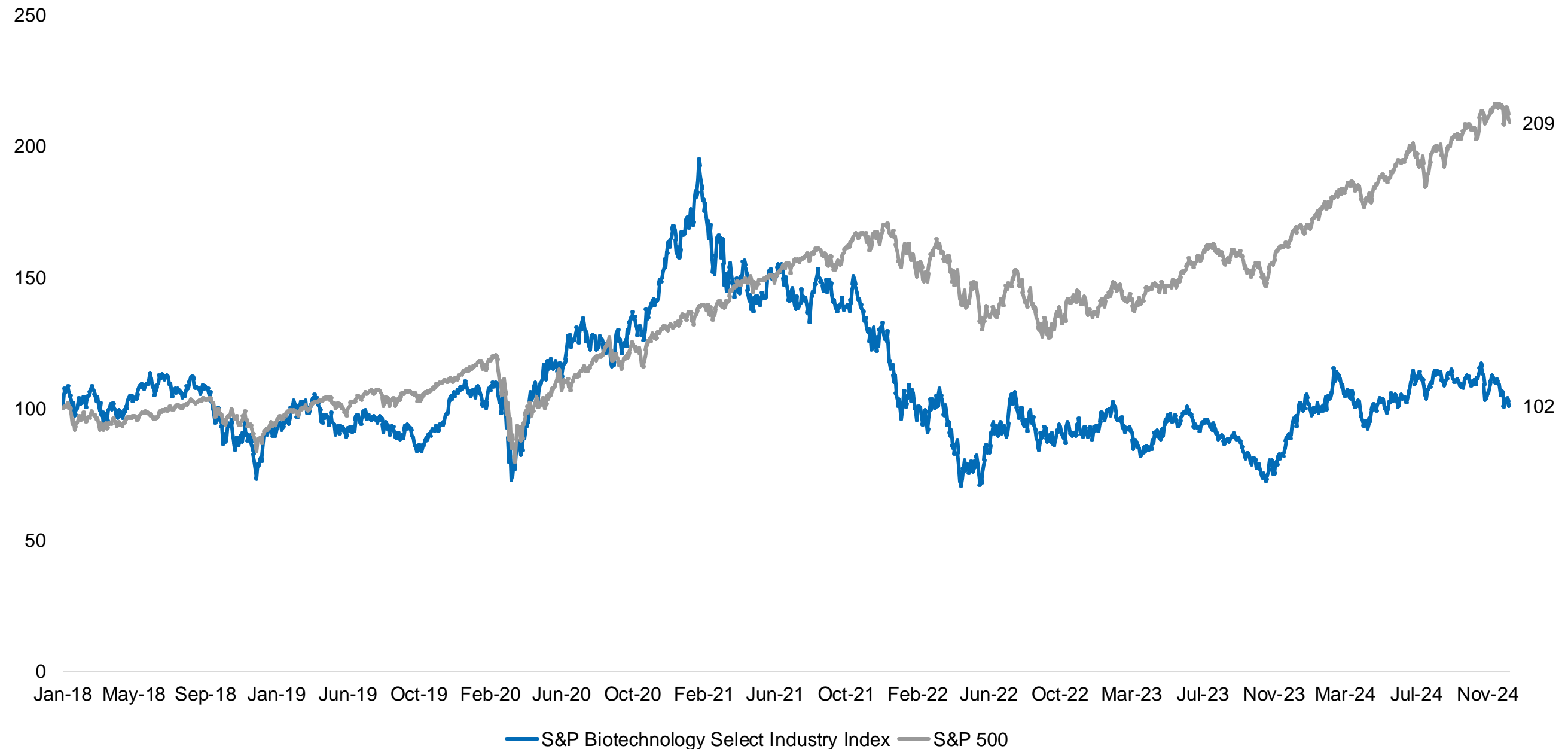
## Public Sources of Capital



# Recent IPO Aftermarket Performance is Critical for a Public Market Recovery

The S&P Biotech Index highlights the run-up in public company valuations and oversized initial public offerings. After peaking in late 2020 at the height of the market, the index continued to decline throughout most of 2023. Although a modest recovery in late 2023 set the stage for more gains heading into 2024, growth was negligible throughout the past year.

## S&P Biotechnology Select Industry Index | S&P 500



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Since 2020, Interest Rates Have Been Inversely Related to Public Market Performance

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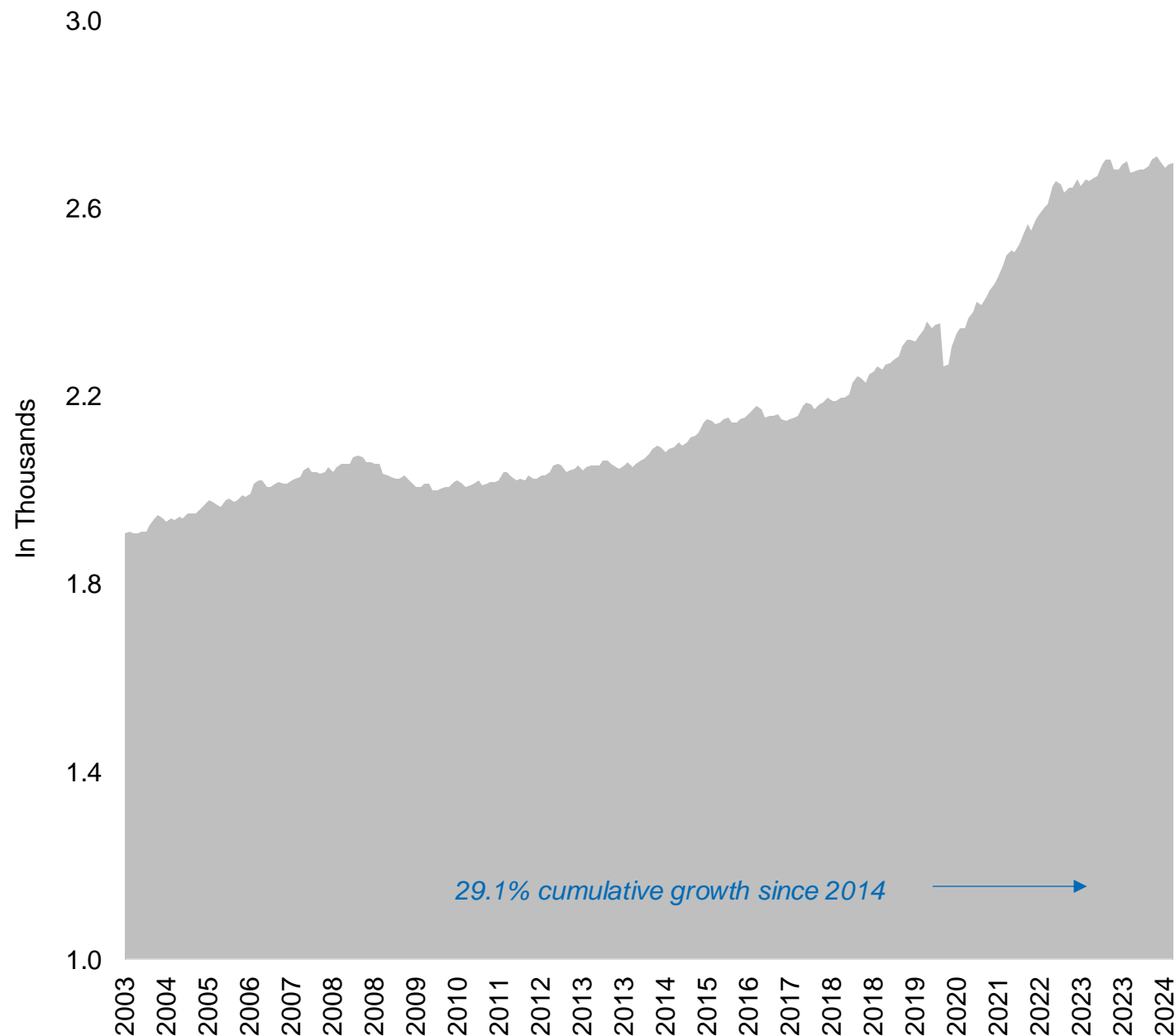
# Industry and Talent Trends



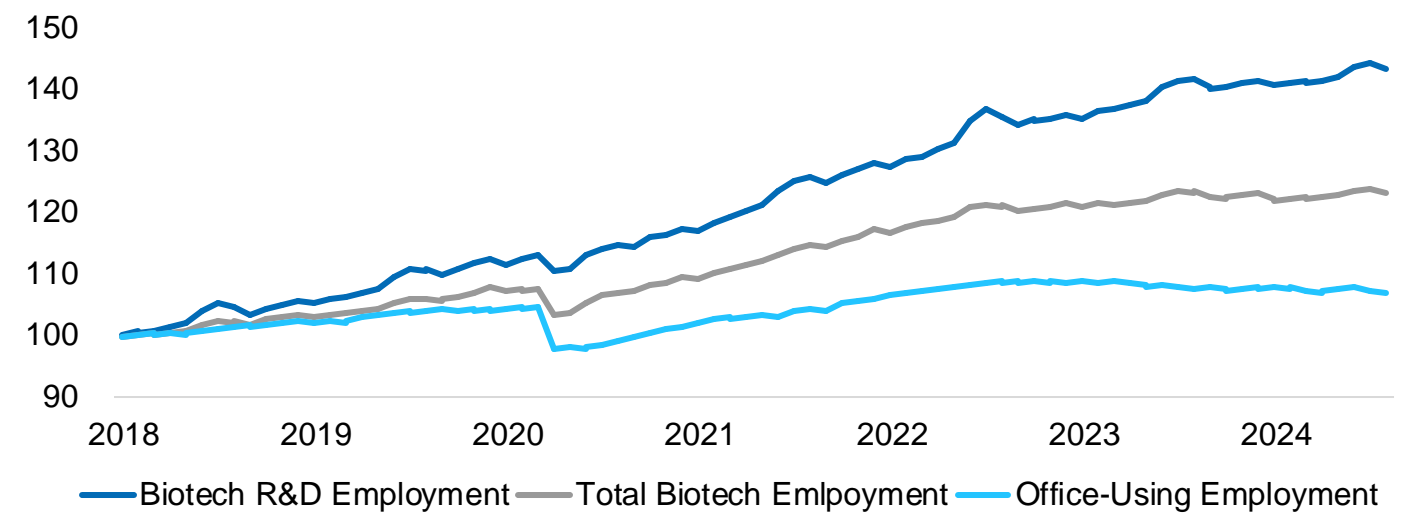
# Despite Recent Headwinds, Employment Ended 2024 Near Peak Levels

Annual gains in life science-related jobs have trailed the sector's long-term average throughout 2024. The number of those working in the life science industry is still in line with record levels of employment reached during the summer of 2024 though. Growth in the research and development subsector continues to offset sluggishness in other biotech sectors.

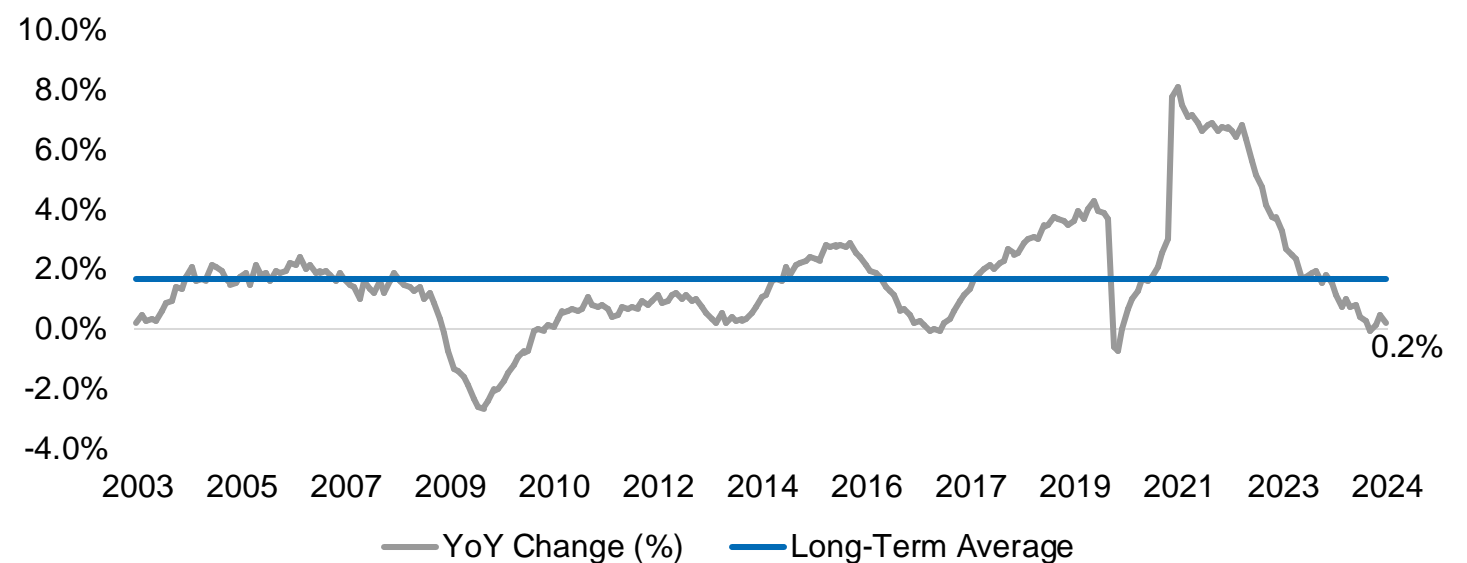
Total U.S. Biotech Employment



U.S. Employment Index



Change in Total U.S. Biotech Employment



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## Biotech Sector Layoffs Persisted Throughout 2024

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## Key Hubs Maintain High Occupation Density

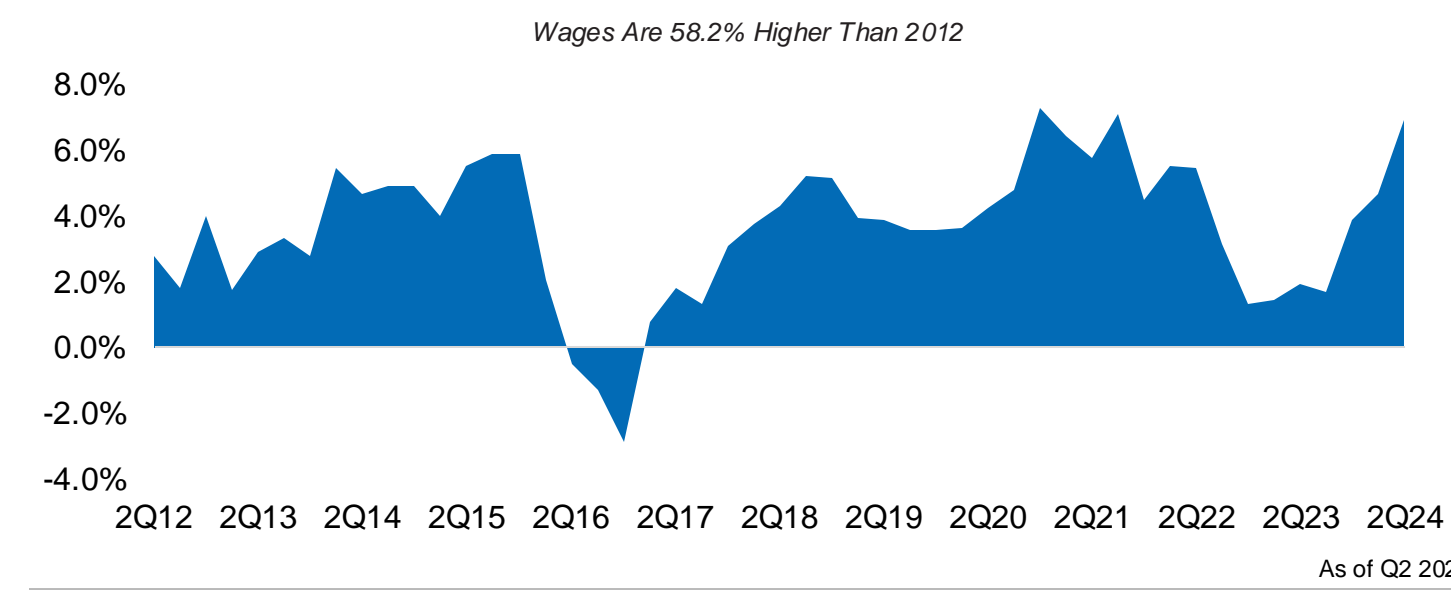
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# Wages And Job Openings Are Trending Positively

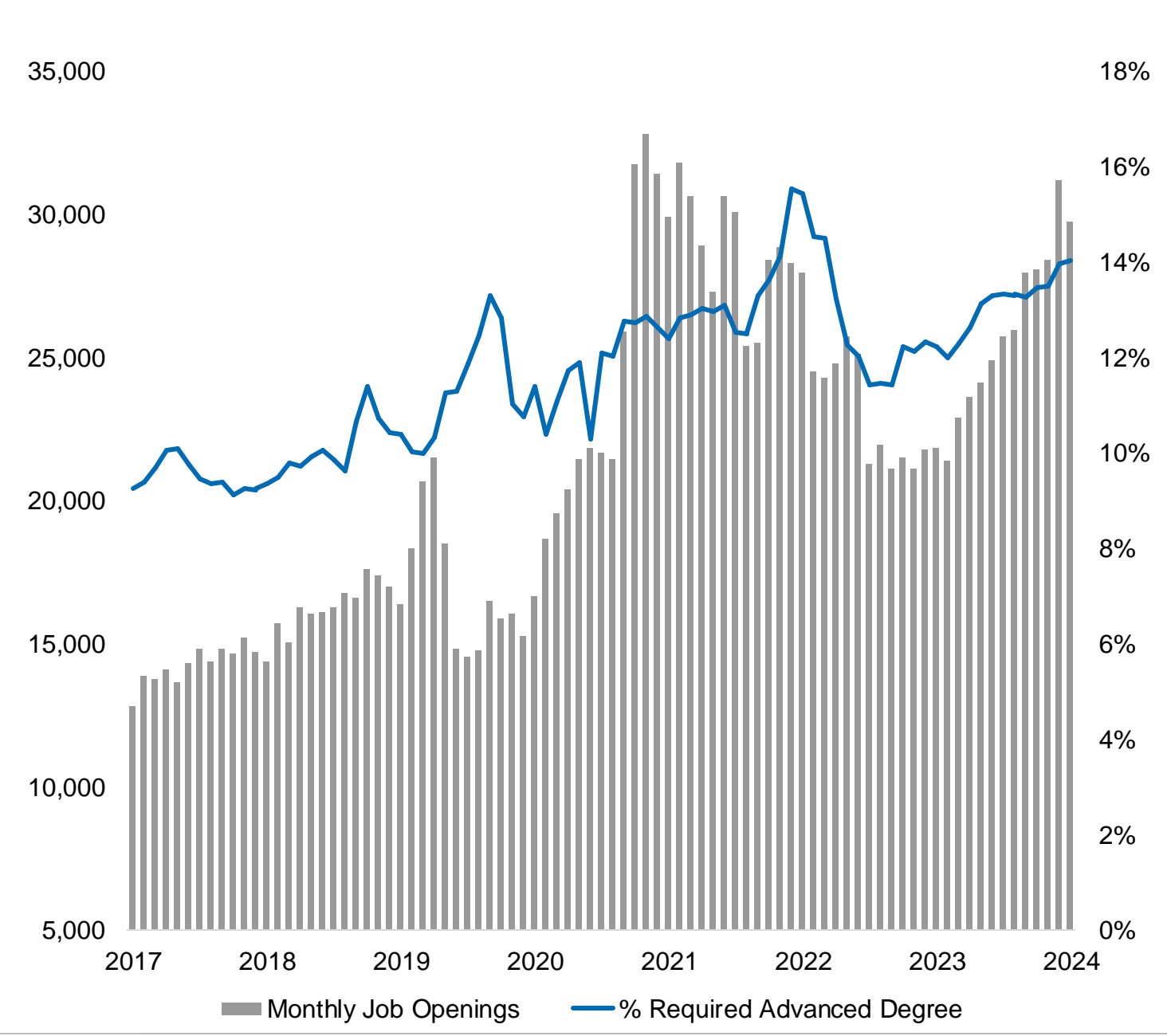
Despite persistent layoffs, biotech-related job openings increased over the last year and are now 36.3% above year-ago levels. The share of jobs requiring an advanced degree continued to climb as well, surpassing 14% by December of 2024. Following a recent deceleration, annual wage growth strengthened during the first half of the year and reached the highest rate since 2020.

2Q24 Ave. Annual Salaries	Biochemists	Biomedical Engineers	Chemists	Medical Scientists
<b>Boston</b>	\$132,100	\$113,000	\$123,900	\$131,200
<b>Bay Area</b>	\$142,700	\$137,000	\$134,200	\$145,400
<b>San Diego</b>	\$129,200	\$122,800	\$113,400	\$124,300
<b>U.S. Average</b>	\$118,900	\$110,000	\$98,500	\$114,100

## 1-Year Change in Average Annual Wages per Worker



## Biotech Job Openings



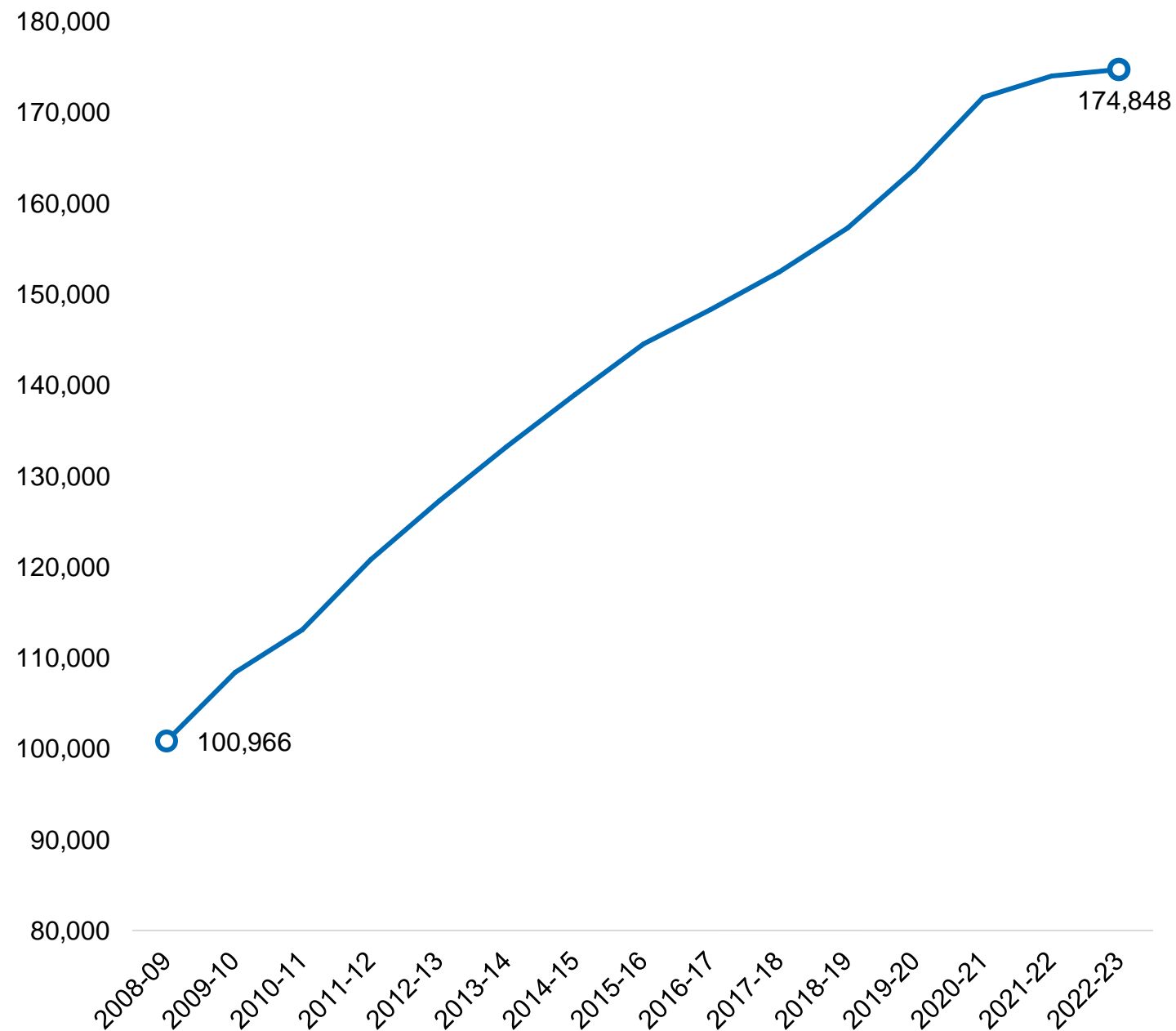
Source: JobsEQ, Newmark Research

As of December 2024

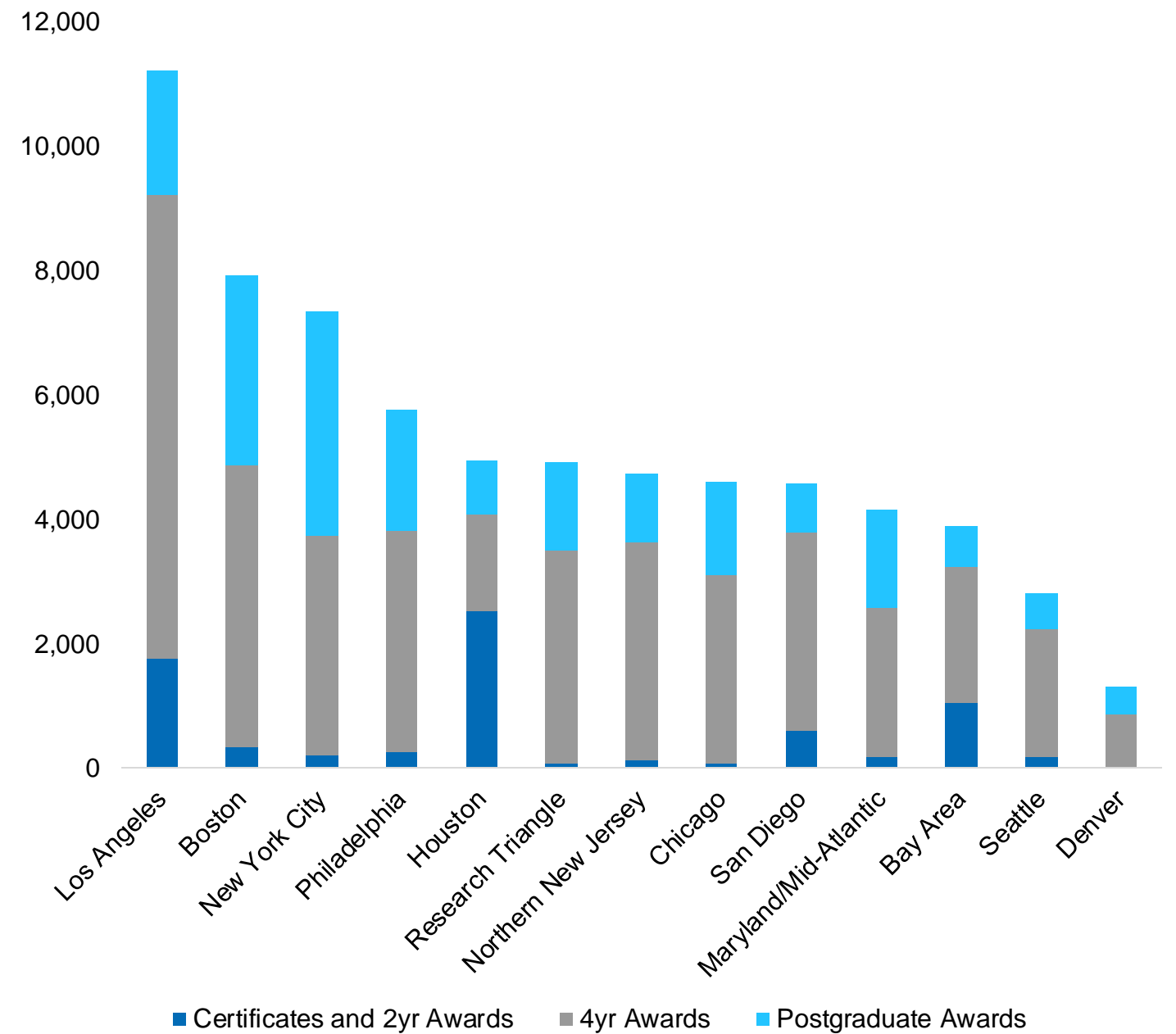
# Emerging Talent Remains Critical for Long-term Sector Growth

The number of biological and biomedical science degrees awarded each year continues to grow, increasing by 73.2% since 2008. The most life science-related degrees are being awarded in Los Angeles, Boston and New York City, closely aligning with significant tech transfer activity in these areas.

Biological and Biomedical Sciences Degrees Awarded



Life Science-Related Degrees Awarded by Metro



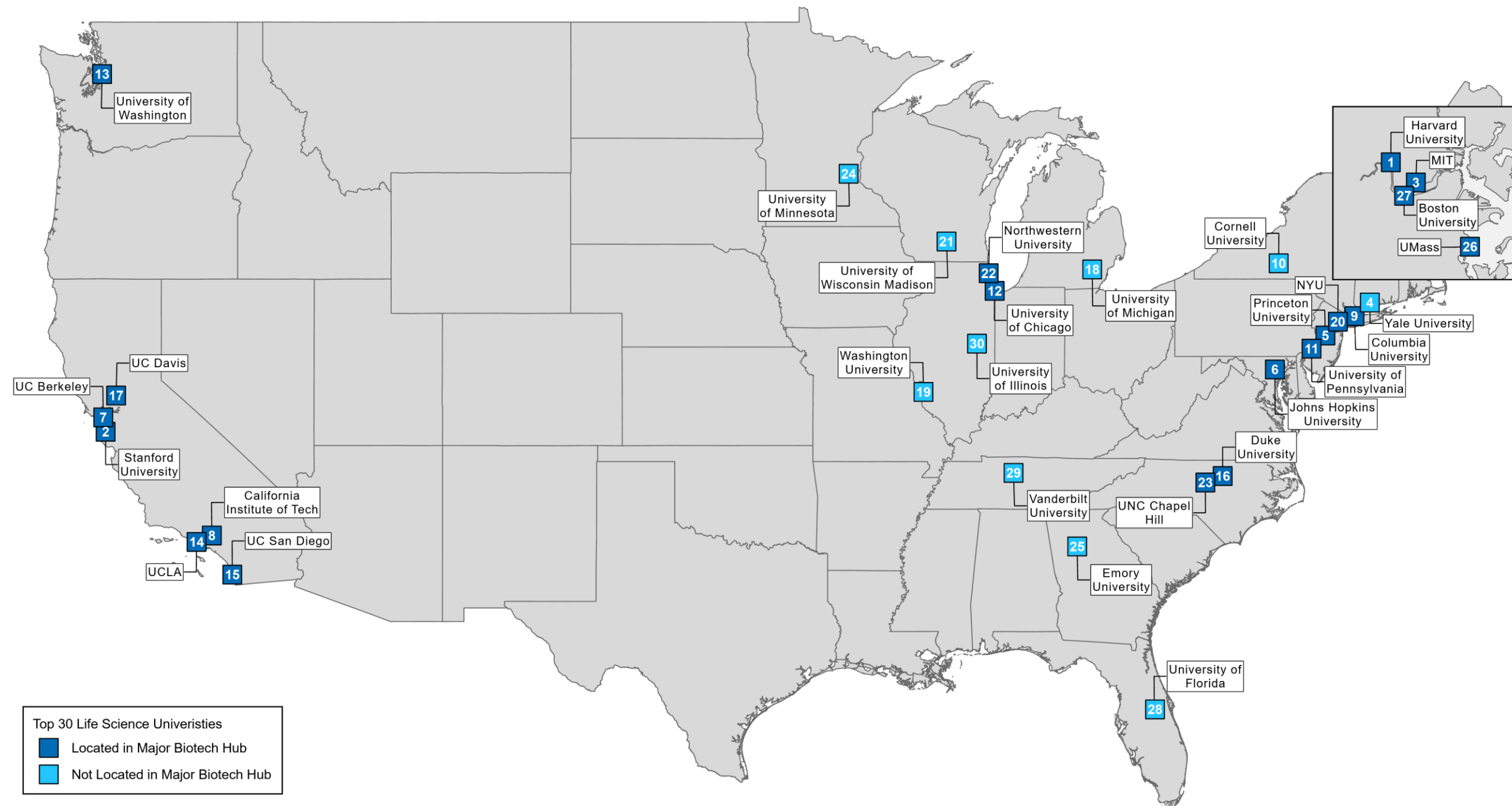
Source: JobsEQ, National Center for Education Statistics, Newmark Research

As of Q2 2024

# Colleges and Universities Support the Talent Pipeline

The concentration of top educational institutions is vital to the life science ecosystem. To maintain a steady pipeline of qualified employees, leading markets for life science are also home to many colleges and universities that produce the most life science degrees. Notably, 20 out of the 30 top schools for life science degrees are located in major biotech hubs.

## Top 30 Universities for Life Science Degrees



Source: Times Higher Education 2024 Rankings, Newmark Research

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## Boston Reigns With Most-Educated Workforce

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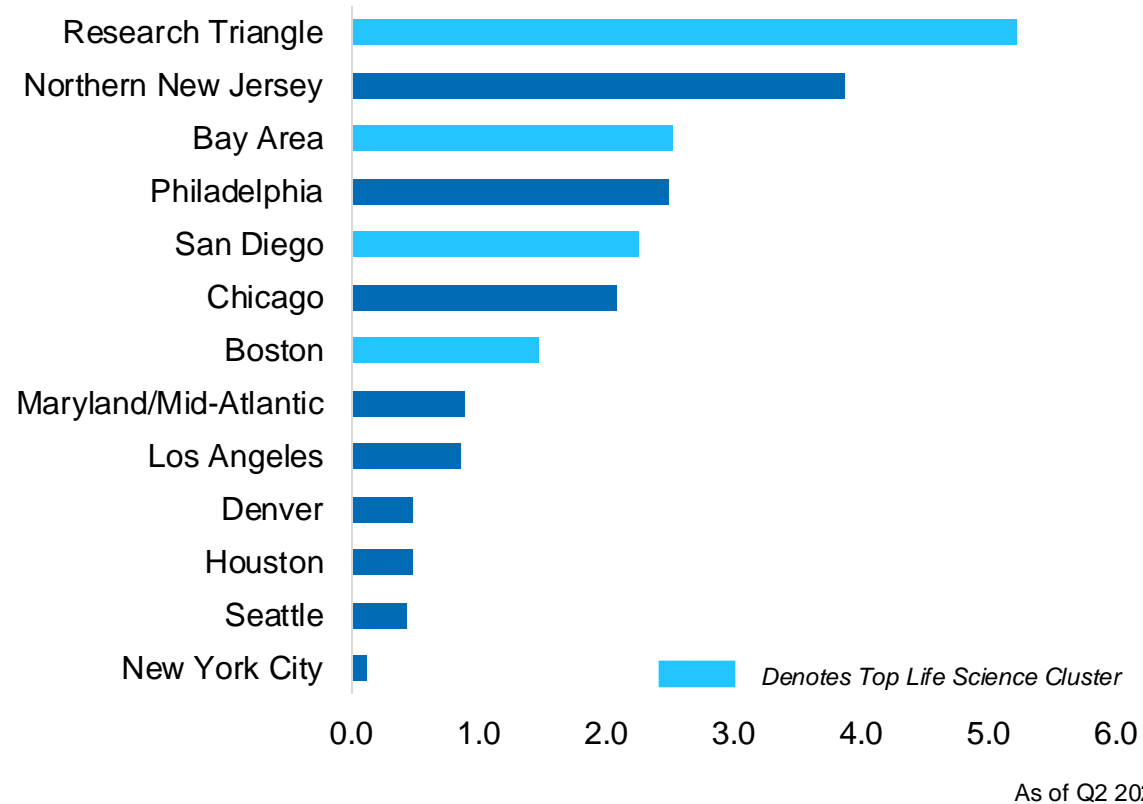
# Bio manufacturing Job Growth Flips Positive, a Good Signal for Times to Come

A resurgence in domestic drug manufacturing has pushed employment in this sector to a 30-year high. While Northern New Jersey has the highest number of jobs, the Research Triangle holds the highest concentration of jobs among the top life science markets. Across the U.S., biomanufacturing employment peaked in May of 2023 and ended November 2024 1.9% below that high point. Year-over-year job growth is now positive for the first time since May of 2023. Prospects for growth remain positive due to recent investments in the onshoring and nearshoring of advanced manufacturing facilities in North America.

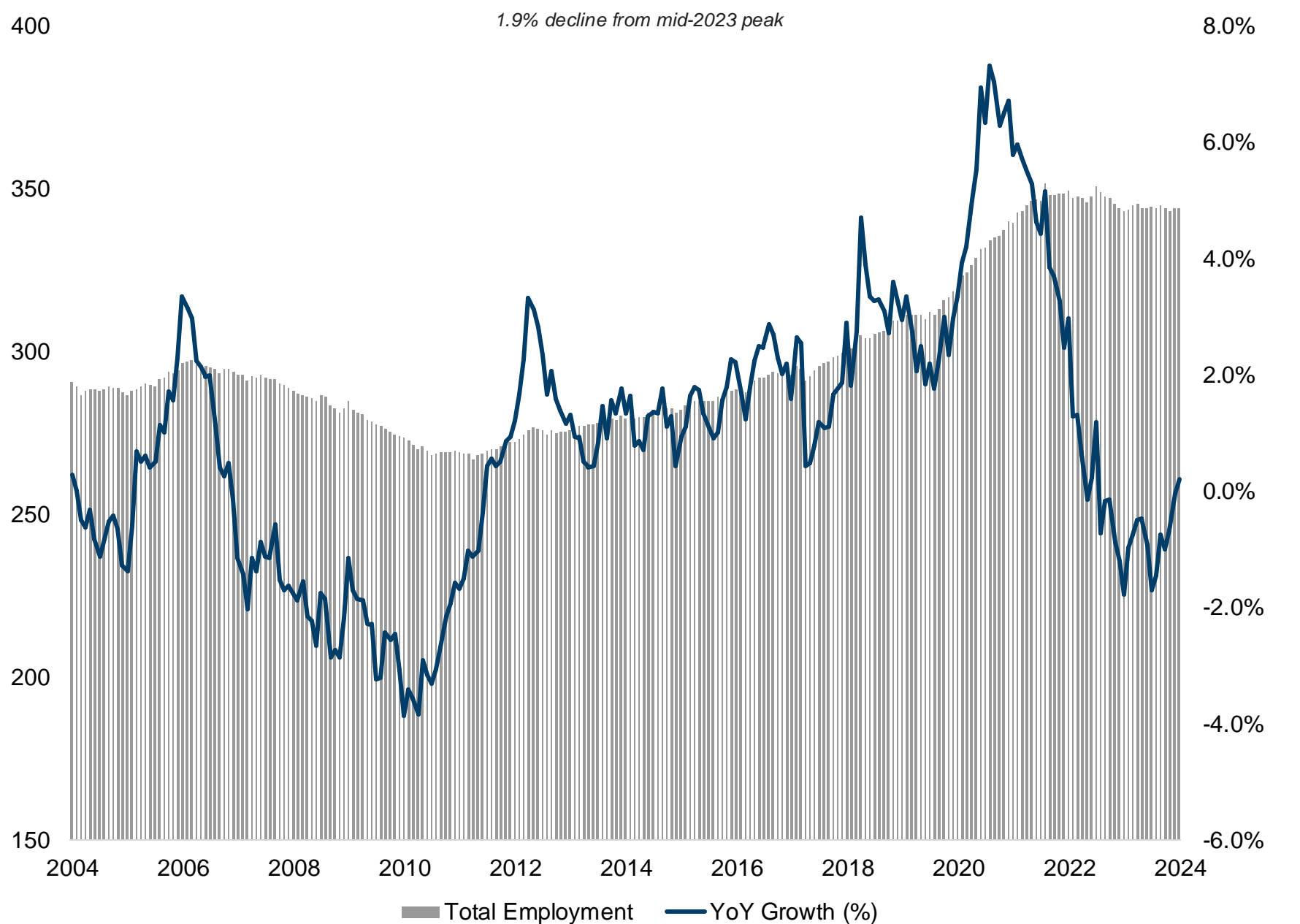
## 2Q24 Pharmaceutical and Medicine Manufacturing Employment

Northern New Jersey	27,745
Chicago	20,857
Philadelphia	15,941
San Francisco	13,856
Research Triangle	12,409

## Pharmaceutical and Medicine Manufacturing Location Quotients



## Historical Pharmaceutical and Medicine Manufacturing Employment



Source: JobsEQ, Moody's, BLS, Newmark Research

As of November 2024

# Market Fundamentals



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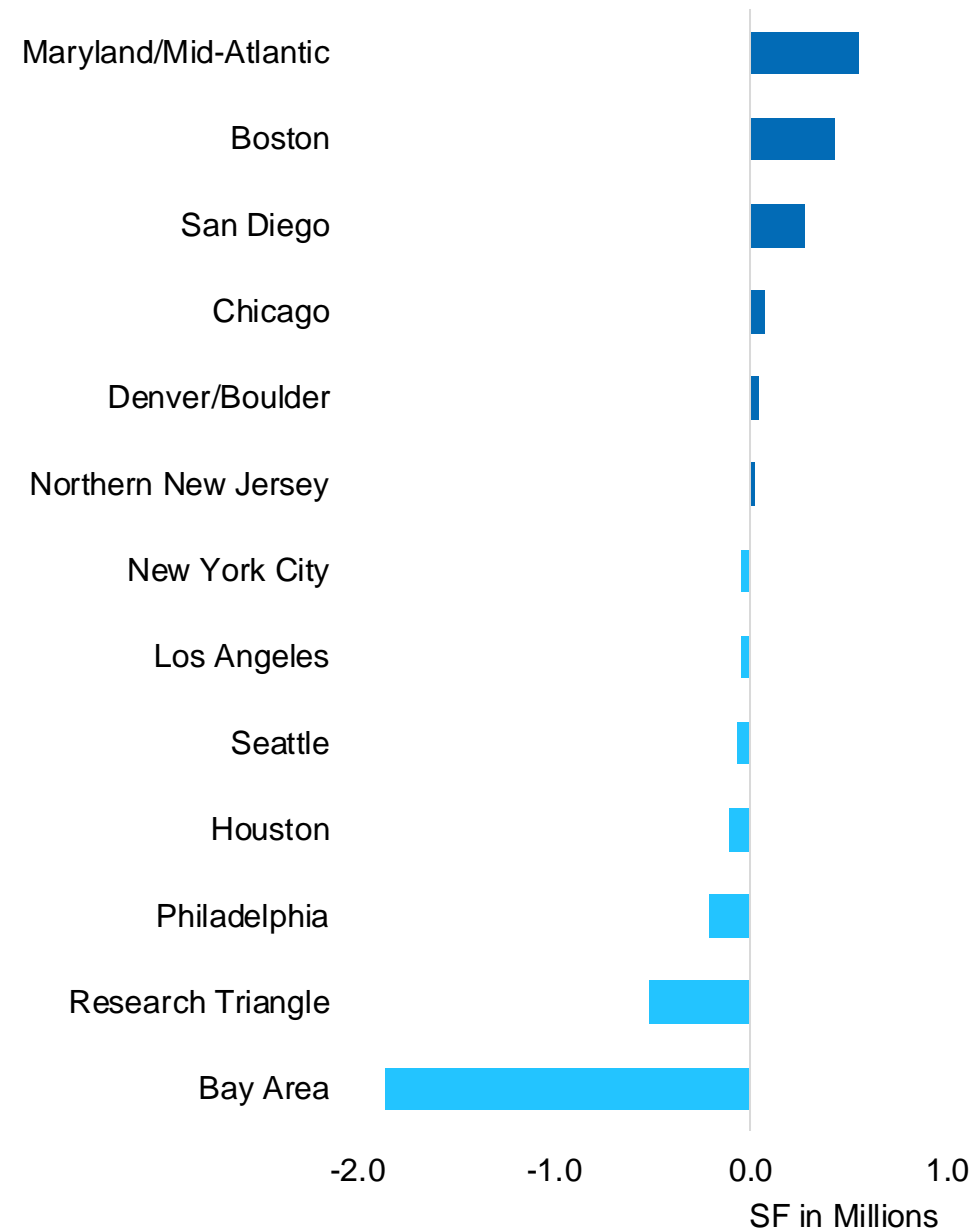
## Demand-Side Fundamentals Have Likely Bottomed

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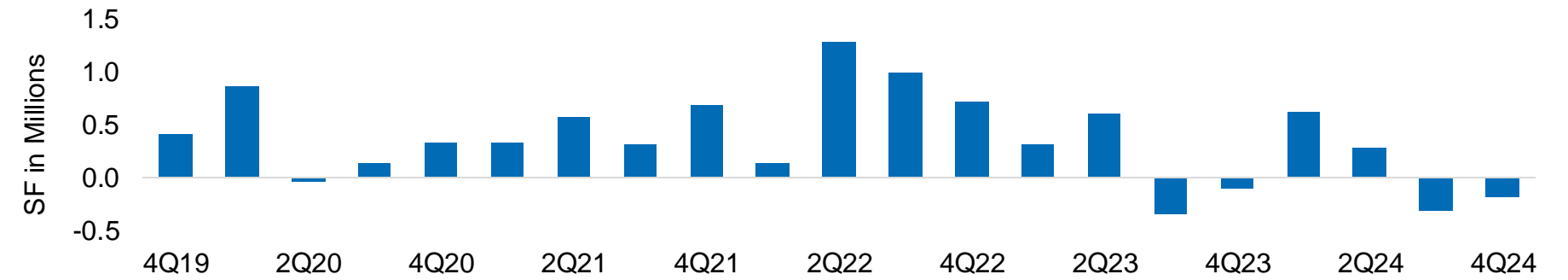
# Pre-Leasing Drove Net Absorption In Several Markets

Roughly half of the top U.S. life science markets posted positive net absorption in 2024. Tenants that pre-leased space taking occupancy in new builds drove most gains in key regions. Despite turning a corner during the fourth quarter of 2024, the Bay Area reported the largest occupancy losses over the year.

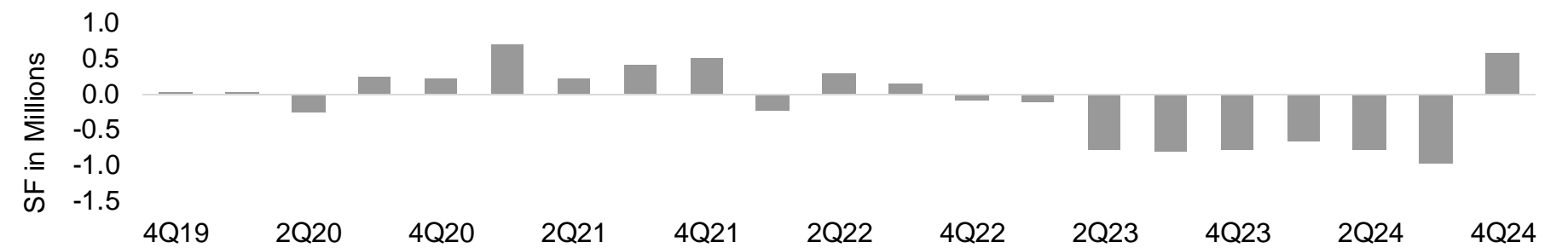
## 2024 Net Absorption by Market



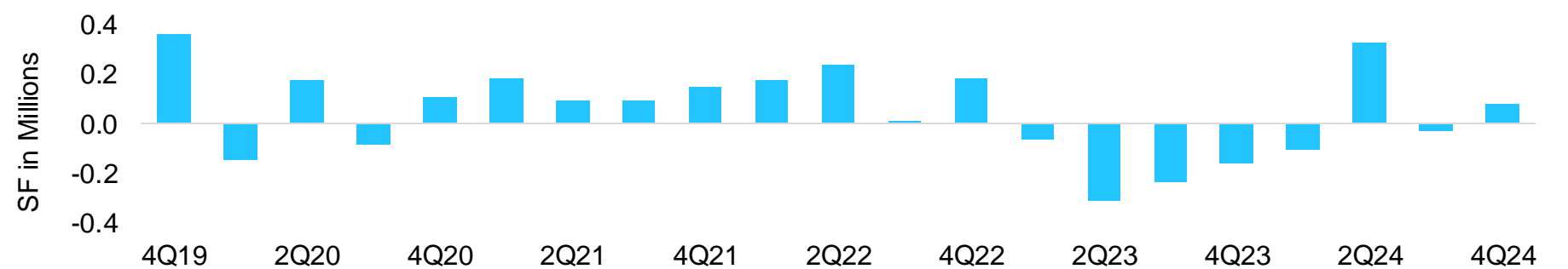
## Historical Net Absorption | Boston



## Historical Net Absorption | Bay Area



## Historical Net Absorption | San Diego



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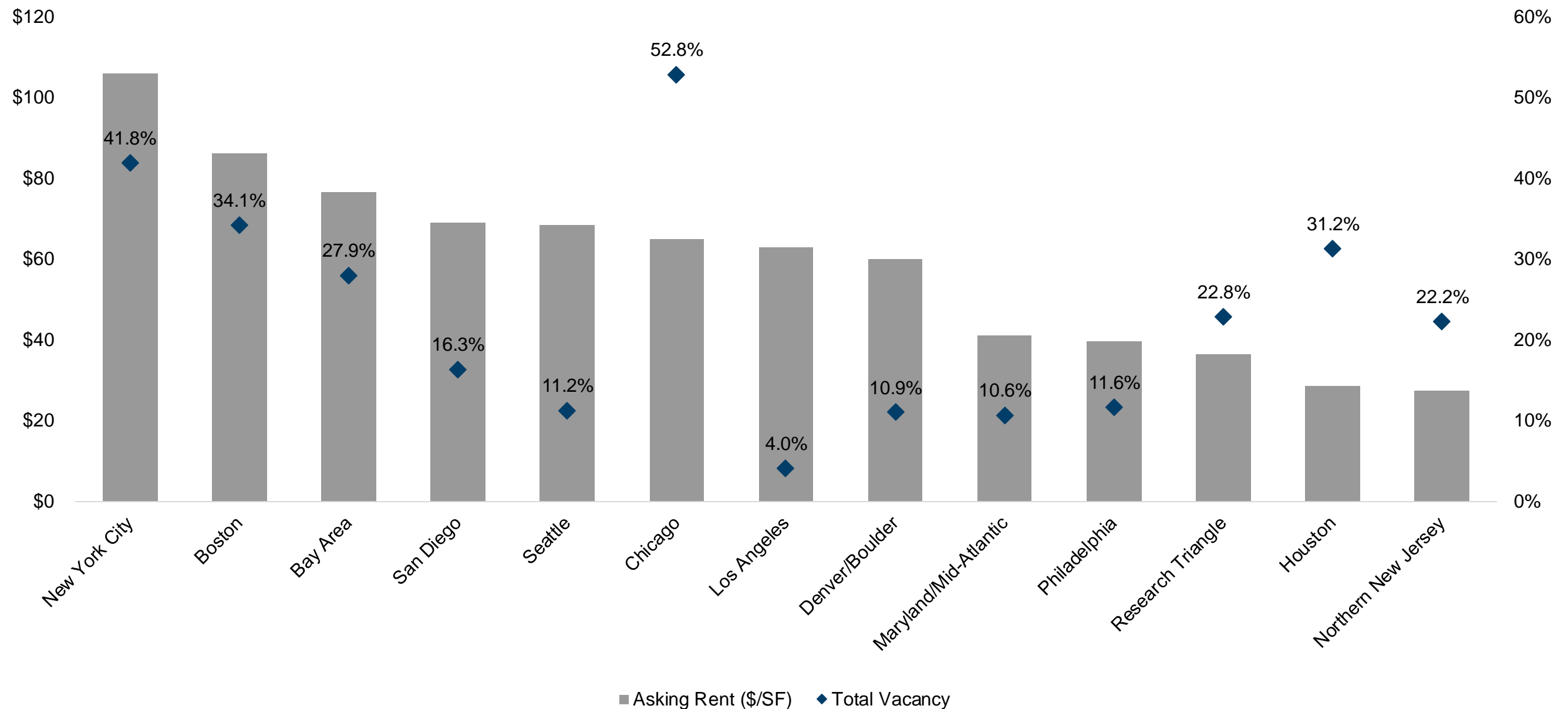
## Fundamentals Are More Favorable in Select Markets

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# Only One Market Maintains Single-Digit Vacancy Rates

At the end of 2024, only one key life science cluster maintained a sub-10% vacancy rate. Year-over-year, vacancies increased in all markets, with Boston posting the largest increase in vacant square footage. Boston and New York were the only metro areas to report double-digit vacancy increases over the year as well. Los Angeles still maintains the tightest fundamentals of the U.S. life science clusters.

4Q2024 Vacancy Rate and Average Asking Rent by Market



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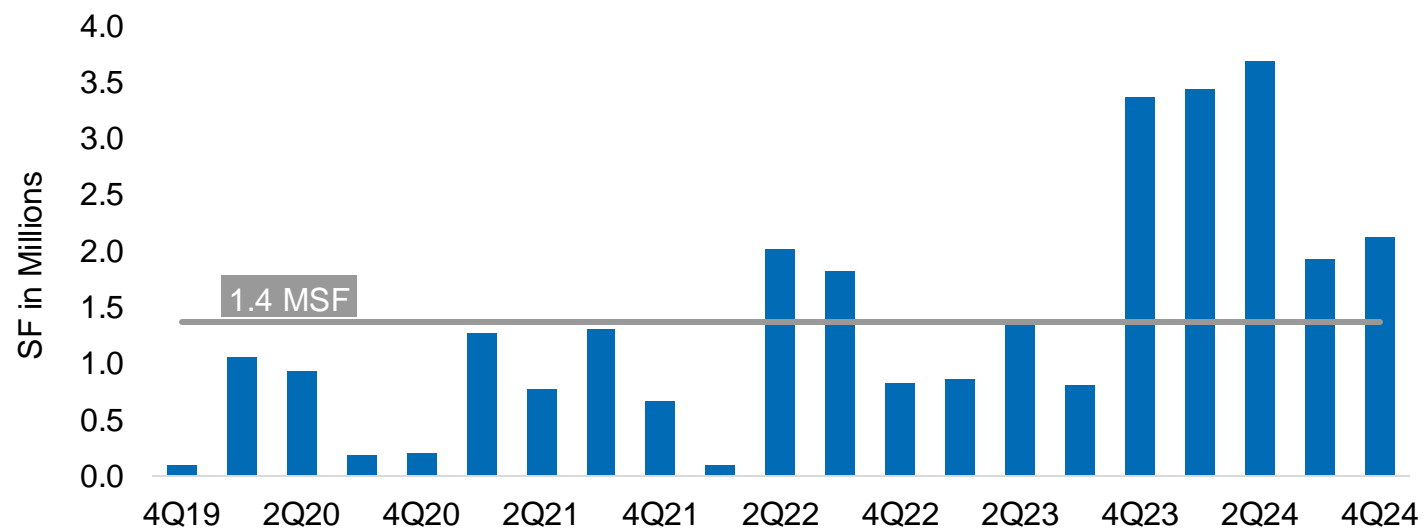
## Sublease Availabilities Are Easing

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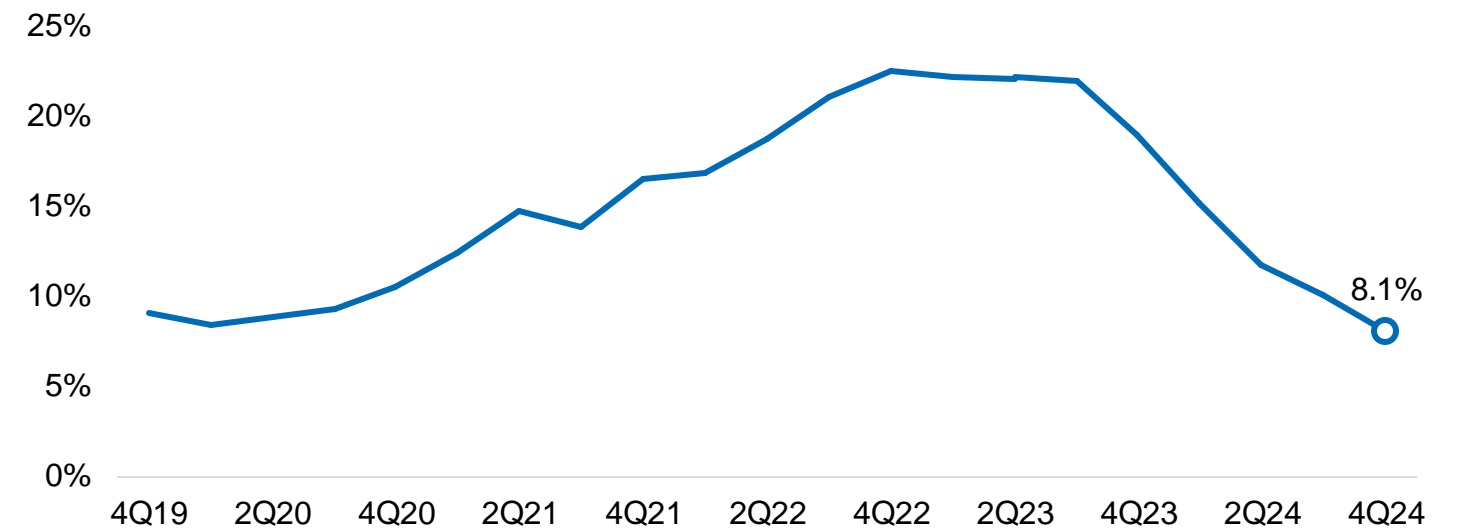
# Deliveries Wane from Record Highs, But Remain Above Historic Levels

Fourth-quarter purpose-built deliveries surpassed two million SF in Boston, the Bay Area, San Diego, and Seattle. Future development remains clustered in just a handful of key markets; however, that share has decreased from mid-year 2024 as projects have delivered and developers consider secondary regions.

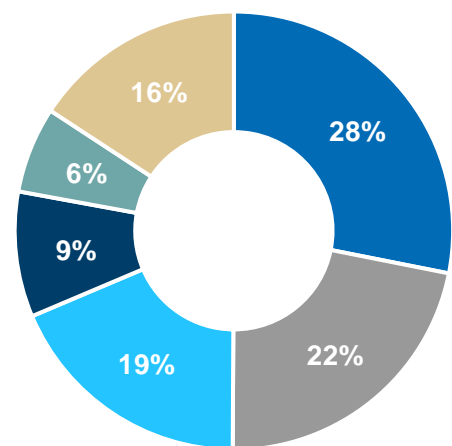
SF of Purpose-Built Laboratory Space Delivered\*



SF Under Construction a % of Existing Laboratory Inventory\*



Share of SF Under Construction



■ Bay Area      ■ Boston      ■ San Diego  
 ■ New York City      ■ Northern New Jersey      ■ All Other

Key Laboratory Developments



585 Third Street	One Milestone	ELCO Yards	SPUR Phase I	Pacific Center
East Cambridge	Boston Urban Edge	Redwood City	South San Francisco	Sorrento Mesa
605,000 SF	440,000 SF	670,578 SF	340,000 SF	496,000 SF
BioMed Realty	Breakthrough Properties / Tishman Speyer	IQHQ	IQHQ	Sterling Bay
2025	2026	2026	2025	2025

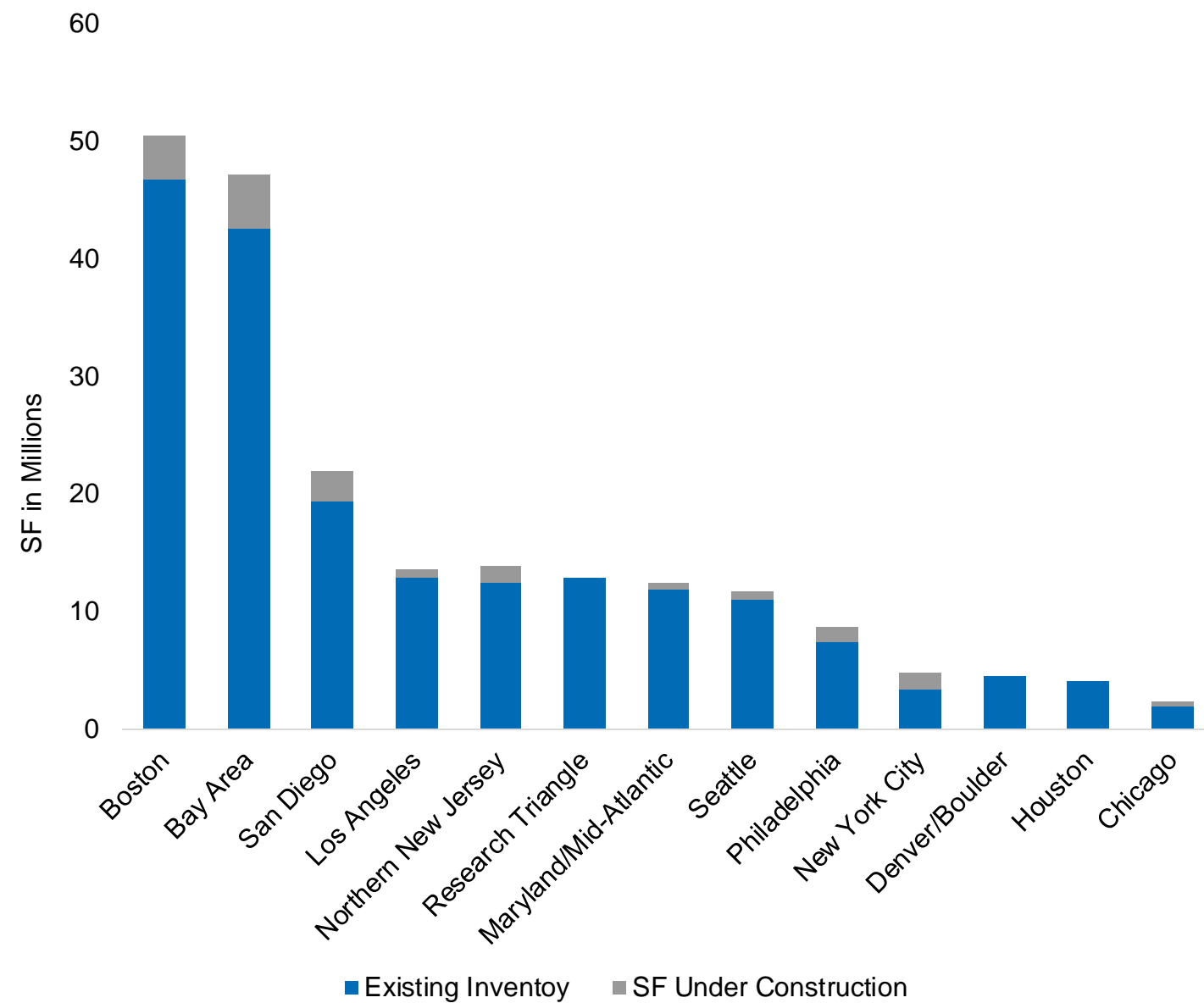
Source: Newmark Research  
 \*Only includes Boston, Bay Area, San Diego, and Seattle



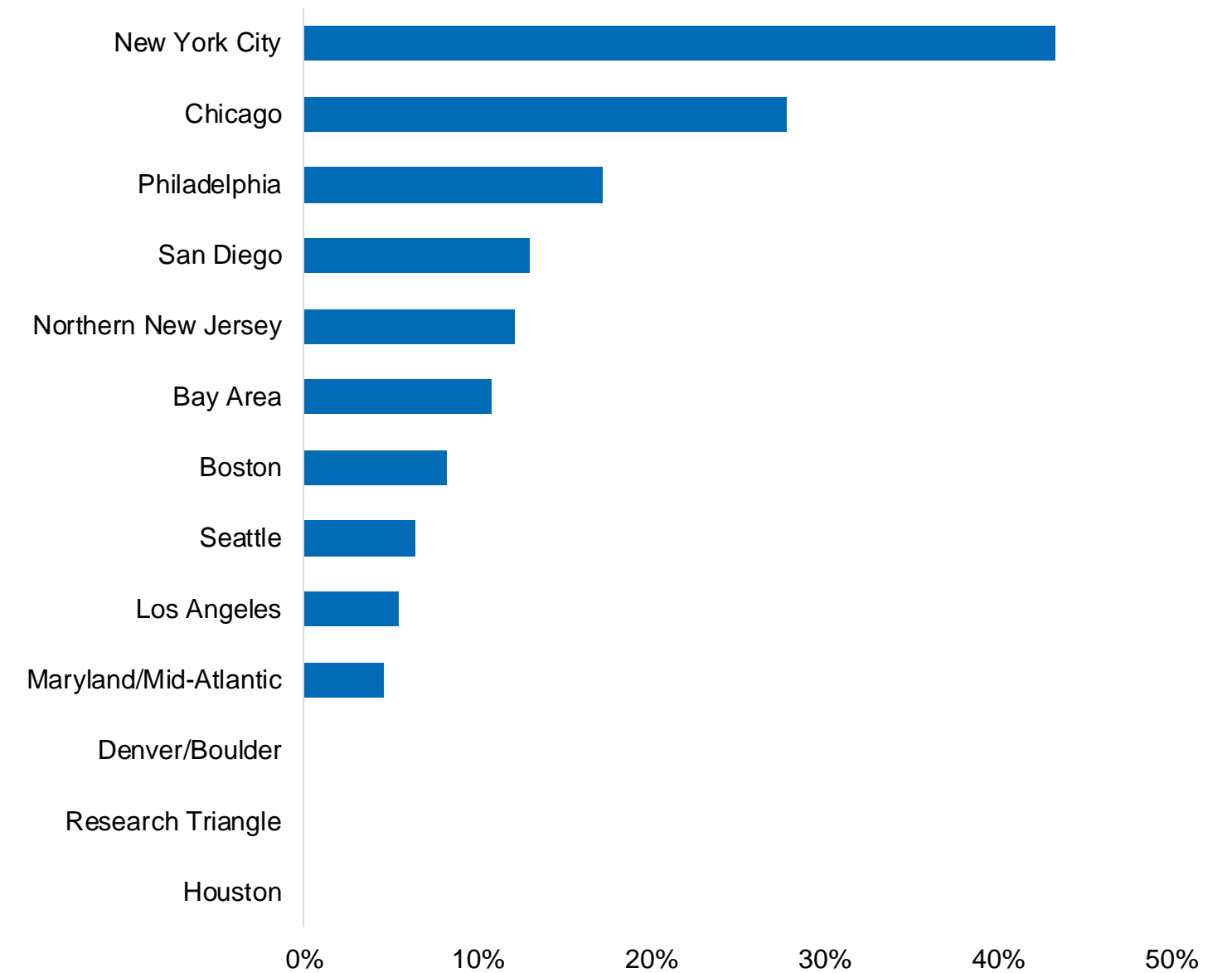
# Established Clusters Continue to Lead Development

Despite five consecutive quarters of deliveries outpacing the 5-year historical average, development has slowed down across the board. The share of life science buildings under construction is concentrated in the top three clusters-Boston, Bay Area, and San Diego, which command about 62% of the SF currently under development. However, when accounting for the existing laboratory inventory, secondary regions such as New York City, Chicago, and Philadelphia lead the way.

Existing Inventory and SF of Purpose-Built Space Under Construction



SF Under Construction a % of Existing Laboratory Inventory



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## New Biomanufacturing Facilities and Expansions Announced Recently

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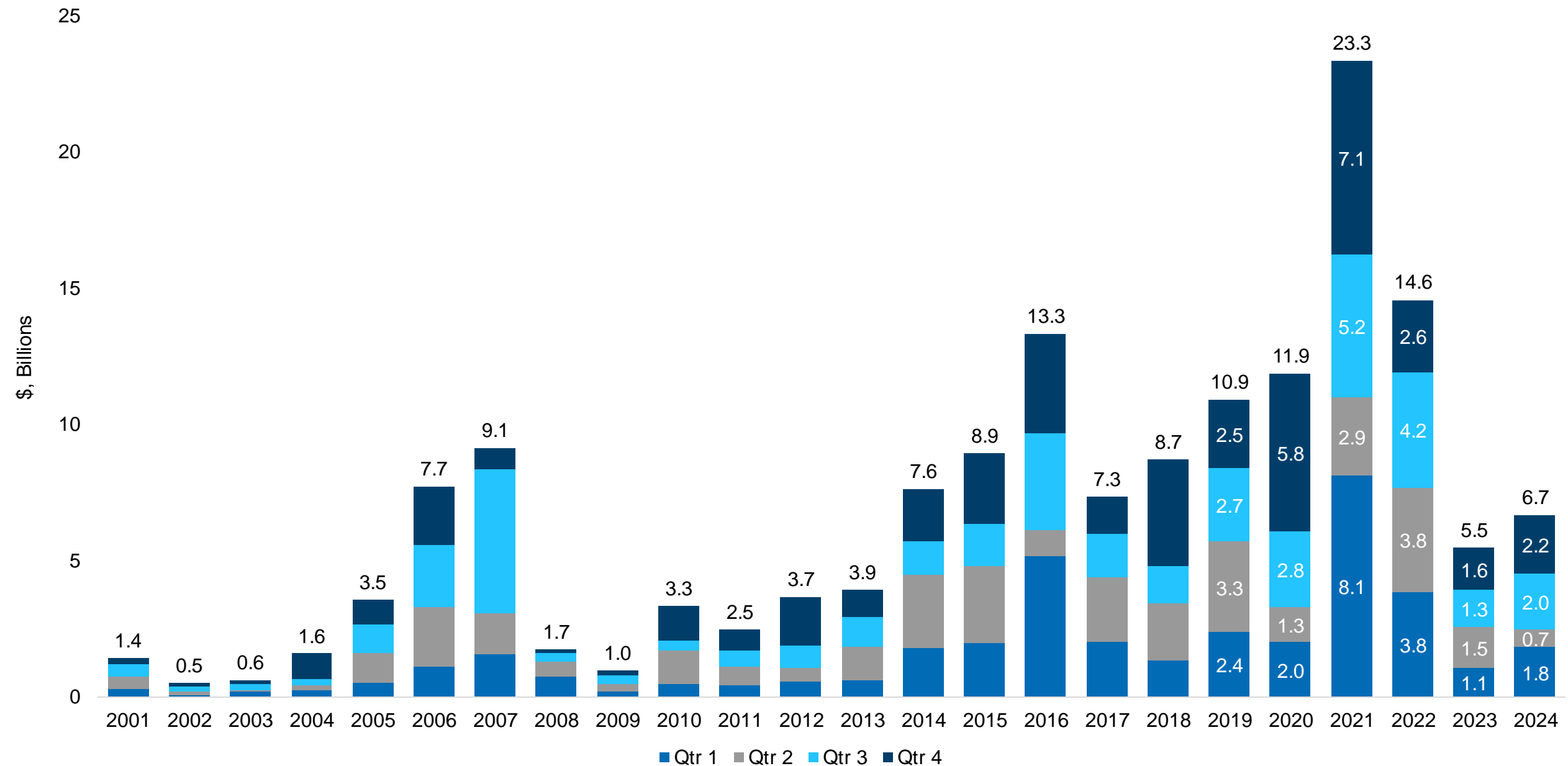
# Capital Markets



# R&D\* Investment Sales Picked Up In Second Half Of 2024

R&D transaction activity totaled \$6.7B in 2024, up 22% year-over-year. Sales continue to run materially below their pre-pandemic pace; activity was down 26% compared to the 2017-to-2019 average. Cost of capital continues to be a concern, but this is shared by all property segments. More to the point, life science markets continue to work through absorption of both new purpose-built buildings as well as conversions. Investor appetite will begin to recover as prospects for NOI growth improve.

## R&D Investment Sales



Source: RCA, Newmark Research as of 1/21/2025  
 \*R&D property subtype is a proxy for Life Science

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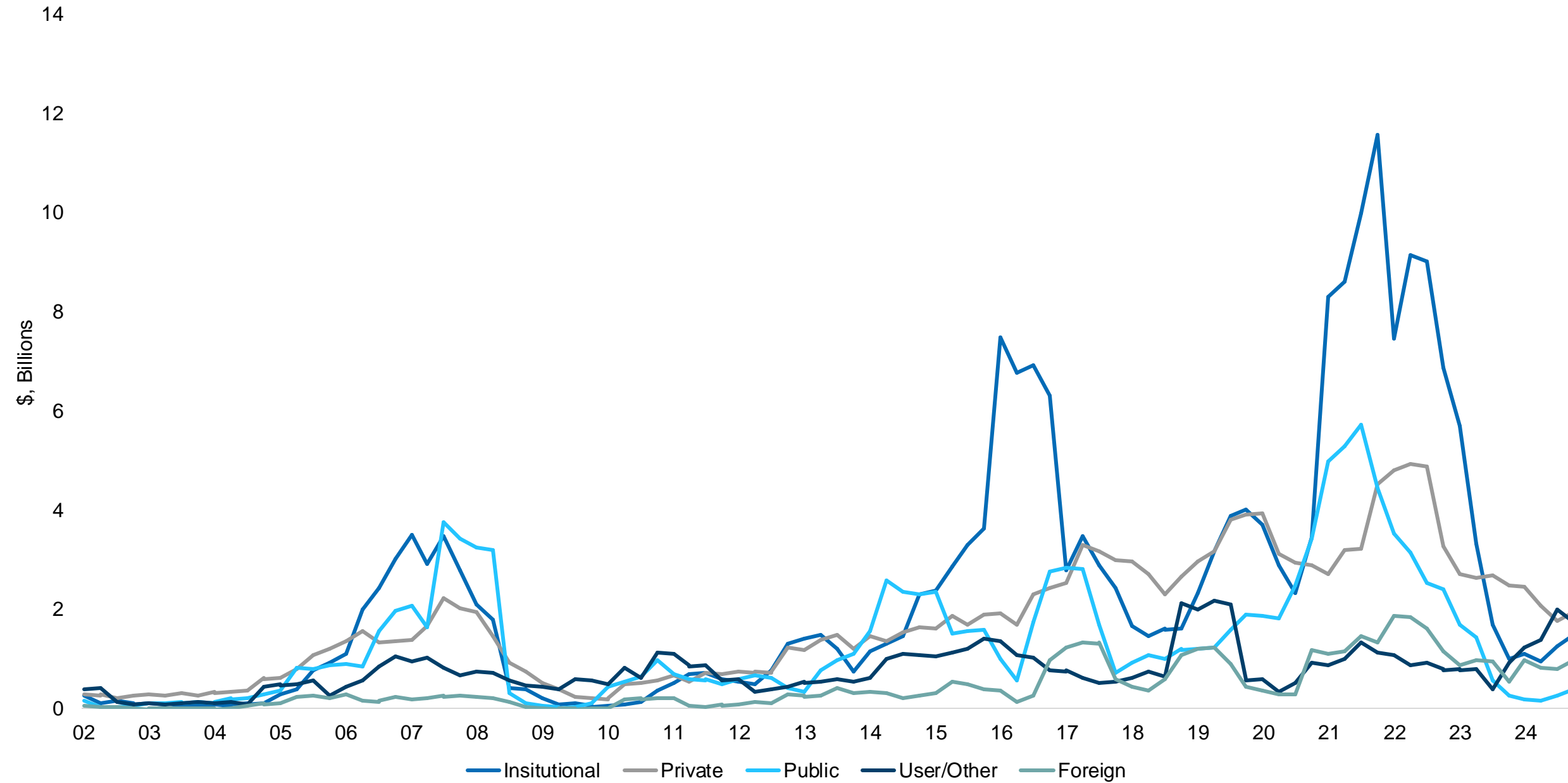
## Liquidity Improved During Latter Half Of 2024

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Newmark business contact for this information

# Most Capital Groups Remain on Sidelines Though Some Occupiers Taking Advantage

Institutional and REIT investor demand drove the acquisitions to their 2021 peak; however, since then these groups have become very quiet, particularly REITs, private capital acquisitions seemed to be stabilizing in 2023 at levels commensurate with pre-pandemic but have more recently decelerated. Foreign capital activity has been more stable, but user acquisitions have picked up and represented 27% of total acquisition volume, the groups highest share since 2012.

R&D\* Acquisition Volume, Rolling 4-Quarter



Source: RCA, Newmark Research as of 1/21/2025  
 \*R&D property subtype is a proxy for Life Science

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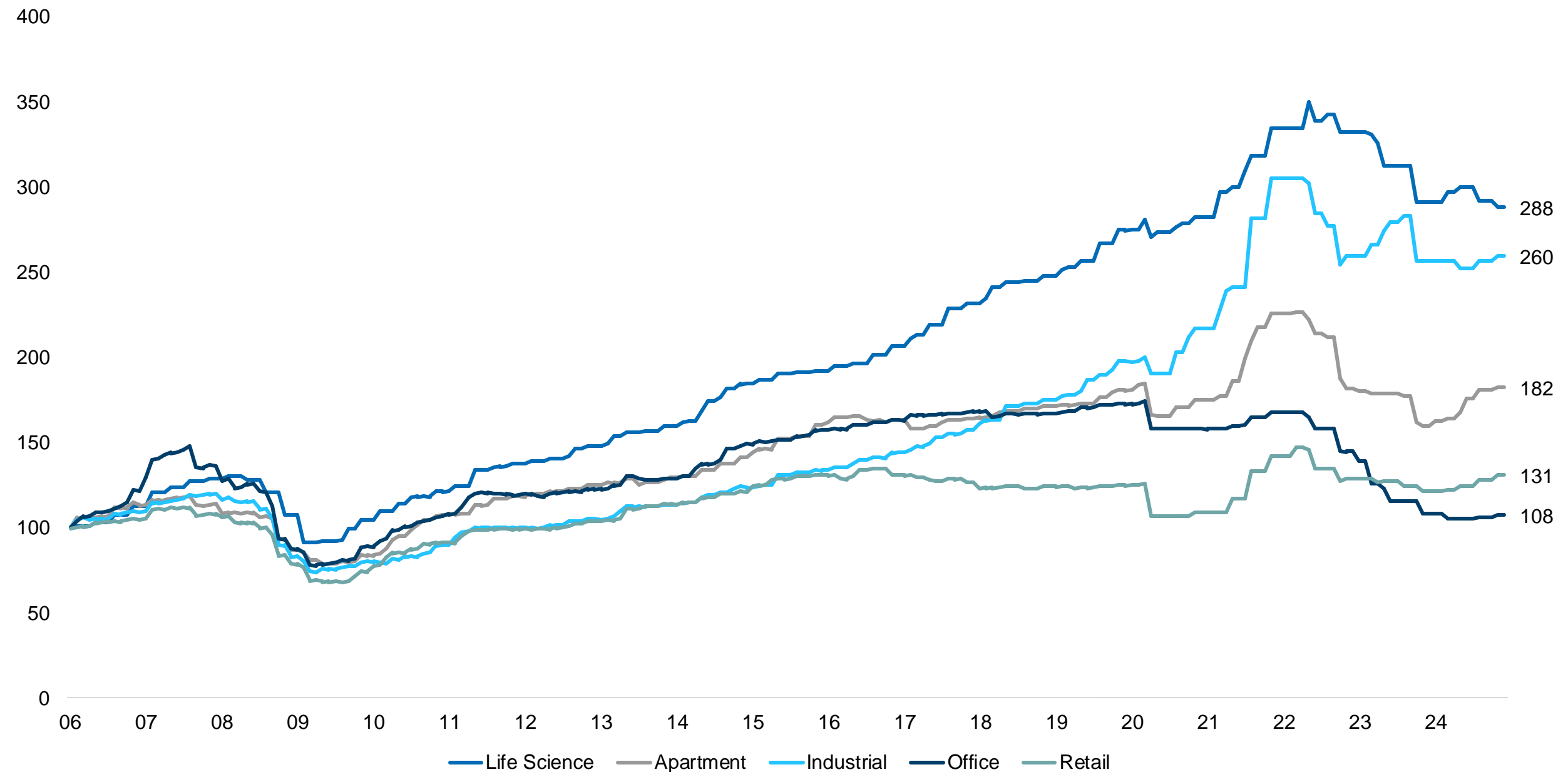
## Life Science REIT Implied Cap Rates Have Risen Significantly

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# Life Science Has Outperformed All Other Property Types Since 2008

From 2019 to the post-pandemic peak, life science outperformed all sectors except industrial, up 23%. Life science values are now down 18% from the peak, much better than Office peak-to-trough change and roughly equal with the other property types. While this augurs poorly for the returns of investors who entered at the top of the market, these price declines are unlikely to foment the kinds of issues in pre-pandemic vintage debt widely projected for the office sector. Indeed, life science values are up 5% compared to December 2019.

Green Street Commercial Property Price Index (Aug 2005 = 100)



Source: Green Street, Newmark Research as of 12/31/2024



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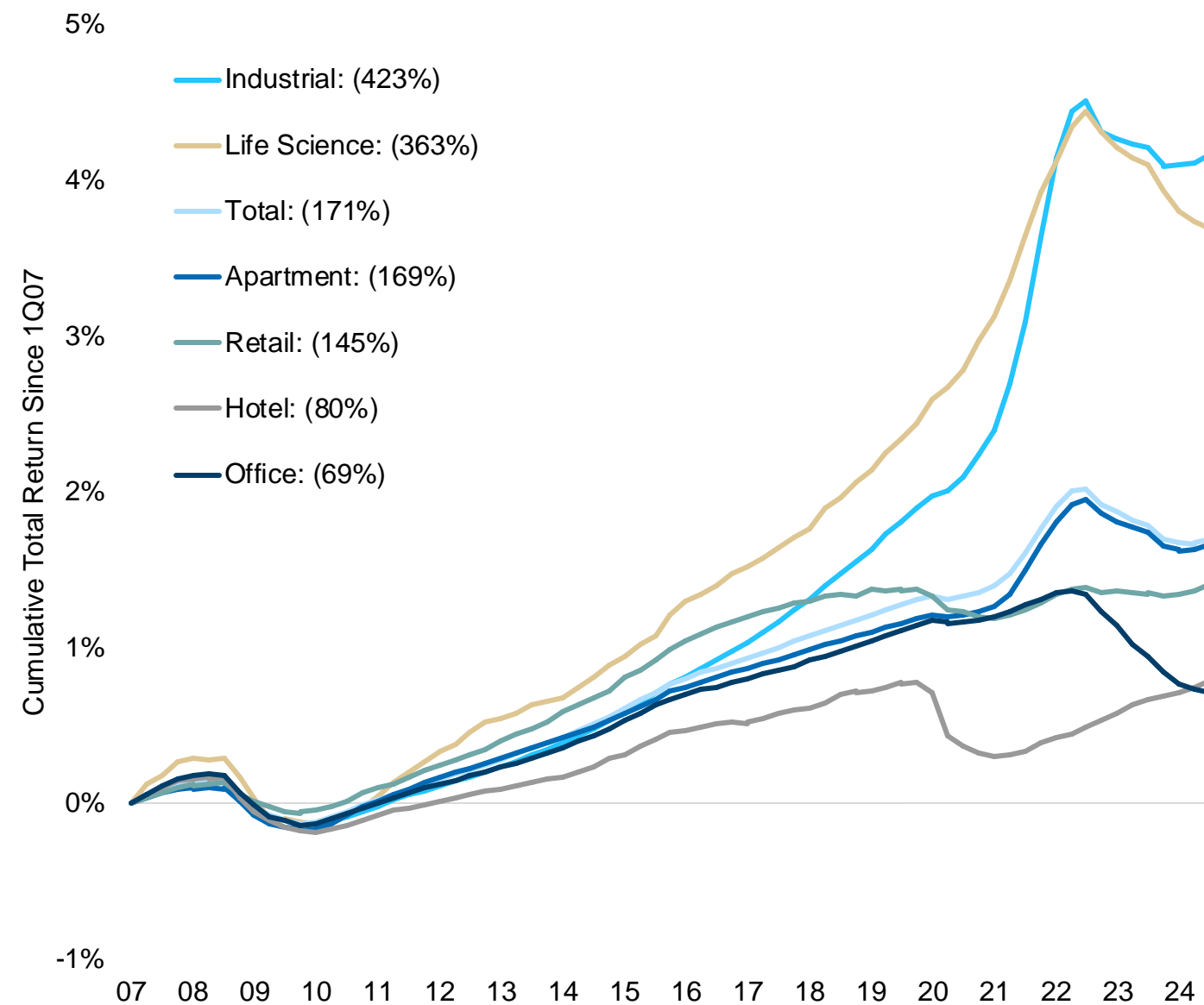
## Life Science REITs Have Underperformed in Recent Years

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Newmark business contact for this information

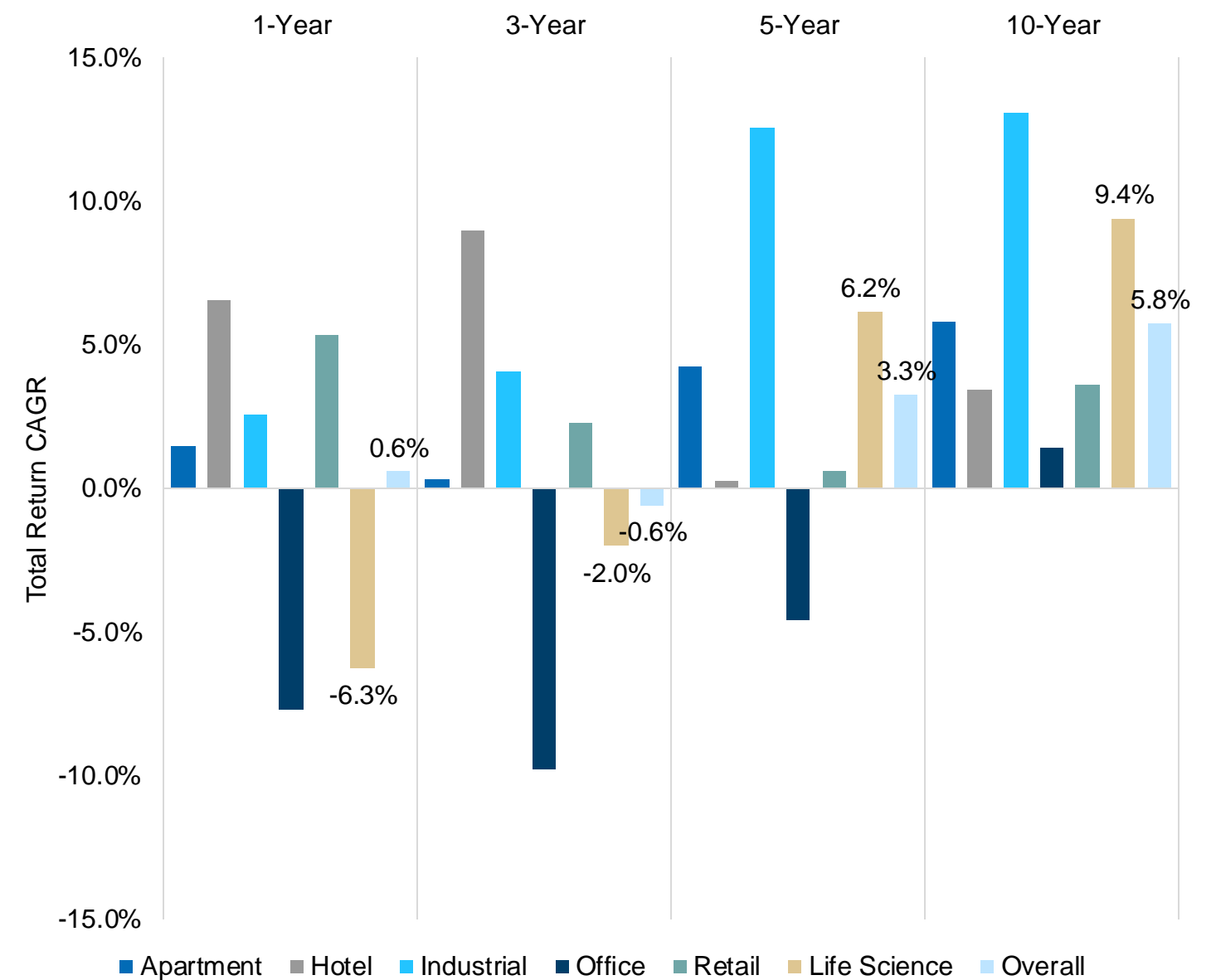
# Private Market Returns Second Only to Industrial Over Last 10 Years

Life science has generated negative total returns for the last eight quarters with a total drawdown of negative 12.9%, underperforming the national property index at negative 7.1%. This performance is similar to the decline in the Life Science CPPI. Looking over longer time spans, life science has consistently outperformed most sectors in the NPI.

NCREIF Life Science Sector Has Outperformed All But Industrial Since 2007



Only Industrial Has Outperformed in Last 10 Years, Returns Softened in TTM



Source: NCREIF, Newmark Research as of 1/30/2025

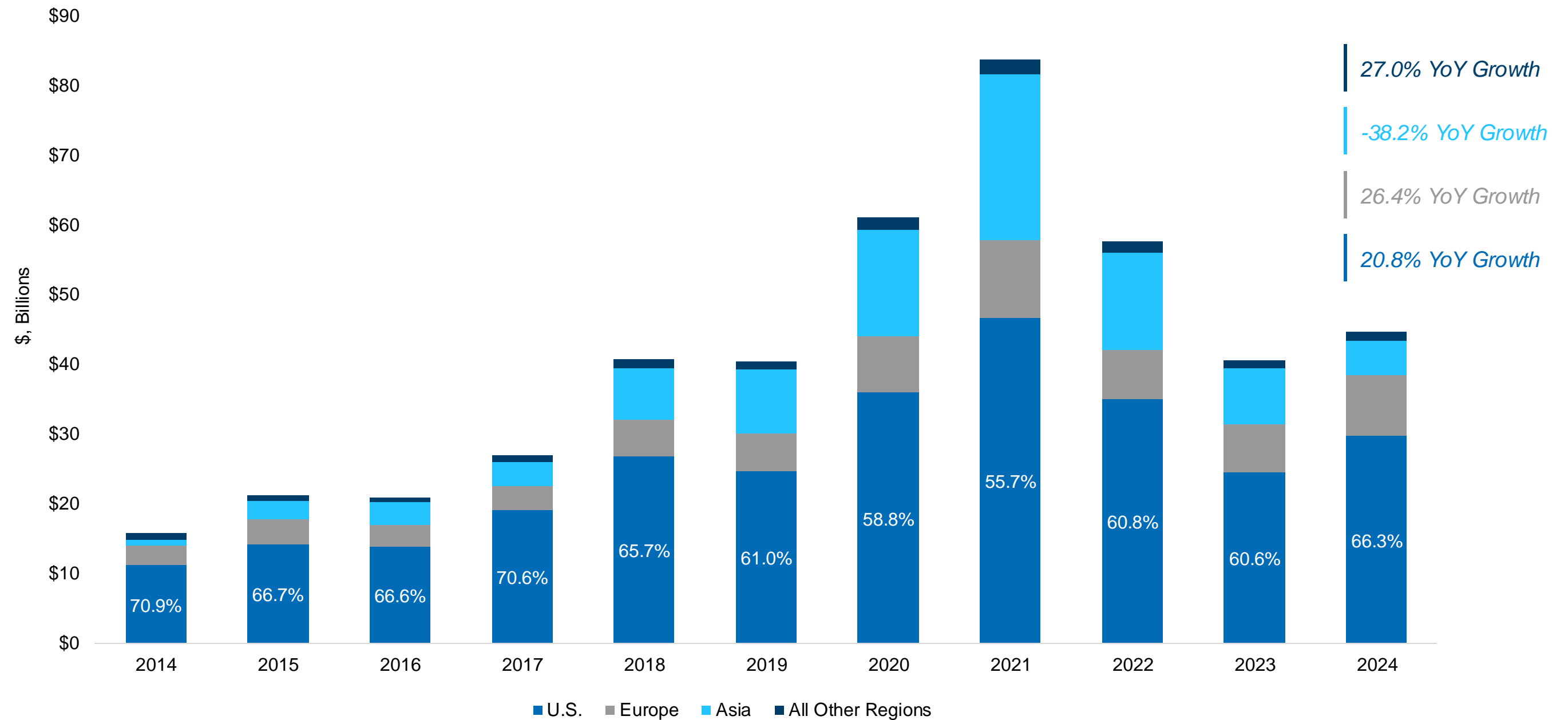
# Global Market Overview



# U.S. Based Firms Still Garner Lion's Share of Venture Funding

In 2024, global life science venture capital funding increased by more than 10%, with roughly a third flowing to U.S. based companies. This represents a near-10-percentage-point increase from 2021 when venture capitalists were expanding faster outside the U.S. Regions that have gained significant ground in terms of venture capital include Canada, Europe and Asia.

## Global Life Science Venture Capital Funding



Source: Pitchbook, Newmark Research

As of 2/9/2025

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## Many Life Science Clusters Outside the U.S. Are Still Maturing

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# Canada

- Canada's life science industry is primarily concentrated in Toronto, Montreal, Vancouver and Ottawa.
- Venture capital funding improved noticeably during 2024, helping to solidify Canada's spot among the top 10 countries globally for capital during the past 10 years.
- The Canadian government continues investing billions of dollars in projects supporting biomanufacturing, life science innovation, and further enhancement of the national vaccine and therapeutics ecosystem.
- British Columbia, anchored by Vancouver, is a leader for life science growth within Canada and boasts a sector employee base of more than 20,000 workers.

## Key Clusters

### Toronto

Toronto's life science sector has more than 30,000 employees, which represented a 35% increase from 2022 to 2023. The larger region, including 'Pill Hill' in Mississauga, is home to dozens of international pharmaceutical companies, 37 research institutes, and nine teaching hospitals, and is the epicenter of Ontario's life science corridor.

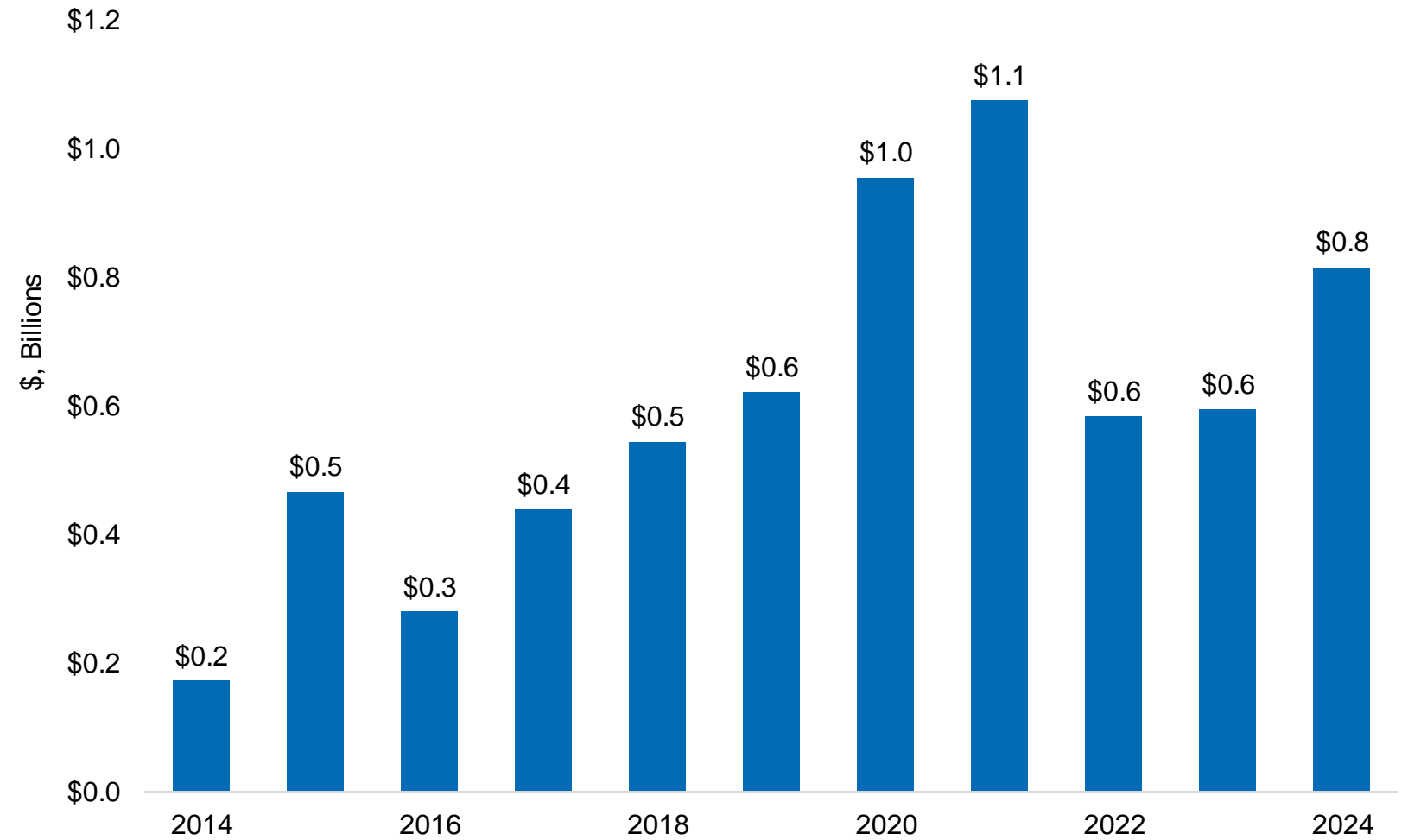
### Montreal

As a top-10 North American hub, Greater Montreal's life science sector is based around several industrial parks including Technoparc Montreal. Montreal is home to several universities, hospitals, and research centers. The region also boasts competitive operating costs compared with other large cities in Canada and the U.S.

### Vancouver

Anchoring British Columbia's network of research institutions, Vancouver is a leading destination for life science R&D in Canada. Life science employment has grown by about 65% in the past decade. Early-stage companies dominate here, and areas of concentration include drug delivery and precision health.

## Historical Venture Capital Funding



### Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Size
Aspect Biosystems	5th & Manitoba, 285 West 5th Ave., Vancouver	Vancouver – Broadway Corridor	Sublease	48,000
adMare BioInnovations	Main Alley, 110 East 5th Ave., Vancouver	Vancouver – Broadway Corridor	Direct Lease	29,910
SPEC Labs	#260-2599 Speakman Dr., Mississauga	Greater Toronto Area West	Direct Lease	20,650

# United Kingdom

- The UK Science & Innovation sector remains a key focus from the UK government to help accelerate GDP and economic growth across the country, with the key markets of Oxford, Cambridge and London being the driving force.
- Despite the challenges occupiers faced in 2024, occupational take up remain relatively subdued, with significant lettings in Oxford during the fourth quarter of the year underpinning much of the activity.
- Occupational demand has tapered off in all the key markets, with many tenants who previously had requirements focusing crucial funds into people and R&D.
- However, 2025 already has momentum with significant transactions occurring during the first few weeks of the year including 90,000 SF to ARM and more space leased to the Ellison Institute in Cambridge and Oxford, respectively.

## Key Clusters

### Cambridge

Cambridge remains at the forefront of the UK life science market and arguably the centre of excellence for Europe. Despite the gravitas that Cambridge has there is rising availability in all areas of the city due to occupier cautiousness around acquiring additional real estate. The international attractiveness of the city continues to drive demand with access to talent pool of employees, which has driven new entrants such as BioNtech and Altos within the last few years.

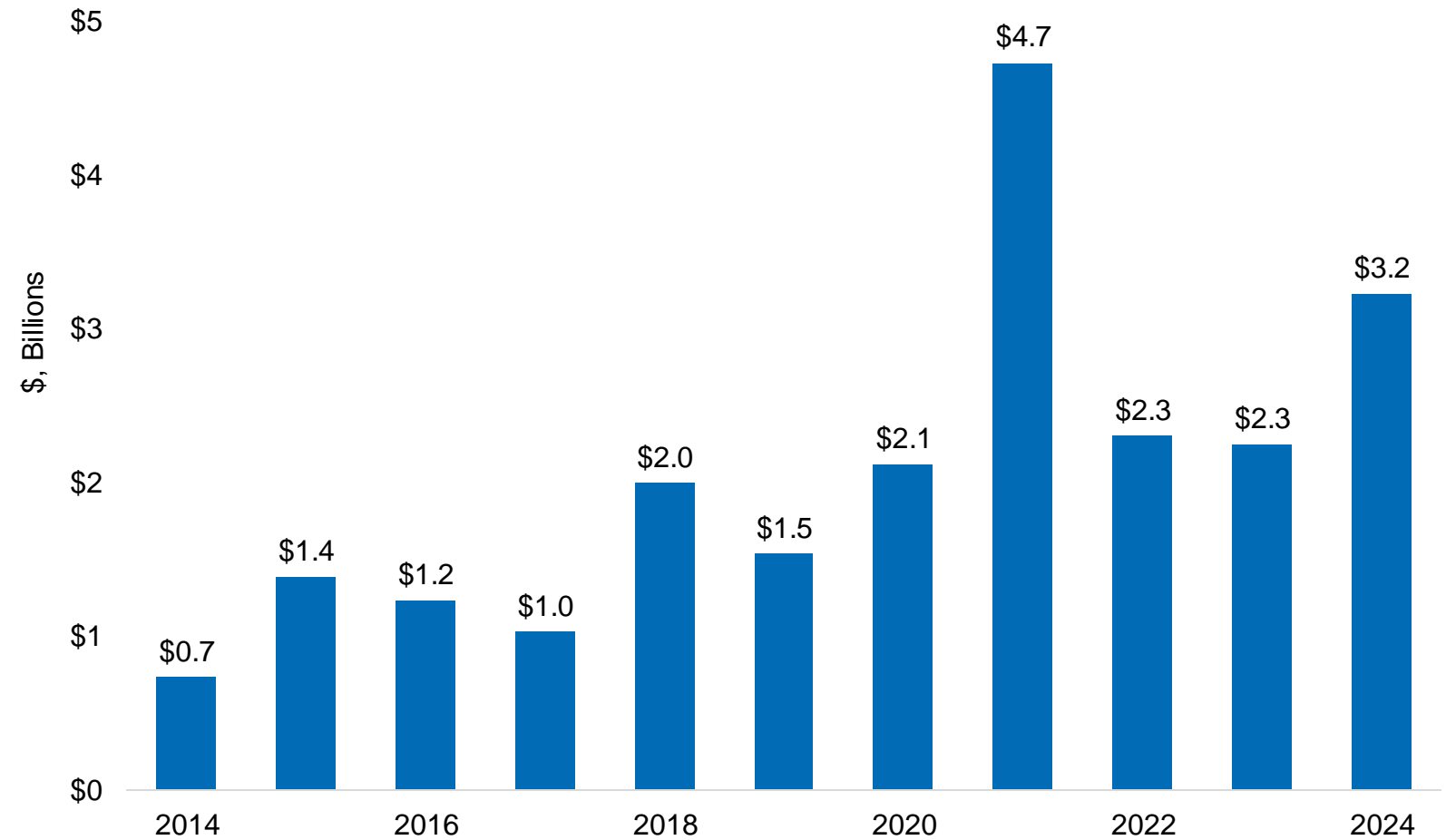
### Oxford

The city of Oxford benefits from arguably a greater array of end users than any other UK market, from space tech, advanced material through to F1 and quantum. Major institutes are expanding here, with the Ellison Institute having selected and started construction on their new facility, which will catalase innovation in the city by bringing in sector experts from around the globe into Oxford.

### London

The fundamentals for London as a world leading science & innovation market remain. The fragility of the occupier market from a laboratory perspective was highlighted during the course of 2024 with take up being muted to roughly 4% of the current development pipeline. With Eli Lilly and Life Arc looking to commit their long-term futures to London during 2025 there are reasons to be optimistic.

## Historical Venture Capital Funding



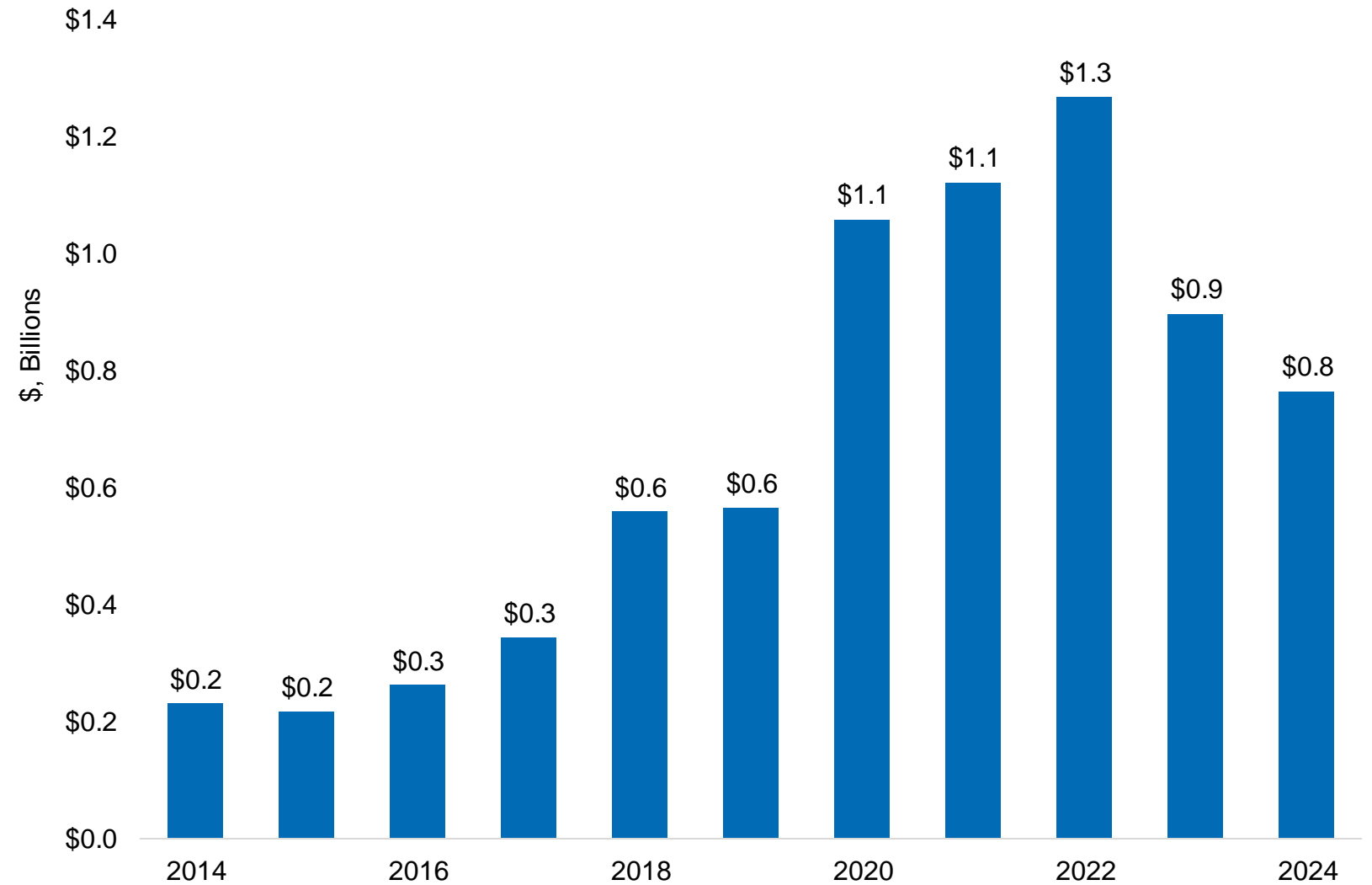
### Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Size (SF)
Novo Nordisk	Iverson Building	South Oxford	Direct Lease	61,000
Welbeck Health Partners	Orion Building, Unity Campus	South Cambridge	Direct Lease	31,000
ViaNautis Bio	Cadence Building, Unity Campus	South Cambridge	Direct Lease	10,850

# France

- France is one of the leading European life science markets, home to major global companies such as Sanofi, Servier, and Ipsen.
- Characterized by limited real estate supply due to the dominant owner-occupier model, France maintains low lab availabilities. In particular, Paris and the surrounding region lack sufficient “L1” and L2” facilities.
- While near-term supply is expected to stay constrained in the Paris region, opportunities are set to grow, with numerous projects currently under construction and at present, leasable space in the Paris Region—including L1 and L2 laboratories, associated offices, and shared areas—amounts to nearly 108,000 sq.m but is projected to more than double by the end of 2026, reaching 250,000 sq.m, and surpassing 300,000 sq.m by 2030.
- This new supply will strengthen the key life sciences clusters in the Paris Region, particularly in the southern part of the region and central Paris. The majority of this upcoming space is being developed by the private sector, including several foreign firms that have recently entered the French market, such as Kadans, Patriarche, and Biolabs.
- Biomanufacturing is growing sector within France’s life science industry, with Servier recently opening a facility in Gidy, Loiret dedicated to producing biological medicines.
- The France 2030 initiative represents a commitment, allocating more than €7.5 billion to the health sector, to solidifying France’s standing as a leader in European healthcare innovation.

## Historical Venture Capital Funding



## Key Clusters

### Paris

Paris hosts a prominent biocluster, national and international regulatory agencies, and numerous pharmaceutical companies including Merck and Boehringer Ingelheim. In the larger Île-de-France region, major clusters can be found in Villejuif and in the second ring in Evry (Genopole) and Saclay (the “French Silicon Valley”).

### Lyon

Dubbed the birthplace of life science in France, Lyon boasts a mature pharmaceutical industry with 100,000 jobs in healthcare. Anchored by Sanofi, bioMerieux, Merial, and Becton Dickinson, the region is home to numerous research centers, universities and life science firms.

### Alsace

In Alsace, health and medical technologies employ close to 40% of the region’s scientists. Located in Eastern France, the region borders Switzerland and Germany and is home to 2 universities. Alsace is also home to BioValley France, which is a competitive cluster dedicated to life science innovations.



# Life Science Market Profiles



# Boston

- Market indicators are still muddled, suggesting Greater Boston's life science market continues to search for a bottom.
- Venture capital funding increased by nearly 47% during the second half of 2024, bringing annual volumes to \$7.5 billion.
- With more than 9.0 million SF of new supply coming on line in the past 12 months, 2024 represents a historic high for deliveries.
- While tenant demand appears to have stabilized, underlying weakness persists as several users require additional funding to transact.
- The reopening of the IPO window led six local biotech companies to go public in 2024. Post initial offering performance has struggled though.

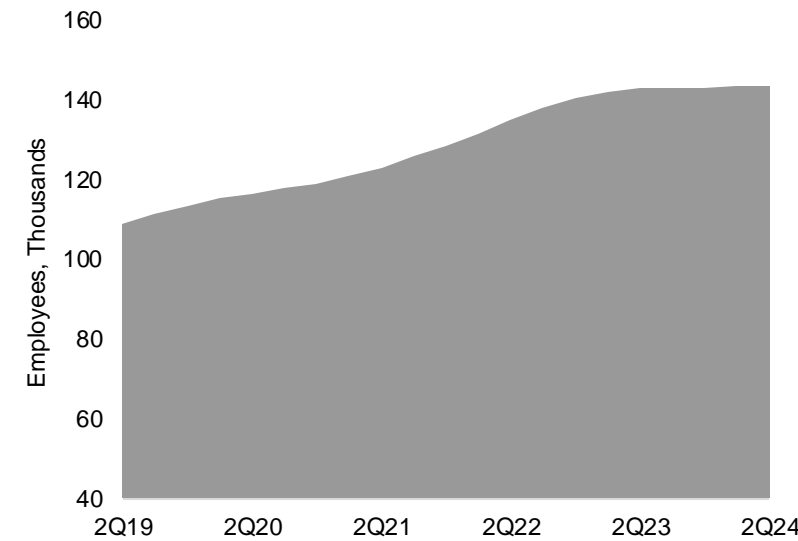
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Ultragenyx Pharmaceuticals	19 Presidential Way, Woburn	North – Route 128	Lease Extension	40,060
Verastem	117 Kendrick St., Needham	West – Route 128	Lease Extension	27,810
Flare Therapeutics	400 Technology Sq., Cambridge	East Cambridge	Direct Lease	21,261
Rubix Life Sciences	4 Kingsbury, Watertown	Urban Edge	Direct Lease	16,000

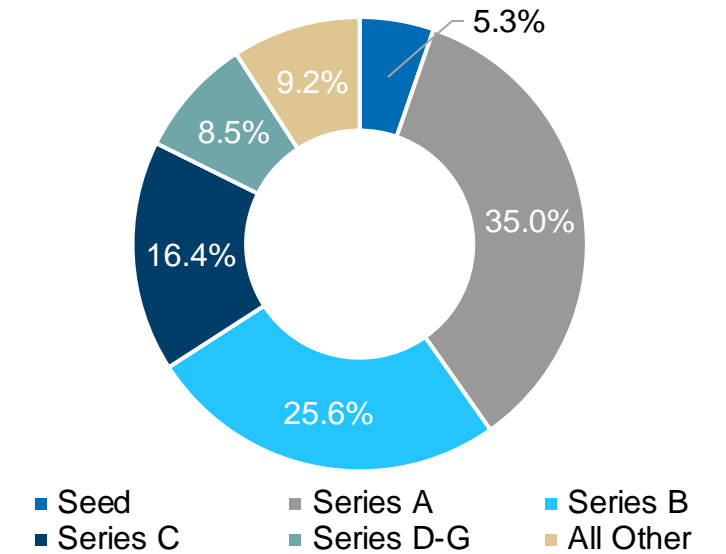
## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
Moderna Portfolio	South – Route 128	Undisclosed	Undisclosed	683,513
Cambridge Portfolio	East Cambridge	Undisclosed	Undisclosed	552,543

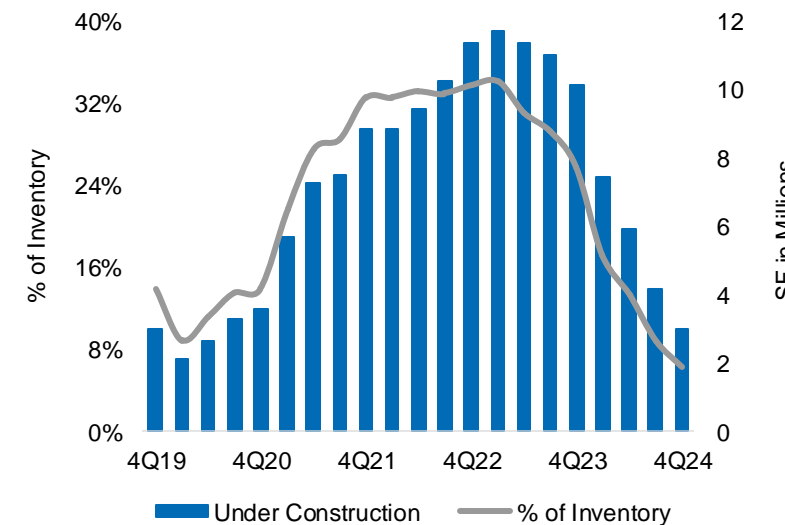
## Life Science Employment



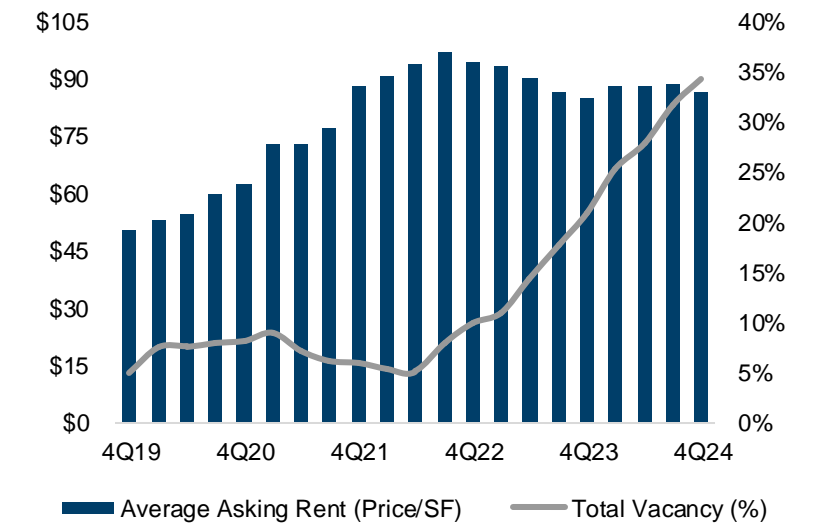
## 2024 Venture Capital Funding



## Life Science Construction



## Asking Rent and Vacancy



## Fourth Quarter Stats

48.2 MSF Total Inventory	3.6 MSF Under Construction	427 KSF 2024 Net Absorption
34.1% Vacancy Rate		\$86.32 / SF Asking Rent (NNN)

## Top Tech Transfer Universities

- Harvard University
- MIT
- Tufts University
- Northeastern University
- UMass Boston
- Brandeis University

# San Francisco Bay Area

- The Bay Area life science market demonstrated notable improvement over the past year, with market sentiment strengthening in the fourth quarter of 2024 due to a shift in interest rate policy, pent-up demand, and the deployment of previously sidelined capital.
- Despite historically high vacancy rates, the region remains a top choice for companies; offering unparalleled access to talent and a well-established life science infrastructure.
- Leasing momentum is expected to carry into early 2025, barring any unexpected economic disruptions.

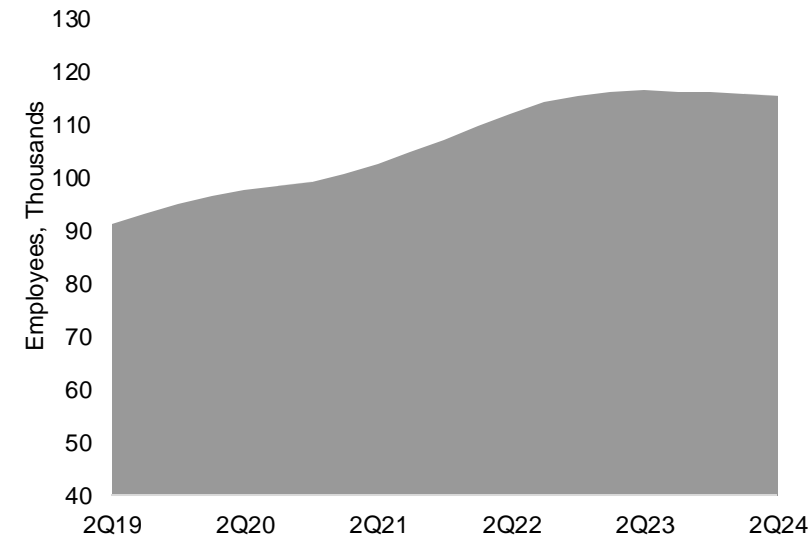
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Vaxcyte	825 Industrial Rd.	San Carlos	Renewal/Expansion	258,581
Genentech	751 Gateway Blvd.	South San Francisco	Renewal	230,592
Cellares	1100 & 1120 Veterans Blvd.	South San Francisco	Direct Lease	205,135

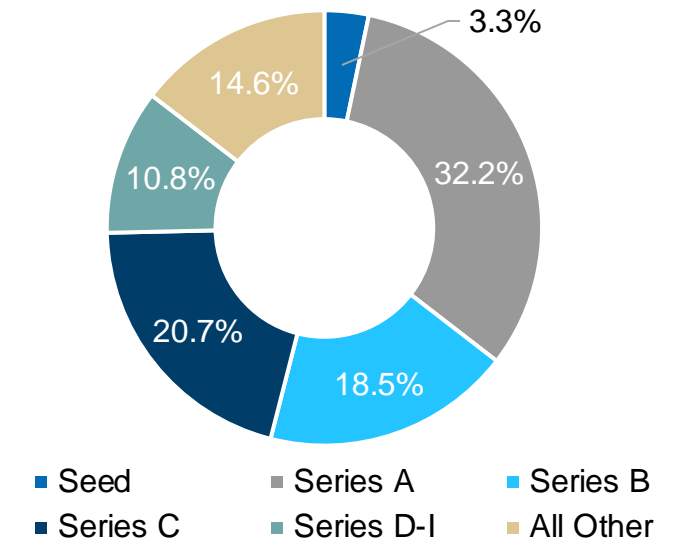
## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
849 & 863 Mitten Rd. / 866 Malcolm Rd.	Burlingame	\$24.5M	\$238	103,093

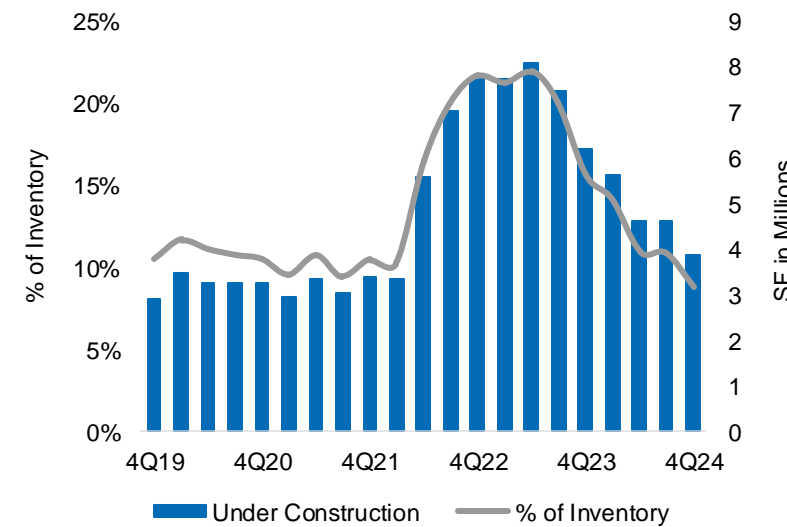
## Life Science Employment



## 2024 Venture Capital Funding



## Life Science Construction



## Asking Rent and Availability\*



## Fourth Quarter Stats

43.6 MSF Total Inventory	3.9 MSF Under Construction	-1.9 MSF 2024 Net Absorption
30.1% Availability Rate*		\$76.68 / SF Asking Rent (NNN)

## Top Tech Transfer Universities

- Stanford University
- University of California, Berkeley

\* Total availability is represented instead of total vacancy since the San Francisco Bay Area Market has not historically separated vacancy and availability.

# San Diego

- Asking rents in the core submarkets declined 2.7% over the past year. Rising vacancy and elevated sublease availability over the past two years have put downward pressure on landlords.
- Total vacancy was at 16.3%, slightly below last quarter's record high of 16.7% but 200 basis points higher than the end of 2023.
- Venture capital funding totaled \$3.5 billion and post-IPO investments totaled \$6 billion in 2024, surpassing the previous record for annual funding set in 2021.
- The development pipeline will continue to decline as speculative projects that are under construction deliver and developers will only break ground on projects with a lease in hand.

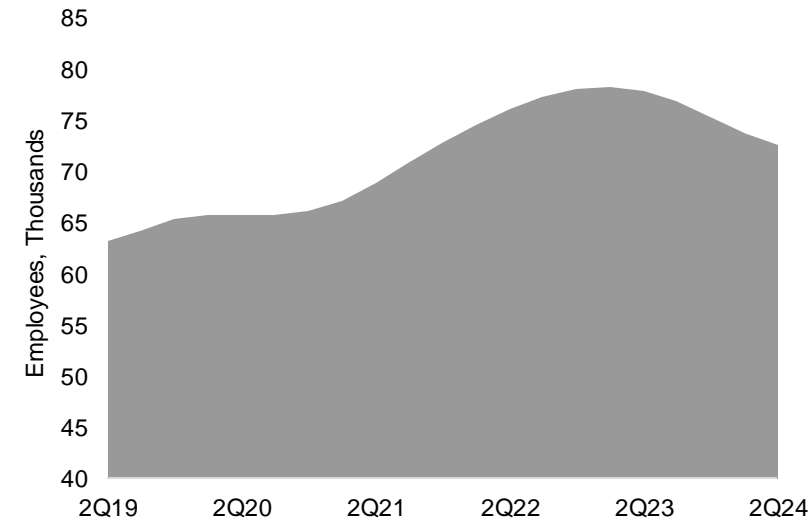
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
LabCorp	3595 John Hopkins Ct	Torrey Pines	Renewal	82,500
RayzeBio	3013 Science Park Rd.	Torrey Pines	Direct Lease	63,539
Veracyte	6925 Lusk Blvd	Sorrento Mesa	Renewal	49,634

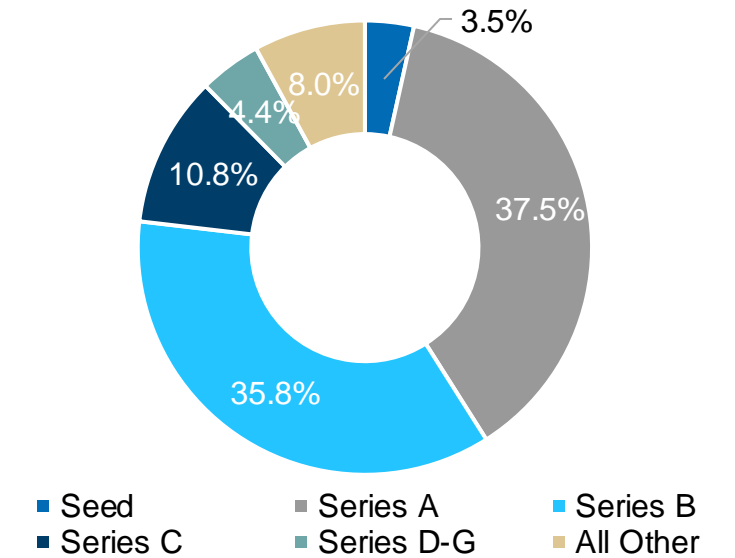
## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
4757 Nexus Center Dr.	UTC	\$48.0M	\$716	67,050
4796 Executive Dr.	UTC	\$42.0M	\$684	61,376
4755 Nexus Center Dr.	UTC	\$30.0M	\$663	45,225

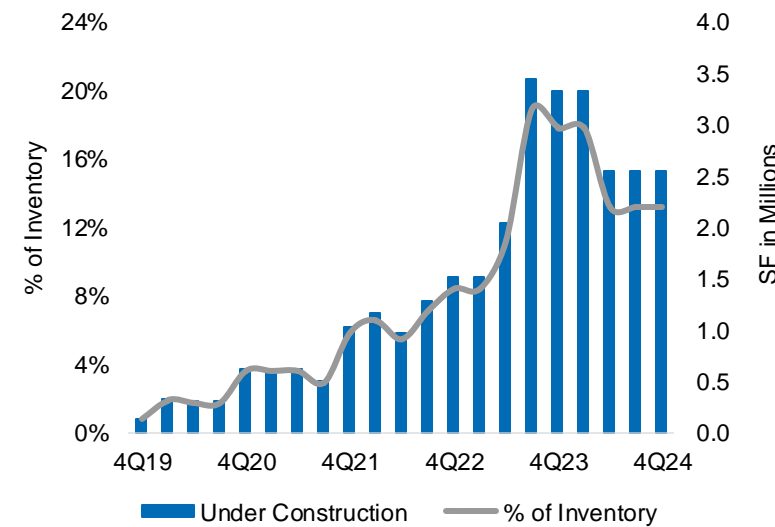
## Life Science Employment



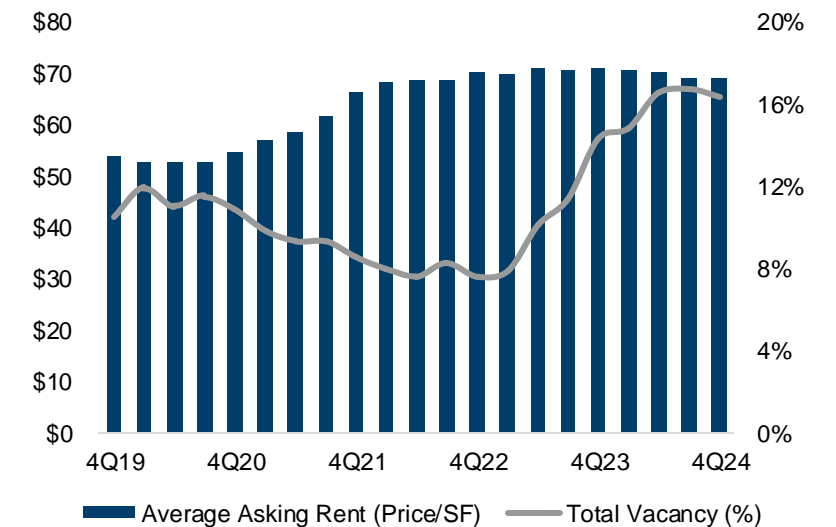
## 2024 Venture Capital Funding



## Life Science Construction



## Asking Rent and Vacancy



## Fourth Quarter Stats

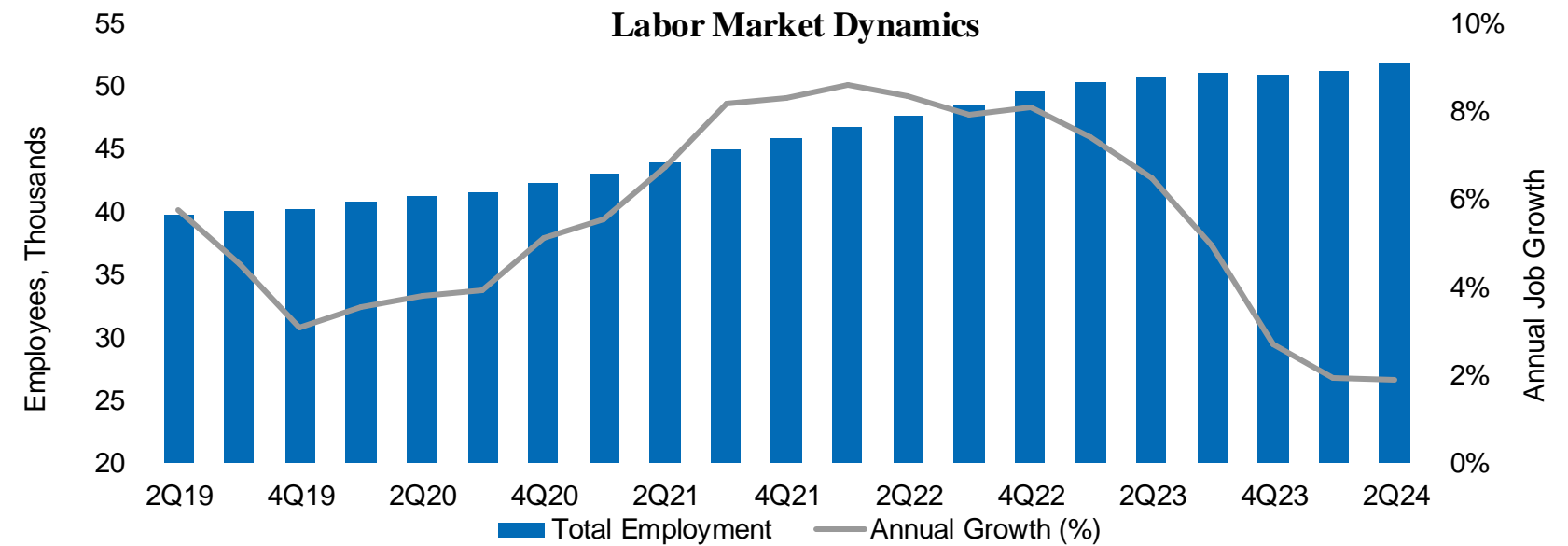
19.4 MSF Total Inventory	2.5 MSF Under Construction	276 KSF 2024 Net Absorption
16.3% Vacancy Rate		\$69.03 / SF Asking Rent (NNN)

## Top Tech Transfer Universities

- University of California, San Diego
- San Diego State University

# Raleigh/Durham (Research Triangle)

- Amgen opened its \$550 million manufacturing plant and immediately broke ground on its \$1 billion plant expansion in Holly Springs.
- These projects are expanding on Novo Nordisk's \$4.1 billion investment in the region during the third quarter of 2024, which was the largest life science investment in North Carolina history.
- Pharmaceutical companies are partnering with local colleges and high schools to create a BioWork certificate that will qualify recipients for entry-level jobs at these new manufacturing facilities.



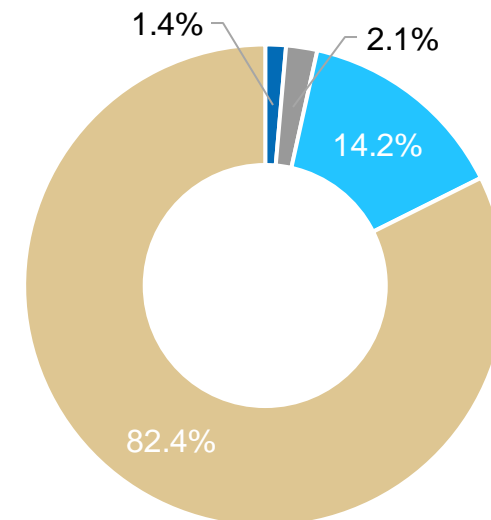
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Clarus Biologics	Discovery 2, Morrisville	RTP/RDU	Sublease	4,889
374Water	Southport 2, Morrisville	RTP/RDU	Direct Lease	3,317
Undisclosed	7020 Kit Creek Rd., Morrisville	RTP/RDU	Sublease	2,630

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
BioProcess Innovation Center	RTP/RDU	\$93.5M	\$619	151,136
Quadrangle I	South Durham	\$12.1M	\$384	31,542

## 2024 Venture Capital Funding



■ Seed ■ Series A ■ Series B ■ All Other

**Top Tech Transfer Universities**

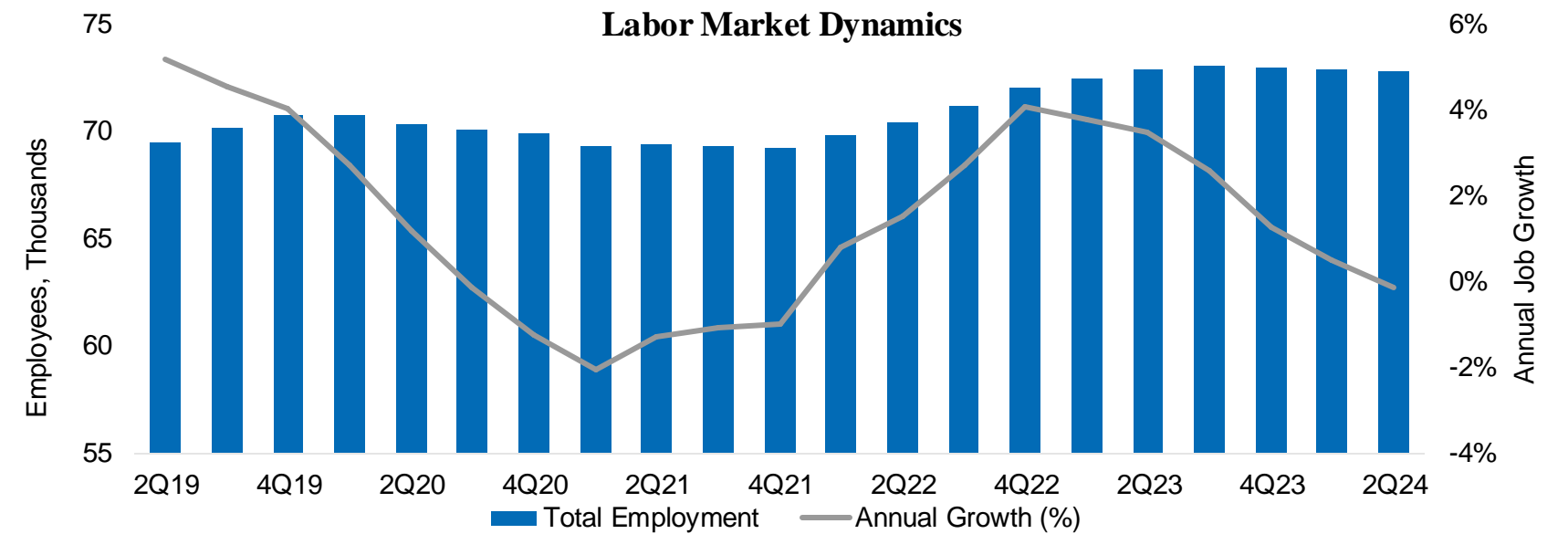
1. North Carolina State University
2. Duke University
3. University of North Carolina at Chapel Hill

## Fourth Quarter Stats

<b>12.9 MSF</b> Total Inventory	<b>0 SF</b> Under Construction	<b>-520 KSF</b> 2024 Net Absorption	<b>22.8%</b> Vacancy Rate	<b>\$36.50 / SF</b> Asking Rent (NNN)
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# Greater Philadelphia

- Annual net absorption totaled negative 210,983 SF, which is significantly lower than annual net absorption from the previous year.
- Rental rates decreased by 18% from the third to the fourth quarter of 2024, driven by cooling demand and rising vacancies in Philadelphia's life science market.
- The only life science property in the development pipeline is 2300 Market St. Anchored by Legend Biotech, the building will add 220,000 SF of laboratory space when it delivers in the third quarter of 2025.
- Despite current market conditions, local market sentiment is more optimistic heading into 2025.



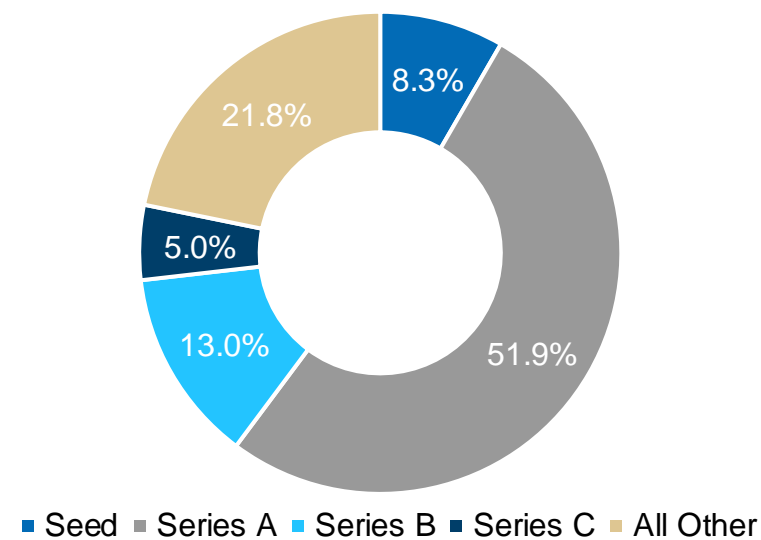
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Quaker Houghton	250 King of Prussia Rd., Radnor	Radnor/Mainline	Direct Lease	39,000
Legend Biotech	2300 Market St., Philadelphia	Market West	Direct Lease	31,000

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
1 Research Way, Princeton	Princeton Area	\$19M	\$376	50,581
1210 Ward Ave., West Chester	Chester County	\$3.6M	\$113	31,772

## 2024 Venture Capital Funding



**Top Tech Transfer Universities**

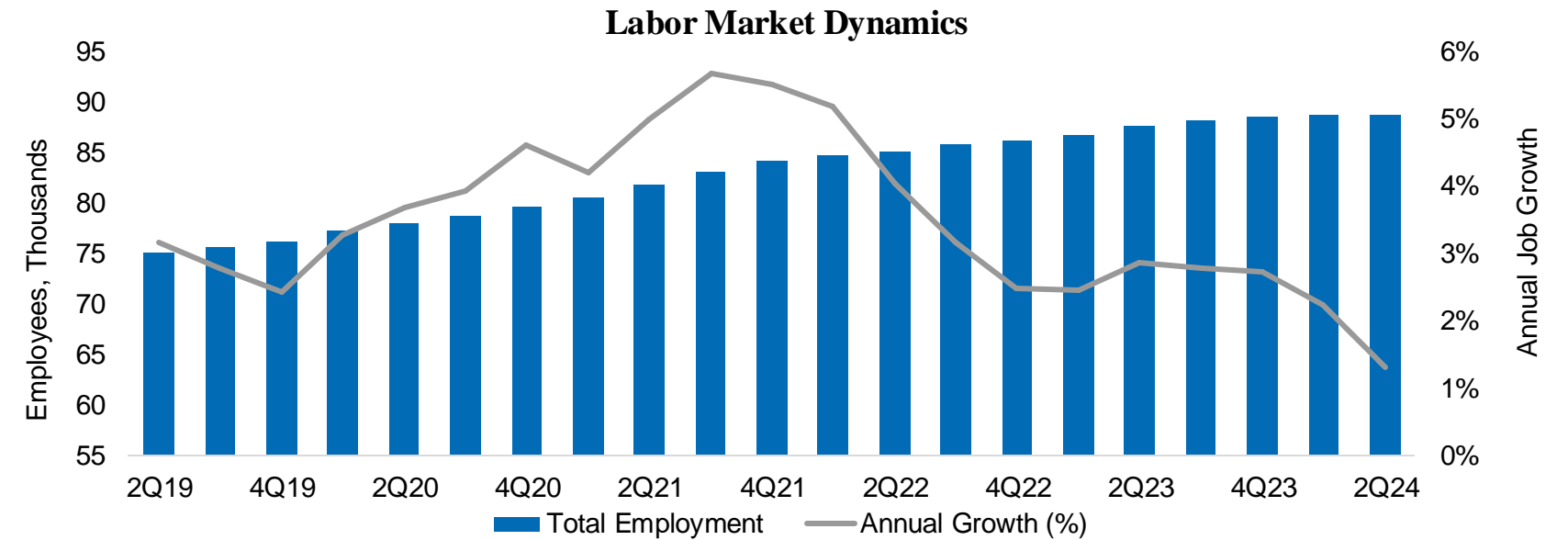
1. University of Pennsylvania
2. Drexel University
3. Temple University

## Fourth Quarter Stats

<b>7.4 MSF</b> Total Inventory	<b>220 KSF</b> Under Construction	<b>-211 KSF</b> 2024 Net Absorption	<b>11.6%</b> Vacancy Rate	<b>\$39.53 / SF</b> Asking Rent (NNN)
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# Maryland / Mid-Atlantic

- The 250,000 SF Alexandria Center at Trville Gateway in the North Rockville submarket delivered in the fourth quarter of 2024 fully-occupied by MilliporeSigma. There are no purpose-built developments remaining under construction going into 2025.
- Vacancy will continue to decrease as near-term supply risk has diminished.
- Asking rents have begun to stabilize, coinciding with decreased vacancy and a lack of new speculative supply.
- Sublease availability declined over the fourth quarter of 2024 as tenants opt for flexible, built-out spaces over committing to longer-term leases.



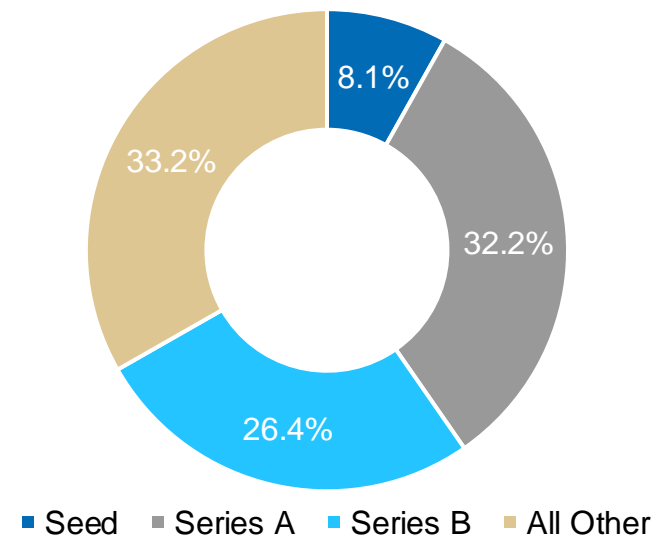
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
AstraZeneca	15010 Broschart Rd., Rockville	North Rockville	Sublease	18,218

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
9119 Gaither Rd., Rockville	North Rockville	\$5.0M	\$198	25,263
7210 Corporate Court, Frederick	Frederick County	\$4.2M	\$139	30,281

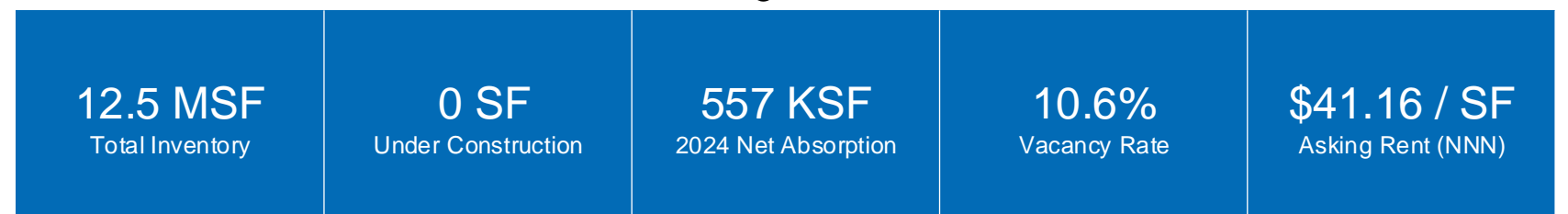
## 2024 Venture Capital Funding



### Top Tech Transfer Universities

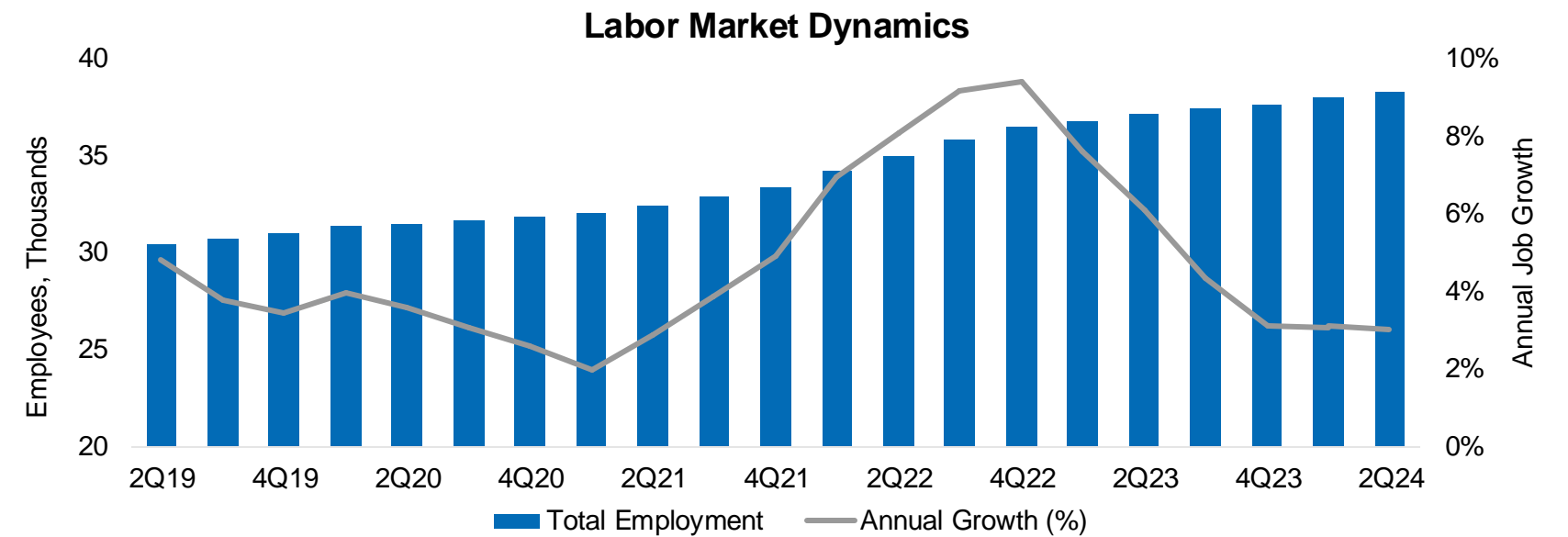
1. Johns Hopkins University
2. University of Maryland, College Park

## Fourth Quarter Stats



# Seattle

- In the fourth quarter of 2024, the Puget Sound life science market recorded modest net absorption of 20,424 SF. By year-end, net absorption resulted in a net negative of 73,509 SF. However, the primary factor contributing to the rising vacancy rates has been the addition of new vacant supply to the market.
- Sublease availability remains elevated at 4.2%, with roughly 473,000 SF available.
- Asking rents in the Puget Sound softened during the fourth quarter of 2024, with average asking rates declining to \$68.36/SF NNN.
- Leasing activity slowed late in 2024 following a strong first half of the year. Nevertheless, annual leasing totals increased year-over-year, reaching nearly 783,000 SF in 2024.



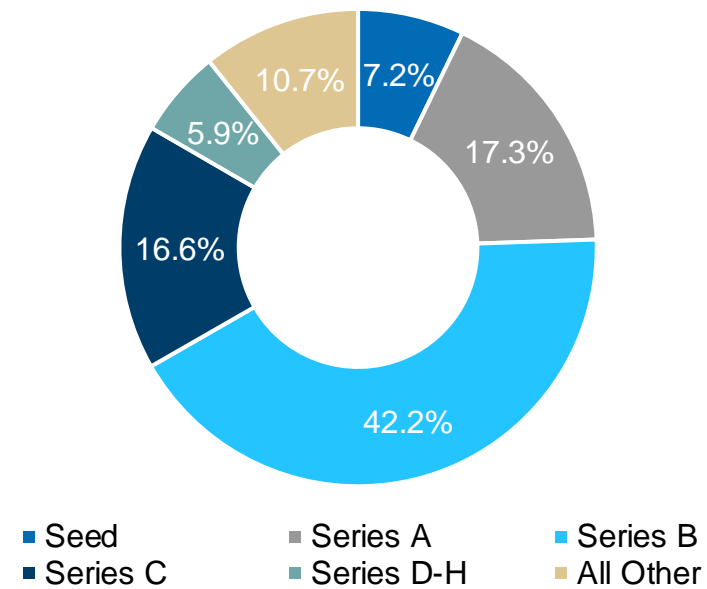
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Pfizer	21720 23 <sup>rd</sup> Dr. SE, Bothell	Bothell/Kenmore	Direct Lease	17,715

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
1201/1208 Eastlake, Seattle*	Lake Union	\$300.0M	\$1,440	240,000
1165 Eastlake, Seattle	Lake Union	\$150.0M	\$1,498	100,096

## 2024 Venture Capital Funding



**Top Tech Transfer Universities**

1. University of Washington
2. Washington State University

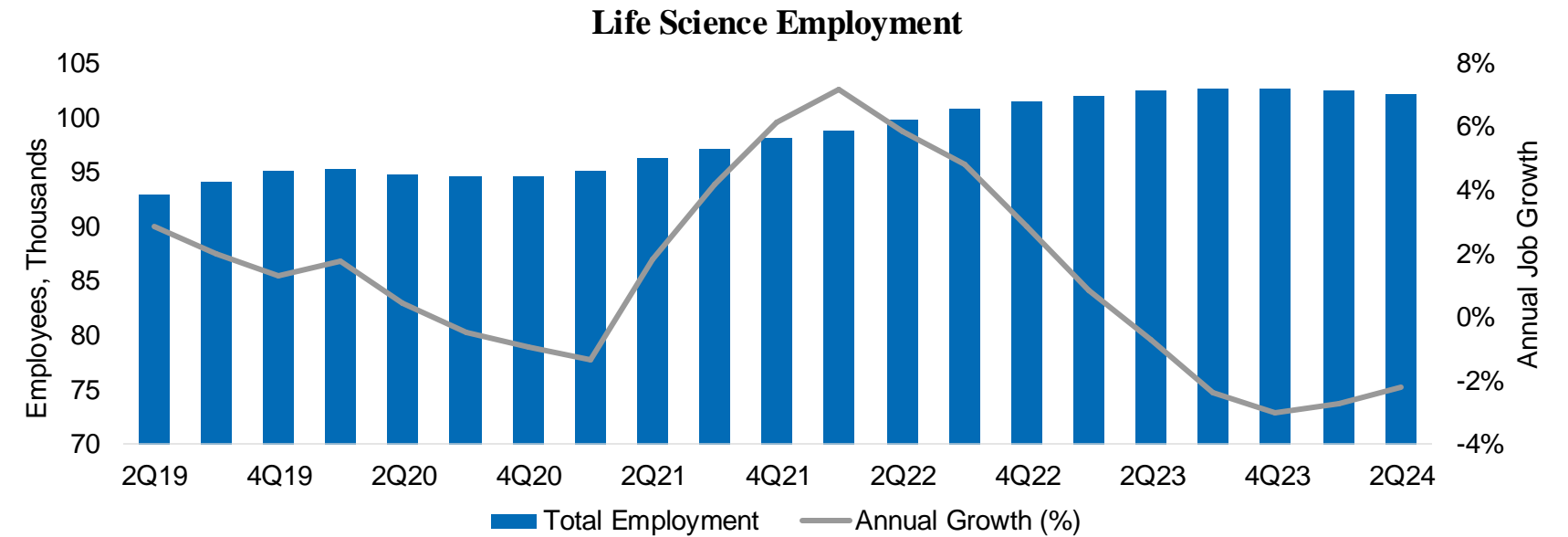
## Fourth Quarter Stats





# Northern New Jersey

- Within the state's borders reside 14 of the top 20 pharma companies and 8 of the top 10 R&D companies in the world.
- Available lab space is limited despite the new vacancies, and current demand for space exceeds one million SF as venture capital investment and demand have yet to slow.
- New Brunswick's 570,000 SF HELIX property is New Jersey's largest investment in life sciences and medical education. The property is set to deliver in the third quarter of 2025.
- The former MERCK global headquarters at 15 Nest Dr. in Kenilworth, now rebranded as NEST, has been transformed into a multitenant life science and tech research hub, offering 1.5 million SF of state-of-the-art lab space.



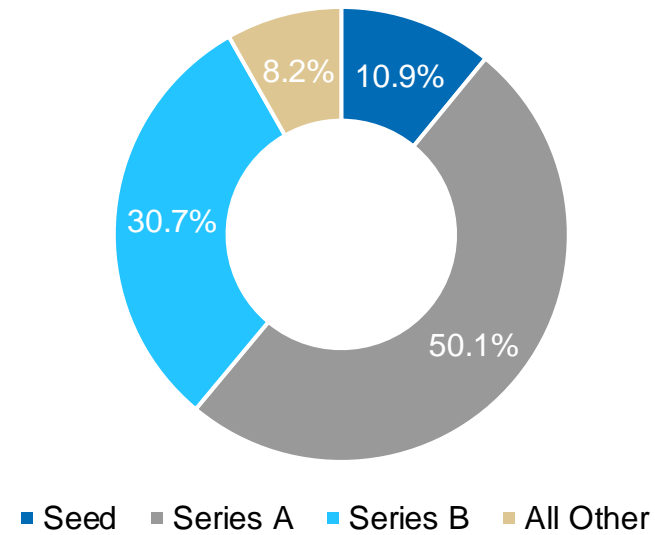
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
CoreWeave	11 Nest Dr., Kenilworth	Union Area	Direct Lease	280,000
Revlon	15 Nest Dr., Kenilworth	Union Area	Direct Lease	62,000
NJIT	15 Nest Dr., Kenilworth	Union Area	Direct Lease	25,000

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
1 Research Way, Princeton	Princeton Area	\$19M	\$376	50,581

## 2024 Venture Capital Funding





### Top Tech Transfer Universities

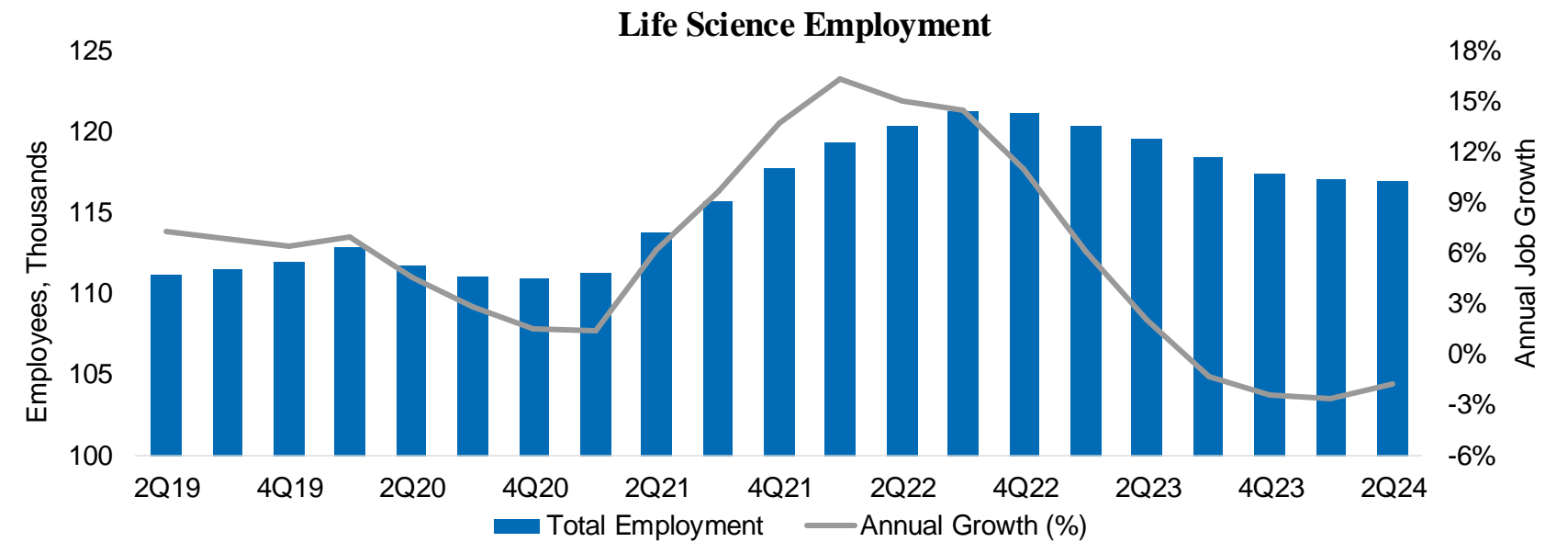
1. Princeton University
2. Rutgers University New Brunswick

## Fourth Quarter Stats



# Los Angeles / Orange County

- Increased tour activity and proposals over the third and fourth quarter of 2024 indicate that local life science tenant activity has experienced an uptick, potentially fueled by easing macroeconomic conditions and a better funding environment.
- Over the past year, the Los Angeles market recorded a decline in venture capital and grant funding, which totaled \$2.2 billion, but is now showing signs of coming back.
- While vacancy has ticked up, the overall lack of direct lab space has acted as a buoy, keeping rates steady and stabilizing the local market amidst broader capital market constraints and conservative demand.



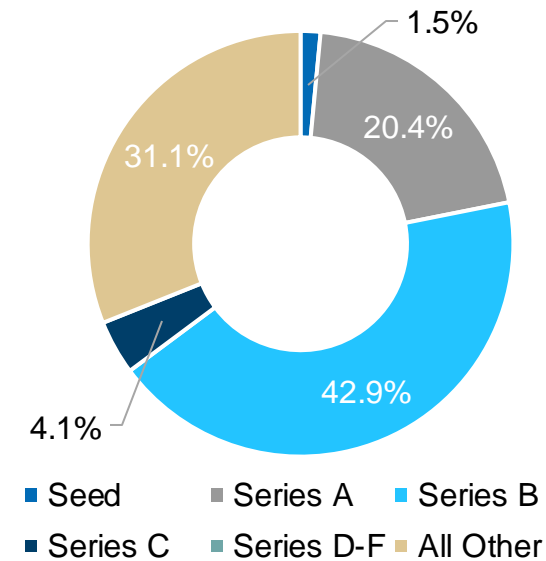
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Carnegie Science	100 W Walnut St., Pasadena	Pasadena	Direct Lease	58,309
Captura	60 San Gabriel Blvd., Pasadena	Pasadena	Direct Lease	8,404

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
5210 Pacific Concourse Dr, Los Angeles	El Segundo	\$55M	\$324	170,000

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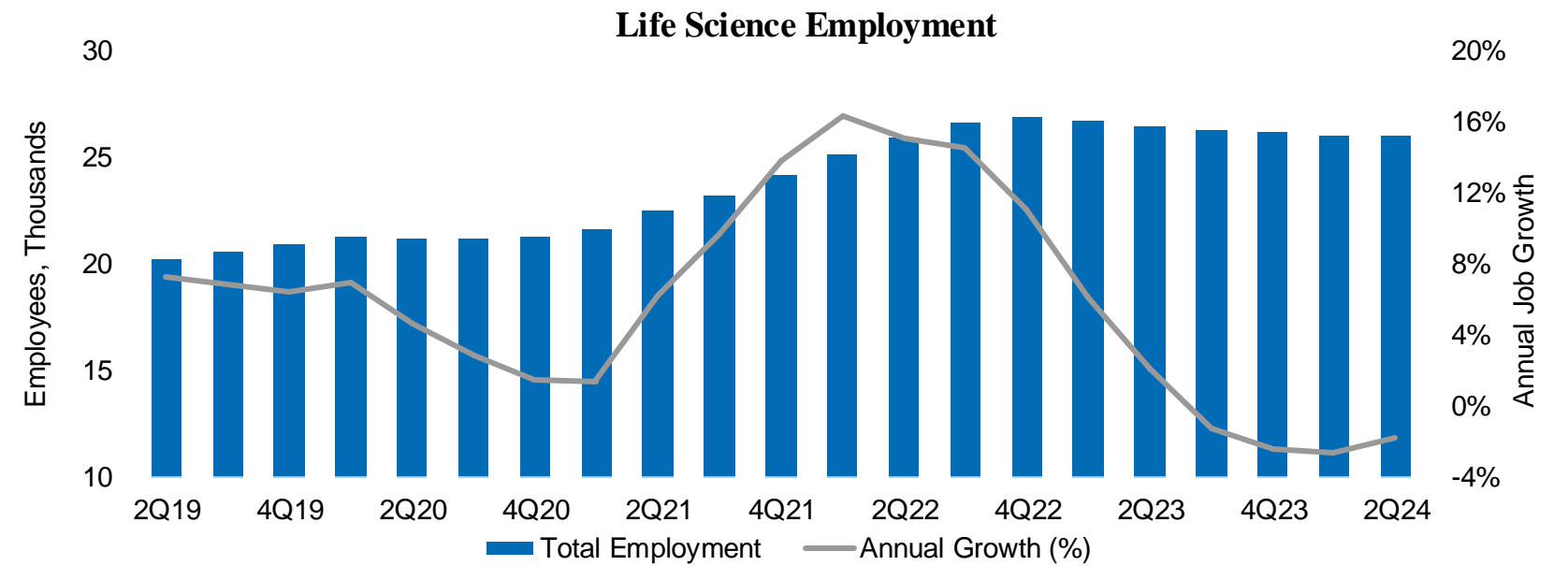
1. California Institute of Technology
2. USC
3. UC Los Angeles
4. UC Davis
5. UC Irvine

## Fourth Quarter Stats

12.5 MSF Total Inventory	760 KSF Under Construction	-52 KSF 2024 Net Absorption	4.1% Vacancy Rate	\$63.00 / SF Asking Rent (NNN)
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# New York City

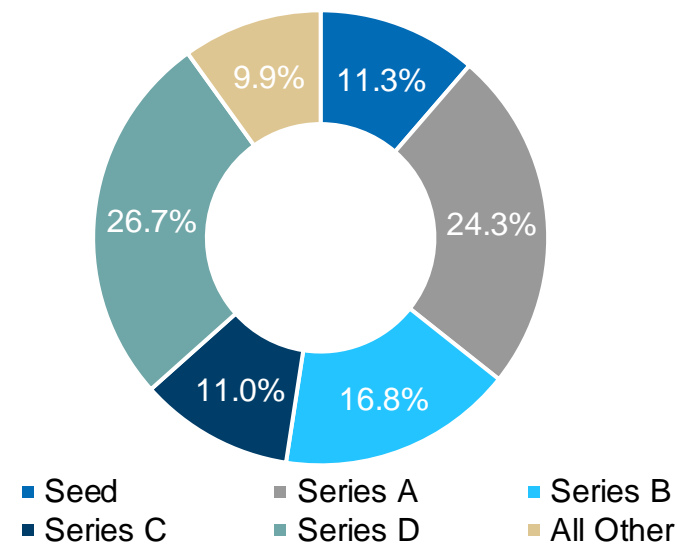
- The Chan Zuckerberg Initiative announced the opening of a new Biohub in NYC. CZ Biohub NY will be housed on Columbia University's campus and will include collaborative efforts from Columbia, The Rockefeller University, and Yale University. The city and state of New York are each contributing \$10 million in funding.
- The city and state of New York also announced a public-private partnership called SPARC Kips Bay, a new 1.5 million SF hub that will encompass a full city block for life science, academic, and medical use.
- Construction completed on 2226 Third Ave. (The Labs @ 121), bringing a fully-vacant 197,427 SF building to the market.



## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Chan Zuckerberg BioHub	615 West 131st St.	Upper West Side	Direct Lease	37,840
Waypoint Bio	430 East 29 <sup>th</sup> St.	East Side	Direct Lease	3,413

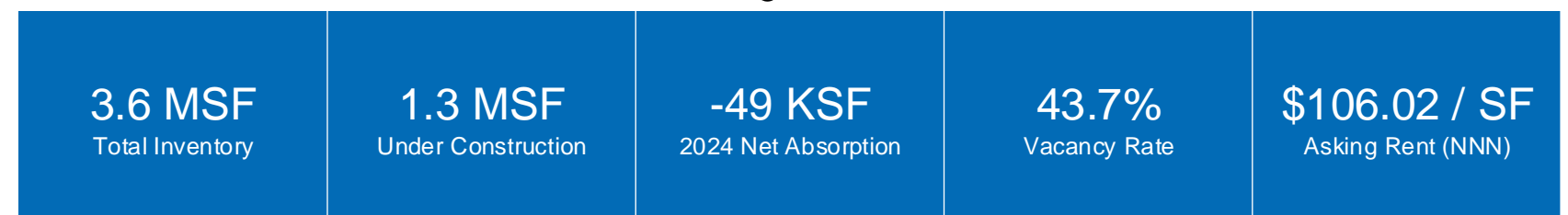
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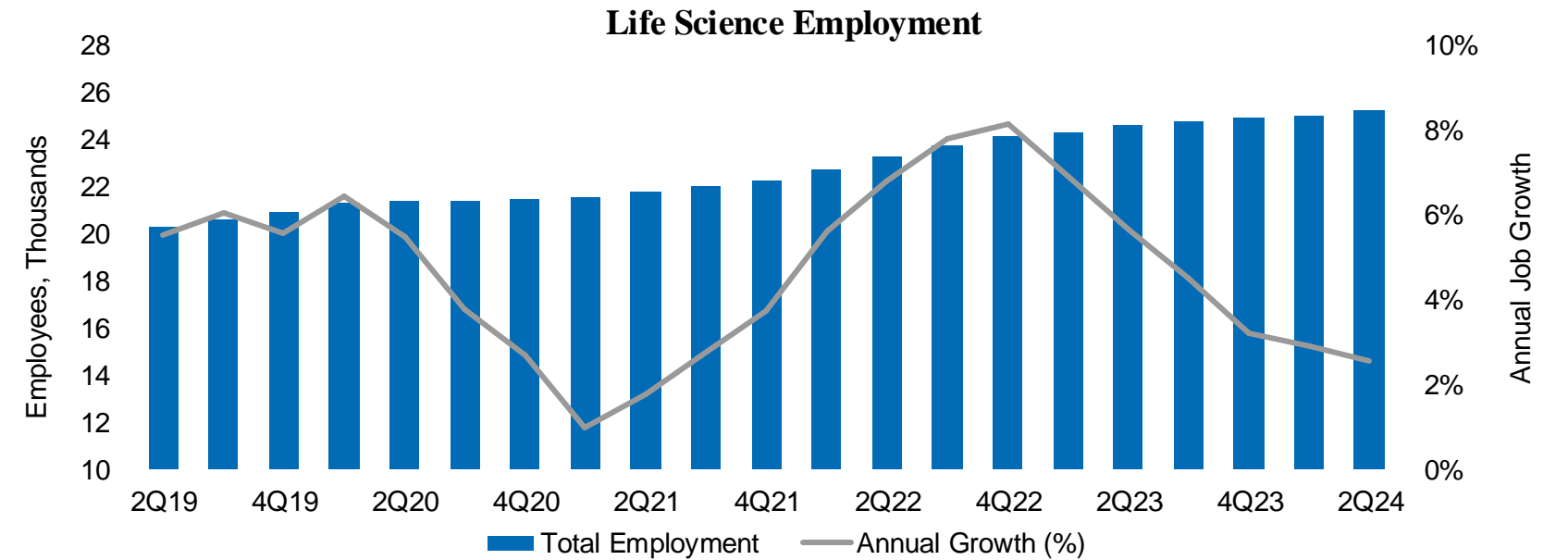
1. Columbia University
2. New York University

### Fourth Quarter Stats



# Denver/Boulder

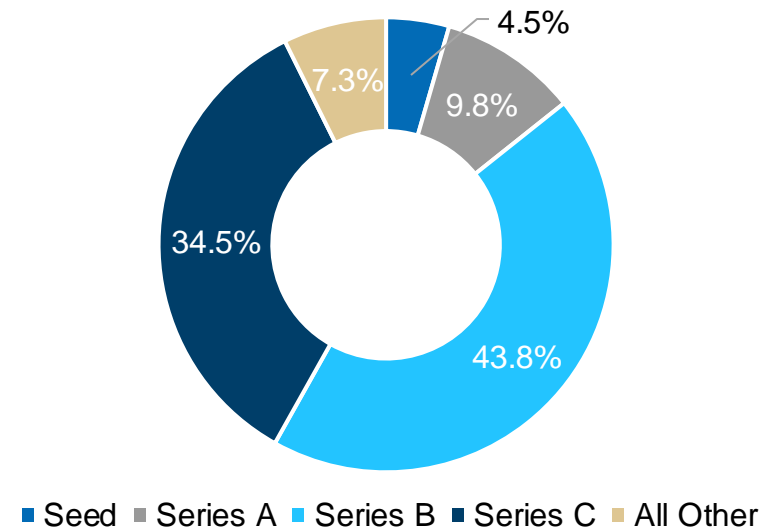
- New space that will be delivering in 2025 consists of converted product coming to the market, featuring a variety of spec lab spaces.
- Colorado life science companies raised \$2.2 billion in 2024, which represents the second time in the past four years funding has exceeded \$2 billion.
- Over the past eight years, Colorado has attracted more than \$12 billion for life science research and development from public and private sources as well as federal, state, and foundation grants.
- Sublease availability decreased with Ambrosia Biosciences taking down 20,000 SF from Pfizer and Vitrivax subleasing roughly 40,000 SF from Inscripta.
- Investment activity remains limited, with no life science buildings changing hands in the fourth quarter of 2024.



## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Vitrivax	5500 Central Ave., Boulder	Boulder	Sublease	40,788
Ambrosia Biosciences	1885 33rd St., Boulder	Boulder	Sublease	20,000
RefinedScience	2115 N Scranton St., Aurora	Aurora	Direct Lease	8,781

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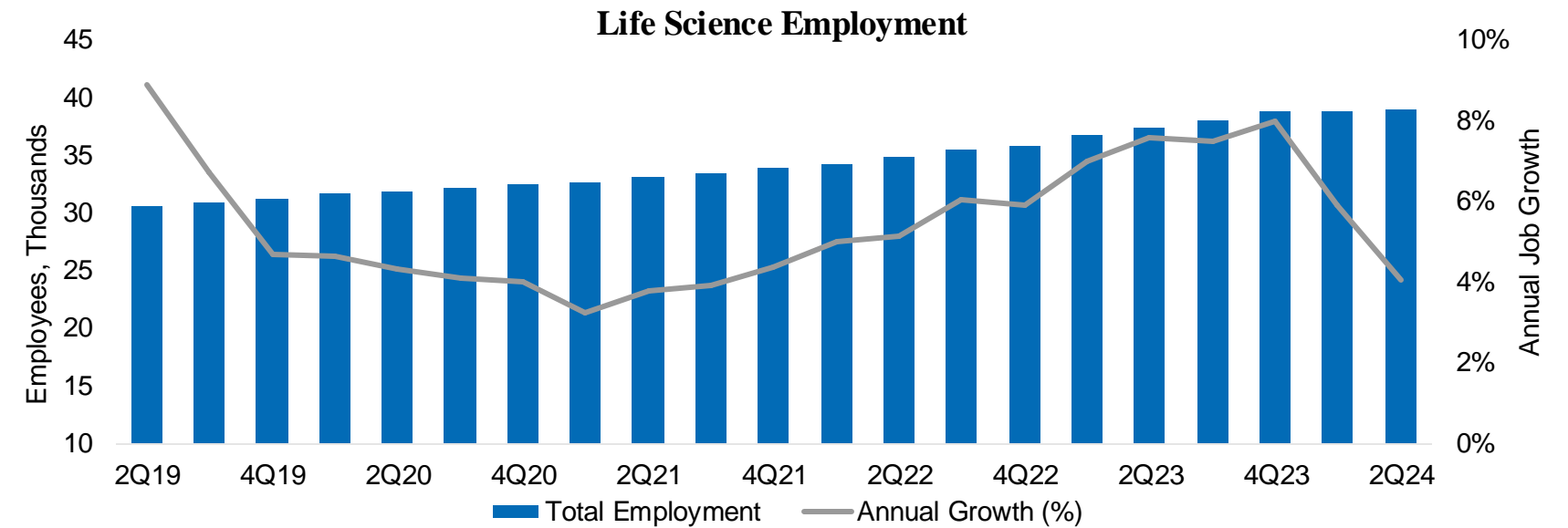
1. University of Colorado Boulder
2. Colorado School of Mines
3. University of Denver

### Fourth Quarter Stats

<b>4.7 MSF</b> Total Inventory	<b>369 KSF</b> Under Construction	<b>41 KSF</b> 2024 Net Absorption	<b>10.9%</b> Vacancy Rate	<b>\$60.00 / SF</b> Asking Rent (NNN)
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# Houston

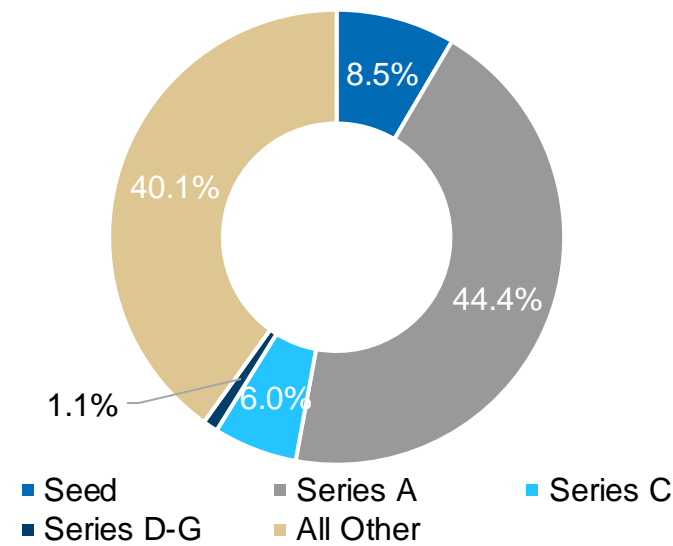
- The first tenants at Helix Park are preparing to move in, with TMC member institutions Baylor College of Medicine and Houston Methodist expected to occupy the Dynamic One building by the first quarter of 2025.
- Baylor College of Medicine will anchor Dynamic One by occupying 114,000 SF and Houston Methodist will occupy 75,800 SF across two floors.
- Portal Innovations moved into its space at the TMC3 Collaborative Building in October of 2024. The life science-focused venture capital firm has leased 30,000 SF of lab space, with plans to incubate its member companies. March Biosciences, Spanios, Crossbridge Bio and Artidis represent some of Portal's member companies.
- Rice Universities' incubator, RBL, has leased 11,000 SF at Dynamic One to support early-stage companies spinning out of the university.



## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
Undisclosed	2575 W Bellfort Ave., Houston	Bellaire/Medical Center	Direct Lease	13,294
RBL	1840 Dynamic Way., Houston	Bellaire/Medical Center	Direct Lease	11,000

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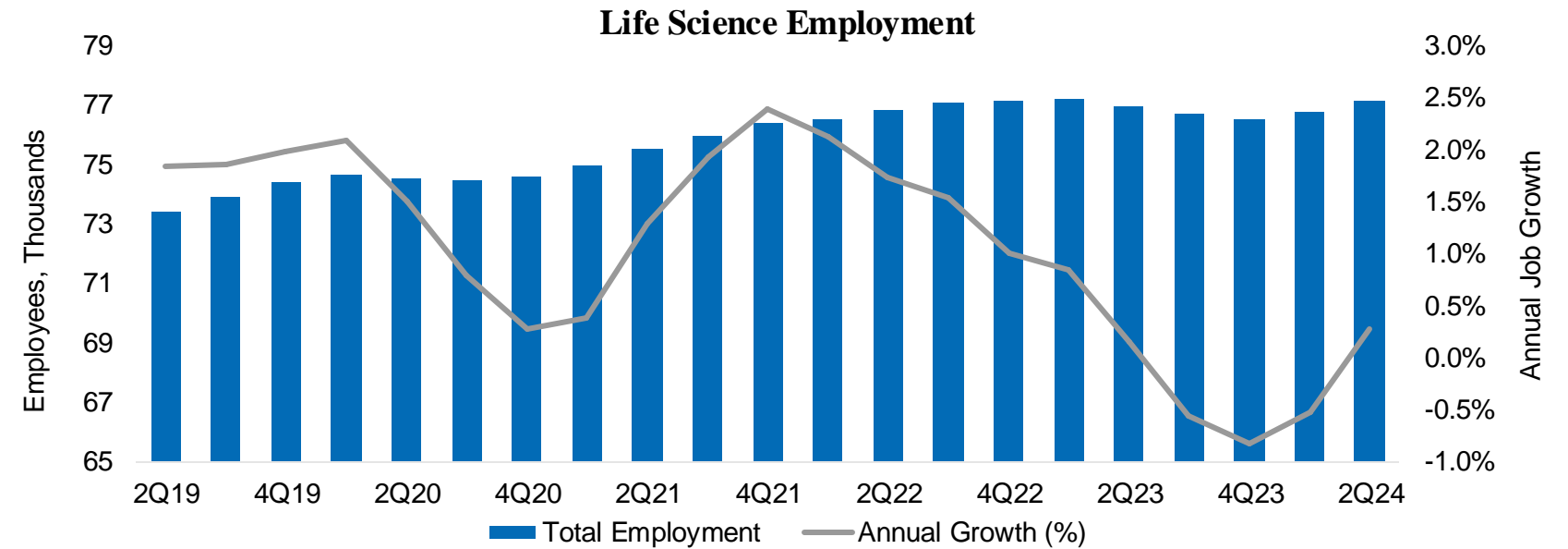
1. Rice University
2. University of Houston

## Fourth Quarter Stats



# Chicago

- Trammel Crow's new life science building, Evanston Labs, located near Northwestern University delivered in the fourth quarter of 2024.
- COUR Pharmaceuticals, who signed a lease for 48,000 SF late in the year, represents the only tenant in Evanston Labs. The clinical-stage biotech firm that develops autoimmune therapies will be moving in the second quarter of 2025.
- Singerman Real Estate's acquisition of the empty lab building at the Illinois Science & Technology Park represents the only investment sale of the quarter. The buyer already owns two other properties in the park. The significantly discounted price represents a diminished interest in the assets type by investors.
- With a vacancy rate of more than 50% and one additional property, Hyde Park Labs, slated to deliver in 2025, the market has several quality options for tenants.



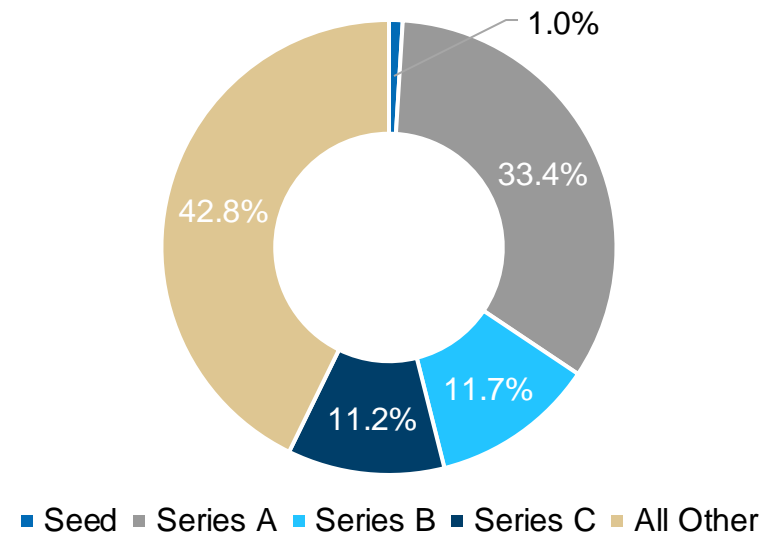
## Select Lease Transactions

Tenant	Building / Address	Submarket	Type	Square Feet
COUR Pharmaceuticals	710 Clark St., Evanston	North	Direct Lease	47,997
Rhaeos	400 N Aberdeen St., Chicago	Fulton Market	Direct Lease	7,344

## Select Sale Transactions

Building / Address	Submarket	Sale Price	Price / SF	Square Feet
8030 Lamon Ave., Skokie	North	\$3.3M	\$24	138,851

## 2024 Venture Capital Funding



**Top Tech Transfer Universities**

1. Northwestern University
2. University of Chicago
3. University of Illinois at Chicago

## Fourth Quarter Stats

<b>2.0 MSF</b> Total Inventory	<b>302 KSF</b> Under Construction	<b>-77 KSF</b> 2024 Net Absorption	<b>52.8%</b> Vacancy Rate	<b>\$65.00 / SF</b> Asking Rent (NNN)
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