



GENECODA[®]
EXECUTIVE AND PROFESSIONAL SEARCH

US Life Science Employment Pulse Report © Q3, 2022



With Exclusive Insights by

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The following report depicts all online job postings (Ads) for the Life Sciences sector in the US over the past three years including trending patterns and sector sub-components. Online Ads are a leading indicator in employment and the hiring cycle. As such, sector posting data provides meaningful market activity and direction that can assist business leaders in the Life Sciences sector make informed decisions regarding human capital. **A full explanation of the data used to create this report follows the report, including sector and sub-sector definitions and indices.**

What's Happening in the US Life Sciences Job Market?

Key Findings

- ✕ **Employers posted 578, 402 Ads in the Life Sciences Sector in Q3, 2022** down from a revised 599,502 Ads in Q2, 2022.
- ✕ **Q3, 2022 represented an ~ 12% Year-Over-Year (YoY) increase** in Ads posted in the Life Sciences sector.
- ✕ The number of Ads fell beneath the Two Period Moving Averages for the first time in eight consecutive quarters **suggesting further downside**. Volatility was not significant.
- ✕ Sub-Sector YoY Industry Component Performance:
 - Research, Testing and Medical Labs (RTM) **increased ~ 2%**
 - Pharmaceutical & Medicine Manufacturing (PMM) **increased ~ 37%**
 - Medical Devices & Equipment (MDE) **increased ~ 1%**

GeneCoda® Insights

- ✕ **Q3, 2022 decreased about 3.5% over Q2, 2022. This quarter marked the first downturn in 2 years of increasing Ad posts.** The Research Testing and Medical Labs (RTM) and the Pharmaceutical & Medicine Manufacturing (PMM) segments each decreased ~ 1% while the Medical Devices and Equipment (MDE) segments decreased ~ 2%.
- ✕ **What to Expect Near Term?** At a “grass roots” level, companies continue to add key staff. Recruitment lead times are still long in specialized cases, but upward wage pressures appear to be levelling off. Since the onset of COVID, remote / hybrid ad posts represent an increasing share of all posts at ~ 14% (Fig 7), forcing local employers to compete with non-local employers for local talent. Although we are tracking continued industry downsizing reports, they have not been large enough to dampen overall recruitment activity. Some companies are putting programs on hold, however. Top industry “Hard Skills” cited most frequently in Q3 Ad posts in rank order include Pharmaceuticals, GMP, Marketing, Biology, Clinical Trials, Auditing, Data Analysis, New Product Development, Biotechnology, and SOP.



Forecasting Q4, 2022 – Flat to Mild Downside

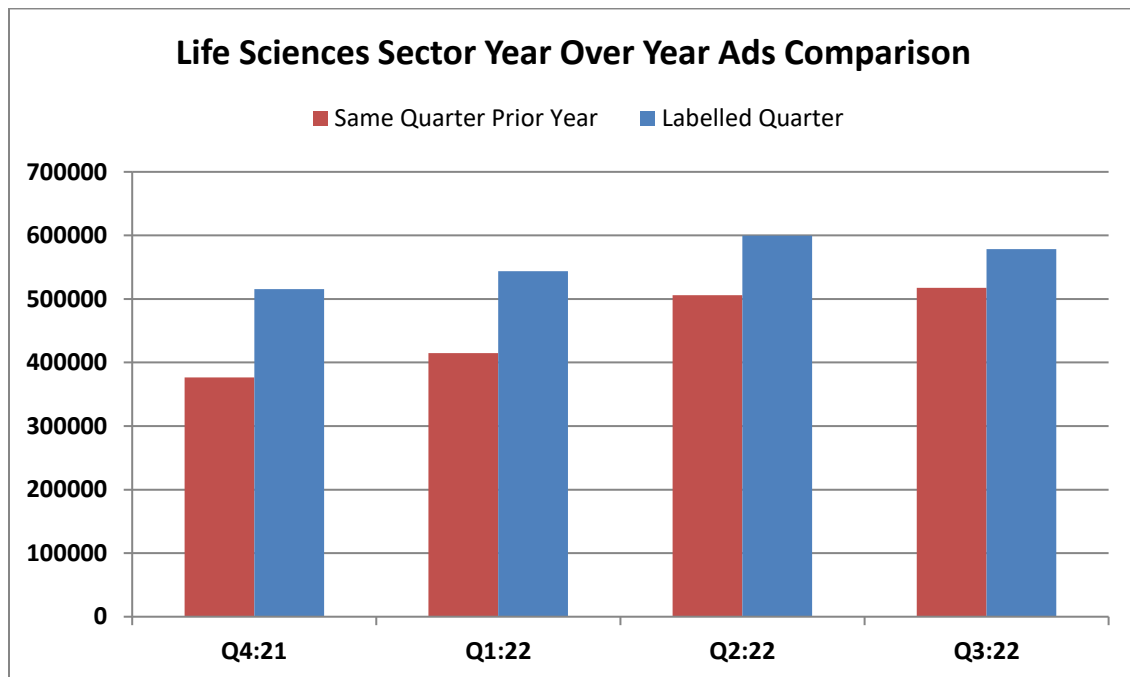
- ✕ The comps were double digit again in Q3, 2022 but we expect continued headwinds in Q4, 2022 with more challenging quarterly comparisons and sustained volatility in the investment markets. Relative equity prices (PMM Fig. 5 and MDE Fig. 6) are on clearly divergent directional paths suggesting further weakening in the number of Ad posts.
- ✕ We expect a flattening to mild downside in RTM, PMM and MDE compared with Q3, 2022. Regarding the inter-relationship of RTM (bigger services focus) to PMM (product focus), RTM has ~ 19% more Ads posted than PMM down from ~ 26% in Q2, 2022. This differential is the lowest we have seen in several quarters underscoring our estimates of a flat to mild downside.

Our forecast is 578,530 total Ads posted for the sector in Q4 of 2022 which would represent an ~ 11% increase from Q4 of 2021 and a ~ 0% increase from Q3 of 2022.

Business Impact of Ad Posting Aging, Workforce Composite and Salaries

- ✕ In Q3 of 2022, the median posting duration for a posted Ad was 27 days in the Life Sciences sector versus the national average of all postings at 30 days.¹
- ✕ Ad postings classified as “full time” in Q3 of 2022 remained at ~ 97% of all posted positions.
- ✕ The median advertised salary across the Life Sciences sector in Q3 of 2022 was approximately \$56,200. ~ 10% of all postings contained compensation data down from 13% in Q2, 2022. **The median advertised salary for posts classified as remote or hybrid was \$105,900.**

Figure 1: Comparison of All Current Life Science Job Postings with Prior Year

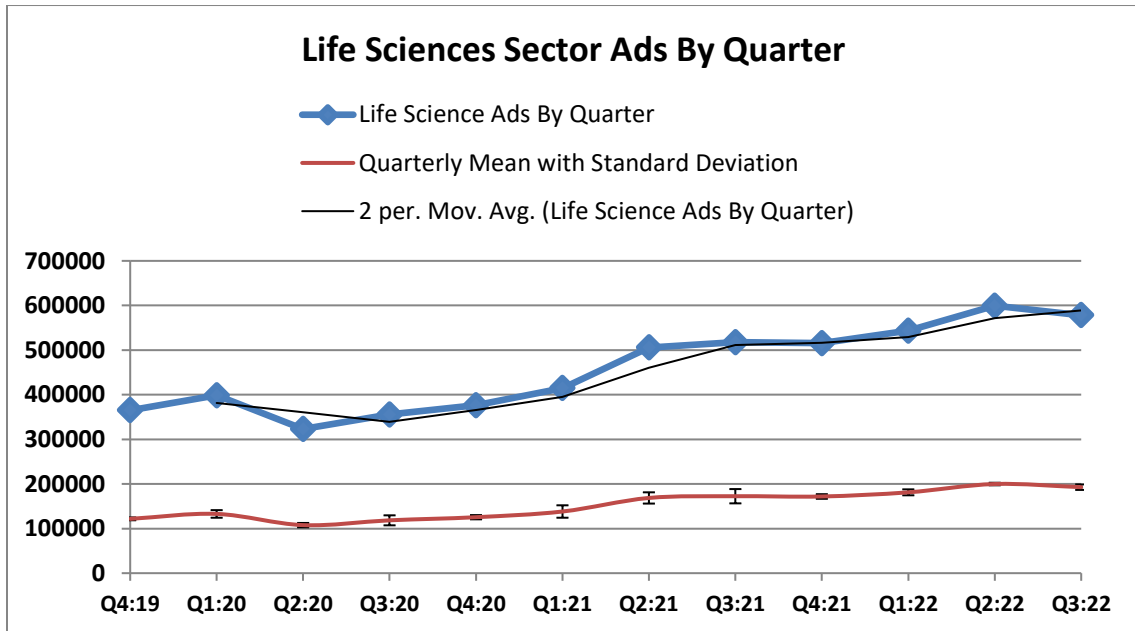


Source: Lightcast, 2022

¹ Posting duration is best used as a relative measure of time to fill when comparing occupations, regions, and skill sets. Duration is based on a curated subset of job postings that does not include long standing or “evergreen” job postings. As a result, the actual time to fill for a posting may be higher than the listed median posting duration.

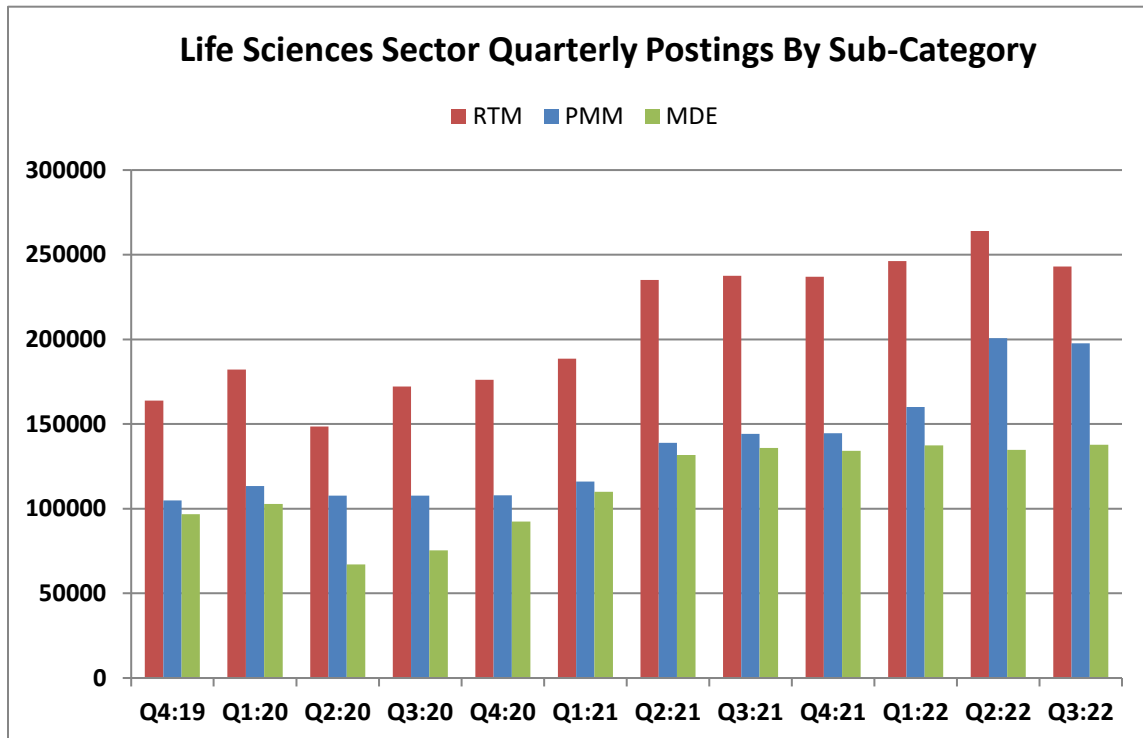


Figure 2: Comparison of Quarterly Sums, Means, and Standard Deviations of Sector Ads



Source: Lightcast, 2022

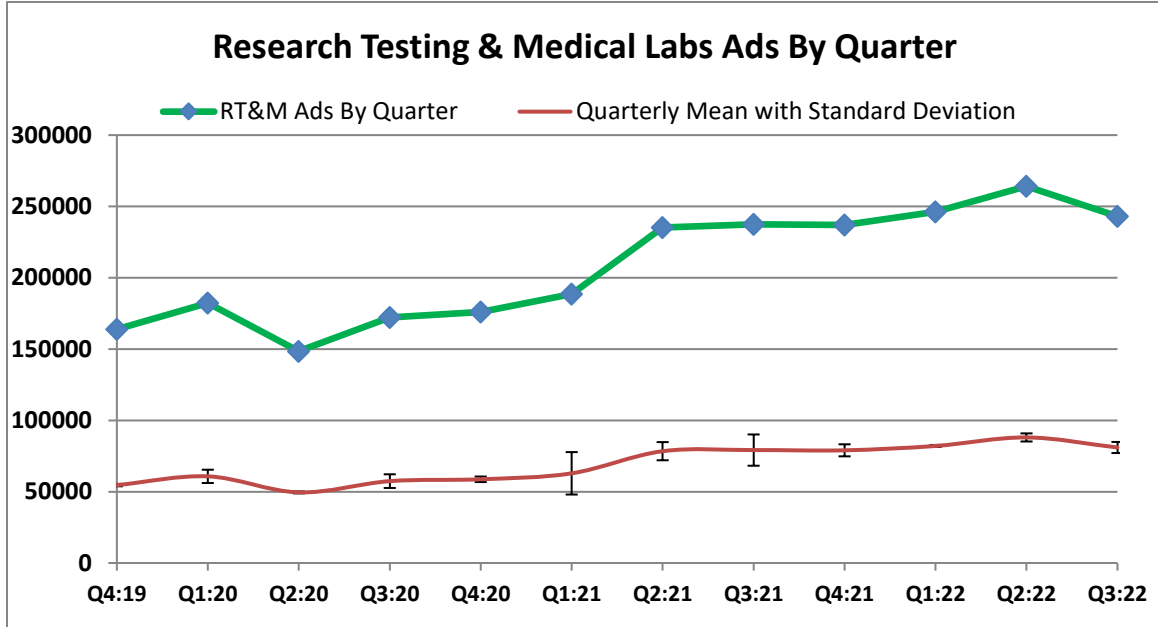
Figure 3: 3-Year Quarterly Industry Job Postings by Sub-Category



Source: Lightcast, 2022

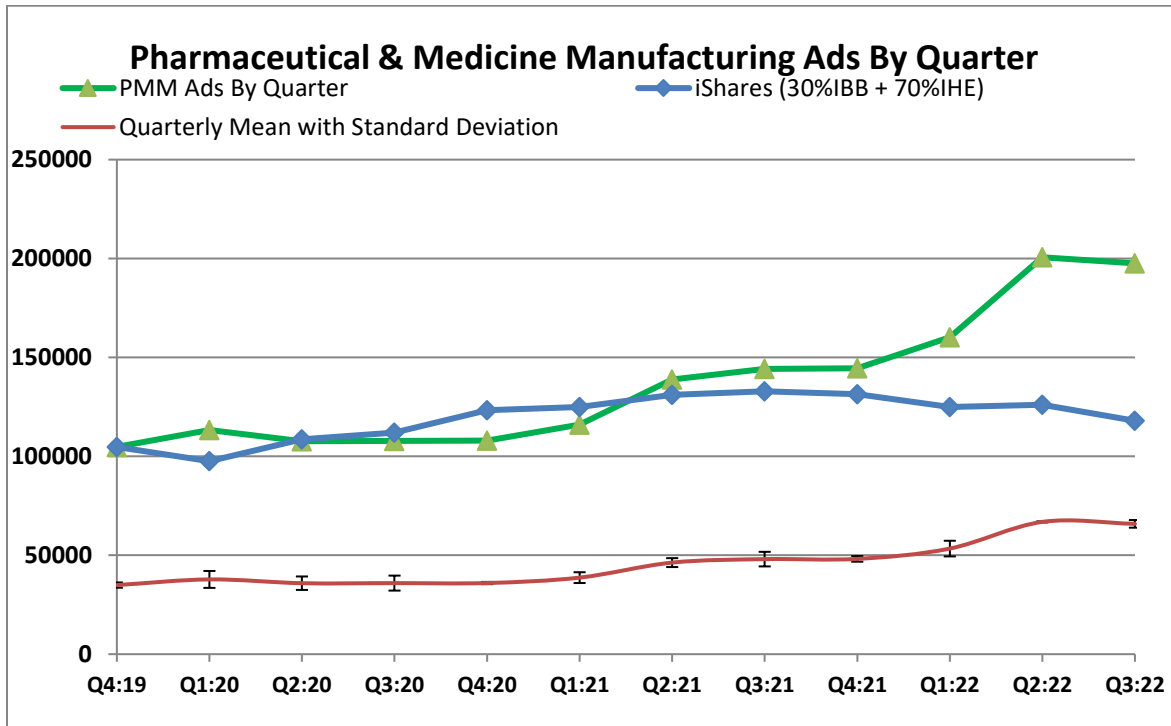


Figure 4: 3-Year RTM Job Postings: Quarterly Sums, Mean, and Std Deviation



Source: Lightcast, 2022

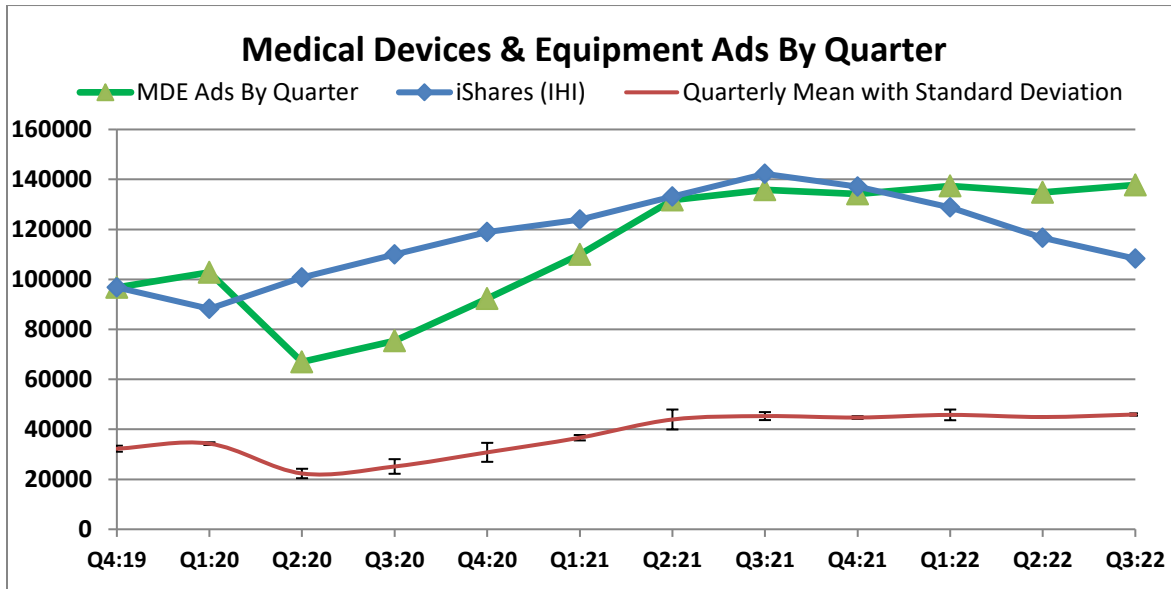
Figure 5: 3-Year PMM Job Postings: Quarterly Sums, Mean, Std Deviation, and iShares (IHE & IBB)



Source: Lightcast, 2022

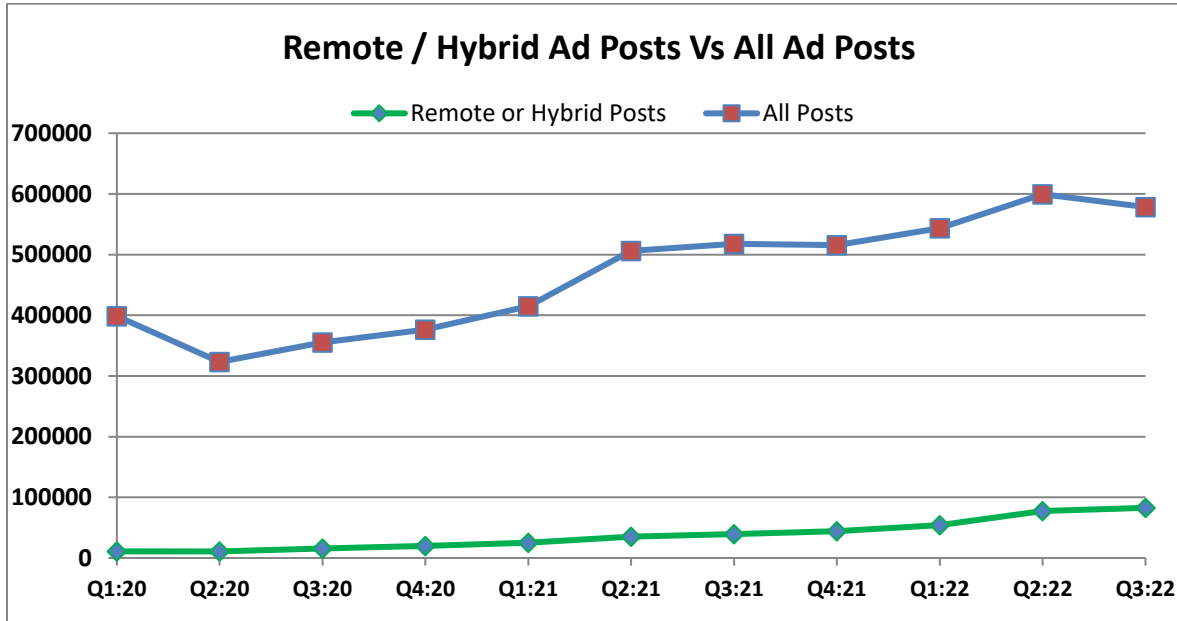


Figure 6: 3-Year MDE Job Postings: Quarterly Sums, Mean, Std Deviation, and iShares (IHI)



Source: Lightcast, 2022

Figure 7: Remote / Hybrid Ad Posts²



² In July of 2022, Lightcast began tracking data defined as remote (job described as remote), non-remote (jobs described as onsite), hybrid (jobs described as partially remote and partially on-site) and unknown (job postings that do not denote remote or non-remote). Because many postings fall into the unknown category, the number of unknown posts from companies that might also consider a remote or hybrid workforce likely represents a far larger number than what this graph illustrates. We commenced this chart in Q1 of 2020 at the time COVID-19, a major accelerant in the shift to remote and hybrid work models, first emerged in the US and because data prior to this time is less than that observed in Q1, 2020.



Source: Lightcast, 2022

US Life Sciences Employment Pulse

Third Quarter, 2022

Methods of Data Collection & Analysis

Data contained in this report was sourced from [Lightcast](#). Lightcast compiles an extensive **sweep of online POSTED positions (Ads)** in the US monthly, with the ability to review up to 4 years of prior data.

Lightcast's data is derived from quarterly updates of 18 billion data points curated from dozens of government data sources (QCEW, OES, etc.) as well as hundreds of millions of online job openings with filters by company, job title, skills, keywords, and more offering a wealth of insight into the US Life Sciences labor market.

US Life Sciences Sector Overview and Definition

Lightcast categorizes industries by leveraging [North American Industry Classification System](#) (NAICS) codes. While **NAICS codes are considered the most reliable source of data and industry classifications in the US**, there are occasions where industries may be over-represented or under-represented based on industry definitions. These issues most often occur where there is an attempt to capture high technology or emerging growth segments of markets that are not as clearly defined as mature industries. Therefore, we will continue to monitor and, potentially, adjust our definition considering these challenges.

To accurately define the US Life Sciences Sector based on product development, GeneCoda® consulted the TEconomy/BIO "[Investment, Innovation and Job Creation in a Growing U.S. Bioscience Industry 2018](#)" Report (p. 61) for guidance and **reviewed the focus set** of 24 NAICS codes. We then adjusted to the following 15 NAICS codes **for purposes of this report.**



The Life Sciences Sector Defined by North American Industry Classification System (NAICS) Codes

Life Science Sub-Categories	Sector	Code
Research, Testing & Medical Laboratories (RTM)	Research & Development (R&D) in Biotechnology (except Nanobiotechnology)	541714
	Medical Laboratories	621511
	Research & Development (R&D) in Nanotechnology ³	541713
	Research and Development (R&D) in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) ⁴	541715
	Testing Laboratories ⁵	541380
Pharmaceutical & Medicine Manufacturing (PMM)	Medicinal and Botanical Manufacturing	325411
	Pharmaceutical Preparation Manufacturing	325412
	In-Vitro Diagnostic Substance Manufacturing	325413
	Biological Product (except Diagnostic) Manufacturing	325414
Medical Devices & Equipment (MDE)	Electromedical & Electrotherapeutic Apparatus Manufacturing	334510
	Analytical Laboratory Instrument Manufacturing	334516
	Irradiation Apparatus Manufacturing	334517
	Surgical & Medical Instrument Manufacturing	339112
	Surgical Appliance & Supplies Manufacturing	339113
	Dental Equipment & Supplier Manufacturing	339114

RTM sector example companies: LabCorp, Quest, IQVIA

PMM sector example companies: Pfizer, Johnson & Johnson, AbbVie, Merck

MDE sector example companies: Thermo Fisher, Medtronic, Stryker, Danaher

³ Some R&D in Nanotechnology companies as denoted by NAICS #541713 are grouped together with companies representing other industries and therefore may not be relevant to the Life Sciences Sector. Therefore, Ad posts in this segment can be overstated.

⁴ Some R&D companies in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) as denoted by NAICS #541715 are grouped together with companies representing other industries and therefore may not be relevant to the Life Sciences Sector. Therefore, Ad posts in this segment can be overstated.

⁵ Some Testing Labs companies as denoted by NAICS #541380 are grouped together with companies representing other industries and therefore may not be relevant to the Life Sciences Sector. Therefore, Ad posts in this segment can be overstated.



GeneCoda® then filtered the initial data set to remove all Ads considered duplicates, all Ads posted by “non-direct” employers such as search or staffing firms and then, queried by NAICS industry classifications pertaining to the US Life Sciences sector.ⁱ

Comparative Trends of Relevant Equity Markets and Job Postings

Continued in our Q3 2022 report and denoted in blue, are graphs on PMM (Figure 5) and MDE (Figure 6) sub-sector slides showing correlated equity market models⁶ⁱⁱ.

- **Methods of Equity Modeling**

For PMM and MDE surrogates, **GeneCoda® chose iShares from BlackRock**. For MDE, we used iShares U.S. Medical Devices ETF (Ticker | [IHI](#)). For PMM, we used both iShares Biotech ETF (Ticker | [IBB](#)) and iShares U.S. Pharmaceuticals ETF (Ticker | [IHE](#)). For PMM, we used a portfolio mix of 30% IBB and 70% IHE based on approximation of market capitalization for the Pharmaceutical and Biotechnology industries.⁷

- **Correlation Between Indexes and Ads**

We reviewed Equity Indexes for correlation against Lightcast’s Ad postings. **GeneCoda® visually inspected the Top 50 Companies posting jobs in Lightcast. We then compared the names of the Top 50 Companies posting Ads against the actual holdings of each respective Equity Index to ensure significant overlap.**⁸

- **Equity Market Pricing and Graph Methodology**

Lightcast’s monthly postings are consolidated at the end of each month. Equity Index data are available the first business day of each month. **Therefore, for each Equity Index, GeneCoda® uses the adjusted closing price on the first day of the following month as our pricing structure.**

- **Correlation of Graphs**

To better elucidate comparative directional trends, GeneCoda® “normalized” our Equity Index graphs over 3 years of report data using the initial quarter as the starting point. **Both the number of Ads posted, and the corresponding Equity Index will therefore converge at origination on the left-hand side of each graph.**⁹

⁶ GeneCoda® will review our models annually for indices that may represent better surrogates for each sub-sector component as well as for market capitalization, where relevant.

⁷ We reviewed the following links to establish the basis of PMM’s (30% IBB and 70% IHE) weighting based on estimated sector market capitalization.

➤ IBB Reference: Genetic Engineering & Biotechnology News [Top 25 Biotech Companies of 2019](#) market cap estimate of \$964B.

➤ IHE Reference: Biospace’s [Top 20 Pharma Companies by Market Cap in Q1 2019](#) with a market cap estimate of \$2,630B.

⁸ Correlations are imperfect and may change over time. For example, for a company to be part of an index, it must be publicly traded. Although most companies that make up the top 50 companies posting jobs are publicly traded, it is possible for privately held companies to be significant contributors to job postings. So, privately held companies may appear in Lightcast’s data and not in equity index investments.

⁹ Using MDE as an example, we note that the IHI closing price on December, 1st 2016 is 131.69. We note that there were 70,701 Ads posted for Q4 of 2016 (Quarter ended December 31st). 70,701 Ads divided by a 131.69 closing price of IHI gives us a multiple of 536.87, which we then apply to each subsequent quarter’s price.



Do You Have Questions or Want to Know More?



- Are you considering Life Sciences Executive and Professional Search?
- Seeking Sub-Sector, Geographic Specific, Individual Role, Compensation or Other Employment Analysis Information?
- Seeking an expert guest speaker / panelist?

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ⁱ As with many reports involving enterprise scale data collection and interpretation, there are inherent challenges that lead to imperfect outcomes. For example, by the inherent nature of the fact that a position must be posted online to be counted, very senior level (i.e., C and V level) roles will be under-represented as many of these role types are not posted online. Moreover, removing “non-direct” employers will remove certain roles that may be retained and/or exclusive to search firms further reducing the actual market size. This report’s intent is to focus on fundamental trends and market direction of direct employer ads.

ⁱⁱ As of this report’s release, we were unable to locate an “Equity Index” that would reasonably approximate the RTM sector so one would have to be created. This “index” would be highly dependent on companies such as LabCorp and Quest who represent the single largest components by market capitalization. We envision ultimately capturing the RTM sub-sector and ultimately, the entire Life Sciences sector based on market capitalization.