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Life Sciences and Pharma

Segment Burst

Fall 2023

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Skill gaps in the life sciences sector

In today's evolving pharmaceutical landscape, job seekers are encountering a [shift in skills requirements](#).

While traditional laboratory skills remain crucial in research and development roles, there's a growing demand for data skills, particularly in jobs related to synthetic chemistry and digital applications.

A [report](#) commissioned by the Association of the British Pharmaceutical Industry (ABPI) underscores the significance of digital and data skills as top priorities for the sector. Candidates with computer modules and expertise in coding languages like JavaScript, Linux, and R are highly sought after by prospective employers in the industry.

Within the life sciences sector, roles in healthcare and medical communications are increasingly requiring digital proficiency. The pharmaceutical industry, once lagging behind, is now embracing digital roles, including [artificial intelligence positions](#).

Surprisingly, despite a pool of STEM graduates entering the job market, a disconnect persists between candidate capabilities and industry needs.

Economic pressures have introduced challenges in this regard. The Covid-19 pandemic has significantly impacted job opportunities for graduates, leading to a noticeable shortage of mid-level talent in the workforce. STEM graduates, especially in biological sciences, often veer away from their fields due to unattractive wages and incentives.

As unemployment rates rise and job vacancies decrease, there's a surplus of candidates in the pharmaceutical job market. Companies are cautious about workforce expansion, opting to protect profits amid economic uncertainties.

To bridge this talent-sector gap, industry investment in new talent is essential. Making roles more attractive by offering competitive incentives can help nurture the skills required for a resilient pharmaceutical workforce.

In a changing economic climate, collaboration and investment in talent development are key to shaping the future of the pharmaceutical job market.

57% of pharmaceutical professionals in the UK think that the application of mathematical and digital skills is a concern for the industry.

[ABPI](#)

30% of pharmaceutical startups worldwide are dedicated to developing software solutions for the industry.

[StartUs](#)

Tech talent to drive innovation in pharma

In recent years, the pharmaceutical sector has witnessed a remarkable surge in innovation, primarily driven by pharmaceutical startups that are pushing the boundaries of science and technology.

A recent [survey](#) of over 1,700 pharmaceutical startups across the globe has established that the three industry transformations in 2024 will belong to the following areas:

Artificial intelligence: AI is revolutionising drug discovery and clinical trials by streamlining the research process. This not only expedites the time it takes to bring a new drug to market but also significantly reduces research and development costs. Additionally, AI is instrumental in identifying patient cohorts, allowing for more personalised and effective treatment plans. Moreover, automation in manufacturing processes, driven by AI, is enhancing production efficiency and consistency, ensuring the quality and quantity of pharmaceutical products.

Big data and analytics: The pharmaceutical sector generates an enormous amount of data during the discovery and development phases. Big data analytics is essential for making sense of this data, extracting

meaningful insights, and optimising research processes. With the aid of advanced analytics tools, pharmaceutical companies can uncover patterns, identify potential drug candidates, and make data-driven decisions. This approach enhances the efficiency and effectiveness of drug development, ultimately leading to better patient outcomes.

Flexible production: Traditional pharmaceutical manufacturing processes have been undergoing a significant transformation with the advent of flexible production methods. Innovations such as new types of bioreactor systems and continuous manufacturing processes are streamlining drug production. These technologies not only improve production speed but also allow for more precise control over product quality. This flexibility enables pharmaceutical companies to adapt to changing market demands swiftly and efficiently, ensuring a steady supply of vital medications.

As the industry undergoes a technological revolution, the demand for highly skilled talent with expertise in AI, data analytics, and flexible manufacturing is skyrocketing. Traditional pharmaceutical companies find themselves in competition with startups. Pharma leaders must recognise the importance of staying at the forefront of these technological and analytical areas.

Hiring slowdowns in biopharma

Hiring in the biopharma industry took a notable hit in the third quarter of 2023. According to a recent analysis by [BioSpace](#), the slowdown was particularly evident when comparing Q3 2023 with the previous quarter and the same period last year.

Biotech jobs saw a significant decline, down [17%](#) from Q2 and a staggering 46% from the previous year. Pharma jobs were also affected, experiencing a 2% drop from Q2 and a 32% decrease from the prior year. Science R&D jobs and clinical positions faced similar challenges, with declines of 10% and 33% from Q2, respectively, and 39% and 32% decreases compared to the previous year.

The biopharma industry witnessed a wave of restructuring and [layoffs](#), driven primarily by clinical trial failures and strategic shifts. Numerous companies have faced the harsh reality of restructuring, often leading to workforce reductions. These workforce adjustments reflect the industry's dynamic nature, where agility and resource reallocation are essential for long-term success.

Given the industry's shifting landscape, it's essential to focus on talent acquisition, retention, and development strategies that align with long-term business objectives. This includes identifying and nurturing talent that can adapt to changing circumstances and contribute to organisational resilience. Talent providers and biopharma companies should stay informed about industry trends, including clinical trial outcomes, regulatory shifts, and market demands. Being aware of these factors can help in making informed decisions regarding talent acquisition and workforce planning.

Recruitment prospects for 2024

Despite these setbacks, a survey conducted in October 2023 revealed some optimism – [62%](#) of employers surveyed by BioSpace expressed their active pursuit of new talent, signaling ongoing recruitment efforts.

Additionally, 27% of respondents indicated that they anticipate an increase in job openings between October and December, offering a glimmer of hope for the industry's future prospects.