

India's Pharma & Biotech Technology Workforce Set 49% by 2030, Driven by Digital Transformation and R&D Expansion

Pharma & Biotech Technology Workforce in India (2025-2030) India's pharmaceutical and biotechnology sector

KARLSRUHE, GERMANY, November 12, 2025 /EINPresswire.com/ -- [India's pharmaceutical and biotechnology sectors](#) are on the cusp

of a major technology-driven workforce expansion. According to new industry research, the number of technology professionals employed in

the sector is projected to grow from 285,000 in 2025 to 425,000 by 2030 — a compound annual growth rate of 8.3%, far outpacing the broader industry's 5.1% growth rate.



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Technology Talent at the Core of India's Pharma Future



India Top 30 Trending Roles in the Pharma & Biotech Industry: Strategic workforce planning, Hiring Trends, In Demand Skillsets, Demand Push, Salary Benchmarking, job demand and supply"

By Florian Marthaler

Technology professionals now represent 18% of India's total pharma and biotech workforce, supporting digital initiatives across manufacturing, research, and clinical development.

Key talent clusters include:

Engineering & Platform Specialists (45%) – Focused on automation and ERP systems for manufacturing.

Data & AI Experts (28%) – Powering clinical analytics and drug discovery algorithms.

Cyber & Risk Technologists (15%) – Managing compliance and data security.

Product & Experience Teams (12%) – Building digital therapeutics and patient engagement

tools.

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Growth is being fueled by increased adoption of artificial intelligence, real-world evidence platforms, and advanced cybersecurity systems, as well as modernization efforts tied to FDA and EMA compliance requirements. The OECD projects India's pharmaceutical exports to reach USD 55 billion by 2030, underscoring the need for strong digital and technical foundations.

Rising Job Demand and Skill Shortages

Since 2020, pandemic-era disruptions have accelerated digital transformation and manufacturing expansion. Between 2020 and 2023, tech-focused roles in the pharma industry grew by 35–45%, while biotech saw increases up to 65%.

Despite a large supply of engineering graduates, only 3–5% enter pharma and biotech specializations, creating an annual talent gap of 75,000–105,000 positions. Specialized roles such as bioinformatics experts, regulatory technology analysts, and data scientists remain especially hard to fill, with vacancies often lasting up to seven months.

Compensation Trends Reflect Premium for Specialized Skills

Technology roles in the pharma sector command 15–25% higher salaries than comparable IT jobs due to their regulatory and scientific complexity.

Median annual salaries (in USD) include:

Pharma Data Engineer: \$28,500

Regulatory Systems Analyst: \$32,000

Biotech Software Developer: \$35,500

Clinical Data Manager: \$42,000

Pharma IT Architect: \$58,000

Hyderabad and Bangalore lead in compensation levels, while hybrid work remains limited due to regulatory and data security demands.

Evolving Workforce and Emerging Roles

As automation and AI reshape the industry, new hybrid roles are emerging. By 2030, demand will rise for:

AI Governance Officers – Overseeing responsible use of machine learning in R&D.

Regulatory Automation Specialists – Streamlining compliance through digital systems.

Sustainable Bioprocess Engineers – Reducing environmental impact in production.

Digital Twin Architects – Building virtual models for predictive manufacturing.

Patient Data Privacy Officers – Ensuring security of sensitive medical information.

These new functions will require professionals who combine technical, scientific, and regulatory knowledge.

Automation to Enhance, Not Eliminate, Jobs

Automation will reshape, but not reduce, India's pharma workforce.

Manufacturing operations have up to 70% automation potential, particularly in quality testing and packaging.

Engineering and quality assurance functions will see productivity gains of 25–30% through data-driven monitoring systems.

Rather than eliminating jobs, companies are focusing on retraining and upskilling programs that have maintained employment levels while improving output.

Investment and Policy Support Strengthen Growth

India's strong economic fundamentals support this expansion. The Reserve Bank of India forecasts 6.5–7.0% GDP growth, while government initiatives like the USD 2 billion Production Linked Incentive scheme and expanded healthcare spending are boosting job creation in pharma manufacturing and quality assurance.

The National Biotechnology Development Strategy aims to build a USD 150 billion sector by 2025, with continued investment in digital infrastructure under the Digital India program driving further demand for tech professionals.

Regional and Institutional Strengths

Hyderabad leads with 185,000 professionals, followed by Bangalore (142,000) and Pune (128,000).

Leading employers include Sun Pharma, Dr. Reddy's, Cipla, Biocon, and Serum Institute of India, alongside multinationals like Pfizer, Novartis, and GSK.

India's premier institutions—IITs, NIPER, AIIMS, and IISc—continue to supply top-tier talent, with

specialized biotechnology bootcamps bridging key skill gaps.

Outlook

India's pharmaceutical and biotechnology technology workforce is entering a new era of digital sophistication. With rising global demand, government support, and an expanding R&D ecosystem, the country is positioned to become a world leader in pharmaceutical technology innovation and digital health infrastructure by 2030.

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