

Digital Biology Market to Grow at 12.9% CAGR from 2025-2029

The Business Research Company's Digital Biology Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, November 13, 2025 /EINPresswire.com/ -- What Is The [Digital Biology Market](#) Size And Growth?

Over the recent years, the size of the digital biology market has observed significant growth. An escalation from \$14.18 billion in 2024 to \$15.97 billion in 2025, at a compound annual growth rate (CAGR) of 12.6%, is expected. Several factors contribute to this historic upsurge, including

the increased use of bioinformatics tools, expansion in proteomics and genomics research, advancements in cloud computing for biological data, a growing demand for personalized medicine, and government sponsorship in life sciences research.



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The market size for digital biology is anticipated to witness a swift expansion in the coming years. The market is projected to increase to \$25.98 billion in 2029 with a compound annual growth rate (CAGR) of 12.9%. The surge in the predicted period can be traced back to the incorporation of artificial intelligence and machine learning

in biology software, amplified applications of synthetic biology, soaring investments in digital therapeutics, the proliferation of in silico drug discovery platforms, and escalating demand for automated laboratories. Significant trends during the forecast period are expected to feature the utilization of digital twins in biological systems, collective research platforms based in the cloud, uptake of blockchain for securing biological data, predictive models for the progress of diseases, and real-time mimicking of cellular processes.

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What Are The Current Leading Growth Drivers For Digital Biology Market?

The escalation in spending for research and development within the healthcare domain is predicted to drive the expansion of the digital biology market. The term healthcare research and development encapsulates the systematic endeavours to construct, evaluate, and amend medical therapies, equipment, and methods, with the ultimate aim of improving patient outcomes and overall healthcare. This expenditure on healthcare research and development is on the rise thanks to growing demand for groundbreaking therapies and sophisticated treatment options. Businesses are dedicating more funding towards manufacturing innovative pharmaceuticals, medical apparatus, and customised healthcare provisions that can effectively tackle intricate and evolving health problems. The funds channeled into healthcare research and development assist digital biology through backing the creation of state-of-the-art computing resources and bioinformatics systems. These facilitate quicker interpretation of biological information and add precision to disease modeling, resulting in enhanced diagnostics and therapies. Case in point, in June 2025, the UK's Department for Science, Innovation and Technology rolled out an investment of \$114.38 billion (£86 billion) over four years, aimed at bolstering science and technology research and development. This includes contribution towards drug development, with an annual budget of \$29.93 billion (£22.5 billion). As such, the escalation of expenditure on healthcare research and development stimulates the expansion of the digital biology market.

Which Companies Are Currently Leading In The Digital Biology Market?

Major players in the Digital Biology Global Market Report 2025 include:

- Thermo Fisher Scientific
- Illumina Inc.
- Qiagen N.V.
- F. Hoffmann-La Roche Ltd.
- Perkin Elmer
- Agilent Technologies Inc.
- BGI Genomics Co. Ltd.
- DNAnexus Inc.
- Seven Bridges Genomics Inc.
- GenBio Inc.

What Are The Upcoming Trends Of Digital Biology Market In The Globe?

Prominent organizations in the digital biology market have begun to incorporate artificial intelligence more frequently in their procedures related to drug discovery and predictive biology. AI offers tools and algorithms for quicker therapeutic target identification, boosting drug development efficiency, and allowing the production of exact, individual-specific treatments. To illustrate, in December 2024, GenBio AI, a digital biology firm based in the US, initiated Phase 1 of the AI-Driven Digital Organism (AIDO). This novel platform facilitates comprehensive modeling of crucial biological elements, such as DNA, RNA, protein, and single-cell expression.

Consequently, it offers researchers a sophisticated toolkit for simulating biological systems, contributing to the rapid advancement of medical research, drug development, and the production of individualized therapies.

How Is The Digital Biology Market Segmented?

The digital biology market covered in this report is segmented –

- 1) By Component: Software, Hardware, Services
- 2) By Deployment Mode: On Premises, Cloud
- 3) By Technology: Artificial Intelligence In Biology, Bioinformatics Tools And Software, Blockchain For Data Integrity, Cloud Computing Solutions, Deoxyribonucleic Acid Data Storage Technology
- 4) By Application: Drug Discovery, Agriculture, Environmental Monitoring, Personalized Medicine, Synthetic Biology, Bioinformatics, Other Applications
- 5) By End User: Pharmaceutical and Biotechnology Companies, Research and Academic Institutes, Healthcare Providers, Contract Research Organizations, Government and Regulatory Bodies

Subsegments:

- 1) By Software: Genomic Data Analysis, Proteomics Analysis, Metabolomics Analysis, Transcriptomics Analysis, Clinical Bioinformatics, Data Visualization Tools, Laboratory Information Management Systems
- 2) By Hardware: Sequencing Instruments, Mass Spectrometry Systems, Microscopy Instruments, Chromatography Equipment, Cell Culture Instruments, Laboratory Automation Equipment
- 3) By Services: Bioinformatics Consulting, Data Management Services, Genetic Testing Services, Clinical Trial Support Services, Custom Assay Development, Laboratory Management Services, Training And Support Services

View the full digital biology market report:

<https://www.thebusinessresearchcompany.com/report/digital-biology-global-market-report>

Which Is The Dominating Region For The Digital Biology Market?

In the 2025 Digital Biology Global Market Report, North America emerged as the predominant region in the digital biology market for the year 2024. The region anticipated to experience the most rapid growth in the subsequent timeframe is Asia-Pacific. The report includes an overview of various regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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