

# **Global Artificial Intelligence (AI) in Biotechnology Market Size Study & Forecast, by Offering, Applications, Usage and Regional Forecasts 2025-2035**

<https://marketpublishers.com/r/G568EF8D00CEEN.html>

Date: June 2025

Pages: 285

Price: US\$ 3,218.00 (Single User License)

ID: G568EF8D00CEEN

## **Abstracts**

The Global Artificial Intelligence (AI) in Biotechnology Market is valued at approximately USD 3.23 billion in 2024 and is expected to expand at a robust CAGR of over 19.10% during the forecast period 2025-2035. As the confluence of biotechnology and artificial intelligence gains rapid traction, AI is increasingly being deployed to unravel the complexities of biological data, accelerate drug discovery, and optimize biotechnological processes. With its powerful capability to detect patterns, predict outcomes, and automate research-intensive tasks, AI is being embraced across biotech verticals—from genomics and pharmaceutical development to agricultural biotechnology and precision diagnostics. This explosive growth trajectory is being propelled by the expanding need for efficient data analytics, cost-effective innovation in therapeutics, and the rise of personalized medicine. Additionally, the growing availability of structured and unstructured biomedical data sets, coupled with advancements in machine learning algorithms, has set the stage for transformative shifts in biotech research and development.

One of the primary catalysts underpinning this market surge is the unprecedented adoption of AI in drug target identification and screening. By employing deep learning and predictive modeling, researchers are now capable of narrowing down potential therapeutic targets in record time. According to industry insights, global biotech companies are rapidly integrating AI tools into their pipelines, significantly curbing both the costs and timelines of clinical trials. Furthermore, AI-driven platforms are playing a pivotal role in image analysis for medical diagnostics and cellular research. Governments and private enterprises are substantially investing in AI infrastructure to

bolster national biotech initiatives, further fueling market demand. However, the landscape is not without challenges—concerns over data privacy, high implementation costs, and the need for domain-specific AI expertise remain critical constraints to broader adoption.

Regionally, North America is expected to dominate the AI in Biotechnology market by 2025, backed by its mature healthcare infrastructure, a strong presence of major biotech firms, and ongoing research funding. The U.S., in particular, has emerged as a breeding ground for AI-biotech collaborations, with leading pharmaceutical companies forging partnerships with AI startups. Meanwhile, Asia Pacific is anticipated to be the fastest-growing region over the forecast period. Countries such as China and India are intensifying their focus on biotech innovation, driven by a rising disease burden, supportive government regulations, and a surge in AI R&D investments. Europe is also making significant strides, with AI integration in life sciences research being spearheaded by Germany, the UK, and France. These regions are progressively building digital ecosystems conducive to the convergence of AI and biotechnology.

Major market player included in this report are:

Halliburton Company

Schlumberger Limited.

BASF SE

Baker Hughes Company

Impact Fluid Solutions

Chevron Phillips Chemical Company

M&D Industries Of Louisiana, Inc.

Aubin Group

Trican Well Service Ltd.

Croda International Plc.

IBM Corporation

Google DeepMind

NVIDIA Corporation

Intel Corporation

Biogen Inc.

### Global Artificial Intelligence (AI) in Biotechnology Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period - 2025-2035

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

### By Offering:

Software

Hardware

Services

### By Applications:

Drug Target Identification

Drug Screening

Image Screening

Predictive Modeling

### By Usage:

Agriculture Biotechnology

Medical Biotechnology

Animal Biotechnology

Industrial Biotechnology

### By Region:

North America

U.S.

Canada

## Europe

UK

Germany

France

Spain

Italy

Rest of Europe

## Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

## Latin America

Brazil

Mexico

## Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

## Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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