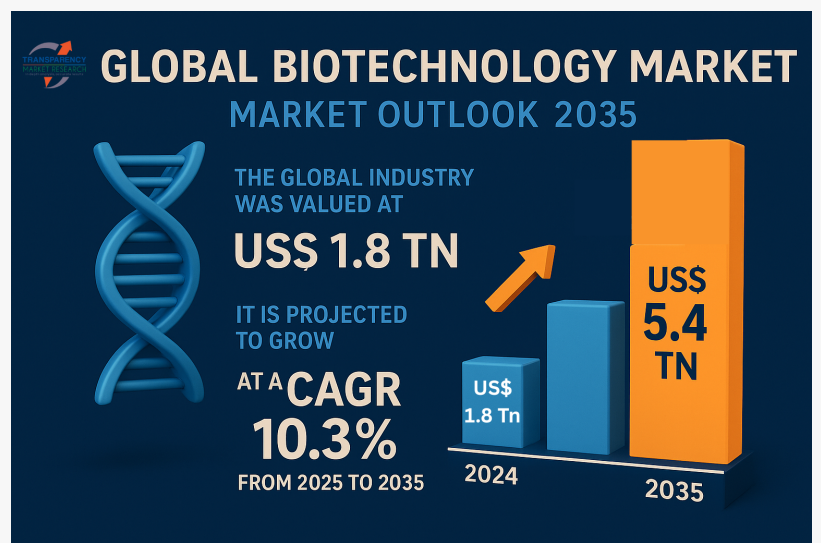


# Biotechnology Market Growth to Reach US\$ 5.4 Trillion by 2035 as Demand for Cell & Gene Therapies Expands | TMR

*Biotechnology Market Set for 10.3% CAGR Growth Through 2035 Driven by Medical & Agricultural Advances | TMR Insights*

WILMINGTON, DE, UNITED STATES,  
August 14, 2025 /EINPresswire.com/ --  
[Biotechnology Market](#) Outlook 2035

The global biotechnology market was valued at US\$ 1.8 Trillion in 2024 and is projected to exceed US\$ 5.4 Trillion by 2035, growing at a strong CAGR of 10.3% from 2025 to 2035. Market growth is fueled by advancements in genetic engineering, personalized medicine, and biopharmaceuticals, along with increasing applications in agriculture, industrial processing, and environmental sustainability. Expanding R&D investments and supportive government initiatives are further accelerating the sector's rapid expansion.



Biotechnology Market Outlook 2035

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Global Biotechnology  
Market to See 10.3% CAGR  
Through 2035 on Gene  
Therapy & Biopharma  
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Biotechnology integrates biology with engineering and data science to develop therapeutics, diagnostics, agricultural traits, industrial enzymes, and sustainable materials. From [mRNA](#) platforms and CRISPR editing to bio-based chemicals and AI-driven discovery, the field

underpins next-generation healthcare and sustainable manufacturing.

As regulatory pathways mature and capital flows toward late-stage assets and platform

companies, biotech is expanding its footprint across healthcare, agriculture, and industrial applications.

## Analyst Viewpoints

The Biotechnology Market is transitioning from single-asset bets to platform-centric models that can repeatedly generate candidates. Three structural shifts stand out:

1. Modality diversification: mRNA, gene editing, cell therapies, and targeted protein degraders complement monoclonal antibodies and recombinant proteins.
2. Industrialization of discovery: AI/ML, high-throughput screening, and lab automation reduce cycle times and cost per hypothesis.
3. Biomanufacturing scale-up: Continuous processing, single-use systems, and modular facilities improve flexibility and speed-to-clinic.

Winners will pair scientific differentiation with manufacturing excellence and data-rich clinical strategies that translate into payer-recognized value.

## Analysis of Key Players in the Biotechnology Market

The global biotechnology market is witnessing accelerated innovation, driven by advancements in gene-editing technologies such as CRISPR, mRNA-based therapeutics, and next-generation biologics. Leading players are heavily investing in R&D to develop therapies for genetic disorders, enhance vaccine development pipelines, and improve manufacturing scalability. Companies are also expanding into precision medicine and advanced therapy medicinal products (ATMPs) to address unmet medical needs.

Prominent biotechnology companies include

- Abbott
- AstraZeneca
- Pfizer Inc.
- F. Hoffmann-La Roche AG
- Novartis AG
- Merck & Co., Inc.
- Eli Lilly and Company

Novo Nordisk A/S, Merck KGaA, Johnson & Johnson Services, Inc., Amgen Inc., GSK plc, Sanofi, Thermo Fisher Scientific Inc., AbbVie Inc., Bristol-Myers Squibb Company, Teva Pharmaceutical Industries Ltd., Gilead Sciences, Inc., Biogen Inc., and Moderna, Inc.

These players have been profiled in the biotechnology market research report based on parameters such as company overview, financial overview, business strategies, product portfolio, business segments, and recent developments.

## Key Developments

- April 2025 – Biocon Biologics Limited received U.S. Food and Drug Administration (FDA)

approval for Jobevne (bevacizumab-nwgd), a biosimilar to Avastin (bevacizumab), indicated for the treatment of various cancers. Jobevne acts as a vascular endothelial growth factor (VEGF) inhibitor, preventing angiogenesis and restricting tumor blood supply.

- February 2025 – Pfizer Inc. announced U.S. FDA approval for its supplemental Biologics License Application (SBLA) for Adcetris (brentuximab vedotin) in combination with lenalidomide and a rituximab product for treating adults with relapsed or refractory large B-cell lymphoma (LBCL) and high-grade B-cell lymphoma (HGBL) after at least two prior systemic therapies.

## Key Growth Drivers

### 1. Rising Burden of Chronic & Rare Diseases

Unmet needs in oncology, immunology, metabolic, and rare genetic disorders.

### 2. Platform Modalities & Precision Medicine

Companion diagnostics, biomarkers, and targeted delivery improve outcomes.

### 3. Public-Private Funding & Incentives

Grant programs, orphan incentives, and expedited pathways de-risk innovation.

### 4. Bioprocessing Innovation

Single-use, continuous, and modular plants shorten time-to-commercial.

### 5. Sustainable Bio-Manufacturing

Bio-based materials and enzymes enable decarbonization in chemicals and textiles.

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## Opportunities

### • Gene Editing & In Vivo Delivery

Next-gen editors, LNPs, AAV engineering, and extravasation strategies.

### • Allogeneic Cell Therapies

Off-the-shelf immune cells to scale beyond autologous constraints.

### • AI-First Discovery & Design

Generative models for antibodies, enzymes, and RNA constructs.

### • Microbiome & RNA Therapeutics

Engineered consortia and diversified RNA chemistries beyond mRNA.

### • CDMO/CMO Capacity & Regionalization

Near-shoring and tech-transfer hubs for supply resilience.

### • Bio-Industrial & Agri-Bio

Strain engineering, precision fermentation, and climate-resilient crops.

## Challenges

- Clinical & Regulatory Risk

Late-stage attrition, safety signals, and evolving guidance for novel modalities.

- Manufacturing Complexity & COGS

Yield variability, raw material constraints, and cold-chain logistics.

- Pricing & Market Access Pressure

HTA scrutiny, outcomes-based contracts, and affordability debates.

- Capital Market Cyclicity

IPO/windows and funding troughs impacting early-stage pipelines.

- Talent & Infrastructure Gaps

Shortages in GMP, analytics, and computational biology skill sets.

## Market Segmentation

### By Application:

Healthcare/Pharma (therapeutics, vaccines, diagnostics) • Industrial Biotechnology (enzymes, bio-based materials, biofuels) • Agricultural Biotechnology (trait engineering, biologicals) • Environmental & Others

### By Technology/Modality:

Recombinant Proteins & mAbs • Cell Therapy • Gene Therapy/Gene Editing • RNA Therapeutics (mRNA/siRNA/ASO) • Synthetic Biology • Microbiome • CRISPR & Novel Editors • Protein Degradation

### By Bioprocessing Type:

Upstream (cell line dev, media, fermentation) • Downstream (chromatography, filtration) • Continuous/Hybrid • Single-Use Systems • Fill-Finish

### By End User:

Biotech & Pharma Companies • CDMOs/CMOs • Academic/Research Institutes • Diagnostics Labs • Industrial Manufacturers • Agri-biotech Firms

### By Region:

North America • Europe • Asia-Pacific • Middle East & Africa • Latin America

## Future Prospectus

By 2035, biotechnology will be anchored by platform scalability, patient-centric access models, and digitally integrated plants. Expect broader in vivo editing, long-acting RNA, and allogeneic cell therapies to commercialize across prioritized indications. Industrial biotech will scale precision fermentation for specialty chemicals and proteins, while agri-bio deploys climate-resilient traits and biological crop protection. Asia-Pacific will lead capacity growth; North America and Europe will remain hubs for early innovation and high-value launches.

## What Is in This Report?

- Global & regional market size forecasts (2023–2035)
- Drivers, restraints, and opportunity mapping by modality and end use
- Pipeline heatmap and clinical milestone tracker
- Bioprocessing technology landscape (continuous, single-use, analytics)
- Competitive benchmarking and partnership/M&A analysis
- Pricing, access, and reimbursement outlook (incl. biosimilars)
- Regulatory, CMC, and quality considerations for advanced modalities
- Porter's Five Forces, SWOT, and go-to-market playbooks

### Why Buy This Report?

1. Strategic Foresight – Data-driven forecasts to shape portfolio and capacity plans.
2. Innovation Radar – Identify breakthrough platforms and high-probability indications.
3. Competitive Edge – Benchmark pipelines, tech stacks, and manufacturing depth.
4. Operational Clarity – Translate bioprocess choices into COGS and time-to-market.
5. Access Readiness – Navigate HTA demands, outcomes evidence, and pricing levers.
6. Risk Management – Scenario plans for funding cycles, supply shocks, and regulation.

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### Conclusion

The Biotechnology Market is moving from experimental promise to scaled, platform-driven impact across healthcare and industry. Companies that marry modalities with manufacturability, embed AI across R&D, and prove real-world value through outcomes and access strategies will define the next decade of growth. This report is your blueprint to prioritize bets, accelerate development, and capture value from discovery to commercial scale.

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## Contact Us

Transparency Market Research Inc.  
CORPORATE HEADQUARTER DOWNTOWN,  
1000 N. West Street,  
Suite 1200, Wilmington, Delaware 19801 USA  
Tel: +1-518-618-1030  
USA - Canada Toll Free: 866-552-3453  
Website: <https://www.transparencymarketresearch.com>  
Blog: <https://tmrblog.com>  
Email: [sales@transparencymarketresearch.com](mailto:sales@transparencymarketresearch.com)

Atil Chaudhari

Transparency Market Research Inc.

+1 518-618-1030

[email us here](#)

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