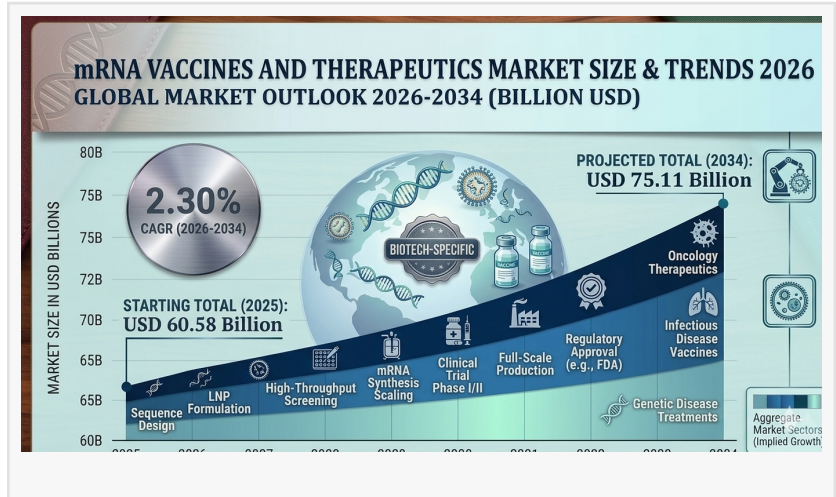


mRNA Vaccines and Therapeutics Market to Reach USD 75.11 Billion by 2034, Growing at 2.30% CAGR

Europe leads the global mRNA vaccines and therapeutics market with a 34.6% share.

ST. BROOKLYN, NY, UNITED STATES, May 7, 2026 /EINPresswire.com/ -- The global mRNA vaccines and therapeutics market reached USD 60.58 Billion in 2025 and is projected to reach USD 75.11 Billion by 2034, expanding at a CAGR of 2.30% during 2026–2034, according to the latest market research report by IMARC Group. Growth is anchored by Infectious Disease applications (38.4% share), strong in-house manufacturing (64.3%), Europe's leading regional share (34.6%), and rapid advances in AI-assisted mRNA sequence design and self-amplifying mRNA platforms.



Report Highlights:

- Market Size (2025): USD 60.58 Billion
- Forecast (2034): USD 75.11 Billion
- CAGR (2026–2034): 2.30%
- Leading Region: Europe (34.6%)
- Top Application: Infectious Disease (38.4%)
- Fastest-Growing Application: Cancer (28.6%)
- Manufacturing: In-house leads with 64.3% share

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mRNA Vaccines and Therapeutics Market Outlook 2026–2034:

mRNA vaccines and therapeutics use messenger RNA technology to instruct cells to produce proteins capable of preventing or treating disease. Following its breakthrough deployment in

COVID-19 vaccines, mRNA has matured into a programmable therapeutic platform now expanding aggressively into oncology, gene editing, protein replacement therapies, and rapid-response pandemic vaccines.

The market reached USD 60.58 Billion in 2025 and is projected to reach USD 75.11 Billion by 2034 at a 2.30% CAGR, driven by ongoing COVID-19 booster programmes, RSV vaccine rollouts, advancing influenza mRNA clinical programmes, and a growing pipeline of personalized cancer vaccines.

mRNA Vaccines and Therapeutics Market Drivers 2026:

1. Continued Infectious Disease Demand:

Infectious Disease applications lead the market with a 38.4% share in 2025, reflecting ongoing COVID-19 booster programmes, RSV vaccine rollouts, and advancing influenza mRNA vaccine clinical programmes. The platform's flexibility and rapid-response design continue to make it the preferred technology for emerging pathogen response.

2. Personalized Cancer Vaccine Pipelines

Cancer is the second largest and fastest-expanding application segment with a 28.6% share, driven by personalized mRNA cancer vaccine pipelines from Moderna and BioNTech. The ability to design tumor-specific mRNA constructs is unlocking a new class of precision oncology therapeutics now advancing through late-stage clinical trials.

3. Expansion into Gene Editing and Protein Replacement

Gene Editing (18.4% share) and Protein Replacement (14.6% share) segments are gaining clinical traction. mRNA-based delivery is increasingly being applied to in vivo gene editing programmes, rare-disease therapeutics, and protein replacement strategies that traditional small-molecule and biologic platforms cannot address.

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<https://www.imarcgroup.com/request?type=report&id=2207&flag=C>

mRNA Vaccines and Therapeutics Market Trends 2026:

AI-Assisted mRNA Sequence Design:

Machine learning platforms are now central to mRNA codon optimization, UTR design, and immunogenicity prediction. These computational tools reduce mRNA design cycles from months to days, supporting both rapid-response pandemic preparedness and personalized oncology vaccine development.

Self-Amplifying mRNA (saRNA) Platforms:

Self-amplifying mRNA platforms enable lower-dose vaccines and therapeutics by allowing the mRNA to replicate inside cells. This trend is expected to expand the clinical applications of mRNA technology, lower manufacturing costs, and improve the durability of immune responses.

Expansion of In-House Manufacturing:

In-house manufacturing currently accounts for 64.3% of the market, as biopharmaceutical companies invest in proprietary mRNA production capacity to control supply chains, protect IP, and accelerate clinical timelines. Expanded manufacturing capacity is also extending into emerging markets.

Personalized Oncology and Precision Medicine:

mRNA platforms are increasingly tailored to patient-specific genetic profiles, particularly in cancer treatment. Personalized cancer vaccine pipelines from leading developers are creating new revenue streams beyond infectious-disease vaccines.

mRNA Vaccines and Therapeutics Market Segmentation:

By Application (2025 share)

- Infectious Disease – 38.4%
- Cancer – 28.6%
- Gene Editing – 18.4%
- Protein Replacement – 14.6%

Leading Segment: Infectious Disease leads, supported by ongoing COVID-19, RSV, and influenza mRNA programmes.

By Manufacturing

- In-House Manufacturing – 64.3% (leading)
- Contract Manufacturing

Regional Insights: mRNA Vaccines and Therapeutics Market

Europe – Market Leader (34.6% share)

Europe leads the global mRNA vaccines and therapeutics market with a 34.6% share, anchored by BioNTech's mRNA platform leadership, CureVac's clinical pipeline, and strong public investment in mRNA research and manufacturing.

North America (28.4% share)

North America holds 28.4% of the global market, supported by Moderna and Pfizer's mRNA franchises, robust biotechnology infrastructure, and continued government-backed innovation funding.

Asia Pacific (22.3% share)

Asia Pacific accounts for 22.3% of the global market and is rapidly expanding as China, Japan, South Korea, and India scale clinical trial activity, biotech investment, and pharmaceutical manufacturing capacity.

Latin America (8.4% share)

Latin America represents 8.4% of the global market, with steady expansion supported by improving healthcare systems and rising adoption of advanced vaccine technologies.

Middle East & Africa (6.3% share)

The Middle East and Africa region accounts for 6.3% of the market, growing on the back of healthcare modernization and rising biotechnology investments across the GCC region.

View the Full Report: <https://www.imarcgroup.com/mrna-vaccines-therapeutics-market>

Key Companies in the mRNA Vaccines and Therapeutics Market:

Major players profiled in the IMARC Group report include:

- Arcturus Therapeutics, Inc.
- Argos Therapeutics, Inc.
- BioNTech SE
- CureVac AG
- ethris GmbH
- eTheRNA immunotherapies NV
- GlaxoSmithKline plc
- Moderna, Inc.
- Pfizer Inc.
- Sangamo Therapeutics, Inc.
- Translate Bio, Inc.

Key Takeaways from the Report:

- Market projected to grow from USD 60.58 Billion (2025) to USD 75.11 Billion by 2034 at a 2.30%

CAGR.

- Infectious Disease leads applications with a 38.4% share.
- Cancer is the fastest-expanding application segment at 28.6% share.
- Europe leads regionally with 34.6% market share.
- In-house manufacturing accounts for 64.3% of capacity.
- AI-assisted mRNA design and self-amplifying mRNA platforms are reshaping the pipeline.

About IMARC Group:

IMARC Group is a leading market research company that offers management strategy and market research worldwide. The company partners with clients across all sectors and regions to identify their highest-value opportunities, address their most critical challenges, and transform their businesses. IMARC's information products cover major market, scientific, economic, and technological developments for business leaders in pharmaceutical, industrial, and high-technology organizations.

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