

Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Market Size, Share & Trends Analysis Report By Product

TBRC's Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

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/EINPresswire.com/ -- What Is The

[Messenger Ribonucleic Acid \(mRNA\)](#)

[Synthesis And Manufacturing Market Size](#) And Growth?

The size of the market for messenger ribonucleic acid (mRNA) synthesis and manufacturing has expanded swiftly in the past few years. The forecast shows an increase from \$4.56 billion in 2024, reaching \$5.14 billion in 2025, with a compound annual growth rate (CAGR) of 12.7%. The

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rise during the historical period stems from enhanced government subsidies to ready for pandemics, the preliminary accomplishments of COVID-19 mRNA vaccines, a spike in interest towards personalized medicine, escalation in infectious diseases occurrences, and synergies between biotech corporations and educational institutions.

The market for the synthesis and production of messenger ribonucleic acid (mRNA) is anticipated to expand swiftly over the next few years. It is projected to reach \$8.21

billion by 2029, with a compound annual growth rate (CAGR) of 12.5%. The growth during the forecast period can be linked to the broadening of therapeutic applications beyond only vaccines, technological developments in mRNA delivery methods, heightened investment in biomanufacturing facilities, greater demand for quick vaccine development mechanisms, and the backing of regulatory bodies for fast-tracked approvals. During the forecast period, major trends involve a move towards autonomous and modular mRNA production facilities, the incorporation of AI and automation in synthesis processes, the creation of thermostable mRNA compounds, circRNA technology, and the rise of self-amplifying mRNA platforms.



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What Are The Current Leading Growth Drivers For [Messenger Ribonucleic Acid \(mRNA\) Synthesis And Manufacturing Market?](#)

The surge in infectious diseases is anticipated to fuel the expansion of the messenger ribonucleic acid (mRNA) synthesis and manufacturing market. Infectious diseases are conditions caused by pathogenic microorganisms like bacteria, viruses, fungi, or parasites, diseases such as malaria are included and they can transmit directly or indirectly. The surge in infectious diseases can be traced back to rapid urbanization, which results in increased population density and close human interaction, making infection transmission easier. mRNA synthesis and manufacturing play a critical role in battling infectious diseases by facilitating the swift creation and scalable production of specified vaccines and therapeutics, provoking a particular immune response. To illustrate, in November 2023, the World Health Organization, an intergovernmental outfit based in Switzerland, reported that in 2022, the global total of malaria cases (an infectious disease) was estimated at about 249 million, a 5 million case increase (2%) compared to 2021. Therefore, the surge in infectious diseases is fueling the expansion of the messenger ribonucleic acid (mRNA) synthesis and manufacturing market.

Which Companies Are Currently Leading In The Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Market?

Major players in the Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Global Market Report 2025 include:

- Thermo Fisher Scientific Inc.
- Evonik Industries AG
- Moderna Inc.
- BioNTech SE
- AGC Biologics A/S
- Eurofins Scientific SE
- Lonza Group AG
- Catalent Inc.
- WuXi Biologics (Cayman) Inc.
- Samsung Biologics Co Ltd.

What Are The Main Trends, Positively Impacting The Growth Of Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Market?

Key players within the messenger ribonucleic acid (mRNA) synthesis and manufacturing marketplace are making strides towards product innovation, such as co-transcriptional capping platforms, to expedite preclinical investigations and minimize regulatory complications. Co-transcriptional capping platforms, a novel technique, can effectively attach a safeguarding cap to mRNA molecules as they are synthesized, boosting mRNA's stability, translational proficiency,

and control over immunogenicity. For example, GenScript, an American life sciences research tools corporation, instigated their good manufacturing practice (GMP)-like mRNA manufacturing service in May 2025. This manufacturing service was designed with regulatory consciousness and scalability in mind, aiming to produce pure, efficacious mRNA for preclinical tests that will facilitate the approval of new drugs, such as those related to toxicology, biodistribution, pharmacokinetic or pharmacodynamic (PK or PD) evaluations. With the operation being compliant with cleanroom regulations and established in an environment classified under International Organization for Standardization (ISO) as level 7, it also utilizes the ground-breaking co-transcriptional capping technology. This service can deliver tailor-made mRNA in a minimal span of seven weeks, effectively narrowing the critical developmental difference between research-grade and complete GMP manufacturing. This aids early-stage biotech and pharmaceutical companies looking to carry out studies that are aligned with regulatory guidelines, without having to incur the hefty expenditure or timeframe associated with traditional GMP production.

How Is The Messenger Ribonucleic Acid (mRNA) Synthesis And Manufacturing Market Segmented?

The messenger ribonucleic acid (mrna) synthesis and manufacturing market covered in this report is segmented –

- 1) By Service Type: Messenger Ribonucleic Acid (mRNA) Drug Synthesis, Messenger Ribonucleic Acid (mRNA) Vaccine Synthesis
- 2) By Scale Of Operation: Preclinical, Clinical, Commercial
- 3) By Therapeutic Area: Infectious Diseases, Oncology, Other Therapeutic Areas
- 4) By Application: Vaccine Production, Therapeutic Development, Drug Discovery, Other Applications

Subsegments:

- 1) By Messenger Ribonucleic Acid (mRNA) Drug Synthesis: Custom Messenger Ribonucleic Acid (mRNA) Synthesis, GMP-Grade Messenger Ribonucleic Acid (mRNA) Synthesis, Large-Scale Messenger Ribonucleic Acid (mRNA) Synthesis, Modified Messenger Ribonucleic Acid (mRNA) Synthesis, Capping And Tailing Services, Purification Services
- 2) By Messenger Ribonucleic Acid (mRNA) Vaccine Synthesis: Preclinical Messenger Ribonucleic Acid (mRNA) Vaccine Synthesis, Clinical-Grade Messenger Ribonucleic Acid (mRNA) Vaccine Synthesis, GMP-Compliant Vaccine Batch Production, Self-Amplifying Messenger Ribonucleic Acid (mRNA) Synthesis, Messenger Ribonucleic Acid (mRNA)-LNP Formulation Services For Vaccines, Stability Testing And QC Services

View the full messenger ribonucleic acid (mrna) synthesis and manufacturing market report: <https://www.thebusinessresearchcompany.com/report/messenger-ribonucleic-acid-mrna-synthesis-and-manufacturing-global-market-report>

Which Is The Dominating Region For The Messenger Ribonucleic Acid (mRNA) Synthesis And

Manufacturing Market?

In 2024, the dominant region in the global market for Messenger Ribonucleic Acid (mRNA) Synthesis and Manufacturing was North America. The Asia-Pacific region is predicted to experience the quickest growth during the forecast period. The report incorporates various regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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