mRNA Vaccines and Therapeutics - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2021 - 2029

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Report description:

The mRNA Vaccines and Therapeutics Market size is estimated at USD 54.70 billion in 2024, and is expected to reach USD 118.90 billion by 2029, growing at a CAGR of 16.80% during the forecast period (2024-2029).

The increase in demand for the development of new vaccines to control the spread of COVID-19 has led to the growth of the market studied. The COVID-19 pandemic favorably impacted the growth of the global market due to the rising number of COVID-19 patients around the world and the significant external financing for the manufacturing of mRNA-based COVID-19 vaccines. Additionally, when new strains of the SARS-COVID-19 virus appeared in numerous nations throughout the world, demand for mRNA vaccines witnessed a sharp rise due to their potent protection against these strains. As a result, the usage of these mRNA-based products increased during the COVID-19 pandemic and resulted in the market's growth.

Furthermore, in November 2022, the World Bank approved operations to support vaccine rollout in 78 countries, amounting to USD 10.1 billion. The program has reached over 100 countries with emergency operations to prevent, detect, and respond to COVID-19 and strengthen systems for public health preparedness. Therefore, the COVID-19 pandemic had a profound impact on the mRNA vaccines and therapeutics market since the proportion of COVID-19-affected patients was high, and the demand for vaccine development increased during the pandemic. Currently, as the pandemic has subsided, the market is expected to expand in the coming years due to the increased development of mRNA vaccines and therapeutics for various infectious and chronic diseases.

Growth in research and development (R&D), collaborations, and strategic partnerships, along with growing demand for new vaccines and therapeutics and increasing chronic and infectious diseases, are expected to drive the growth of the market studied. For example, in January 2021, Ribometrix Inc. and Genentech (a member of the Roche Group) announced an exclusive worldwide license and collaboration agreement to discover, develop, and commercialize novel RNA-targeted small molecule therapeutics against multiple targets. As part of this collaboration, Genentech paid Ribometrix USD 25.0 million upfront and received exclusive rights to several pre-defined targets, including an exclusive global license to develop and commercialize the molecules. In addition, in February 2022, Eli Lilly and Company invested USD 700.0 million to build a facility at the Port of Boston to support its RNA-based research and development activities.

The rising prevalence of chronic diseases is another factor driving the growth of the market studied. According to the Centers for Disease Control and Prevention report in September 2021, seasonal influenza viruses are constantly mutating, due to which vaccines also need to be modified accordingly. This factor is driving the growth of the influenza vaccine, which is expected to boost the growth of the mRNA vaccine and therapeutics market. Additionally, according to the December 2022 update by the CDC Weekly US Influenza Surveillance Report, during the week of October 2022, 113,482 cases were reported for influenza in clinical laboratories. Out of which 112,488 cases were reported for influenza A and 994 cases for influenza B. Hence, a high prevalence of influenza cases is anticipated to boost the market's growth over the forecast period.

Therefore, with the increase in chronic and infectious diseases, coupled with the advancement of mRNA therapeutics, the market studied is anticipated to witness growth over the forecast period. However, the strict regulatory framework for the market authorization and approval for the mRNA vaccine can restrain the market's growth over the forecast period.

mRNA Vaccine and Therapeutics Market Trends

Infectious Disease Segment is Expected to Occupy a Significant Share in the mRNA Vaccines and Therapeutics Market over the Forecast Period

The infectious diseases segment is expected to witness significant growth during the forecast period. The increasing prevalence of Ebola, influenza, human immunodeficiency virus (HIV), and other viral infections, including COVID-19, act as major driving factors for this segment. Earlier in 2020, the outbreak of COVID-19 sparked demand for mRNA vaccines and therapeutics. Several major players are actively involved in the research and development of vaccines to combat the COVID-19 infection. COVID-19 has shown a significant positive impact on the infectious diseases segment of the market studied.

Additionally, the growing burden of infectious diseases is expected to propel the infectious diseases segment's growth over the forecast period. According to the Minority of HIV/AIDS Fund (MHAF) United States Department of Health and Human Services Statistics updated in June 2021, there were approximately 37.6 million people living with HIV worldwide in 2020, of whom 35.9 million were adults and 1.7 million were children (under the age of 15). The market is expanding as a result of the rising prevalence of HIV, and the resulting demand for vaccine development is expected to boost the growth of the market over the forecast period.

In addition, non-COVID-19 mRNA vaccines for HIV, influenza, and other viral infections are currently in development and clinical trials. For instance, in April 2022, the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), launched a Phase 1 clinical trial to evaluate three experimental messenger RNA (mRNA)-based HIV vaccines platform. The HVTN 302 study is sponsored by NIAID and conducted by the NIAID-funded HIV Vaccine Trials Network (HVTN) based at the Fred Hutchinson Cancer Research Center in Seattle.

Additionally, in July 2021, Moderna announced that the first participants had been dosed in Phase 1 and 2 clinical trials of its quadrivalent influenza candidate, mRNA-1010. Approximately 180 healthy adults in the United States participated in the study and were fully enrolled in early September 2021. Therefore, these increasing mRNA vaccine and therapeutics developments and clinical trials for several infectious diseases are anticipated to grow over the forecast period.

North America is Expected to Hold a Significant Share in the Market in the Forecast Period

North America is expected to dominate the mRNA vaccines and therapeutics market during the forecast period. An increasing number of research and development (R&D) activities and investments in the sector, new product launches, and a rising number of chronic diseases are the major factors attributed to the market's growth in the region. For instance, according to the Cancer Facts & Figures 2022 data published by the American Cancer Society, an estimated 1.9 million new cancer cases were diagnosed and 609,360 cancer deaths in the United States in 2022. Hence, the prevalence of chronic diseases coupled with the increasing geriatric population in the country is anticipated to create more opportunities for the development of new mRNA vaccines in the country, driving the growth of the market studied.

Various initiatives taken by the government are expected to support the market's growth over the forecast period. For instance, in February 2022, the US President's Malaria Initiative invested USD 770 million in 2020 to fight against malaria. In addition, through the Immunization Partnership Fund (IPF), the Government of Canada reached populations with lower vaccine uptake by enabling informed vaccination choices. In 2020 and 2021, IPF received USD 45.5 million in additional funding over 2.5 years to allow the Public Health Agency of Canada to continue supporting vaccination efforts across Canada. Through these initiatives, the Government of Canada is working to increase vaccine confidence, uptake, and access to COVID-19 vaccines across Canada.

Additionally, in May 2021, the Government of Canada announced an investment of up to USD 199.16 million in Resilience Biotechnologies Inc. to increase its manufacturing and filling/finishing capacity for several vaccines and therapeutics that use new technologies such as mRNA. Therefore, health care and drug spending and increasing government activities by these countries are expected to increase in the region over the next few years.

Strategic activities such as new product development, approvals, collaborations, and acquisitions in the United States are driving the growth of the mRNA therapeutics market. For example, in June 2021, Cambridge, Massachusetts, United States-based Strand Therapeutics raised USD 52.0 million to program new cancer therapies. Additionally, as per clinicaltrials.gov, around 150 mRNA vaccine clinical trials were registered in the United States involving biopharmaceuticals in 2022. This increasing number of clinical trials for mRNA vaccines in the country is anticipated to drive the growth of the market studied.

mRNA Vaccine and Therapeutics Industry Overview

The market for mRNA vaccines and therapeutics is fragmented in nature due to the presence of several companies globally. Key players are implementing various strategies, including partnerships, mergers and acquisitions, geographic expansion, and strategic collaborations to expand their market presence. Some of the key companies dealing in the market studied are AstraZeneca, Pfizer Inc., Moderna, BioNTech, GlaxoSmithKline, Daiichi Sankyo, BioNTech SE, and among others.

Additional Benefits:

  The market estimate (ME) sheet in Excel format
 3 months of analyst support

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