India RNA Therapeutics Market Assessment, By Type [RNA Interference Therapeutics, mRNA Therapeutics, Antisense Oligonucleotide (ASO) Therapeutics, Others], By Product [Vaccines, Drugs], By Indication [Rare Genetic Diseases/Hereditary Diseases, Infectious Diseases, Others], By End-user [Hospitals, Academic Research Centers, Contract Research Organizations, Others], By Region, Opportunities and Forecast, FY2018-FY2032F

Market Report | 2024-11-27 | 127 pages | Market Xcel - Markets and Data

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Report description:

India RNA therapeutics market is projected to witness a CAGR of 15.33% during the forecast period FY2025-FY2032, growing from USD 627.39 million in FY2024 to USD 1,909.94 million in FY2032. The market's growth is supported by the increasing prevalence of chronic diseases, rising investments towards the upgradation of healthcare and pharmaceutical sectors, growing research, and increasing support from the government.

The growing threat of different chronic diseases, including diabetes and cardiovascular diseases, is propelling the adoption of cutting-edge therapies, boosting the RNA therapeutics market demand in India. According to the estimates of the Indian Heart Association (IHA), India accounts for approximately 60% cases of heart diseases across the world. Due to the functionally specific and biologically diverse nature of RNAs, they can be used for loss- or gain-of-function purposes. Emergent technologies based on gene editing and microRNAs are reducing the burden of complex diseases in a novel manner; RNA-based gene editing is expected to provide control of complex diseases over longer periods of time and a permanent cure for monogenic cardiovascular diseases. Unlike biological products that require bioreactors and complex setups, RNA therapies can be synthesized chemically, ensuring that it is swiftly tested and produced if a viable RNA candidate is identified. Due to the easily reproducible nature of these therapies, various market players and research organizations in the country are actively investing in identifying appropriate

therapeutic solutions to combat previously undruggable diseases. Moreover, the focus on research activities on RNA therapies is also increasing in India as they can benefit large patient populations, making them essential for densely populated countries such as India.

Increasing Cases of Infectious Diseases Support Market Expansion

The rising cases of infectious diseases in the country are boosting India's RNA therapeutics market growth. As per the Department of Biotechnology estimates, infectious diseases are one of India's top ten causes of death. To combat the threat of chronic diseases in the country, various organizations are working towards the development and availability of effective therapeutic solutions. The growing knowledge about RNA and its involvement in different diseases encourages the utilization of RNAs to function on hitherto genes, transcripts, and proteins selectively. RNA therapeutics can aid in reducing the rate of infections in the country, which in turn will reduce the number of preventable deaths in India.

Growing Government Support Boosts Market Expansion

The government is promoting collaborations and partnerships between leading pharmaceutical and biotechnology companies and international players to propel the development and availability of RNA-based therapeutic solutions in the country. Additionally, the Indian regulatory framework is evolving to accommodate and facilitate the approval of RNA therapeutics, which is essential for providing innovative treatments and advancing clinical applications. Furthermore, the Indian government is also actively investing in the biotechnology sector. As per the estimates of Invest India, the country invested USD 1 billion in research and development activities in biotechnology in 2022. In order to meet the growing domestic and international demand, the country is also increasingly investing in enhancing research infrastructure and constructing bio-incubation centers. Such efforts and investments are expected to bolster the growth of the biotechnology sector and positively influence the market's expansion.

mRNA Therapeutics Account for Significant Market Share

The rising cases of various chronic diseases in the country, including cancer, are propelling the requirement for mRNA therapeutics. As per the statistical analysis of incidence rates of cancer published in the Indian Journal of Public Health, the country's cancer burden is expected to rise by 31.4% between 2015 and 2025. mRNA vaccines showcase great potential as compared to traditional cancer vaccines that are based on peptides or proteins. mRNA vaccines reconcile the requirement for commercialization and personalization that is unique to every protein and is not beholden to their human leukocyte antigen (HLA) haplotype. Another advantage of mRNA vaccines includes the availability of engineering strategies for enabling the induction of adaptive and innate immune responses. Additionally, direct injection of mRNA vaccines provides flexibility and safety in terms of speed with which antigens or personalized epitopes can be produced in mRNA form. In the future, mRNA vaccines are expected to include the optimization of nanoparticles for delivering mRNA itself as well as the vaccine.

Vaccines Hold Significant Market Share

The expansion of the segment is supported by the significantly lower production time of RNA vaccines. mRNA, responsible for encoding one or more antigens of the infectious agent, is derived from a DNA template, which can be synthesized with the help of a digital sequence and sent across the world in an instant. The production process for RNA vaccines can be easily standardized and scaled, enabling replacement of the sequence encoding the protein necessary for a new vaccine, while ensuring minimal changes to the vaccine production process. Such advantages, coupled with the increasing approval from the Government of India, are bolstering the market's expansion. In June 2023, India's first mRNA-based vaccine received approval from the Drug Control General of India (DCGI). Such approvals are expected to augment the market's demand and aid the pharmaceutical sector in meeting the evolving requirements of the patients and the healthcare sector.

Future Market Scenario (FY2025-FY2032F)

As per the India RNA therapeutics market analysis, the rapid expansion of the population, along with rising cases of chronic diseases and evolving healthcare requirements of the patients, is expected to provide lucrative growth opportunities to the market. According to the statistical analysis on incidence rates of cancer published in the Indian Journal of Public Health in 2023, the burden of cancer is estimated to rise to 2.98 million in India by 2025 from 2.67 million in 2021. As healthcare is becoming more personalized in treatment modes, the demand for RNA therapies is expected to increase in the coming years for treating chronic diseases such as cancer. Government support for research activities in RNA vaccines is expected to bolster the commercialization of these vaccines.

Collaborations between Indian companies and international players are expected to enhance the efficacy of RNA-based therapies

and widen the scope of application against more diseases. Furthermore, the pharmaceutical industry in India is expected to invest heavily in expanding its manufacturing capabilities to accommodate RNA drugs and vaccines. Additionally, due to the government's emphasis on making India a global hub for biotechnology, new biomanufacturing facilities and innovation centers are being set up, which in turn are expected to support the market's growth. These facilities will aid in the local manufacturing of RNA therapies, ensuring their easy
availability.

Key Players Landscape and Outlook

The rising efforts of the key market players to propel the development of effective therapeutic solutions with the support of government organizations is expected to boost the India RNA therapeutics market size. In June 2023, the Department of Biotechnology announced that the office of the DCGI has given approval to the Omicron-specific mRNA-based booster vaccine that was supported by the Biotechnology Industry Research Assistance Council's (BIRAC) Mission COVID Suraksha and developed by Gennova Biopharmaceuticals Ltd. The vaccine was developed with the help of Gennova's indigenous platform technology. Such developments and alliances are expected to bolster the availability of essential therapeutic solutions and provide lucrative growth opportunities to the market.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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