

## **RNAi Drug Delivery: Technologies and Global Markets**

Market Research Report | 2023-08-08 | 141 pages | BCC Research

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### **Report description:**

Description

Report Scope:

This research report categorizes the market for nucleic acid drugs by type. The major product segments are conjugated and encapsulated. The non-viral vectors used for encapsulation are divided into polymers, lipids and others (e.g., inorganic material, hybrid systems). The market is also segmented based on the molecule types, delivery modes and therapeutic areas. It is divided by application types into therapeutic applications and research-based applications. The markets in North America, Europe, the Asia-Pacific region and Rest of the World (RoW) are covered.

Report Includes:

- 24 data tables and 45 additional tables
- An up-to-date overview and industry analysis of the global markets for RNA interference (RNAi) drug delivery technologies
- Analyses of the global market trends, with historic market revenue (sales figures) from 2020 to 2022, estimates for 2023, and projections of compound annual growth rates (CAGRs) through 2028
- Estimation of the actual market size and revenue forecast for the RNAi drug delivery technologies market, and corresponding market share analysis based on type of RNAi, therapeutic area, and region
- Discussion of major growth drivers, industry-specific challenges, regulatory aspects, and technology advancement that will shape the market for RNAi drug delivery technologies as a basis for projecting demand in the next few years (2023-2028)
- Review of key patent grants and patent applications on RNAi drug delivery markets, and emerging technologies and new developments within the marketplace
- Latest information on the mergers and acquisition deals, partnerships, agreements, collaborations, and other strategic alliances within the marketplace

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- Insight into the recent industry structure, competitive aspects of each product segments, increasing investment on R&D activities, market growth strategies, and company revenue share analysis
- A look at commercial opportunities in the RNAi research tools and reagents, recent progress and future opportunities for RNAi therapeutics in various disease classifications, clinical trial applications, and potential markets for future developments
- Identification of the major stakeholders and analysis of the competitive landscape based on recent developments, segmental revenues, and operational integration
- Descriptive company profiles of the leading global players of the industry, including Alnylam Pharmaceuticals, Benitec Biopharma, Ionis Pharmaceutical, Novo Nordisk and Sirnaomics Inc.

## Executive Summary

### Summary:

Nucleic acid drugs have a long history, but they have reached the status of a new therapeutic segment in recent years. Two major reasons have been the success of the COVID-19 vaccines, which are based on the mRNA and use lipid molecules for delivery. The second major reason is the increasing approval of nucleic acid drugs. Nucleic acid drugs are poised to treat "undruggable" diseases and rare diseases. They are also being researched for the treatment of chronic conditions and infectious diseases.

The last five years saw approval of siRNA-based drugs. These comprise a different class of nucleic acid drugs that cannot be delivered naked in the human body. Hence there is a need for these molecules to be attached to a delivery agent. The market for nucleic acid drugs is expanding, so a growing demand for the drug delivery agents is also increasing. Drug delivery has been a restricting point in the application of nucleic acid drugs. There is therefore constant research and development regarding the drug delivery systems of nucleic acid drugs.

The major driver of the market includes the increasing investment in the nucleic acid drug segment. The nucleic acid companies have been attracting investments from various sources, such as venture capitalists and seed investments. Even big pharmaceutical companies are keeping a close watch on new companies for mergers and acquisitions. The drugs currently available on the market are targeted toward rare diseases, and such drugs are allocated orphan drug status. They enjoy many benefits such as faster approval and even tax benefits, which are major drivers for the market. The opportunity to target undruggable diseases is also huge and will spur the market forward.

The major restraint affecting market growth is the addition of other technologies, such as CSPIR. The regulations are also not globally uniform, and they vary drastically for nucleic acid drugs. Another major restraint is the high prices of such drugs, which limit their access. The awareness level for such diseases is also low, which negatively impacts the market.

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