

Antisense & RNAi Therapeutics – A Global Market Overview

<https://marketpublishers.com/r/AD18AE03E68EEN.html>

Date: September 2024

Pages: 253

Price: US\$ 4,500.00 (Single User License)

ID: AD18AE03E68EEN

Abstracts

Antisense & RNAi Therapeutics Market Trends and Outlook

Antisense and RNA interference (RNAi) therapeutics are novel approaches to inhibit gene expression to treat diseases. Antisense therapy utilizes synthetic nucleic acids called antisense oligonucleotides (ASOs) that bind to specific messenger RNA (mRNA) sequences, effectively silencing disease-associated genes. RNAi employs double-stranded RNA (dsRNA) to produce small interfering RNA (siRNA) and microRNA (miRNA) that degrade target mRNAs, thereby preventing protein production. Both approaches are under development for conditions such as cancer, neurodegenerative disorders, cardiometabolic disorders, and ocular diseases. While they offer precise gene suppression crucial for treating chronic and rare diseases, challenges remain in delivering ASOs to specific tissues. Advances in nucleic acid technologies continue to broaden their therapeutic applications in oncology, genetic disorders, and infectious diseases.

The global market for Antisense & RNAi Therapeutics is estimated at US\$5.4 billion in 2024 and is anticipated to post a CAGR of 17.8% during the 2024-2030 analysis period and stand at a projected US\$14.4 billion by 2030.

The Antisense & RNAi therapeutics market growth is primarily driven by advancements in drug delivery technologies, like lipid nanoparticles and conjugate systems, which improve the stability and cellular uptake of RNA-based drugs. Additionally, the increasing occurrence of chronic and genetic diseases, along with the ability of these therapies to target disease-specific genes, has spurred the demand. The market is expanding further due to the increased focus on research and development in rare diseases like Amyloid Transthyretin (ATTR) amyloidosis and Spinal Muscular Atrophy

(SMA). This leads to the potential for orphan drug designations and associated incentives.

Antisense & RNAi Therapeutics Regional Market Analysis

North America dominates the global Antisense & RNAi therapeutics market, with an estimated 52.6% of the market share in 2024. This dominance is driven by robust pharmaceutical and biotechnology sectors, significant investments in research and development, and the presence of major pharmaceutical companies and research institutions that enhance access to advanced treatments, supported by a robust healthcare infrastructure promoting early rare disease screening. In contrast, the Asia Pacific region is projected to register the fastest CAGR of 18.9% during the forecast period from 2024 to 2030, fueled by emerging markets such as China and India. These countries are enhancing generic drug manufacturing and promoting local biotech innovation, leading to more affordable therapies, and attracting substantial investments from global pharmaceutical firms.

Antisense & RNAi Therapeutics Market Analysis by Technology

The Antisense RNA segment is the largest market, with an estimated share of 64.1% in 2024, driven by its application in cardiovascular, respiratory, neurodegenerative, and genetic disorders. Its precision in regulating gene and protein expression enhances therapies and spurs ongoing research. Successful clinical trials and FDA approvals validate antisense therapies' efficacy, attracting investment and increasing demand due to the rising prevalence of these disorders. Meanwhile, the RNA Interference (RNAi) technology segment is anticipated to record the fastest CAGR of 19% during the analysis period 2024-2030, with applications in targeting cancer-related genes and treating bacterial, viral, and parasitic diseases, reflecting the technology's versatility and potential to address unmet medical needs.

Antisense & RNAi Therapeutics Market Analysis by Route of Administration

The intrathecal injections segment leads the market in 2024 with a share of 36.9%, as this method allows for effective pain management and spasticity reduction with smaller doses directly delivered to the cerebrospinal fluid. Despite being invasive, intrathecal drug delivery has a low complication rate and is widely used for chemotherapy and infection treatment post-neurosurgery. In contrast, the subcutaneous injection segment is projected to record the fastest CAGR of 19.3% from 2024 to 2030, offering a convenient and low-risk alternative to intravenous administration. This method provides

flexibility in injection sites and employs smaller needles, potentially reducing patient discomfort and promoting segment growth.

Antisense & RNAi Therapeutics Market Analysis by Application

The neurodegenerative disorders segment dominates the market with an estimated share of 27.1% in 2024, primarily affecting the elderly and prompting significant biomedical research for therapeutic development. The increasing number of RNA-based techniques enhances the ability to target various disease-associated genes, making it a key focus for industry players. Conversely, the genetic disorders segment is projected to grow at the fastest CAGR of 19.3% during the forecast period 2024-2030, driven by innovations in RNA vaccines and gene therapy. The application of novel RNA editing methods in gene therapy shows promise for effectively treating genetic disorders.

Antisense & RNAi Therapeutics Market Report Scope

This global report on Antisense & RNAi Therapeutics analyzes the market based on technology, route of administration and applications. In addition to providing profiles of major companies operating in this space, the latest corporate and industrial developments have been covered to offer a clear panorama of how and where the market is progressing.

Key Metrics

Historical Period: 2021-2023

Base Year: 2023

Forecast Period: 2024-2030

Units: Value market in US\$

Companies Mentioned: 10+

Antisense & RNAi Therapeutics Market by Geographic Region

North America (The United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Italy, Spain, and Rest of Europe)

Asia-Pacific (Japan, China, India, South Korea, and Rest of Asia-Pacific)

South America (Brazil, Argentina, and Rest of South America)

Rest of World

Antisense & RNAi Therapeutics Market by Technology

Antisense RNA

RNA Interference

Antisense & RNAi Therapeutics Market by Route of Administration

Intrathecal

Intravenous

Subcutaneous

Others (Including Topical, Pulmonary, Transdermal, Oral, and Ophthalmic Administration)

Antisense & RNAi Therapeutics Market by Application

Neurodegenerative Disorders

Oncology

Cardiometabolic & Renal Disorders

Genetic Disorders

Infectious Diseases

Respiratory Disorders

Other Applications (Including Ocular, Muscle, Skin, Autoimmune, Hematological Disorders, and Others)

Contents

PART A: GLOBAL MARKET PERSPECTIVE

1. INTRODUCTION

Product Outline

Antisense and RNAi Therapeutics Defined

Antisense and RNAi Therapeutic Technologies

Antisense RNA

RNA Interference

Antisense and RNAi Therapeutic Route of Administration

Intrathecal

Intravenous

Subcutaneous

Others (Including Topical, Pulmonary, Transdermal, Oral, and Ophthalmic Administration)

Antisense and RNAi Therapeutic Applications

Neurodegenerative Disorders

Oncology

Cardiometabolic & Renal Disorders

Genetic Disorders

Infectious Diseases

Respiratory Disorders

Other Applications (Including Ocular, Muscle, Skin, Autoimmune, Hematological Disorders, and Others)

2. Key Market Trends

3. Key Global Players

Anylam Pharmaceuticals, Inc.

Arbutus Biopharma Corporation

Benitec Biopharma Inc.

GSK plc

Ionis Pharmaceuticals, Inc.

Olix Pharmaceuticals, Inc.

Percheron Therapeutics Limited

Sanofi S.A.

Sarepta Therapeutics, Inc.

Silence Therapeutics plc

4. Key Business & Product Trends

5. Global Market Overview

Global Antisense and RNAi Therapeutics Market Overview by Technology
Antisense and RNAi Therapeutics Technology Market Overview by Global Region

Antisense RNA

RNA Interference

Global Antisense and RNAi Therapeutics Market Overview by Route of Administration

Antisense and RNAi Therapeutics Route of Administration Market Overview by Global Region

Intrathecal

Intravenous

Subcutaneous

Others

Global Antisense and RNAi Therapeutics Market Overview by Application

Antisense and RNAi Therapeutics Application Market Overview by Global Region

Neurodegenerative Disorders

Oncology

Cardiometabolic & Renal Disorders

Genetic Disorders

Infectious Diseases

Respiratory Disorders

Other Applications

PART B: REGIONAL MARKET PERSPECTIVE

Global Antisense and RNAi Therapeutics Market Overview by Geographic Region

REGIONAL MARKET OVERVIEW

6. North America

North American Antisense and RNAi Therapeutics Market Overview by Geographic Region

North American Antisense and RNAi Therapeutics Market Overview by Technology

North American Antisense and RNAi Therapeutics Market Overview by Route of Administration

North American Antisense and RNAi Therapeutics Market Overview by Application

Country-wise Analysis of North American Antisense and RNAi Therapeutics Market
The United States

United States Antisense and RNAi Therapeutics Market Overview by Technology

United States Antisense and RNAi Therapeutics Market Overview by Route of Administration

United States Antisense and RNAi Therapeutics Market Overview by Application

Canada

Canadian Antisense and RNAi Therapeutics Market Overview by Technology

Canadian Antisense and RNAi Therapeutics Market Overview by Route of Administration

Canadian Antisense and RNAi Therapeutics Market Overview by Application
Mexico

Mexican Antisense and RNAi Therapeutics Market Overview by Technology

Mexican Antisense and RNAi Therapeutics Market Overview by Route of Administration

Mexican Antisense and RNAi Therapeutics Market Overview by Application

7. Europe

European Antisense and RNAi Therapeutics Market Overview by Geographic Region

European Antisense and RNAi Therapeutics Market Overview by Technology

European Antisense and RNAi Therapeutics Market Overview by Route of Administration

European Antisense and RNAi Therapeutics Market Overview by Application

Country-wise Analysis of European Antisense and RNAi Therapeutics Market
Germany

German Antisense and RNAi Therapeutics Market Overview by Technology

German Antisense and RNAi Therapeutics Market Overview by Route of Administration

German Antisense and RNAi Therapeutics Market Overview by Application

France

French Antisense and RNAi Therapeutics Market Overview by Technology

French Antisense and RNAi Therapeutics Market Overview by Route of Administration

French Antisense and RNAi Therapeutics Market Overview by Application

The United Kingdom

United Kingdom Antisense and RNAi Therapeutics Market Overview by Technology

United Kingdom Antisense and RNAi Therapeutics Market Overview by Route of Administration

United Kingdom Antisense and RNAi Therapeutics Market Overview by Application

Italy

Italian Antisense and RNAi Therapeutics Market Overview by Technology

Italian Antisense and RNAi Therapeutics Market Overview by Route of Administration

Italian Antisense and RNAi Therapeutics Market Overview by Application

Spain

Spanish Antisense and RNAi Therapeutics Market Overview by Technology

Spanish Antisense and RNAi Therapeutics Market Overview by Route of Administration

Spanish Antisense and RNAi Therapeutics Market Overview by Application

Rest of Europe

Rest of Europe Antisense and RNAi Therapeutics Market Overview by Technology

Rest of Europe Antisense and RNAi Therapeutics Market Overview by Route of

Administration

Rest of Europe Antisense and RNAi Therapeutics Market Overview by Application

8. Asia-Pacific

Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Geographic Region

Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Technology

Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Route of Administration

Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Application

Country-wise Analysis of Asia-Pacific Antisense and RNAi Therapeutics Market
Japan

Japanese Antisense and RNAi Therapeutics Market Overview by Technology

Japanese Antisense and RNAi Therapeutics Market Overview by Route of Administration

Japanese Antisense and RNAi Therapeutics Market Overview by Application

China

Chinese Antisense and RNAi Therapeutics Market Overview by Technology

Chinese Antisense and RNAi Therapeutics Market Overview by Route of Administration

Chinese Antisense and RNAi Therapeutics Market Overview by Application

India

Indian Antisense and RNAi Therapeutics Market Overview by Technology

Indian Antisense and RNAi Therapeutics Market Overview by Route of Administration

Indian Antisense and RNAi Therapeutics Market Overview by Application

South Korea

South Korean Antisense and RNAi Therapeutics Market Overview by Technology

South Korean Antisense and RNAi Therapeutics Market Overview by Route of Administration

South Korean Antisense and RNAi Therapeutics Market Overview by Application

Rest of Asia-Pacific

Rest of Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Technology

Rest of Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Route of Administration

Rest of Asia-Pacific Antisense and RNAi Therapeutics Market Overview by Application

9. South America

South American Antisense and RNAi Therapeutics Market Overview by Geographic Region

South American Antisense and RNAi Therapeutics Market Overview by Technology

South American Antisense and RNAi Therapeutics Market Overview by Route of Administration

South American Antisense and RNAi Therapeutics Market Overview by Application

Country-wise Analysis of Asia-Pacific Antisense and RNAi Therapeutics Market

Brazil

Brazilian Antisense and RNAi Therapeutics Market Overview by Technology

Brazilian Antisense and RNAi Therapeutics Market Overview by Route of Administration

Brazilian Antisense and RNAi Therapeutics Market Overview by Application

Argentina

Argentine Antisense and RNAi Therapeutics Market Overview by Technology

Argentine Antisense and RNAi Therapeutics Market Overview by Route of Administration

Argentine Antisense and RNAi Therapeutics Market Overview by Application

Rest of South America

Rest of South American Antisense and RNAi Therapeutics Market Overview by Technology

Rest of South American Antisense and RNAi Therapeutics Market Overview by Route of Administration

Rest of South American Antisense and RNAi Therapeutics Market Overview by Application

10. Rest of World

Rest of World Antisense and RNAi Therapeutics Market Overview by Technology

Rest of World Antisense and RNAi Therapeutics Market Overview by Route of Administration

Rest of World Antisense and RNAi Therapeutics Market Overview by Application

PART C: GUIDE TO THE INDUSTRY

PART D: ANNEXURE

1. RESEARCH METHODOLOGY

2. FEEDBACK

I would like to order

Product name: Antisense & RNAi Therapeutics – A Global Market Overview

Product link: <https://marketpublishers.com/r/AD18AE03E68EEN.html>

Price: US\$ 4,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/AD18AE03E68EEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970