

# RNA Therapeutics Market by Product (Vaccines, Drugs), Type (mRNA Therapeutics, RNA Interference, Antisense Oligonucleotides), Indication (Infectious Diseases, Rare Genetic Diseases), End User (Hospitals & Clinics) - Global Forecast to 2028

Market Report | 2023-09-15 | 166 pages | MarketsandMarkets

### **AVAILABLE LICENSES:**

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

#### **Report description:**

The RNA therapeutics market is projected to grow from USD 13.7 billion in 2023 to USD 18.0 billion by 2028 at a CAGR of 5.6%. The key factors driving the overall market growth include an increase in the number of collaborations and partnerships among market players as well as RNA technology manufacturers, an increase in applications of different types of RNA therapeutics (such as RNA aptamers, siRNA, small-activating RNA), and the rapid emergency use authorizations and approvals for COVID-19 booster vaccines. The emergence of small activating RNAs (siRNAs) and circular RNAs (circRNAs) has expanded the scope of RNA therapeutics.

"RNA drugs to witness the highest growth during the forecast period."

Based on product, the RNA therapeutics market is segmented into drugs and vaccines. In 2022, vaccines represented the majority of the market share, whereas the RNA drugs segment registered the highest growth rate during the forecast period (2023-2028). The growth of the RNA therapeutics drugs market is propelled by a surge in technological advancements in RNA synthesis and drug delivery. The increasing number of FDA approvals for RNA-based drugs and robust increase in the pipeline are attributive to the segment's lucrative growth. Regulatory approvals of RNA-based drugs, such as Patisiran, Lumasiran, and Viltolarsen, and their successful commercialization have encouraged several therapeutics manufacturers to invest in this space. "The mRNA therapeutics segment accounted for the largest share in the RNA therapeutics market in 2022."

Based on the type, the RNA therapeutics market is segmented into RNA interference (RNAi) therapeutics, mRNA therapeutics, antisense oligonucleotide (ASO) therapeutics, and other therapeutics. The mRNA therapeutics segment accounted for the largest share of the RNA therapeutics market in 2022. The success of mRNA-based COVID-19 vaccines has also demonstrated the potential of mRNA technology in developing effective vaccines against infectious diseases, leading to increased interest and

investment in mRNA therapeutics. In August 2023, CARsgen Therapeutics Holdings collaborated with Moderna, Inc. to investigate CARsgen's investigational Claudin18.2 CAR T-cell product candidate (CT041) in combination with Moderna's investigational Claudin18.2 mRNA cancer vaccine.

#### ?

"Rare genetic/hereditary diseases have emerged as a lucrative segment in the RNA therapeutics market." Based on the indication, the RNA therapeutics market is segmented into infectious diseases, rare genetic diseases/hereditary diseases, and other indications. Rare genetic diseases, often characterized by their limited prevalence and challenging treatment paradigms, create opportunities for the innovative potential of RNA-based interventions. RNA therapeutics offer a unique avenue to address these rare genetic disorders by precisely targeting the underlying genetic mutations that are responsible for the diseases. Through techniques such as gene silencing using small interfering RNAs (siRNAs) or gene editing using CRISPR/Cas9,

RNA therapeutics correct or mitigate the genetic abnormalities causing these conditions. Europe dominates the global RNA therapeutics market throughout the forecast period.

The global RNA therapeutics market is segmented into four major regions, namely, North America, Europe, the Asia Pacific, and the Rest of the World. Europe leads the market for RNA vaccines, with the highest share of revenue in this segment in 2022. North America has emerged as the fastest-growing region from 2023 to 2028. The collective revenue share of Europe, across both RNA vaccines and RNA drugs, is highest in 2022, and this is set to continue through the forecast period. Breakdown of supply-side primary interviews by company type, designation, and region:

- By Respondent: Supply Side (70%), Demand side (30%)

- By Designation: C-level (55%), Director-level (20%), and Others (25%)

- By Region: North America (50%), Europe (20%), AsiaPacific (20%), and Rest of the World(10%)

List of Companies Profiled in the Report - Moderna, Inc. (US) - Alnylam Pharmaceuticals, Inc. (US) - Pfizer Inc. (US) - Novartis AG (Switzerland) - Ionis Pharmaceuticals, Inc. (US) - Sarepta Therapeutics, Inc. (US) -∏Sanofi (France) Arrowhead Pharmaceuticals, Inc. (US) -∏BioNtech SE (Germany) Orna Therapeutics (US) -□CRISPR Therapeutics (Switzerland) - Silence Therapeutics (UK) - Astellas Pharma Inc. (Japan) - CureVac SE (Germany) - Sirnaomics (US) - Arcturus Therapeutics Inc. (US) Arbutus Biopharma (US) **Research Coverage** 

This report studies the RNA therapeutics market based on product, type, indication, end user, and region. The report also analyzes factors (such as drivers, restraints, opportunities, and challenges) affecting the market growth. It evaluates the opportunities and challenges in the market for stakeholders and provides details of the competitive landscape for market leaders. The report also studies micro markets with respect to their growth trends, prospects, and contributions to the total RNA therapeutics market. The report forecasts the revenue of the market segments with respect to four major regions.

Reasons to Buy the Report:

The report provides insights on the following pointers:

-[Market Drivers: The key factors driving the overall market growth include an increase in the number of collaborations and partnerships among market players as well as RNA technology manufacturers, an increase in applications of different types of RNA therapeutics and the rapid emergency use authorizations and approvals for COVID-19 booster vaccines.

-[Market Penetration: Comprehensive information on RNA therapeutics offered by the top 17-20 players in the market. The report analyzes the RNA therapeutics market by product, type, indication, end user, and region.

-[]Market Development: Comprehensive information about lucrative emerging markets. The report analyzes the markets for various products/types of RNA therapeutics/end users across key geographic regions.

- Market Diversification: Exhaustive information about untapped geographies, recent developments, and investments in the gene editing market

- Competitive Assessment: In-depth assessment of market shares and strategies of the leading players in the RNA therapeutics market

## **Table of Contents:**

1 INTRODUCTION 24 1.1 STUDY OBJECTIVES 24 1.2 MARKET DEFINITION 24 1.2.1 INCLUSIONS AND EXCLUSIONS 24 1.3 MARKET SCOPE 25 1.3.1 ||YEARS CONSIDERED ||25 1.4 CURRENCY CONSIDERED 26 1.5 RESEARCH LIMITATIONS 26 1.6 STAKEHOLDERS 26 1.6.1 RECESSION IMPACT: RNA THERAPEUTICS MARKET 27 2 RESEARCH METHODOLOGY 28 2.1 RESEARCH DATA 28 FIGURE 1⊓RESEARCH DESIGN⊓28 2.1.1 SECONDARY DATA 29 2.1.2 PRIMARY DATA 29 FIGURE 2 BREAKDOWN OF PRIMARIES: RNA THERAPEUTICS MARKET 30 2.2 MARKET ESTIMATION METHODOLOGY 30 FIGURE 3 RNA THERAPEUTICS MARKET SIZE ESTIMATION (SUPPLY SIDE ANALYSIS), 2022 30 FIGURE 4[]MARKET SIZE ESTIMATION: COMPANY REVENUE ANALYSIS-BASED ESTIMATION, 2022[]31 2.2.1 INSIGHTS FROM PRIMARY EXPERTS 32 FIGURE 5 MARKET SIZE VALIDATION FROM PRIMARY SOURCES 32 2.3 MARKET GROWTH RATE PROJECTION 33 FIGURE 6 RNA THERAPEUTICS MARKET (SUPPLY SIDE): CAGR PROJECTIONS 34 FIGURE 7 GROWTH ANALYSIS OF DEMAND SIDE DRIVERS: RNA THERAPEUTICS MARKET 34 2.4 MARKET ESTIMATION AND DATA TRIANGULATION 35 FIGURE 8 DATA TRIANGULATION METHODOLOGY 35 2.5 STUDY ASSUMPTIONS 35 2.6 RISK ANALYSIS 36 2.7 IMPACT OF ECONOMIC RECESSION ON RNA THERAPEUTICS MARKET 36 TABLE 1[]GLOBAL INFLATION RATE PROJECTIONS, 2021-2027 (% GROWTH)[]36

TABLE 2 US HEALTH EXPENDITURE, 2019-2022 (USD MILLION) 36 TABLE 3 US HEALTH EXPENDITURE, 2023-2027 (USD MILLION) 37 3 EXECUTIVE SUMMARY 38 FIGURE 9∏RNA THERAPEUTICS MARKET, BY PRODUCT, 2023 VS. 2028 (USD MILLION)∏38 FIGURE 10 RNA THERAPEUTICS MARKET, BY TYPE, 2023 VS. 2028 (USD MILLION) 39 FIGURE 11⊓RNA THERAPEUTICS MARKET, BY INDICATION, 2023 VS. 2028 (USD MILLION)⊓39 FIGURE 12 RNA THERAPEUTICS MARKET, BY END USER, 2023 VS. 2028 (USD MILLION) 40 FIGURE 13 REGIONAL SNAPSHOT: RNA THERAPEUTICS MARKET 41 4⊓PREMIUM INSIGHTS∏42 4.1 RNA THERAPEUTICS MARKET OVERVIEW 42 FIGURE 14 GROWING PARTNERSHIPS AND COLLABORATIONS AMONG KEY PLAYERS TO DRIVE MARKET 42 4.2 NORTH AMERICA: RNA THERAPEUTICS MARKET SHARE, BY PRODUCT AND COUNTRY (2022) 43 FIGURE 15 VACCINES ACCOUNTED FOR LARGEST SHARE OF NORTH AMERICAN RNA THERAPEUTICS MARKET IN 2022 43 4.3∏NORTH AMERICA: RNA THERAPEUTICS MARKET, BY INDICATION, 2023 VS. 2028 (USD MILLION)∏43 FIGURE 16[INFECTIOUS DISEASES TO DOMINATE NORTH AMERICAN RNA THERAPEUTICS MARKET DURING FORECAST PERIOD[]43 5⊓MARKET OVERVIEW∏44 5.1 INTRODUCTION 44 5.2 MARKET DYNAMICS 44 FIGURE 17 DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES: RNA THERAPEUTICS MARKET 44 TABLE 4⊓IMPACT ANALYSIS: RNA THERAPEUTICS MARKET⊓45 5.2.1 || DRIVERS || 45 5.2.1.1 Increasing partnerships and collaborations between market players and RNA technology manufacturers 45 5.2.1.2 Increasing number of novel modalities for RNA therapeutics 46 5.2.1.3 Growing number of emergency use authorizations and approvals for COVID-19 booster vaccines 47 5.2.2 RESTRAINTS 48 5.2.2.1 Discontinuation or recalls of RNA therapeutic products 48 TABLE 5 LIST OF RNA THERAPEUTICS FOR WHICH CLINICAL DEVELOPMENT WAS HALTED 48 5.2.3 OPPORTUNITIES 49 5.2.3.1 Higher progress in development of RNA aptamer-based therapeutics 49 TABLE 6∏RNA APTAMERS UNDER CLINICAL DEVELOPMENT∏49 5.2.4 CHALLENGES 50 5.2.4.1 Rapid degradation by ubiguitous RNases in environment and tissues with strong immunogenicity of exogenous RNA 5.3 TECHNOLOGY ANALYSIS (RNA VACCINE AND THERAPY MANUFACTURING) 5.3.1 PARAMETERS OF MANUFACTURING 51 5.3.2 CIRCULAR RNA ENGINEERING 51 5.4 PIPELINE ANALYSIS 52 FIGURE 18 PIPELINE THERAPIES, BY CATEGORY, 2022 52 5.4.1 PIPELINE ANALYSIS FOR KEY MARKET PLAYERS (TOP 5) 52 5.4.1.1 Moderna, Inc. 52 TABLE 7∏PIPELINE CANDIDATES OF MODERNA, INC.∏52 5.4.1.2 Pfizer, Inc. 54 TABLE 8 PIPELINE CANDIDATES OF PFIZER INC. 54 5.4.1.3 Alnylam Pharmaceuticals, Inc. 54 TABLE 9∏PIPELINE CANDIDATES OF ALNYLAM PHARMACEUTICALS, INC.∏54 5.4.1.4 Novartis AG TABLE 10 PIPELINE CANDIDATES OF NOVARTIS AG 55 5.4.1.5 Ionis Pharmaceuticals, Inc. 55

TABLE 11 PIPELINE CANDIDATES OF IONIS PHARMACEUTICALS, INC. 55 5.5 PORTER'S FIVE FORCES ANALYSIS 56 TABLE 12 PORTER'S FIVE FORCES ANALYSIS: RNA THERAPEUTICS MARKET 56 5.5.1 THREAT OF NEW ENTRANTS 56 5.5.2 THREAT OF SUBSTITUTES 57 5.5.3 BARGAINING POWER OF BUYERS 57 5.5.4 BARGAINING POWER OF SUPPLIERS 57 5.5.5∏INTENSITY OF COMPETITIVE RIVALRY∏57 5.6 REGULATORY ANALYSIS 58 TABLE 13 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 58 TABLE 14 UROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 58 TABLE 15∏ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS∏59 TABLE 16 REST OF THE WORLD: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 59 5.7 VALUE CHAIN ANALYSIS 60 FIGURE 19 VALUE CHAIN ANALYSIS OF RNA THERAPEUTICS MARKET: R&D AND MANUFACTURING PHASES ADD MAXIMUM VALUE 5.8 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES 61 FIGURE 20[]TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES[]61 5.9 KEY STAKEHOLDERS AND BUYING CRITERIA 5.9.1 KEY STAKEHOLDERS IN BUYING PROCESS 61 FIGURE 21 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS OF RNA-BASED THERAPEUTICS 61 5.9.2 BUYING CRITERIA FOR RNA THERAPEUTIC PRODUCTS/MEDICINES 62 FIGURE 22 KEY BUYING CRITERIA FOR END USERS 62 5.10 PRICING ANALYSIS 62 5.10.1 PRICING ANALYSIS FOR FDA-APPROVED RNA THERAPEUTICS, BY PRODUCT 62 TABLE 17 AVERAGE SELLING PRICE FOR RNA VACCINES AND DRUGS, BY REGION 62 5.10.2 PRICING TREND ANALYSIS: RNA VACCINES AND DRUGS 63 5.11 KEY CONFERENCES AND EVENTS (2023-2024) 63 TABLE 18 KEY CONFERENCES AND EVENTS IN RNA THERAPEUTICS MARKET (2023-2024) 63 5.12 ECOSYSTEM MARKET MAP 64 6∏RNA THERAPEUTICS MARKET, BY PRODUCT∏65 6.1⊓INTRODUCTION⊓66 TABLE 19⊓RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)∏66 6.2 VACCINES 66 6.2.1∏INCREASED NUMBER OF APPROVALS AND HIGHER INVESTMENTS FOR COVID-19 BOOSTER VACCINES TO DRIVE MARKET∏66 TABLE 20∏RNA THERAPEUTICS MARKET FOR VACCINES, BY REGION, 2021-2028 (USD MILLION)∏67 TABLE 21 NORTH AMERICA: RNA THERAPEUTICS MARKET FOR VACCINES, BY COUNTRY, 2021-2028 (USD MILLION) 67 TABLE 22[]EUROPE: RNA THERAPEUTICS MARKET FOR VACCINES, BY COUNTRY, 2021-2028 (USD MILLION)[]67 TABLE 23∏ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR VACCINES, BY COUNTRY, 2021-2028 (USD MILLION)∏68 6.3[]DRUGS[]68 6.3.1 □ GROWING FUNDING AND INVESTMENTS IN RNA THERAPEUTICS RESEARCH TO DRIVE MARKET □ 68 TABLE 24 RNA THERAPEUTICS MARKET FOR DRUGS, BY REGION, 2021-2028 (USD MILLION)[68 TABLE 25[]NORTH AMERICA: RNA THERAPEUTICS MARKET FOR DRUGS, BY COUNTRY, 2021-2028 (USD MILLION)]69 TABLE 26[]EUROPE: RNA THERAPEUTICS MARKET FOR DRUGS, BY COUNTRY, 2021-2028 (USD MILLION)][69 TABLE 27∏ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR DRUGS, BY COUNTRY, 2021-2028 (USD MILLION)∏69 7 RNA THERAPEUTICS MARKET, BY TYPE 70 7.1 INTRODUCTION 71 TABLE 28 RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 71

7.2 MRNA THERAPEUTICS 71

7.2.1 INCREASING INVESTMENTS FOR COVID-19 MRNA VACCINES TO DRIVE MARKET 71

TABLE 29[]RNA THERAPEUTICS MARKET FOR MRNA THERAPEUTICS, BY REGION, 2021-2028 (USD MILLION)[]72 TABLE 30[]NORTH AMERICA: RNA THERAPEUTICS MARKET FOR MRNA THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)[]73 TABLE 31[]EUROPE: RNA THERAPEUTICS MARKET FOR MRNA THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)[]73 TABLE 32[]ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR MRNA THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)[]73 7.3][RNA INTERFERENCE (RNAI) THERAPEUTICS[]74

7.3.1 INCREASING NUMBER OF APPROVALS FOR SIRNA THERAPEUTICS BY US FDA TO DRIVE MARKET 74

TABLE 33[]RNA THERAPEUTICS MARKET FOR RNA INTERFERENCE (RNAI) THERAPEUTICS, BY REGION, 2021-2028 (USD MILLION)[]74 TABLE 34[]NORTH AMERICA: RNA THERAPEUTICS MARKET FOR RNA INTERFERENCE (RNAI) THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)[]75

TABLE 35[]EUROPE: RNA THERAPEUTICS MARKET FOR RNA INTERFERENCE (RNAI) THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)]75

TABLE 36[]ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR RNA INTERFERENCE (RNAI) THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)]]75

7.4 ANTISENSE OLIGONUCLEOTIDE (ASO) THERAPEUTICS 76

7.4.1 INCREASED NUMBER OF CHEMICAL MODIFICATIONS AND TECHNOLOGICAL ADVANCEMENTS TO DRIVE MARKET []76 TABLE 37 RNA THERAPEUTICS MARKET FOR ANTISENSE OLIGONUCLEOTIDE (ASO) THERAPEUTICS, BY REGION, 2021-2028 (USD MILLION)]76

TABLE 38[]NORTH AMERICA: RNA THERAPEUTICS MARKET FOR ANTISENSE OLIGONUCLEOTIDE (ASO) THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)[]77

TABLE 39□EUROPE: RNA THERAPEUTICS MARKET FOR ANTISENSE OLIGONUCLEOTIDE (ASO) THERAPEUTICS, BY COUNTRY, 2021-2028 (USD MILLION)□77

TABLE 40 ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR ANTISENSE OLIGONUCLEOTIDE (ASO) THERAPEUTICS, BY COUNTRY,

2021-2028 (USD MILLION)[]77 7.5[]OTHER THERAPEUTICS[]78

8 RNA THERAPEUTICS MARKET, BY INDICATION 79

8.1 INTRODUCTION 80

TABLE 41 RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 80

8.2 INFECTIOUS DISEASES 80

8.2.1 INCREASING PREVALENCE OF INFECTIOUS DISEASES AND GROWING INVESTMENTS IN R&D TO DRIVE MARKET 80 TABLE 42 RNA THERAPEUTICS MARKET FOR INFECTIOUS DISEASES, BY REGION, 2021-2028 (USD MILLION)81

TABLE 43 NORTH AMERICA: RNA THERAPEUTICS MARKET FOR INFECTIOUS DISEASES, BY COUNTRY, 2021-2028 (USD MILLION) 81 TABLE 44 EUROPE: RNA THERAPEUTICS MARKET FOR INFECTIOUS DISEASES, BY COUNTRY, 2021-2028 (USD MILLION) 81 TABLE 45 ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR INFECTIOUS DISEASES, BY COUNTRY, 2021-2028 (USD MILLION) 82 8.3 RARE GENETIC/HEREDITARY DISEASES 82

8.3.1 TECHNOLOGICAL INNOVATION AND INCREASED DEMAND FOR PERSONALIZED MEDICINES TO DRIVE MARKET 82 TABLE 46 RNA THERAPEUTICS MARKET FOR RARE GENETIC/HEREDITARY DISEASES, BY REGION, 2021-2028 (USD MILLION) 83 TABLE 47 NORTH AMERICA: RNA THERAPEUTICS MARKET FOR RARE GENETIC/HEREDITARY DISEASES, BY COUNTRY, 2021-2028 (USD MILLION) 83

TABLE 48[]EUROPE: RNA THERAPEUTICS MARKET FOR RARE GENETIC/HEREDITARY DISEASES, BY COUNTRY, 2021-2028 (USD MILLION)]83

TABLE 49]ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR RARE GENETIC/HEREDITARY DISEASES, BY COUNTRY, 2021-2028 (USD MILLION)]84

8.4 OTHER INDICATIONS 84

TABLE 50 RNA THERAPEUTICS MARKET FOR OTHER INDICATIONS, BY REGION, 2021-2028 (USD MILLION) 85

TABLE 51 NORTH AMERICA: RNA THERAPEUTICS MARKET FOR OTHER INDICATIONS, BY COUNTRY, 2021-2028 (USD MILLION) 85

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

TABLE 52[]EUROPE: RNA THERAPEUTICS MARKET FOR OTHER INDICATIONS, BY COUNTRY, 2021-2028 (USD MILLION)[]86 TABLE 53[]ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR OTHER INDICATIONS, BY COUNTRY, 2021-2028 (USD MILLION)[]86 9[]RNA THERAPEUTICS MARKET, BY END USER[]87

9.1 INTRODUCTION 88

TABLE 54 RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION) 88

9.2 HOSPITALS AND CLINICS 88

9.2.1 INCREASED PREVALENCE OF CHRONIC DISEASES AND HIGHER EFFICACY OF RNA-BASED THERAPIES TO DRIVE MARKET [88 TABLE 55]RNA THERAPEUTICS MARKET FOR HOSPITALS AND CLINICS, BY REGION, 2021-2028 (USD MILLION)[89 TABLE 56[NORTH AMERICA: RNA THERAPEUTICS MARKET FOR HOSPITALS AND CLINICS, BY COUNTRY, 2021-2028 (USD MILLION)[89 TABLE 57]EUROPE: RNA THERAPEUTICS MARKET FOR HOSPITALS AND CLINICS, BY COUNTRY, 2021-2028 (USD MILLION)[89 TABLE 58]ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR HOSPITALS AND CLINICS, BY COUNTRY, 2021-2028 (USD MILLION)[90 9.3]RESEARCH SETTINGS[90

9.3.1 HIGHER THERAPEUTIC POTENTIAL OF RNA TECHNOLOGY TO CREATE NEW OPPORTUNITIES IN MEDICAL RESEARCH []90 TABLE 59 RNA THERAPEUTICS MARKET FOR RESEARCH SETTINGS, BY REGION, 2021-2028 (USD MILLION) []91 TABLE 60 NORTH AMERICA: RNA THERAPEUTICS MARKET FOR RESEARCH SETTINGS, BY COUNTRY, 2021-2028 (USD MILLION) []91 TABLE 61 EUROPE: RNA THERAPEUTICS MARKET FOR RESEARCH SETTINGS, BY COUNTRY, 2021-2028 (USD MILLION) []91 TABLE 62 ASIA PACIFIC: RNA THERAPEUTICS MARKET FOR RESEARCH SETTINGS, BY COUNTRY, 2021-2028 (USD MILLION) []92 10 RNA THERAPEUTICS MARKET, BY REGION []93

10.1 INTRODUCTION 94

TABLE 63 RNA THERAPEUTICS MARKET, BY REGION, 2021-2028 (USD MILLION) 94

10.2 NORTH AMERICA 94

FIGURE 23 NORTH AMERICA: RNA THERAPEUTICS MARKET SNAPSHOT 95

TABLE 64 NORTH AMERICA: RNA THERAPEUTICS MARKET, BY COUNTRY, 2021-2028 (USD MILLION) 95

TABLE 65[]NORTH AMERICA: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)[]96

TABLE 66[]NORTH AMERICA: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)[]96

TABLE 67 NORTH AMERICA: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 96

TABLE 68[]NORTH AMERICA: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)[]97

10.2.1 NORTH AMERICA: RECESSION IMPACT 97

10.2.2[]US[]98

10.2.2.1 Growing technological innovation in RNA delivery systems and rising investments in biopharmaceutical research to drive market 98

TABLE 69]LIST OF RECENT RNA THERAPEUTICS APPROVED BY FDA]98

TABLE 70[]US: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)[]99

TABLE 71[]US: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)[]99

TABLE 72[]US: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION)[]99

TABLE 73[]US: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)[]100 10.2.3[]CANADA[]100

10.2.3.1 Increasing government initiatives and investments for life science research to drive market 100

TABLE 74[CANADA: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)[]101

TABLE 75[CANADA: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)[101

TABLE 76 CANADA: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 101

TABLE 77[]CANADA: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)[]10210.3[]EUROPE[]102

TABLE 78 EUROPE: RNA THERAPEUTICS MARKET, BY COUNTRY, 2021-2028 (USD MILLION) 102 TABLE 79 EUROPE: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) 103 TABLE 80 EUROPE: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 103 TABLE 81 EUROPE: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 103

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com www.scotts-international.com

TABLE 82[]EUROPE: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)]]104 10.3.1 EUROPE: RECESSION IMPACT 104 10.3.2 GERMANY 104 10.3.2.1 Rising number of market players and growing public and private funding for research activities to drive market 104 TABLE 83 GERMANY: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) 105 TABLE 84 GERMANY: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 105 TABLE 85 GERMANY: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 106 TABLE 86 GERMANY: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION) 106 10.3.3 || FRANCE || 106 10.3.3.1 Growing pharmaceutical manufacturing industry and increasing number of clinical trials for oncology to drive market 106 TABLE 87∏FRANCE: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)∏107 TABLE 88∏FRANCE: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)∏107 TABLE 89□FRANCE: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION)□107 TABLE 90□FRANCE: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)□108 10.3.4 UK 108 10.3.4.1 [Higher R&D investment by pharmaceutical companies for RNA-based drug discovery to drive market [108 TABLE 91 UK: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) 109 TABLE 92[]UK: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)[]109 TABLE 93[]UK: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION)]]109 TABLE 94⊓UK: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)∏110 10.3.5 REST OF EUROPE 110 TABLE 95[REST OF EUROPE: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)[]110 TABLE 96∏REST OF EUROPE: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)∏111 TABLE 97 REST OF EUROPE: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 111 TABLE 98∏REST OF EUROPE: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)∏111 10.4 ASIA PACIFIC 112 FIGURE 24 ASIA PACIFIC: RNA THERAPEUTICS MARKET SNAPSHOT 113 TABLE 99∏ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY COUNTRY, 2021-2028 (USD MILLION)∏114 TABLE 100[ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)]114 TABLE 101∏ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION)∏114 TABLE 102∏ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION)∏115 TABLE 103∏ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)∏115 10.4.1 ASIA PACIFIC: RECESSION IMPACT 115 10.4.2 || APAN || 116 10.4.2.1 Increasing geriatric population and rising government initiatives for drug innovation to drive market TABLE 104 AAAN: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) TABLE 105 JAPAN: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 117 TABLE 106 JAPAN: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 117 TABLE 107∏JAPAN: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)∏117 10.4.3 CHINA 118 10.4.3.1 Low manufacturing costs and increased number of R&D activities to drive market 118 TABLE 108 CHINA: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) 118 TABLE 109 CHINA: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 119 TABLE 110 CHINA: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) 119 TABLE 111 CHINA: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION) 119 10.4.4 SOUTH KOREA 120

10.4.4.1 Increasing number of government initiatives and growing R&D activities for RNA therapeutics to drive market 120

TABLE 112[SOUTH KOREA: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)[]120 TABLE 113 SOUTH KOREA: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 120 TABLE 114 SOUTH KOREA: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) TABLE 115□SOUTH KOREA: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION)□121 10.4.5 REST OF ASIA PACIFIC 121 TABLE 116⊓REST OF ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION)∏122 TABLE 117 REST OF ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 22 TABLE 118 REST OF ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION) TABLE 119 REST OF ASIA PACIFIC: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION) 123 10.5 REST OF THE WORLD 123 TABLE 120 REST OF THE WORLD: RNA THERAPEUTICS MARKET, BY PRODUCT, 2021-2028 (USD MILLION) 123 TABLE 121 REST OF THE WORLD: RNA THERAPEUTICS MARKET, BY TYPE, 2021-2028 (USD MILLION) 124 TABLE 122⊓REST OF THE WORLD: RNA THERAPEUTICS MARKET, BY INDICATION, 2021-2028 (USD MILLION)⊓124 TABLE 123 REST OF THE WORLD: RNA THERAPEUTICS MARKET, BY END USER, 2021-2028 (USD MILLION) 124 11 COMPETITIVE LANDSCAPE 125 11.1 OVERVIEW 125 11.2 KEY STRATEGIES ADOPTED BY MAJOR PLAYERS IN RNA THERAPEUTICS MARKET 126 FIGURE 25 KEY PLAYER STRATEGIES IN RNA THERAPEUTICS MARKET, 2021-2023 126 11.3 MARKET SHARE ANALYSIS 127

FIGURE 26 MARKET SHARE ANALYSIS OF TOP 3 PLAYERS IN RNA THERAPEUTICS MARKET, 2022 127

TABLE 124 DEGREE OF COMPETITION: RNA THERAPEUTICS MARKET 127

11.4 REVENUE SHARE ANALYSIS OF TOP MARKET PLAYERS 129

FIGURE 27 REVENUE SHARE ANALYSIS OF TOP 4 PLAYERS IN RNA THERAPEUTICS MARKET, 2020-2022 129

11.5 COMPANY EVALUATION MATRIX FOR KEY PLAYERS 129

11.5.1[]STARS[]129

11.5.2 EMERGING LEADERS 130

11.5.3 PERVASIVE PLAYERS 130

11.5.4 PARTICIPANTS 130

FIGURE 28 COMPANY EVALUATION MATRIX FOR KEY PLAYERS: RNA THERAPEUTICS MARKET, 2022 131

11.6 COMPANY EVALUATION MATRIX FOR START-UPS/SMES 132

11.6.1 PROGRESSIVE COMPANIES 132

11.6.2 STARTING BLOCKS 132

11.6.3 DYNAMIC COMPANIES 132

11.6.4 RESPONSIVE COMPANIES 132

FIGURE 29 COMPANY EVALUATION MATRIX FOR START-UPS/SMES: RNA THERAPEUTICS MARKET, 2022 133

11.7 COMPETITIVE BENCHMARKING 134

TABLE 125 DETAILED LIST OF KEY START-UPS/SMES: RNA THERAPEUTICS MARKET 134

11.8 COMPETITIVE SCENARIOS AND TRENDS 135

11.8.1 KEY PRODUCT APPROVALS 135

TABLE 126 KEY PRODUCT APPROVALS, JANUARY 2021-AUGUST 2023 135

11.8.2 KEY DEALS 135

TABLE 127 KEY DEALS, JANUARY 2021-AUGUST 2023 135

11.8.3 OTHER KEY DEVELOPMENTS 136

TABLE 128 OTHER KEY DEVELOPMENTS, JANUARY 2021-AUGUST 2023 136

12 COMPANY PROFILES 137

(Business overview, Products offered, Recent Developments, MNM view)\*

12.1 KEY PLAYERS 137

12.1.1 MODERNA, INC. 137 TABLE 129 MODERNA, INC.: COMPANY OVERVIEW 137 FIGURE 30 MODERNA, INC.: COMPANY SNAPSHOT (2022) 138 12.1.2 ALNYLAM PHARMACEUTICALS, INC. 142 TABLE 130 ALNYLAM PHARMACEUTICALS, INC.: COMPANY OVERVIEW 142 FIGURE 31 ALNYLAM PHARMACEUTICALS, INC.: COMPANY SNAPSHOT (2022) 142 12.1.3 NOVARTIS AG 145 TABLE 131 NOVARTIS AG: COMPANY OVERVIEW 145 FIGURE 32 NOVARTIS AG: COMPANY SNAPSHOT (2022) 146 12.1.4 ⊓IONIS PHARMACEUTICALS, INC. ⊓149 TABLE 132⊓IONIS PHARMACEUTICALS, INC.: COMPANY OVERVIEW⊓149 FIGURE 33[IONIS PHARMACEUTICALS, INC.: COMPANY SNAPSHOT (2022)]149 12.1.5 SAREPTA THERAPEUTICS, INC. 153 TABLE 133 SAREPTA THERAPEUTICS, INC.: COMPANY OVERVIEW 153 FIGURE 34 SAREPTA THERAPEUTICS, INC.: COMPANY SNAPSHOT (2022) 153 12.1.6 SANOFI 155 TABLE 134 SANOFI: COMPANY OVERVIEW 155 FIGURE 35 SANOFI: COMPANY SNAPSHOT (2022) 156 12.1.7 PFIZER INC. 158 TABLE 135 PFIZER INC.: COMPANY OVERVIEW 158 FIGURE 36 PFIZER INC.: COMPANY SNAPSHOT (2022) 159 12.2 OTHER PLAYERS 161 12.2.1 ARROWHEAD PHARMACEUTICALS, INC. 161 12.2.2 BIONTECH SE 161 12.2.3 ORNA THERAPEUTICS 162 12.2.4 CRISPR THERAPEUTICS 162 12.2.5 SILENCE THERAPEUTICS 163 12.2.6 ASTELLAS PHARMA INC. 163 12.2.7 CUREVAC SE 164 12.2.8 SIRNAOMICS 164 12.2.9 ARCTURUS THERAPEUTICS, INC. 165 12.2.10 ARBUTUS BIOPHARMA 165 \*Details on Business overview, Products offered, Recent Developments, MNM view might not be captured in case of unlisted companies. 13 APPENDIX 166 13.1 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL 168 13.2 CUSTOMIZATION OPTIONS 170 13.3 RELATED REPORTS 170 13.4 AUTHOR DETAILS 171



# RNA Therapeutics Market by Product (Vaccines, Drugs), Type (mRNA Therapeutics, RNA Interference, Antisense Oligonucleotides), Indication (Infectious Diseases, Rare Genetic Diseases), End User (Hospitals & Clinics) - Global Forecast to 2028

Market Report | 2023-09-15 | 166 pages | MarketsandMarkets

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

### **ORDER FORM:**

Select license	License		Price
	Single User		\$4950.00
	Multi User		\$6650.00
	Corporate License		\$8150.00
	Enterprise Site License		\$10000.00
<u> </u>	·	VAT	

Total

\*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346. [\*\* VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	Phone*	
First Name*	Last Name*	
Job title*		
Company Name*	EU Vat / Tax ID / NIP	number*
Address*	City*	
Zip Code*	Country*	

Date

2025-05-20

Signature