

# **mRNA Vaccine Market- Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028**

## **Segmented By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA), By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others), Region and Competition**

<https://marketpublishers.com/r/MA5778FFFE2CEN.html>

Date: August 2023

Pages: 112

Price: US\$ 4,900.00 (Single User License)

ID: MA5778FFFE2CEN

### **Abstracts**

Global mRNA vaccine market is poised to grow at an impressive rate during the forecast period on account of the various benefits of mRNA vaccine over DNA vaccine in terms of production, safety, efficacy, and distribution, among others. Global mRNA Vaccine Market is driven by the rising incidence of cancer, genetic abnormalities, and viral infections. Approximately 10 million deaths, or nearly one in six deaths, happened due to cancer in 2020, making it one of the top causes of death globally. TAA (tumor-associated antigens), TSA (tumor-specific antigens), and their related cytokines can all be encoded and expressed by mRNA vaccines, which constitute a significant class of cancer vaccines. These vaccines are more adaptable to various diseases and patients because mRNA cancer vaccines can boost both humoral and cellular immunity. Besides, the sudden outbreak and spread of the COVID-19 pandemic and the success of Moderna's and Pfizer- BioNTech's vaccines against COVID-19 are expected to create new prospects for growth of the mRNA vaccine market in the coming years. This has, in turn, resulted in many biotechnology & pharmaceutical companies and academic & research institutions coming forward and starting research and development and launching clinical trials for the development of different types of mRNA vaccines, thereby creating lucrative opportunities for the growth of global mRNA vaccine market during the forecast period. According to clinicaltrials.gov, around 444 clinical studies related to mRNA Vaccines are in different phases of development being conducted

across different parts of the globe.

The important reason for encouraging extensive study and deployment of mRNA vaccines is their numerous distinctive benefits. One of the main causes for the development of mRNA vaccines is their convenience of production. Simple in form, its active component, RNA, is often produced in vitro utilizing linear DNA as a template. Through codon optimization, nucleoside modification, and an additional delivery method, the stability and translation efficiency of mRNA can be enhanced during this process to create a nucleic acid vaccine with high specificity and resilient stability. The vaccine's safety is another important aspect that encourages widespread use. There is no potential risk of infection or genetic damage because the mRNA does not integrate into the host genome.

mRNA vaccines create proteins that cause human bodies to generate an immune response. Since these vaccines don't involve live viruses, there is absolutely no risk of getting sick after receiving them. The body quickly breaks down mRNA, and cells don't readily take up foreign mRNA. Recent technological advancements have improved the stability of the mRNA molecule and wrapped the molecules in lipids to improve cell delivery effectiveness. These developments boost the production of spike protein in your cells, triggering a stronger immunological response.

Furthermore, owing to recent technological developments in enhanced translation, stability, and delivery methods, messenger RNAs have emerged as a promising therapeutic tool. In fact, mRNA vaccines have opened the door to new pharmacological fields and have become a significant therapeutic class. The development of vaccines is entering a new age because of these mRNA vaccines, which support next-generation vaccinations.

Industry expansion is anticipated to be supported during the projected time by increased investments in the development of cutting-edge and efficient mRNA vaccines. For instance, American mRNA therapeutic developer Arcturus Therapeutics established a Japanese company in Chiba Prefecture in April 2021 as part of a joint venture with Axcelead, Inc., and is currently building a production plant in Minamisoma City, Fukushima Prefecture. In the upcoming years, such investments are probably going to supplement market expansion.

### Advantages of mRNA Vaccines

mRNA vaccine production has advantages over the other counterparts, when compared

to the production of most vaccines, since it does not require the use of cell cultures. The risk of contamination is smaller than what is seen with other sophisticated vaccine manufacturing techniques because of its quick reaction time. Additionally, mRNA vaccines are safer due to their non-integrative nature and transitory expression within cells. Using lipid-encapsulated or naked forms of sequence-optimized mRNA, mRNA vaccines have produced potent immunity against infectious disease targets in animal models of influenza virus, Zika virus, rabies virus, and others, particularly in recent years.

### Increasing Research Activities to produce mRNA-based Vaccines

The numerous benefits mRNA offers over other therapeutic modalities, such as higher biological efficacy, enhanced potent immunogenicity, and versatile delivery platforms at low toxicity levels, are the main drivers of the ongoing research and development efforts being made in this field. The development of mRNA-based vaccines to prevent infectious or chronic diseases like diabetes, HIV, cancer, and cardiovascular diseases is the subject of extensive research. There are currently 430 clinical trials using mRNA vaccines to prevent diseases other than COVID-19. The majority of these clinical trials, according to an analysis by Clinicaltrials.gov, are conducted in the United States.

A multivalent, mRNA-based vaccine that protects against all 20 known influenza virus subtypes has been created by researchers at the Perelman School of Medicine at the University of Pennsylvania. They take a different approach from earlier attempts to create a universal flu vaccine by including antigens unique to each subtype rather than just a smaller set of antigens shared by subtypes. The SARS-CoV-2 vaccines made by Pfizer and Moderna used the same mRNA technology as this strategy. Penn was a leader in the development of the mRNA technology used in those COVID-19 vaccines.

### Market Segmentation

Global mRNA Vaccine Market can be segmented by mRNA type, by application, and by region. Based on mRNA type, the market can be divided into nucleoside-modified mRNA, unmodified mRNA, and self-amplifying mRNA. Based on application the market is divided into COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, and others. Regionally, the mRNA Vaccine can be categorized into North America, Europe, Asia Pacific, South America, and Middle East & Africa.

### Market Players

Arcturus Therapeutics Holdings Inc., BioNTech SE, CureVac N.V., Daiichi Sankyo Company Limited., Ethris GmbH, GlaxoSmithKline plc, Genovax Biopharmaceuticals Ltd, Moderna, Inc., Pantheon Therapeutics GmbH, Providence Therapeutics, Silence Therapeutics, Translate Bio, VERSAMEB AG, Verve Therapeutics Inc., are some of the leading players operating in the Global mRNA Vaccine Market.

#### Report Scope:

In this report, Global mRNA Vaccine Market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

#### Global mRNA Vaccine Market, By mRNA Type:

Nucleoside-modified mRNA

Unmodified mRNA

Self-Amplifying mRNA

#### Global mRNA Vaccine Market, By Application:

COVID-19 mRNA Vaccines

Non COVID-19 mRNA Vaccines

Others

#### Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in Global mRNA Vaccine Market.

#### Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed analysis and profiling of additional market players (up to five).

## Contents

### **1. PRODUCT OVERVIEW**

- 1.1. Market Definition
- 1.2. Scope of the Market
  - 1.2.1. Markets Covered
  - 1.2.2. Years Considered for Study
  - 1.2.3. Key Market Segmentations

### **2. RESEARCH METHODOLOGY**

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

### **3. EXECUTIVE SUMMARY**

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, Trends

### **4. CLINICAL TRIAL ANALYSIS**

- 4.1. Ongoing Clinical Trials
- 4.2. Completed Clinical Trials
- 4.3. Terminated Clinical Trials
- 4.4. Breakdown of Pipeline, By Development Phase
- 4.5. Breakdown of Pipeline, By Status
- 4.6. Breakdown of Pipeline, By Study Type
- 4.7. Breakdown of Pipeline, By Region
- 4.8. Clinical Trials Heat Map

## 5. VOICE OF CUSTOMER

## 6. GLOBAL MRNA VACCINE MARKET OUTLOOK

### 6.1. Market Size & Forecast

#### 6.1.1. By Value

### 6.2. Market Share & Forecast

#### 6.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)

#### 6.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)

#### 6.2.3. By Region (North America, Europe, Asia Pacific, South America, Middle East & Africa)

#### 6.2.4. By Company (2022)

### 6.3. Product Map

#### 6.3.1. By mRNA Type

#### 6.3.2. By Application

#### 6.3.3. By Region

## 7. NORTH AMERICA MRNA VACCINE MARKET OUTLOOK

### 7.1. Market Size & Forecast

#### 7.1.1. By Value

### 7.2. Market Share & Forecast

#### 7.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)

#### 7.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)

#### 7.2.3. By Country

### 7.3. North America: Country Analysis

#### 7.3.1. United States mRNA Vaccine Market Outlook

##### 7.3.1.1. Market Size & Forecast

###### 7.3.1.1.1. By Value

##### 7.3.1.2. Market Share & Forecast

###### 7.3.1.2.1. By mRNA Type

###### 7.3.1.2.2. By Application

#### 7.3.2. Canada mRNA Vaccine Market Outlook

##### 7.3.2.1. Market Size & Forecast

###### 7.3.2.1.1. By Value

- 7.3.2.2. Market Share & Forecast
  - 7.3.2.2.1. By mRNA Type
  - 7.3.2.2.2. By Application
- 7.3.3. Mexico mRNA Vaccine Market Outlook
  - 7.3.3.1. Market Size & Forecast
    - 7.3.3.1.1. By Value
  - 7.3.3.2. Market Share & Forecast
    - 7.3.3.2.1. By mRNA Type
    - 7.3.3.2.2. By Application

## **8. EUROPE MRNA VACCINE MARKET OUTLOOK**

- 8.1. Market Size & Forecast
  - 8.1.1. By Value
- 8.2. Market Share & Forecast
  - 8.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)
  - 8.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)
  - 8.2.3. By Country
- 8.3. Europe: Country Analysis
  - 8.3.1. France mRNA Vaccine Market Outlook
    - 8.3.1.1. Market Size & Forecast
      - 8.3.1.1.1. By Value
    - 8.3.1.2. Market Share & Forecast
      - 8.3.1.2.1. By mRNA Type
      - 8.3.1.2.2. By Application
  - 8.3.2. Germany mRNA Vaccine Market Outlook
    - 8.3.2.1. Market Size & Forecast
      - 8.3.2.1.1. By Value
    - 8.3.2.2. Market Share & Forecast
      - 8.3.2.2.1. By mRNA Type
      - 8.3.2.2.2. By Application
  - 8.3.3. United Kingdom mRNA Vaccine Market Outlook
    - 8.3.3.1. Market Size & Forecast
      - 8.3.3.1.1. By Value
    - 8.3.3.2. Market Share & Forecast
      - 8.3.3.2.1. By mRNA Type
      - 8.3.3.2.2. By Application



#### 8.3.4. Italy mRNA Vaccine Market Outlook

##### 8.3.4.1. Market Size & Forecast

###### 8.3.4.1.1. By Value

##### 8.3.4.2. Market Share & Forecast

###### 8.3.4.2.1. By mRNA Type

###### 8.3.4.2.2. By Application

#### 8.3.5. Spain mRNA Vaccine Market Outlook

##### 8.3.5.1. Market Size & Forecast

###### 8.3.5.1.1. By Value

##### 8.3.5.2. Market Share & Forecast

###### 8.3.5.2.1. By mRNA Type

###### 8.3.5.2.2. By Application

### **9. ASIA-PACIFIC MRNA VACCINE MARKET OUTLOOK**

#### 9.1. Market Size & Forecast

##### 9.1.1. By Value

#### 9.2. Market Share & Forecast

##### 9.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)

##### 9.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)

##### 9.2.3. By Country

#### 9.3. Asia-Pacific: Country Analysis

##### 9.3.1. China mRNA Vaccine Market Outlook

###### 9.3.1.1. Market Size & Forecast

###### 9.3.1.1.1. By Value

###### 9.3.1.2. Market Share & Forecast

###### 9.3.1.2.1. By mRNA Type

###### 9.3.1.2.2. By Application

##### 9.3.2. India mRNA Vaccine Market Outlook

###### 9.3.2.1. Market Size & Forecast

###### 9.3.2.1.1. By Value

###### 9.3.2.2. Market Share & Forecast

###### 9.3.2.2.1. By mRNA Type

###### 9.3.2.2.2. By Application

##### 9.3.3. Japan mRNA Vaccine Market Outlook

###### 9.3.3.1. Market Size & Forecast

###### 9.3.3.1.1. By Value

- 9.3.3.2. Market Share & Forecast
  - 9.3.3.2.1. By mRNA Type
  - 9.3.3.2.2. By Application
- 9.3.4. South Korea mRNA Vaccine Market Outlook
  - 9.3.4.1. Market Size & Forecast
    - 9.3.4.1.1. By Value
  - 9.3.4.2. Market Share & Forecast
    - 9.3.4.2.1. By mRNA Type
    - 9.3.4.2.2. By Application
- 9.3.5. Australia mRNA Vaccine Market Outlook
  - 9.3.5.1. Market Size & Forecast
    - 9.3.5.1.1. By Value
  - 9.3.5.2. Market Share & Forecast
    - 9.3.5.2.1. By mRNA Type
    - 9.3.5.2.2. By Application

## **10. SOUTH AMERICA MRNA VACCINE MARKET OUTLOOK**

- 10.1. Market Size & Forecast
  - 10.1.1. By Value
- 10.2. Market Share & Forecast
  - 10.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)
  - 10.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)
  - 10.2.3. By Country
- 10.3. South America: Country Analysis
  - 10.3.1. Brazil mRNA Vaccine Market Outlook
    - 10.3.1.1. Market Size & Forecast
      - 10.3.1.1.1. By Value
    - 10.3.1.2. Market Share & Forecast
      - 10.3.1.2.1. By mRNA Type
      - 10.3.1.2.2. By Application
  - 10.3.2. Argentina mRNA Vaccine Market Outlook
    - 10.3.2.1. Market Size & Forecast
      - 10.3.2.1.1. By Value
    - 10.3.2.2. Market Share & Forecast
      - 10.3.2.2.1. By mRNA Type
      - 10.3.2.2.2. By Application

### 10.3.3. Colombia mRNA Vaccine Market Outlook

#### 10.3.3.1. Market Size & Forecast

##### 10.3.3.1.1. By Value

#### 10.3.3.2. Market Share & Forecast

##### 10.3.3.2.1. By mRNA Type

##### 10.3.3.2.2. By Application

## 11. MIDDLE EAST AND AFRICA MRNA VACCINE MARKET OUTLOOK

### 11.1. Market Size & Forecast

#### 11.1.1. By Value

### 11.2. Market Share & Forecast

#### 11.2.1. By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA)

#### 11.2.2. By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others)

#### 11.2.3. By Country

### 11.3. MEA: Country Analysis

#### 11.3.1. South Africa mRNA Vaccine Market Outlook

##### 11.3.1.1. Market Size & Forecast

##### 11.3.1.1.1. By Value

##### 11.3.1.2. Market Share & Forecast

##### 11.3.1.2.1. By mRNA Type

##### 11.3.1.2.2. By Application

#### 11.3.2. Saudi Arabia mRNA Vaccine Market Outlook

##### 11.3.2.1. Market Size & Forecast

##### 11.3.2.1.1. By Value

##### 11.3.2.2. Market Share & Forecast

##### 11.3.2.2.1. By mRNA Type

##### 11.3.2.2.2. By Application

#### 11.3.3. UAE mRNA Vaccine Market Outlook

##### 11.3.3.1. Market Size & Forecast

##### 11.3.3.1.1. By Value

##### 11.3.3.2. Market Share & Forecast

##### 11.3.3.2.1. By mRNA Type

##### 11.3.3.2.2. By Application

## 12. MARKET DYNAMICS

- 12.1. Drivers
- 12.2. Challenges

### **13. MARKET TRENDS & DEVELOPMENTS**

- 13.1. Recent Developments
- 13.2. Merger Acquisition
- 13.3. Product launches

### **14. GLOBAL MRNA VACCINE MARKET: SWOT ANALYSIS**

### **15. PORTER'S FIVE FORCES ANALYSIS**

- 15.1. Competition in the Industry
- 15.2. Potential of New Entrants
- 15.3. Power of Suppliers
- 15.4. Power of Customers
- 15.5. Threat of Substitute Products

### **16. COMPETITIVE LANDSCAPE**

- 16.1. Business Overview
- 16.2. Product Offerings
- 16.3. Recent Developments
- 16.4. Financials (As Reported)
- 16.5. Key Personnel
- 16.6. SWOT Analysis
  - 16.6.1. Arcturus Therapeutics Holdings Inc.
  - 16.6.2. BioNTech SE
  - 16.6.3. CureVac N.V.
  - 16.6.4. Daiichi Sankyo Company Limited.
  - 16.6.5. Ethris GmbH
  - 16.6.6. GlaxoSmithKline plc
  - 16.6.7. Genovva Biopharmaceuticals Ltd
  - 16.6.8. Moderna, Inc.
  - 16.6.9. Pantherna Therapeutics GmbH
  - 16.6.10. Providence Therapeutics
  - 16.6.11. Silence Therapeutics
  - 16.6.12. Translate Bio

16.6.13. VERSAMEB AG

16.6.14. Verve Therapeutics Inc.

## **17. STRATEGIC RECOMMENDATIONS**

## I would like to order

Product name: mRNA Vaccine Market- Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By mRNA Type (Nucleoside-modified mRNA, Unmodified mRNA, Self-Amplifying mRNA), By Application (COVID-19 mRNA Vaccines, Non COVID-19 mRNA Vaccines, Others), Region and Competition

Product link: <https://marketpublishers.com/r/MA5778FFFE2CEN.html>

Price: US\$ 4,900.00 (Single User License / Electronic Delivery)

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

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/MA5778FFFE2CEN.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