SCOTTS INTERNATIONAL

Microrna Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The microRNA market is projected to grow with a CAGR of 15.6% during the forecast period (2023 - 2028).

The COVID-19 pandemic affected health care systems globally and resulted in the interruption of usual care in many healthcare facilities, exposing vulnerable patients with cancer to significant risks. In addition to vaccinations against SARS-CoV-2 infection that have been approved, miRNAs are found to be a potential alternative for combating this new virus. The expression of these miRNAs, on the other hand, is useful in detecting SARS-CoV-2 infection. According to the National Center for Biotechnology Information, 2021, titled "The Role of miRNAs in COVID-19 Diseases", various miRNAs bind to the SARS-CoV-2 genome and limit its post-transcriptional expression, reducing the severity of COVID-19 disease. In addition, among all miRNAs, miR-21-3p is found to have the best binding to the human coronavirus genome. Due to the increasing COVID-19 infection, the demand for effective treatment is increasing, which further increases the demand for next-generation sequencing technologies and miRNA sequencing. According to an article published by the National Center for Biotechnology Information, 2020, titled "A New Approach for COVID-19 Treatment by micro-RNA", it has been found that miRNAs perform critical functions during virus infection, reducing the burden on healthcare systems during a pandemic. Hence, COVID-19 has a positive impact on the microRNA market.

The factors propelling the growth of the microRNA market are the increasing prevalence of chronic diseases, rising incidences and prevalence of COVID-19 worldwide, advancement and adoption of next-generation sequencing methods and their applications in various fields, and increasing adoption of microRNA as a biomarker.

The rising prevalence of chronic diseases such as cancer, cardiovascular diseases, diabetes, etc., and rare diseases are the key factors driving the growth of the market over the forecast period. For instance, according to the American Cancer Society, an estimated 36,000 new cancer cases occurred in Wisconsin, United States, in 2021. According to Rare Disease day, rare diseases are estimated to affect nearly 3.5% - 5.9% of the global population in 2020, with over 300 million people living with one or more of over 6,000 identified rare diseases around the world.

In addition, the adoption of miRNA instruments and consumables is expected to be aided by extensive research activities aimed at determining the possible functions of microRNA (miRNA) in the development of novel treatments for a variety of disorders. For instance, in June 2020, researchers from Munich revealed that a specific microRNA aids in the preservation of endothelial integrity, lowering the risk of atherosclerosis.

Moreover, the company's initiatives in developing microRNA assays and kits and robust funding by biotechnology companies are also contributing to the growth of the market. For instance, Qiagen's QIAseq miRNA Library Kit includes gel-free miRNA sequencing library prep from 1 ng of total RNA. It eliminates adapter dimers and undesired RNA species for the greatest fidelity and most effective data, incorporates Unique Molecular Indices (UMIs) for quantitative measurement of individual miRNA molecules, and connects directly to the RNA-seq Analysis Portal for human, mouse, and rat samples. Similarly, in February 2021, Aurora Science, an Italian biotech investment company, funded USD 22.46 million to InteRNA Technologies for developing miRNAs. Similarly, in October 2021, MiRxes announced to expand miRNA assay technology to treat multiple cancer types and other diseases.

However, the safety and toxicity issues of microRNAs are likely to hinder the growth of the market over the forecast period.

Micro RNorth America Market Trends

Real-Time Polymerase Chain Reaction is Expected to Dominate the Market

The factors propelling the growth of real-time polymerase chain reaction are increasing incidences of COVID-19, rising prevalence of cancer, increasing application of polymerase chain reaction in drug development, clinical diagnostics, and rapid technological advancements such as the development of high performance and superior quantitative PCR (qPCR) and digital PCR (dPCR) systems.

The rising incidence and prevalence of COVID-19 worldwide is the key driving factor for market growth. According to the World Health Organization, 2022, 510 million confirmed cases of COVID-19 and 6 million deaths are reported as of 29th April 2022 globally. In addition, as per the same source, 212 million confirmed cases of COVID-19 were reported in Europe, 57 million in South-East Asia, 53 million in Western Pacific, 21 million in Eastern Mediterranean, and 8 million in Africa.

Moreover, the companies are focusing on developing real-time polymerase chain reaction kits, and assays for the detection of various diseases, especially coronavirus is boosting the growth of the real-time polymerase chain reaction segment over the forecast period. For instance, in December 2021, Eurofins Technologies announced the launch of two RT-PCR assays to accurately diagnose respiratory diseases caused by SARS-CoV-2, Influenza virus, or Respiratory syncytial virus (RSV). Similarly, in December 2021, Tata MD launched COVID express RT-PCR testing solutions. It consists of Tata MD CHECK XF, a 3-Gene RT-PCR kit that is RNA extraction free and uses fast amplification protocol combined with a portable and fast qPCR analyzer, and Tata MD CHECK RT-PCR Fast 3 Gene.

Thus, the rising incidence and prevalence of COVID-19 and the focus of market players on launching real-time polymerase chain reaction kits and other detection methods are likely to propel the market growth over the forecast period.

North America is Expected to Have the Significant Market Share

The increasing incidences of cancer, rising demand for next-generation and microRNA services and applications in drug development, adoption of the latest technology, and established research infrastructure for proteomics, genomics, and oncology are the factors propelling the growth of the microRNA market in the North American region.

The rising number of cancer cases in the region is the key driving factor in the growth of the microRNA market. According to GLOBOCAN 2020 statistics, 2 million new cancer cases were diagnosed in the United States in 2020, with 612,390 fatalities. This indicates that the incidence and mortality rate associated with cancer is significantly high, which increases the demand for precision medicines and treatments for patients, subsequently increasing the demand for microRNA techniques in the region.

In addition, the increasing drug and patent approvals from the Food and Drug Administration in the region are also contributing to the growth of the market. For instance, in December 2021, InteRNA Technologies received an Investigational New Drug approval from the United States Food and Drug Administration for its Phase I clinical trial evaluating the lead miRNA candidate, INT-1B3, in patients with advanced solid tumors. This approval enables InteRNA to expand the number of clinical sites and facilitate the enrollment of patients for the dose-expansion part of the trial in the United States. Similarly, in May 2020, DiamiR received United States Patent approval for microRNA-based methods that are used for the detection and monitoring of brain aging. The invention addresses the use of quantitative methods for analyzing miRNA present in detectable blood plasma and brain as brain aging biomarkers.

Moreover, the presence of key players, such as Illumina Inc., Thermo Fisher Scientific, etc., and an increase in research and development spending by companies to develop innovative and advanced products in the United States are expected to drive regional growth. For instance, in March 2021, DiamiR agreed to acquire CLIA (Clinical Laboratory Improvement Amendments) certified laboratory in New Haven, Connecticut, from Interpace Biosciences. This will enhance the DiamiR'scapabilities to develop and commercialize its microRNA-based tests for early detection, differential diagnosis, prediction of progression, and monitoring of brain health and other conditions.

Thus, the rising number of cancer cases, new product launches, and increasing product approvals are likely to increase the growth of the microRNA market in the region.

Micro RNorth America Market Competitor Analysis

The microRNA market is moderately competitive, with several players across the globe. In terms of market share, various major players currently dominate the market. With the increase in research and development activity, many regional players are expected to be part of the microRNA market over the forecast period. Some of the major players in the market are Thermo Fisher Scientific, Inc., Qiagen N.V., Illumina, Inc., PerkinElmer, Inc., and Takara Bio, Inc.

Additional Benefits:

  The market estimate (ME) sheet in Excel format
 3 months of analyst support

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