MicroRNA Market is estimated to be US$ 3844.3 million by 2032 with a CAGR of 16.0% over the forecast period (2022-2032)

MicroRNA are used by cells to control expression of gene. MicroRNA molecules are found in blood and cells. MicroRNA up regulate or down regulate in various inflammatory and infectious disease. MicroRNA are determine to play major role in different range of developmental process which includes, cell proliferation, metabolism, apoptosis, neuronal cell fate and developmental timing. MicroRNA function as tumor suppressors or oncogenes under specific conditions. MicroRNA is a biomarker as it meet most of the required criteria to be an ideal biomarker such as high specificity, accessibility and sensitivity. MicroRNA regulate gene expression post transcriptionally. PTEN and TP53 genes are regulated by the MicroRNA. By repressing protein expression & by promoting mRNA decay MicroRNA silence the expression of gene. MicroRNA target an average of 100 to 200 genes. MicroRNA has become the potential biomarkers for diagnosis, prognosis, and therapeutic target of human cancer. MicroRNA are produced by transcription of miRNA genes in nucleus which is known as miRNA precursor genes. MicroRNA play an important role in estimating the development, prognosis, progression, diagnosis, & treatment response in cancer patients. MicroRNA helps in targeting apoptotic genes by mediating tumorigenesis. MicroRNA provides capability of cancer stem cells for evading G1/S checkpoint. MicroRNA also paly vital role in p53 tumor suppressor pathways. miR-451 is a potential prognostic biomarker in head & neck squamous cell carcinomas. MicroRNA regulate the immune response, development of immune cell and prevention of autoimmunity. MicroRNA plays an important role in regulating immune-inflammatory response. MicroRNA are also involved in regulating TLRs (toll-like receptors) in periodontal inflammation. MicroRNA which are extracellular are isolated from body fluids like plasma, serum and saliva. These extracellular MicroRNA are act as a potential biomarker for detecting various diseases. Salivary MicroRNAs are used in detecting oral cancer. Salivary exosomal MicroRNAs plays important role in diagnostic tool and also provides information regarding the role of MicroRNAs in pathophysiology of various salivary gland disease. Quantitative PCR (q-PCR) and Microarray methods are major modalities used for profiling MicroRNAs. Quantitative PCR method is inexpensive and widely used which allows the measurement of minute quantities of MicroRNAs. However, wide variety of applications has given positive impact on target market growth.

The report **"MicroRNA Market, By Technology (Microarray, Real Time PCR, Next Generation Sequencing, and Others), By Application (Cardiovascular disease, Cancer, Neurological disease, Infectious disease, Immunological disorder, and Others), By End-Users (Pharmaceutical & Biotechnology Companies, Research Institutes, and Others), and By Region (North America, Europe, Asia Pacific, Latin America, and Middle East & Africa) - Trends, Analysis and Forecast till 2032"**

Key Highlights:

- In July 2019, miRFA an automated pipeline for microRNA functional analysis with correlation support from TCGA & TCPA expression data in pancreatic cancer. Fifteen circulating miRNAs with significantly altered expression levels were detected in pancreatic cancer patients was queried separately in pipeline. It was concluded that miRNA functional analysis pipeline serve as a valuable tool in biomarker discovery involves mature microRNA associated with pancreatic cancer & developed to cover additional cancer types.
- In February 2019, PmiRDiscVali an integrated pipeline for plant microRNA discovery & validation. It was concluded that integrated pipeline PmiRDiscVali, is featured with degradome-seq-data-based validation & vivid result presentation will be useful for large scale identification of plant miRNA candidates.

Analyst View:

The key factor for driving MicroRNA market is rising prevalence of cancer diseases and rapid growth in urban population. Rising urbanization has significant impact on cancer morbidity due to risk factors like more pollution in urban areas, poor nutrition food, lack of exercise, smoking, alcohol intake, etc. MicroRNA act as a potential biomarker for detecting various diseases like cancer, heart disease, infectious disease, etc. MicroRNA helps in diagnosis, prognosis, and treating of cancer diseases. Using MicroRNA-based therapy provides advantages which includes ability to rapidly develop new therapies and ability to target several genes in given pathway. MicroRNA has become the promising candidate for development of biomarkers. Multiple technological platforms are developed for miRNA isolation, miRNA profiling, miRNA quantitation, miRNA target detection and modulating miRNA levels in-vitro and in-vivo. However, application in cancer diagnosis is expected to boosts the growth of target market over the forecast period. As a result, market competition is intensifying, and both big international corporations and start-ups are vying to establish position in the market.

Browse 60 market data tables* and 35 figures* through 140 slides and in-depth TOC on "MicroRNA Market, By Technology (Microarray, Real Time PCR, Next Generation Sequencing, and Others), By Application (Cardiovascular disease, Cancer, Neurological disease, Infectious disease, Immunological disorder, and Others), By End-Users (Pharmaceutical & Biotechnology Companies, Research Institutes, and Others), and By Region (North America, Europe, Asia Pacific, Latin America, and Middle East & Africa) - Trends, Analysis and Forecast till 2032"

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Key Market Insights from the report:

MicroRNA Market accounted for US$ 728.23 million in 2022 and is estimated to be US$ 3844.3 million by 2032 and is anticipated to register a CAGR of 16.0%. The MicroRNA Market is segmented based on Technology, Application, and Region.

- Based on Technology, MicroRNA Market is segmented into microarray, real time PCR, next generation sequencing, and others.
- Based on Application, MicroRNA Market is segmented into cardiovascular disease, cancer, neurological disease, infectious disease, Immunological disorder, and others.
- Based on End-Users, MicroRNA Market is segmented into pharmaceutical & biotechnology companies, research institutes, and others.

- By Region, the MicroRNA Market is segmented into North America, Europe, Asia Pacific, Latin America, Middle East & Africa.

Competitive Landscape & their strategies of MicroRNA Market:

The prominent players operating in the MicroRNA Market includes, Thermo Fisher Scientific, Illumina, QIAGEN, NEB, Takara Bio, Agilent Technologies, NanoString Technologies Inc., Bio-Rad Laboratories, Roche, GeneCopoeia, and others.

The market provides detailed information regarding the industrial base, productivity, strengths, manufacturers, and recent trends which will help companies enlarge the businesses and promote financial growth. Furthermore, the report exhibits dynamic factors including segments, sub-segments, regional marketplaces, competition, dominant key players, and market forecasts. In addition, the market includes recent collaborations, mergers, acquisitions, and partnerships along with regulatory frameworks across different regions impacting the market trajectory. Recent technological advances and innovations influencing the global market are included in the report.

Other Related Reports:-

https://chaitanyablogs21.blogspot.com/2023/01/agricultural-microbial-market-is.html

https://www.reddit.com/r/unitedstatesofindia/comments/1077ind/agricultural_microbial_market_is_estimated_to_be/

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