

## **MicroRNA Research Tools, Diagnostics and Therapeutics: Global Markets**

Market Research Report | 2023-07-28 | 200 pages | BCC Research

### **AVAILABLE LICENSES:**

- Single User License \$5500.00
- 2-5 Users License \$6600.00
- Site License \$7920.00
- Enterprise License \$9504.00

### **Report description:**

Description

Report Scope:

The research study aims to thoroughly assess and analyze the miRNA research tools, diagnostics and therapeutics market; revenue forecasts; and future trends globally and provide strategic recommendations for the success of the market participants. This study focuses on the global market of miRNA tools and provides an updated review including its applications in various arenas of diagnostics and therapeutics. The report deals with miRNA tools covering technologies used in the biomedical industry. These products are miRNA quantitative reverse transcription-PCR, next-generation sequencing, microarray, fluorescent in situ hybridization, isolation and purification tools and other tools like inhibitors, probes and vectors.

The report also covers miRNA tools by end user and application. The end users for miRNA tools are categorized as academic and other research institutes, life science industry, and service sectors. The report covers market application areas, such as cancer, cardiovascular diseases, immune diseases, neurological disorders, metabolic disorders, and others (virology, liver diseases, genetic diseases among others).

The scope of the study is global. Current and projected market forecasts during the forecast period (2023 to 2028) are discussed. Figures for 2023 are estimated, except where actual results have been reported. This report includes forecasts by technology type, end user, application and region from 2023 through 2028.

The report also includes an analysis of leading and emerging competitors in the current worldwide miRNA research tools, diagnostics and therapeutics market. Profiles of manufacturers of leading products as well as biotechnology companies with novel products in development, are analyzed to define the specific product strategies employed. This report also assesses emerging trends and technologies in the market.

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

## Report Includes:

- 33 data tables and 43 additional tables
- An up-to-date overview and industry analysis of the global markets for microRNA (miRNA) research tools, diagnostics and therapeutics
- Analyses of the global market trends, with historical market revenue data (sales figures) for 2020-2022, estimates for 2023, forecasts for 2024, and projections of compound annual growth rates (CAGRs) through 2028
- Estimation of the actual market size and revenue forecast for the global miRNA tools markets, and corresponding market share analysis based on technology type, application (therapeutic area), end user, and region
- Updated information on key market drivers and opportunities, industry shifts and regulations, and other region and industry specific macroeconomic variables that will influence this market demand in the coming years (2023-2028)
- Insight into the recent industry structure, competitive aspects of each product segments, increasing investment on R&D activities, market growth strategies, and company revenue share analysis
- Review of the selected new miRNA products, research tools and diagnostics services, recent drug candidates, clinical trial applications, and new trends and developments in the biomedical industry
- Examination of the extensive portfolio of miRNA pathway drug candidates, some already in Phase II clinical trials, showing promising clinical data in various arenas of diagnostics and therapeutics, including cancer, hepatitis infections, and cardiovascular diseases etc.
- Identification of leading and emerging competitors in the current worldwide market for miRNA research tools, diagnostics, and therapeutics, and analysis of their competitive landscape based on recent developments and segmental revenues
- Descriptive company profiles of the leading global players, including Agilent Technologies Inc., Bio-Rad Laboratories Inc., Illumina Inc., F. Hoffmann-La Roche AG, Merck KGaA, Qiagen N.V., and Thermo Fisher Scientific Inc.

## Executive Summary

### Summary:

microRNAs (miRNAs) are noncoding RNA that play pivotal role in gene silencing and posttranscriptional regulation of gene expression. Studies have shown that thousands of human protein-coding genes are regulated by miRNAs, indicating that miRNAs have regulatory roles in diverse cellular functions, such as apoptosis, proliferation and differentiation-all of which have shown to be contributing factor in diseases such as cancer and cardiovascular conditions. These features make it a potential diagnostic and therapeutic candidate. Currently, more than 2,500 mature microRNAs have been identified in the human genome. An important factor for success in miRNA research is access to high-performance tools and technologies.

Several tools and technologies are used in the miRNA research continuum, from isolation through discovery, profiling, quantitation, validation and functional analysis. Sensitive and advanced laboratory analysis methods [quantitative reverse transcription polymerase chain reaction (RT- qPCR), next-generation sequencing (NGS), and microarray] and tools (probes, reagents, and kits) for miRNA isolation, discovery, profiling, quantitation, validation and functional analysis are being largely used globally.

Most known miRNAs have been identified by random cloning and sequencing. There is an estimated REDACTED% chance of uncovering a unique miRNA using this method-thus making discovery efforts very time-consuming and laborious. Recent studies have focused on bioinformatics, where algorithms predict miRNAs based on the presence of hairpins and other structures associated with the presence of miRNAs.

The miRNA tools market has observed moderate growth recently and is predicted to grow at a CAGR of REDACTED% from 2023 to

**Scotts International. EU Vat number: PL 6772247784**

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

www.scotts-international.com

2028. The need for new research tools is constant as users deepen scientific understanding and search for the next breakthrough. MiRNA profiling is quickly becoming a promising technique in many research fields, such as translational research. It can provide useful information on the role of miRNAs in the pathogenesis of human diseases such as cancers, metabolic diseases, neurological disorders and infectious diseases.

The miRNA tools market growth is attributed to increased research at the genetic level, increased use of miRNA for therapeutic and diagnostic research purposes, the rise in R&D funding, and increased demand for advanced analysis techniques and assay methods. Microarray technology and the advent of NGS in the early 2000s significantly broadened our understanding of miRNAs and introduced new opportunities for clinical applications.

## **Table of Contents:**

Table of Contents

Chapter 1 Introduction

Study Goals and Objectives

Reasons for Doing This Study

Scope of Report

Methodology and Information Sources

What's New in This Update?

Geographic Breakdown

Chapter 2 Summary and Highlights

Market Outlook

Highlights of the MicroRNA Research Tools, Diagnostics and Therapeutics Markets

Chapter 3 Market Overview

Background: Genetic Material

Types of RNA

Messenger RNA (mRNA)

Ribosomal RNA (rRNA)

Transfer RNA (tRNA)

Small Interfering RNAs (siRNA)

Small Nucleolar RNA (snoRNA)

PIWI-interacting RNAs (piRNAs)

MicroRNAs (miRNAs)

Overview

History of MicroRNA Research

Biogenesis of MicroRNA

The Function of MicroRNA

Applications of MicroRNA

Research Tools

MicroRNA in Therapeutics

MicroRNA in Diagnostics

Bioinformatics: Applications in MicroRNA Research

Computational Tools

miRDB

TargetScan

DIANA-microT-CDS

miRTargetLink 2.0

RNA22 v2

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

TargetMiner  
RNAhybrid  
MicroRNA Databases  
miRBase  
DeepBase  
miRNAMap  
Plant microRNA Database (PMRD)  
Chapter 4 Market Dynamics  
Market Drivers  
Developments in Analytical Technologies and Assay Methods  
Robust Funding Environment for Biomedical Research  
Increasing Incidence of Chronic Diseases  
Growing Number of Clinically Relevant miRNAs  
Market Challenges  
High Investment Cost  
High Failure Rate  
Challenges Associated with microRNA Based Therapeutics Development  
Lack of Skilled Professionals  
Chapter 5 Market Breakdown by Technology Type  
Market Overview  
Quantitative Reverse Transcription Polymerase Chain Reaction (RT-qPCR)  
Next-Generation Sequencing (NGS)  
Microarray  
Isolation and Purification Tools  
In Situ Hybridization (ISH) and Northern Blotting  
Other miRNA Tools  
MicroRNA Mimics  
MicroRNA Inhibitors  
Agomirs/Antagomirs  
Market Revenue by Technology Type  
RT-qPCR  
Next-generation Sequencing (NGS)  
Microarray  
Isolation and Purification Tools  
In Situ Hybridization (ISH) and Northern Blotting  
Other Tools  
Chapter 6 Market Breakdown by End User  
Market Overview  
Academic and Other Research Institutes  
Life Science Industry  
Therapeutics  
Diagnostics  
miRNA Service Providers  
Market Revenue by End User  
Academic and Other Research Institutes Market, by Technology Type  
Life Science Industry Market, by Technology Type  
miRNA Service Providers Market, by Technology Type

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

## Chapter 7 Market Breakdown by Application

### Market Overview

Cancer

Cardiovascular Diseases

Neurological Disorders

Metabolic Diseases

Immune Disorders

Other Diseases

### Market Revenue by Application

Cancer

Cardiovascular Diseases

Neurological Disorders

Metabolic Disorders

Immune Disorders

Other Diseases

## Chapter 8 Market Breakdown by Region

### Market Overview

#### Market Revenue by Region

North America

Market Revenue, by Technology Type

Europe

Market Revenue, by Technology Type

Asia-Pacific

Market Revenue, by Technology Type

Rest of the World (RoW)

Market Revenue, by Technology Type

## Chapter 9 ESG Development

### Introduction to ESG

Sustainability in miRNA Tools and Services Industry: An ESG Perspective

#### Key ESG Issues

Consumer Attitudes Towards ESG

Industry ESG Performance Analysis

Case Study

Concluding Remarks from BCC

## Chapter 10 Emerging Trends and Technologies

Emerging Technologies and Trends in the Market

Circulating miRNA Diagnostics for Non-invasive Health Monitoring

Increasing Adoption of Digital PCR (dPCR)

RNA-Sequencing

## Chapter 11 Clinical Trials Analysis

Overview

Pipeline Analysis

## Chapter 12 Competitive Landscape

Overview

Leading Market Players Ranking

Mergers and Acquisitions

## Chapter 13 Company Profiles

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

ABCAM PLC  
AGILENT TECHNOLOGIES INC.  
BIO-RAD LABORATORIES INC.  
CD GENOMICS  
DANAHER  
F. HOFFMANN-LA ROCHE AG  
GENECOPOEIA INC.  
ILLUMINA INC.  
MERCK KGAA  
NANOSTRING TECHNOLOGIES INC.  
QIAGEN  
REGULUS THERAPEUTICS  
THERMO FISHER SCIENTIFIC INC.  
TAKARA BIO INC.

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

**MicroRNA Research Tools, Diagnostics and Therapeutics: Global Markets**

Market Research Report | 2023-07-28 | 200 pages | BCC Research

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 License	\$5500.00
	2-5 Users License	\$6600.00
	Site License	\$7920.00
	Enterprise License	\$9504.00
		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*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-03-03"/>
		Signature	

**Scotts International. EU Vat number: PL 6772247784**

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

www.scotts-international.com

