

**NGS-based RNA-sequencing Market by Product & Services (Sample Preparation, Platforms & Consumables, Services, Data Analysis), Technology (SBS, SMRT, Nanopore), Application (De Novo, Epigenetics, small RNA), End-User, Region - Global Forecast to 2027**

Market Report | 2023-05-02 | 202 pages | MarketsandMarkets

**AVAILABLE LICENSES:**

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

**Report description:**

The global NGS-based RNA-sequencing market is projected to reach USD 5.5 billion by 2027 from USD 2.5 billion in 2022, at a CAGR of 17.2% during the forecast period. Growth in the NGS-based RNA-sequencing market is mainly driven by the advantages of RNA sequencing over conventional technologies, the decreasing cost of genome sequencing, increasing government funding to support genomics projects, growing research involving RNA sequencing, growing cancer cases, the increasing application of NGS in cancer research, and rapid growth in personalized medicine. On the other hand, a lack of qualified specialists, end-user budget constraints in developing countries, and standardization concerns in diagnostic testing are expected to limit the market growth.

"Nanopore sequencing segment is anticipated to grow at substantial CAGR during the forecast period."

Based on technology, the NGS-based RNA-sequencing market has been segmented into sequencing by synthesis, ion semiconductor sequencing, single-molecule real-time sequencing, and nanopore sequencing. The nanopore sequencing segment is projected to register the highest CAGR from 2022 to 2027. Nanopore sequencing is the only sequencing technology with direct RNA-sequencing capabilities. The adoption of nanopore sequencing is increasing among end users due to its benefits as compared to other next-generation sequencing technologies, such as single-molecule sequencing of native DNA and RNA capable of detecting modifications in individual nucleotides allowing primers to cover the whole length of the 16S gene or even whole ribosomal operons, real-time targeted sequencing, large read lengths and full-length cDNA read, and reliable detection of structural variants.

**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)

"Expression profiling analysis applications segment dominated the market in 2021."

On the basis of application, the NGS-based RNA-sequencing market is segmented into expression profiling analysis, small RNA sequencing, de novo transcriptome assembly, and variant calling & transcriptome epigenetics. In 2021, the expression profiling analysis segment accounted for the largest share of the NGS-based RNA-sequencing market. The increasing prevalence of metabolic disorders, multiple sclerosis, and other diseases are expected to propel the demand for expression profiling analysis.

"North America held the dominant share of the market in 2021."

Geographically, the NGS-based RNA-sequencing market is segmented into North America, Europe, Asia Pacific, Latin America, and the Middle East and Africa. In 2021, North America accounted for the major share of the NGS-based RNA-sequencing market. North America held the dominant share owing to the availability of government support, advancements in RNA sequencing products, the growing prevalence of target diseases, growing research on cancer and inherited rare diseases, and the strong presence of key players in the region. However, the Asia Pacific market is projected to grow at the highest CAGR during the forecast period, owing to a significant focus on R&D, the decreasing costs of NGS products and services, and the increasing focus of major market players on strengthening their presence in the Asia Pacific.

The primary interviews conducted for this report can be categorized as follows:

-□By Company Type - Tier 1: 45%, Tier 2: 34%, Tier 3: 21%

-□By Designation - C-level: 47.0%, D-level: 33.0%, and Others: 20.0%

-□By Region - North America: 35%, Europe: 32%, Asia Pacific: 25%, Latin America: 6%, and the Middle East & Africa: 2%

List of Companies Profiled in the Report

o□Illumina, Inc. (US)

o□Thermo Fisher Scientific, Inc. (US)

o□PerkinElmer, Inc. (US)

o□QIAGEN N.V. (Netherlands)

o□Eurofins Scientific (UK)

o□Oxford Nanopore Technologies (UK)

o□Agilent Technologies, Inc. (US)

o□BGI Group (China)

o□GENEWIZ (US)

o□Hamilton Company (US)

o□NuGEN Technologies (US)

o□Psomagen, Inc. (South Korea)

o□F. Hoffmann-La Roche AG (Switzerland)

o□Takara Bio, Inc. (Japan)

o□Pacific Biosciences (US)

o□Zymo Research Corporation (US)

o□Lucigen Corporation (US)

o□Genotypic Technology (India)

o□Oxford Gene Technology (UK)

o□Becton, Dickinson and Company (US)□

Research Coverage:

This report provides a detailed picture of the global NGS-based RNA-sequencing market. It aims at estimating the size and future growth potential of the market across different segments, such as product & service, technology, application, end user, and region. The report also analyzes factors (such as drivers, restraints, opportunities, and challenges) affecting the market growth. It evaluates the opportunities in the market for stakeholders and provides details of the competitive landscape for market leaders. The report also studies micromarkets with respect to their growth trends, prospects, and contributions to the total NGS-based RNA-sequencing market. The report forecasts the revenue of the market segments with respect to four major regions.

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

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

www.scotts-international.com

Reasons to Buy the Report:

The report provides insights on the following pointers:

- **Market Penetration:** Comprehensive information on NGS-based RNA-sequencing offered by the top 20 players in the NGS-based RNA-sequencing market. The report analyses the NGS-based RNA-sequencing market by product & service, technology, application, end user, and region.

- **Market Development:** Comprehensive information about beneficial emerging markets. The report analyzes the markets for various NGS-based RNA-sequencing products and services across key geographic regions.

- **Market Diversification:** Exhaustive information about new products and services, untapped geographies, recent developments, and investments in the NGS-based RNA-sequencing market.

- **Competitive Assessment:** In-depth assessment of market ranking and strategies of the leading players in the NGS-based RNA-sequencing 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	MARKETS COVERED	25
1.3.2	REGIONAL SCOPE	25
1.3.3	YEARS CONSIDERED	26
1.4	CURRENCY CONSIDERED	26
1.5	STAKEHOLDERS	26
1.6	SUMMARY OF CHANGES	27
2	RESEARCH METHODOLOGY	28
2.1	RESEARCH DATA	28
FIGURE 1	RESEARCH DESIGN	28
2.1.1	SECONDARY RESEARCH	29
2.1.1.1	Key data from secondary sources	29
2.1.2	PRIMARY RESEARCH	30
2.1.2.1	Key data from primary sources	31
FIGURE 2	BREAKDOWN OF PRIMARIES	31
2.2	MARKET ESTIMATION METHODOLOGY	32
FIGURE 3	RESEARCH METHODOLOGY: HYPOTHESIS BUILDING	33
2.2.1	PRODUCT-BASED MARKET ESTIMATION	34
FIGURE 4	PRODUCT-BASED MARKET ESTIMATION	34
2.2.2	APPLICATION-BASED MARKET ESTIMATION	34
FIGURE 5	APPLICATION-BASED MARKET ESTIMATION	35
2.3	PRIMARY RESEARCH VALIDATION	35
2.4	MARKET BREAKDOWN AND DATA TRIANGULATION	36
FIGURE 6	DATA TRIANGULATION	36
2.5	STUDY ASSUMPTIONS	36
FIGURE 7	STUDY ASSUMPTIONS	37
2.6	RESEARCH LIMITATIONS	37

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

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

www.scotts-international.com

### 3 EXECUTIVE SUMMARY 38

FIGURE 8 NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2022 VS. 2027 (USD MILLION) 38

FIGURE 9 NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2022 VS. 2027 (USD MILLION) 39

FIGURE 10 NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2022 VS. 2027 (USD MILLION) 39

FIGURE 11 NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2022 VS. 2027 (USD MILLION) 40

FIGURE 12 REGIONAL SNAPSHOT OF NGS-BASED RNA-SEQUENCING MARKET 41

### 4 PREMIUM INSIGHTS 42

#### 4.1 NGS-BASED RNA-SEQUENCING MARKET OVERVIEW 42

FIGURE 13 GROWING RESEARCH ACTIVITIES INVOLVING RNA-SEQUENCING TO DRIVE MARKET 42

4.2 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY END USER AND COUNTRY (2021) 43

FIGURE 14 CHINA TO DOMINATE ASIA PACIFIC MARKET IN 2021 43

#### 4.3 GEOGRAPHICAL SNAPSHOT OF NGS-BASED RNA-SEQUENCING MARKET 44

FIGURE 15 CHINA TO WITNESS HIGHEST GROWTH RATE DURING FORECAST PERIOD 44

#### 4.4 NGS-BASED RNA-SEQUENCING MARKET, BY REGION 45

FIGURE 16 NORTH AMERICA TO DOMINATE NGS-BASED RNA-SEQUENCING MARKET IN 2027 45

### 5 MARKET OVERVIEW 46

#### 5.1 INTRODUCTION 46

#### 5.2 MARKET DYNAMICS 47

FIGURE 17 NGS-BASED RNA-SEQUENCING MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES 47

##### 5.2.1 DRIVERS 47

5.2.1.1 Decreasing costs of genome sequencing 47

FIGURE 18 COST OF HUMAN WHOLE-GENOME SEQUENCING, 2001-2021 48

5.2.1.2 Advantages of RNA-sequencing over conventional technologies 48

5.2.1.3 Increasing government funding to support genomics projects 49

5.2.1.4 Growing research involving RNA-sequencing 49

5.2.1.5 Rising cancer cases and increasing applications of NGS in cancer research 50

TABLE 1 CANCER INCIDENCE, 2020 VS. 2040 50

5.2.1.6 Rapid growth in personalized medicine adoption 51

##### 5.2.2 RESTRAINTS 51

5.2.2.1 Lack of qualified specialists 51

5.2.2.2 End-user budget constraints in developing countries 51

5.2.2.3 Standardization concerns of RNA-sequencing in diagnostic testing 52

##### 5.2.3 OPPORTUNITIES 52

5.2.3.1 Adoption of blockchain technology and cloud computing 52

##### 5.2.4 CHALLENGES 53

5.2.4.1 Storage and interpretation of sequencing data 53

5.2.4.2 Analysis of RNA-sequencing data to detect novel transcripts 53

5.2.4.3 Ethical issues and challenges in testing procedure 54

### 6 NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE 55

#### 6.1 INTRODUCTION 56

TABLE 2 NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027 (USD MILLION) 56

#### 6.2 RNA-SEQUENCING PLATFORMS & CONSUMABLES 56

6.2.1 INCREASING AVAILABILITY OF PLATFORMS AND GROWING CONSUMABLE USAGE TO ENSURE GROWTH 56

TABLE 3 RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY REGION, 2020-2027 (USD MILLION) 57

TABLE 4 NORTH AMERICA: RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY REGION, 2020-2027 (USD MILLION) 57

TABLE 5 EUROPE: RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY REGION, 2020-2027 (USD MILLION) 58

TABLE 6 ASIA PACIFIC: RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY REGION, 2020-2027 (USD MILLION) 58

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

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

www.scotts-international.com

TABLE 7 □ LATIN AMERICA: RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY REGION, 2020-2027 (USD MILLION) □ 59

6.3 □ SAMPLE PREPARATION PRODUCTS □ 59

6.3.1 □ SAMPLE PREPARATION TO BE FIRST STEP OF NGS WORKFLOW □ 59

TABLE 8 □ SAMPLE PREPARATION PRODUCTS MARKET, BY REGION, 2020-2027 (USD MILLION) □ 59

TABLE 9 □ NORTH AMERICA: SAMPLE PREPARATION PRODUCTS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 60

TABLE 10 □ EUROPE: SAMPLE PREPARATION PRODUCTS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 60

TABLE 11 □ ASIA PACIFIC: SAMPLE PREPARATION PRODUCTS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 61

TABLE 12 □ LATIN AMERICA: SAMPLE PREPARATION PRODUCTS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 61

6.3.2 □ SAMPLE PREPARATION PRODUCTS, BY WORKFLOW □ 61

6.3.2.1 □ Library preparation & target enrichment □ 61

6.3.2.2 □ Quality control □ 62

6.3.3 □ SAMPLE PREPARATION PRODUCTS, BY METHOD □ 62

6.3.3.1 □ Manual sample preparation □ 62

6.3.3.2 □ Microfluidic sample preparation □ 62

6.3.3.3 □ Robotic liquid handling sample preparation □ 62

6.4 □ RNA-SEQUENCING SERVICES □ 63

6.4.1 □ INCREASING ADOPTION OF ADVANCED INFRASTRUCTURE AND EXPERTISE AMONG END USERS TO DRIVE DEMAND □ 63

TABLE 13 □ RNA-SEQUENCING SERVICES MARKET, BY REGION, 2020-2027 (USD MILLION) □ 63

TABLE 14 □ NORTH AMERICA: RNA-SEQUENCING SERVICES MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 64

TABLE 15 □ EUROPE: RNA-SEQUENCING SERVICES MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 64

TABLE 16 □ ASIA PACIFIC: RNA-SEQUENCING SERVICES MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 65

TABLE 17 □ LATIN AMERICA: RNA-SEQUENCING PLATFORMS & CONSUMABLES MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 65

6.5 □ DATA ANALYSIS, STORAGE & MANAGEMENT □ 65

6.5.1 □ INTEGRATION OF CLOUD COMPUTING AND BIOINFORMATICS TO PROPEL MARKET □ 65

TABLE 18 □ DATA ANALYSIS, STORAGE & MANAGEMENT MARKET, BY REGION, 2020-2027 (USD MILLION) □ 66

TABLE 19 □ NORTH AMERICA: DATA ANALYSIS, STORAGE & MANAGEMENT MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 67

TABLE 20 □ EUROPE: DATA ANALYSIS, STORAGE & MANAGEMENT MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 67

TABLE 21 □ ASIA PACIFIC: DATA ANALYSIS, STORAGE & MANAGEMENT MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 68

TABLE 22 □ LATIN AMERICA: DATA ANALYSIS, STORAGE & MANAGEMENT MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 68

7 □ NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY □ 69

7.1 □ INTRODUCTION □ 70

TABLE 23 □ NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027 (USD MILLION) □ 70

7.2 □ SEQUENCING BY SYNTHESIS □ 70

7.2.1 □ SBS TECHNOLOGY TO ENABLE HIGHEST PRODUCTION OF BASE PAIRS WITHIN SHORTEST TIME □ 70

TABLE 24 □ SEQUENCING BY SYNTHESIS MARKET, BY REGION, 2020-2027 (USD MILLION) □ 71

TABLE 25 □ NORTH AMERICA: SEQUENCING BY SYNTHESIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 71

TABLE 26 □ EUROPE: SEQUENCING BY SYNTHESIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 72

TABLE 27 □ ASIA PACIFIC: SEQUENCING BY SYNTHESIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 72

TABLE 28 □ LATIN AMERICA: SEQUENCING BY SYNTHESIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 73

7.3 □ ION SEMICONDUCTOR SEQUENCING □ 73

7.3.1 □ ION SEMICONDUCTOR SEQUENCING PLATFORMS TO POSSESS HIGH-THROUGHPUT CAPABILITIES □ 73

TABLE 29 □ ION SEMICONDUCTOR SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 74

TABLE 30 □ NORTH AMERICA: ION SEMICONDUCTOR SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 74

TABLE 31 □ EUROPE: ION SEMICONDUCTOR SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 75

TABLE 32 □ ASIA PACIFIC: ION SEMICONDUCTOR SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 75

TABLE 33 □ LATIN AMERICA: ION SEMICONDUCTOR SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 76

7.4 □ SINGLE-MOLECULE REAL-TIME SEQUENCING □ 76

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

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

www.scotts-international.com

7.4.1 □ SMRT SEQUENCING TO PRODUCE RESULTS IN SHORTER TIME AND LOWER COSTS □ 76

TABLE 34 □ SINGLE-MOLECULE REAL-TIME SEQUENCING MARKET, BY REGION, 2020-2027 (USD MILLION) □ 77

TABLE 35 □ NORTH AMERICA: SINGLE-MOLECULE REAL-TIME SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 77

TABLE 36 □ EUROPE: SINGLE-MOLECULE REAL-TIME SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 78

TABLE 37 □ ASIA PACIFIC: SINGLE-MOLECULE REAL-TIME SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 78

TABLE 38 □ LATIN AMERICA: SINGLE-MOLECULE REAL-TIME SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 79

7.5 □ NANOPORE SEQUENCING □ 79

7.5.1 □ NANOPORE SEQUENCING TO POSSESS DIRECT RNA-SEQUENCING CAPABILITIES □ 79

TABLE 39 □ NANOPORE SEQUENCING MARKET, BY REGION, 2020-2027 (USD MILLION) □ 80

TABLE 40 □ NORTH AMERICA: NANOPORE SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 80

TABLE 41 □ EUROPE: NANOPORE SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 81

TABLE 42 □ ASIA PACIFIC: NANOPORE SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 81

TABLE 43 □ LATIN AMERICA: NANOPORE SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 82

8 □ NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION □ 83

8.1 □ INTRODUCTION □ 84

TABLE 44 □ NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027 (USD MILLION) □ 84

8.2 □ EXPRESSION PROFILING ANALYSIS □ 84

8.2.1 □ INCREASING NEED FOR IMPROVED PROGNOSIS OF PATIENTS TO PROPEL MARKET □ 84

TABLE 45 □ EXPRESSION PROFILING ANALYSIS MARKET, BY REGION, 2020-2027 (USD MILLION) □ 85

TABLE 46 □ NORTH AMERICA: EXPRESSION PROFILING ANALYSIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 85

TABLE 47 □ EUROPE: EXPRESSION PROFILING ANALYSIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 86

TABLE 48 □ ASIA PACIFIC: EXPRESSION PROFILING ANALYSIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 86

TABLE 49 □ LATIN AMERICA: EXPRESSION PROFILING ANALYSIS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 87

8.3 □ SMALL RNA-SEQUENCING □ 87

8.3.1 □ RISING NEED FOR ACCURATE DIAGNOSTIC ANALYSIS TO SUPPORT MARKET □ 87

TABLE 50 □ SMALL RNA-SEQUENCING MARKET, BY REGION, 2020-2027 (USD MILLION) □ 88

TABLE 51 □ NORTH AMERICA: SMALL RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 88

TABLE 52 □ EUROPE: SMALL RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 88

TABLE 53 □ ASIA PACIFIC: SMALL RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 89

TABLE 54 □ LATIN AMERICA: SMALL RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 89

8.4 □ DE NOVO TRANSCRIPTOME ASSEMBLY □ 89

8.4.1 □ INCREASING CANCER CASES TO DRIVE SEGMENT □ 89

TABLE 55 □ DE NOVO TRANSCRIPTOME ASSEMBLY MARKET, BY REGION, 2020-2027 (USD MILLION) □ 90

TABLE 56 □ NORTH AMERICA: DE NOVO TRANSCRIPTOME ASSEMBLY MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 91

TABLE 57 □ EUROPE: DE NOVO TRANSCRIPTOME ASSEMBLY MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 91

TABLE 58 □ ASIA PACIFIC: DE NOVO TRANSCRIPTOME ASSEMBLY MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 92

TABLE 59 □ LATIN AMERICA: DE NOVO TRANSCRIPTOME ASSEMBLY MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 92

8.5 □ VARIANT CALLING & TRANSCRIPTOME EPIGENETICS □ 92

8.5.1 □ COMPLICATED RNA SEQUENCE DATA ANALYSIS TO RESTRAIN SEGMENT □ 92

TABLE 60 □ VARIANT CALLING & TRANSCRIPTOME EPIGENETICS MARKET, BY REGION, 2020-2027 (USD MILLION) □ 93

TABLE 61 □ NORTH AMERICA: VARIANT CALLING & TRANSCRIPTOME EPIGENETICS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 94

TABLE 62 □ EUROPE: VARIANT CALLING & TRANSCRIPTOME EPIGENETICS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 94

TABLE 63 □ ASIA PACIFIC: VARIANT CALLING & TRANSCRIPTOME EPIGENETICS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 95

TABLE 64 □ LATIN AMERICA: VARIANT CALLING & TRANSCRIPTOME EPIGENETICS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) □ 95

9 □ NGS-BASED RNA-SEQUENCING MARKET, BY END USER □ 96

9.1 □ INTRODUCTION □ 97

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

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

www.scotts-international.com

TABLE 65 NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027 (USD MILLION) 97

9.2 RESEARCH & ACADEMIA 97

9.2.1 INCREASING COLLABORATIONS WITH NGS PLAYERS AND RISING GOVERNMENT FUNDING TO PROPEL MARKET 97

TABLE 66 NGS-BASED RNA-SEQUENCING MARKET FOR RESEARCH & ACADEMIA, BY REGION, 2020-2027 (USD MILLION) 98

9.3 HOSPITALS & CLINICS 99

9.3.1 INCREASING ADOPTION OF NGS SYSTEMS TO DRIVE MARKET 99

TABLE 67 NGS-BASED RNA-SEQUENCING MARKET FOR HOSPITALS & CLINICS, BY REGION, 2020-2027 (USD MILLION) 99

9.4 PHARMACEUTICAL & BIOTECHNOLOGY COMPANIES 100

9.4.1 CONSOLIDATION WITH NGS PLAYERS FOR TARGET THERAPIES TO PROPEL MARKET 100

TABLE 68 NGS-BASED RNA-SEQUENCING MARKET FOR PHARMACEUTICAL & BIOTECHNOLOGY COMPANIES, BY REGION, 2020-2027 (USD MILLION) 100

9.5 OTHER END USERS 101

TABLE 69 NGS-BASED RNA-SEQUENCING MARKET FOR OTHER END USERS, BY REGION, 2020-2027 (USD MILLION) 101

10 NGS-BASED RNA-SEQUENCING MARKET, BY REGION 102

10.1 INTRODUCTION 103

TABLE 70 NGS-BASED RNA-SEQUENCING MARKET, BY REGION, 2020-2027(USD MILLION) 103

10.2 NORTH AMERICA 103

FIGURE 19 NORTH AMERICA: MARKET SNAPSHOT 104

TABLE 71 NORTH AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027(USD MILLION) 104

TABLE 72 NORTH AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 105

TABLE 73 NORTH AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 105

TABLE 74 NORTH AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 106

TABLE 75 NORTH AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027(USD MILLION) 106

10.2.1 US 106

10.2.1.1 Favorable funding scenario and growing R&D activity to drive market 106

TABLE 76 US: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 107

TABLE 77 US: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 108

TABLE 78 US: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 108

10.2.2 CANADA 109

10.2.2.1 Government initiatives for genome research to boost market 109

TABLE 79 CANADA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 109

TABLE 80 CANADA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 110

TABLE 81 CANADA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 110

10.3 EUROPE 110

TABLE 82 EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027(USD MILLION) 111

TABLE 83 EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 111

TABLE 84 EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 112

TABLE 85 EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 112

TABLE 86 EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027(USD MILLION) 113

10.3.1 GERMANY 113

10.3.1.1 Germany to dominate European market during forecast period 113

TABLE 87 GERMANY: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 114

TABLE 88 GERMANY: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 114

TABLE 89 GERMANY: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 115

10.3.2 UK 115

10.3.2.1 Strong presence of NGS organizations and their initiatives to stimulate market 115

TABLE 90 UK: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 116

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

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

www.scotts-international.com

TABLE 91 UK: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 116

TABLE 92 UK: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 117

10.3.3 FRANCE 117

10.3.3.1 Growing awareness of high-throughput sequencing in genetic characterization to accelerate growth 117

TABLE 93 FRANCE: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 118

TABLE 94 FRANCE: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 118

TABLE 95 FRANCE: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 119

10.3.4 REST OF EUROPE 119

TABLE 96 REST OF EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 120

TABLE 97 REST OF EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 120

TABLE 98 REST OF EUROPE: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 121

10.4 ASIA PACIFIC 121

FIGURE 20 ASIA PACIFIC: MARKET SNAPSHOT 122

TABLE 99 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027(USD MILLION) 123

TABLE 100 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 123

TABLE 101 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 124

TABLE 102 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 124

TABLE 103 ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027(USD MILLION) 125

10.4.1 CHINA 125

10.4.1.1 Established players and favorable government initiatives to drive market 125

TABLE 104 CHINA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 126

TABLE 105 CHINA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 127

TABLE 106 CHINA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 127

10.4.2 JAPAN 128

10.4.2.1 Growing awareness and rising incidence of genetic disorders to propel market 128

TABLE 107 JAPAN: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 128

TABLE 108 JAPAN: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 129

TABLE 109 JAPAN: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 129

10.4.3 INDIA 129

10.4.3.1 Rising interest of companies for collaborations to drive market 129

TABLE 110 INDIA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 130

TABLE 111 INDIA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 131

TABLE 112 INDIA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 131

10.4.4 REST OF ASIA PACIFIC 131

TABLE 113 REST OF ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 132

TABLE 114 REST OF ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 132

TABLE 115 REST OF ASIA PACIFIC: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 133

10.5 LATIN AMERICA 133

TABLE 116 LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY COUNTRY, 2020-2027(USD MILLION) 133

TABLE 117 LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 134

TABLE 118 LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 134

TABLE 119 LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION) 135

TABLE 120 LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027(USD MILLION) 135

10.5.1 BRAZIL 135

10.5.1.1 High HIV prevalence to drive demand for NGS in research 135

TABLE 121 BRAZIL: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION) 136

TABLE 122 BRAZIL: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION) 136

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

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

www.scotts-international.com

TABLE 123	BRAZIL: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION)	137
10.5.2	MEXICO	137
10.5.2.1	Economic growth and support for infrastructural development to propel market	137
TABLE 124	MEXICO: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION)	137
TABLE 125	MEXICO: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION)	138
TABLE 126	MEXICO: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION)	138
10.5.3	REST OF LATIN AMERICA	138
TABLE 127	REST OF LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION)	139
TABLE 128	REST OF LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION)	139
TABLE 129	REST OF LATIN AMERICA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION)	140
10.6	MIDDLE EAST & AFRICA	140
10.6.1	LACK OF INFRASTRUCTURE TO RESTRAIN MARKET	140
TABLE 130	MIDDLE EAST & AFRICA: NGS-BASED RNA-SEQUENCING MARKET, BY PRODUCT & SERVICE, 2020-2027(USD MILLION)	141
TABLE 131	MIDDLE EAST & AFRICA: NGS-BASED RNA-SEQUENCING MARKET, BY TECHNOLOGY, 2020-2027(USD MILLION)	141
TABLE 132	MIDDLE EAST & AFRICA: NGS-BASED RNA-SEQUENCING MARKET, BY APPLICATION, 2020-2027(USD MILLION)	142
TABLE 133	MIDDLE EAST & AFRICA: NGS-BASED RNA-SEQUENCING MARKET, BY END USER, 2020-2027(USD MILLION)	142
11	COMPETITIVE LANDSCAPE	143
11.1	OVERVIEW	143
11.2	KEY PLAYER STRATEGIES/RIGHT TO WIN	143
FIGURE 21	KEY DEVELOPMENTS IN NGS-BASED RNA-SEQUENCING MARKET, 2019-2022	143
11.3	MARKET SHARE ANALYSIS	144
FIGURE 22	NGS-BASED RNA-SEQUENCING MARKET SHARE, BY KEY PLAYER, 2021	144
TABLE 134	NGS-BASED RNA-SEQUENCING MARKET: DEGREE OF COMPETITION	144
11.4	REVENUE SHARE ANALYSIS OF TOP MARKET PLAYERS	145
11.5	COMPETITIVE LEADERSHIP MAPPING	146
11.5.1	TERMINOLOGY/NOMENCLATURE	146
11.5.1.1	Visionary leaders	146
11.5.1.2	Innovators	146
11.5.1.3	Dynamic differentiators	146
11.5.1.4	Emerging companies	146
FIGURE 24	NGS-BASED RNA-SEQUENCING MARKET, COMPETITIVE LEADERSHIP MAPPING, 2021 (OVERALL MARKET)	147
FIGURE 25	NGS-BASED RNA-SEQUENCING MARKET, COMPETITIVE LEADERSHIP MAPPING, 2021 (SMES/START-UPS)	148
11.6	COMPETITIVE SCENARIO	148
TABLE 135	NGS-BASED RNA-SEQUENCING MARKET: PRODUCT/SERVICE LAUNCHES	148
TABLE 136	NGS-BASED RNA-SEQUENCING MARKET: DEALS	149
TABLE 137	NGS-BASED RNA-SEQUENCING MARKET: OTHER DEVELOPMENTS	150
12	COMPANY PROFILES	151
(Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats)*		
12.1	KEY PLAYERS	151
12.1.1	ILLUMINA, INC.	151
TABLE 138	ILLUMINA, INC.: COMPANY OVERVIEW	151
FIGURE 26	ILLUMINA, INC.: COMPANY SNAPSHOT, 2021	152
TABLE 139	ILLUMINA, INC.: PRODUCT LAUNCHES	155
TABLE 140	ILLUMINA, INC.: DEALS	156

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

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

www.scotts-international.com

TABLE 141	ILLUMINA, INC.: OTHER DEVELOPMENTS	157
12.1.2	QIAGEN N.V.	158
TABLE 142	QIAGEN N.V.: COMPANY OVERVIEW	158
FIGURE 27	QIAGEN N.V.: COMPANY SNAPSHOT, 2021	159
TABLE 143	QIAGEN N.V.: PRODUCT LAUNCHES & ENHANCEMENTS	163
TABLE 144	QIAGEN N.V.: DEALS	164
12.1.3	PERKINELMER, INC.	166
TABLE 145	PERKINELMER, INC.: COMPANY OVERVIEW	166
FIGURE 28	PERKINELMER, INC.: COMPANY SNAPSHOT, 2021	167
TABLE 146	PERKINELMER, INC.: PRODUCT LAUNCHES	168
12.1.4	EUROFINS SCIENTIFIC	169
TABLE 147	EUROFINS SCIENTIFIC: COMPANY OVERVIEW	169
FIGURE 29	EUROFINS SCIENTIFIC: COMPANY SNAPSHOT, 2021	169
TABLE 148	EUROFINS SCIENTIFIC: DEALS	171
12.1.5	OXFORD NANOPORE TECHNOLOGIES	172
TABLE 149	OXFORD NANOPORE TECHNOLOGIES: COMPANY OVERVIEW	172
TABLE 150	OXFORD NANOPORE TECHNOLOGIES: PRODUCT LAUNCHES	173
TABLE 151	OXFORD NANOPORE TECHNOLOGIES: DEALS	173
TABLE 152	OXFORD NANOPORE TECHNOLOGIES: OTHER DEVELOPMENTS	174
12.1.6	AGILENT TECHNOLOGIES, INC.	175
TABLE 153	AGILENT TECHNOLOGIES, INC.: COMPANY OVERVIEW	175
FIGURE 30	AGILENT TECHNOLOGIES, INC.: COMPANY SNAPSHOT, 2021	176
12.1.7	BGI GROUP	177
TABLE 154	BGI GROUP: COMPANY OVERVIEW	177
TABLE 155	BGI GROUP: DEALS	177
12.1.8	GENEWIZ (PART OF BROOKS AUTOMATION)	178
TABLE 156	GENEWIZ: COMPANY OVERVIEW	178
TABLE 157	GENEWIZ: SERVICES LAUNCHED	179
12.1.9	HAMILTON COMPANY	180
TABLE 158	HAMILTON COMPANY: COMPANY OVERVIEW	180
12.1.10	NUGEN TECHNOLOGIES (PART OF TECAN TRADING AG)	182
TABLE 159	NUGEN TECHNOLOGIES: COMPANY OVERVIEW	182
12.1.11	PSOMAGEN (FORMERLY KNOWN AS MACROGEN)	184
TABLE 160	PSOMAGEN: COMPANY OVERVIEW	184
12.1.12	F. HOFFMANN-LA ROCHE AG	185
TABLE 161	F. HOFFMANN-LA ROCHE AG: COMPANY OVERVIEW	185
FIGURE 31	F. HOFFMANN-LA ROCHE AG: COMPANY SNAPSHOT, 2021	186
TABLE 162	F. HOFFMANN-LA ROCHE AG: DEALS	187
12.1.13	THERMO FISHER SCIENTIFIC, INC.	188
TABLE 163	THERMO FISHER SCIENTIFIC, INC.: COMPANY OVERVIEW	188
FIGURE 32	THERMO FISHER SCIENTIFIC, INC.: COMPANY SNAPSHOT, 2021	189
TABLE 164	THERMO FISHER SCIENTIFIC, INC.: DEALS	190
12.1.14	TAKARA BIO, INC.	191
TABLE 165	TAKARA BIO, INC.: COMPANY OVERVIEW	191
FIGURE 33	TAKARA BIO, INC.: COMPANY SNAPSHOT, 2021	192
12.1.15	PACIFIC BIOSCIENCES	194
TABLE 166	PACIFIC BIOSCIENCES: COMPANY OVERVIEW	194

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

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

www.scotts-international.com

FIGURE 34 PACIFIC BIOSCIENCES: COMPANY SNAPSHOT, 2021 195

12.2 OTHER PLAYERS 198

12.2.1 ZYMO RESEARCH 198

12.2.2 LUCIGEN CORPORATION 198

12.2.3 GENOTYPIC TECHNOLOGY 199

12.2.4 OXFORD GENE TECHNOLOGY (PART OF SYSMEX) 199

12.2.5 BECTON, DICKINSON AND COMPANY 200

\*Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats)\* might not be captured in case of unlisted companies.

13 APPENDIX 201

13.1 DISCUSSION GUIDE 201

13.2 KNOWLEDGESTORE: MARKETSandMARKETS SUBSCRIPTION PORTAL 204

13.3 AVAILABLE CUSTOMIZATION OPTIONS 206

13.4 RELATED REPORTS 207

13.5 AUTHOR DETAILS 208

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

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

www.scotts-international.com

**NGS-based RNA-sequencing Market by Product & Services (Sample Preparation, Platforms & Consumables, Services, Data Analysis), Technology (SBS, SMRT, Nanopore), Application (De Novo, Epigenetics, small RNA), End-User, Region - Global Forecast to 2027**

Market Report | 2023-05-02 | 202 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@scott's-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
		VAT
		Total

\*Please circle the relevant license option. For any questions please contact support@scott's-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"/>

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

tel. 0048 603 394 346 e-mail: support@scott's-international.com

www.scott's-international.com

Zip Code\*

Country\*

Date

2026-03-02

Signature

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

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

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