Next-generation Sequencing (NGS) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 203 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The Next-generation Sequencing Market size is estimated at USD 10.47 billion in 2024, and is expected to reach USD 19.66 billion by 2029, growing at a CAGR of 13.43% during the forecast period (2024-2029).

The NGS diagnostic technology was able to find out a virus's genetic sequence and helped scientists figure out how mutations happen. During the COVID-19 pandemic, governments all over the world worked with the private sector to try to get NGS technology on the market as a possible diagnostic tool.For example, an article published by Frontiers in March 2022 says that next-generation sequencing (NGS) was used to study COVID-19, which made it much easier to find out where SARS-CoV-2 came from.It also said that NGS was important for looking into the possible origins and workings of SARS-CoV-2 in order to stop the spread of COVID-19 and make the treatment plan even better.Thus, the use of NGS technology increased throughout the pandemic phase. However, post-pandemic, the NGS market is expected to have stable growth during the forecast period of the study.

Factors such as the increasing applications in clinical diagnosis and speed, cost, and accuracy, and the increasing efficiency when compared to traditional technologies such as microarrays and the rising number of drug discovery applications are expected to boost market growth.

An upsurge in the use of NGS technology in clinical diagnosis and the speed, cost, and accuracy of this sequencing method are likely to boost the growth of the market. For instance, NGS has a lot of advantages over conventional sequencing techniques, according to an article from PubMed Central published in January 2021.These advantages include a higher throughput with sample multiplexing, a higher sensitivity for finding low-frequency variants, a faster turnaround time for high sample volumes, and a lower cost.Additionally, a PubMed Central article from April 2021 claimed that because NGS is capable of massively parallel sequencing

and is steadily replacing its predecessor, conventional Sanger sequencing, it has significantly influenced the demand for more affordable and quick sequencing technologies.It is expected that NGS's advantages will help the market grow over the next few years.

The market is also expected to grow because replacing old technologies like microarrays will make them more efficient and because more drug discovery applications will need NGS technology.For example, an article published by Elsevier in August 2022 said that NGS was better than microarrays at detecting DNA and doing other genomic tasks.

Additionally, several market players are playing a key role in the development of drugs through this technology, which is also expected to boost market growth. For example, in January 2022, Illumina Inc. and Nashville Biosciences LLC, a wholly-owned subsidiary of Vanderbilt University Medical Center (VUMC), signed a multi-year agreement to speed up the development of new medicines through large-scale genomics and the creation of a leading clinical genomic resource using Illumina's next-generation sequencing (NGS) platforms.

Hence, the aforementioned factors, such as the rising developments by key market players, the efficiency in replacing the traditional technologies (such as microarrays), growing drug discovery applications demanding NGS technology, and an upsurge in the use of NGS technology in clinical diagnosis, are expected to boost the market's growth. However, factors such as legal and ethical issues, the interpretation of complex data, and the lack of skilled professionals are expected to impede market growth.

Next Generation Sequencing (NGS) Market Trends

The Whole Genome Sequencing Segment is Expected to Grow at a Significant Rate Over the Forecast Period

The whole-genome sequencing segment is expected to grow substantially over the coming years. Whole-genome sequencing (WGS) has been widely accepted for providing the highest possible resolution information about various diseases and other genetic analyses. For instance, according to the article published by NCBI, whole genome sequencing (WGS) can provide unprecedentedly relevant information regarding the malaria parasite genome used for malaria pathology. In addition to the same article, the advent of next-generation sequencing is making WGS a standard in the field of disease management and reduction.

Moreover, numerous initiatives undertaken by universities, academic and research institutions, and research establishments to utilize WGS technology in identifying the root cause of diseases are likely to propel the segment's growth. For instance, in February 2021, Stanford Medicine launched an in-house service for whole-genome sequencing. The whole-genome sequencing of various viruses was greatly simplified using the NGS-based test.

In the same way, the University College London reported in November 2022 that personalizing whole genome sequencing can double the number of rare diseases that can be diagnosed.All the patients who participated received whole genome sequencing via Genomics England's '100,000 Genomes Project" to try to find a genetic cause for their suspected primary mitochondrial disease (PMD). Thus, the increasing demand for whole genome sequencing is expected to boost the usage of NGS technology. Furthermore, the rising number of clinical trial studies pertaining to the use of whole-genome sequencing is also increasing the focus on whole-genome sequencing, thereby contributing to the market's growth.

Thus, due to the above-mentioned factors, such as numerous initiatives undertaken by universities, academic and research institutions, and research establishments for utilizing WGS technology in identifying the root cause of diseases and the rising advantages of whole genome sequencing, the segment is anticipated to witness healthy growth over the forecast period.

North America is Expected to Hold a Significant Share of the Market Over the Forecast Period

North America is expected to hold a significant share of the market and is expected to continue the trend over the coming years. Next-generation sequencing (NGS) technology is gaining popularity as a routine clinical diagnostic test. Factors such as the rising prevalence of chronic and infectious diseases, the increasing spending on genomics, and the rising developments by key market players are expected to boost market growth.

For instance, as per the Canada Cancer Society's statistics for 2022, around 6,700 Canadians were diagnosed with leukemia in 2021, out of which 4,000 were men and 2,700 were women. Also, as per the American Cancer Society's data for 2023, around 59,610 new cases of leukemia and 20,380 new cases of acute myeloid leukemia (AML) are expected to be diagnosed in the United States in 2023. Thus, the high incidence of such diseases is leading to an increase in the usage of NGS technology-based devices, thereby driving the market in the region.

Also, more money will be spent on genomics research, which is expected to increase the use of NGS-based devices and drive the growth of the market.For example, the National Institutes of Health (NIH) said in May 2022 that spending on cancer genomics in the United States would rise from USD 1,160 million in 2021 to USD 1,220 million in 2022.

The growth of the market is also expected to be helped by the fact that key market players are making more and more changes. For example, in September 2022, Predicine, Inc. said that the US FDA had given the PredicineCARETM cfDNA Assay, a Next-Generation Sequencing (NGS) assay for tumor mutation profiling in cfDNA isolated from liquid biopsy samples from cancer patients, breakthrough device designation.Similarly, in August 2022, Thermo Fisher Scientific announced that the United States FDA granted premarket approval to an NGS-based test known as the "Oncomine Dx Target Test' as a companion diagnostic (CDx) to identify patients whose tumors have HER2 (ERBB2) activating mutations (SNVs and Exon 20 Insertion) in non-small cell lung cancer (NSCLC) who may be candidates for ENHERTU (fam-trastuzumab deruxtecan nxki) as a companion diagnostic (CDx).

Thus, the aforementioned factors, such as the rising prevalence of chronic and infectious diseases, increasing spending on genomics, and the rising developments by key market players, are expected to boost market growth in the region.

Next Generation Sequencing (NGS) Industry Overview

The next-generation sequencing (NGS) market is highly fragmented, with the presence of several global and international players. The key players are adopting different growth strategies to enhance their market presence, such as partnerships, agreements, collaborations, new product launches, geographical expansions, mergers, and acquisitions. Some of the key players in the market are F. Hoffmann-La Roche Ltd., Thermo Fisher Scientific Inc., Agilent Technologies, Illumina Inc., and PerkinElmer Inc., among others.

Additional Benefits:

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

Table of Contents:

1 INTRODUCTION
1.1 Study Assumptions and Market Definition
1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS
4.1 Market Overview
4.2 Market Drivers
4.2.1 Increasing Applications in Clinical Diagnosis and Speed, Cost, and Accuracy
4.2.2 Increasing Efficiency when Compared To Traditional Technologies Such As Microarrays and Rising Drug Discovery Applications
4.3 Market Restraints
4.3.1 Legal and Ethical Issues
4.3.2 Interpretation of Complex Data and Lack of Skilled Professionals
4.4 Porter's Five Forces Analysis
4.4.1 Bargaining Power of Buyers/Consumers
4.4.2 Bargaining Power of Suppliers
4.4.3 Threat of New Entrants
4.4.4 Threat of Substitute Products
4.4.5 Intensity of Competitive Rivalry

5 MARKET SEGMENTATION (Market Size By Value - USD million)
5.1 By Type of Sequencing
5.1.1 Whole Genome Sequencing
5.1.2 Targeted Resequencing
5.1.3 Whole Exome Sequencing
5.1.4 RNA Sequencing
5.1.5 CHIP Sequencing
5.1.6 De Novo Sequencing
5.1.7 Methyl Sequencing
5.2 By Product Type
5.2.1 Instruments
5.2.2 Reagents and Consumables
5.2.3 Services
5.3 By End-User
5.3.1 Hospitals and Healthcare Institutions
5.3.2 Academics
5.3.3 Pharmaceutical and Biotechnology Companies
5.4 By Application
5.4.1 Drug Discovery and Personalized Medicine
5.4.2 Genetic Screening
5.4.3 Diagnostics
5.4.4 Agriculture and Animal Research
5.4.5 Other Applications
5.5 Geography
5.5.1 North America
5.5.1.1 United States
5.5.1.2 Canada
5.5.1.3 Mexico
5.5.2 Europe
5.5.2.1 Germany

5.5.2.2 United Kingdom
5.5.2.3 France
5.5.2.4 Italy
5.5.2.5 Spain
5.5.2.6 Rest of Europe
5.5.3 Asia-Pacific
5.5.3.1 China
5.5.3.2 Japan
5.5.3.3 India
5.5.3.4 Australia
5.5.3.5 South Korea
5.5.3.6 Rest of Asia-Pacific
5.5.4 Middle East and Africa
5.5.4.1 GCC
5.5.4.2 South Africa
5.5.4.3 Rest of Middle East and Africa
5.5.5 South America
5.5.5.1 Brazil
5.5.5.2 Argentina
5.5.5.3 Rest of South America

6 COMPETITIVE LANDSCAPE
6.1 Company Profiles
6.1.1 Agilent Technologies
6.1.2 Bio-Rad Laboratories Inc.
6.1.3 DNASTAR Inc.
6.1.4 Eurofins Scientific
6.1.5 F. Hoffmann-La Roche Ltd.
6.1.6 Illumina Inc.
6.1.7 Macrogen Inc.
6.1.8 Pacific Biosciences of California Inc.
6.1.9 PerkinElmer Inc.
6.1.10 Qiagen
6.1.11 Thermo Fisher Scientific Inc.
6.1.12 CD Genomics

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

Next-generation Sequencing (NGS) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 203 pages | Mordor Intelligence

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	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	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*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-06-24
		Signature