

# Next Generation Sequencing Market 2021 Based on Growth Opportunities, Revenue and Business Strategy Until 2027

The next generation sequencing (NGS) is any of several high throughput approaches of DNA sequencing using the concept of massively parallel processing.

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EINPresswire.com/ -- Global Next
Generation Sequencing Market is
valued at USD 8.58 Billion in 2020 and
expected to reach USD 29.17 Billion by
2027 with a CAGR of 19.1% over the
forecast period.

Global Next Generation Sequencing
Market: Global Size, Trends,
Competitive, Historical & Forecast
Analysis, 2021-2027- Increasing
number of cancer patients and growing
research and development in this field
are the significant factors which are

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driving the growth of the Global Next Generation Sequencing Market.

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Scope of Next Generation Sequencing Market Report

The next generation sequencing (NGS) is any of several high throughput approaches of DNA sequencing using the concept of massively parallel processing. Many NGS platforms differ on the basis of engineering configurations and sequencing chemistry. They share the technical

paradigm of massive parallel sequencing via spatially separated, clonally amplified DNA templates or single DNA molecule in a flow cell. NGS is also known capillary sequencing, massive parallel sequencing or massively parallel sequencing. Next generation sequencing technologies are currently used for whole genome sequencing, investigation of genome diversity, epigenetic, metagenomics, identification of non-coding RNSs and protein binding sites and gene expression profiling by RNA sequencing. These are also used in microbiology and virology for detecting various microorganisms and viruses by using metagenomic approaches, investigation microbial communities in the human bodies and environment. And, it is also used for analysis of viral genome variability within the host and detection of low abundance antiviral drug resistance mutations in HIV patients. Some of these sequencing technologies emerged in 1994-1998 and have been commercially available since 2005.

The COVID-19 outbreak has positive impact on next generation sequencing (NGS) market. Various major players and new startups in NGO market have came forward to support the research on testing kits, vaccines and treatment for affected patients as plays an important role in the clinical labs and research to fight against the SARS-CoV-2, which results in the COVID-19. Thus, the COVID-19 has overall shown a positive impact on the growth of NGS market.

Global Next Generation Sequencing Market Segmentation:

The next generation sequencing market is divided into types of sequencing, product type, technology, application, end user and region & country level. Based on types of sequencing, the global next generation sequencing market is segmented into whole genome sequencing, targeted resequencing and whole exome sequencing. Based on product type, the market is divided into consumables, platforms and services. And based on technology, the market is segmented into sequencing by synthesis, ION semiconductor sequencing, nanopore sequencing, single molecule real time sequencing and other technologies. On the basis of application, the market is divided into diagnostics, drug discovery, agricultural and animal research and others. Based on end-user, the market is segmented into academic institutes, research centers, pharmaceuticals and biotechnology industries, hospitals and clinics and other.

By Type of Sequencing:

- •Whole Genome Sequencing
- Targeted Resequencing
- Whole Exome Sequencing

By Product Type

- Consumables
- •Blatforms
- Bervices

By Technology:

•Bequencing by Synthesis

- •IDN Semiconductor Sequencing
- Nanopore Sequencing
- Bingle Molecule Real Time Sequencing
- Other Technologies

# By Application:

- Diagnostics
- Drug Discovery
- Agricultural and Animal research
- Others

### By End-User:

- Academic Institutes
- Research Centers
- Bharmaceuticals and Biotechnology Industries
- ⊞ospitals and Clinics
- Other

The regions covered in this Next Generation Sequencing Market report are North America, Europe, Asia-Pacific and Rest of the World. On the base of nation level, the marketplace is sub divided into U.S., Mexico, Canada, U.K., France, Germany, Italy, India, China, Japan, South East Asia, Middle East Asia (UAE, Saudi Arabia, Egypt) GCC, Africa, etc.

Key Players for Next Generation Sequencing Market

Key players of this market are Thermo Fisher Scientific, Illumina, PerKinElmer, BGI Group, Agilent Technologies, Bio-Rad Laboratories, Eurofins GATC Biotech GmbH, DNASTAR Inc., Genomatrix GmbH, Oxford Nanopore Technologies, F. Hoffman-La Roche Ltd., QIAGEN and others.

Increasing Prevalence of Cancer, Growing Research & Development Activities in the Field of NGS and Growing Cases of Covid-19 Globally are the Major Factors Driving the Market Growth

Increasing cancer patients globally is one of the major factors driving the growth of global next generation sequencing market. For instance; according to World Health Organization Report on Cancer (WHO) 2020, in 2018, 18.1 million people around the world suffered with cancer and 9.6 million died due to this cancer like chronic disease. The most frequently diagnosed cancer is lung cancer about 11.6% of all cases followed by female breast cancer 11.6% and colorectal cancers around 10.2 %. Lung cancer is leading cause of most of the deaths occurred by cancer. Deaths are due to colorectal and stomach cancers followed by lung cancer. Next generation sequencing is used to identify novel and rare cancer mutations and to detect familial cancer mutation carriers and to provide molecular rationale for appropriate targeted therapy.

In addition growing, rising number of research and development activities in the field of NGS and

growing cases of Covid-19 globally are also fostering the growth of next generation sequencing (NGS) market. For instance; in 2021, Cebra Research launched two new PCR-based and NGS based exploratory tools for viral diseases to support R&D in for vaccine development against infectious diseases. WGS of respiratory viruses and SARS-CoV-2 is made easier using the NGS-based test. Also in 2020, Eurofins Genomics launched cost effective, optimized, SARS-CoV-2 NGS services that offer sequencing of complete viral genomes. In May 2020, The KAPA Target Enrichment portfolio was launched by Roche for target enrichment during sequencing. In February 2021, Oxford Nanopore Technologies deployed 200 MinIONs to China for use viral and bacterial sequencing surveillance programs. Increase in research in NGS promoting other advanced researches and methodologies in the NGS. Furthermore, low cost of NGS and the supportive government policies are some other factors supplementing the market growth.

However, high investment in research and development may limit the market growth. In spite of that, its increasing applications in chronic diseases may offer an the opportunity for the further growth of next generation sequencing market.

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North America is Anticipated to Dominate the Global Next Generation Sequencing Market

Geographically, North America is expected to dominate the global next generation sequencing market over the forecast period due to increasing number of FDA approvals, presence of key players and rising number of cancer patients in this region. For instance; according to npj Genomic Medicine; in April 2018, Food and Drug Administration (FDA) finalized a guidance document for design, development and analytical validation of NGS based on Vitro Diagnostics (IVDs). This is for diagnosis of suspected germline diseases, in efforts to establish of regulatory approach for next generation sequencing testing. Also in 2018, FDA granted marketing approval for ClonoSEQ assay, a NGS based diagnostic test for MRD (Minimal Residual Disease) in patients having acute lymphoblastic leukemia (ALL) or multiple myeloma. In addition, increasing number of cancer patients in this region is also fostering the demand for next generation sequencing technology. According to American Cancer Society 2019, more than 1.7 million cancer cases were detected in U.S. About 606,880 Americans were expected to die of cancer in 2019.

Asia Pacific is expected to grow faster in this market due to increasing prevalence of genetic disorders, increasing research & development and rising awareness about genetic health. For instance; according to Indian Council of Medical Research (ICMR), about 70 million Indians suffer from inherited genetic diseases or rare diseases (RD). These include hemophilia, thalassemia, sickle cell anemia, retinal dystrophies, primary immunodeficiency (PID), haemangioma, cystic fibrosis etc. As NGS reduce both cost and time required for exome or genome analysis and NGS is allowed for the implementation of panels of genes for diagnosis and research in genetic disorders.

Key Benefits for Next Generation Sequencing Market Report:

- Global Next Generation Sequencing Market report covers in-depth historical and forecast analysis.
- •Global Next Generation Sequencing Market research report provides detail information about Market Introduction, Market Summary, Global market Revenue (Revenue USD), Market Drivers, Market Restraints, Market Opportunities, Competitive Analysis, Regional and Country Level.
- •Global Next Generation Sequencing report helps to identify opportunities in marketplace.
- •Global Next Generation Sequencing Market report covers extensive analysis of emerging trends and competitive landscape.

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