Long Read Sequencing Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, 2017-2027
Segmented By Component (Instruments, Consumables, Services), By Technology (Single-Molecule Real-Time Sequencing (SMRT), Nanopore Sequencing, Others), By Workflow (Pre-Sequencing, Sequencing, Data Analysis), By Application (Oncology, Infectious Diseases, Rare Diseases, Genetic Disorders, Metabolic Disorders, Others), By End User (Hospitals & Clinics, Biotechnology & Pharmaceutical Companies, Academic & Research Institutions, Others), By Region, By company and By Region

Market Report | 2023-06-01 | 113 pages | TechSci Research

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Report description:

The global long-read sequencing market is anticipated to observe impressive growth during the forecast period 2023-2027. The major factors include growing occurrences of genetic disorders, growing government support for R&D activities, and extensive development in technology are fueling the growth of the market. Long-read sequencing, also known as third-generation sequencing, is a DNA sequencing technique that is being researched. It can determine the nucleotide sequence of long sequences of DNA ranging between 10,000 and 100,000 base pairs at a time. This technology eliminates the need to cut up and then amplify DNA which is usually needed in other DNA sequencing methods. The other factors supporting the market's growth are, a rise in R&D activities, a growing number of patients with genetic diseases, including cancer, an increasing number of clinical trials, the rising popularity of personalized medicine, increasing acceptance of modern approaches for medical diagnostics, rising utilization

of sequence analysis methodologies in medical institutes for academic purposes, rise in world population, growing adoption of inorganic growth strategies, and immense potential for emerging submarkets.

The surge in Incidences of Genetic Disorders

The increasing prevalence of genetic diseases, such as color blindness, Down's syndrome, cystic fibrosis, and others, across the globe is bolstering the growth of the market. According to the World Health Organization (WHO), more than 10,000 of the diseases are known to be monogenic, triggered by a single error in a single gene in the human DNA. With the help of long-read sequencing methods, the whole genomics of the patient can be examined. Thus, rising the adoption of long-read sequencing in the treatment of genetic conditions. The growing number of patients suffering from genetic diseases is also a contributing factor to the growth of the market. According to the World Health Organization (WHO), sickle cell anemia, a severe genetic condition, affects about 72,000 newborn babies.

Increasing Government Support for R&D Activities

The increasing research which uses long-read sequencing methods is being heavily funded by government authorities, which is a key reason for the growth of the market. Moreover, the rising number of research activities is augmenting the growth of the market. For instance, in the U.S., genomics research and development projects are funded through the National Institutes of Health (NIH) as well as numerous other groups from around the globe. Presently, numerous amounts of research activities are being performed, which is projected to give manufacturers an advantage as they develop new and advanced long-read sequencing, as well as to open many opportunities in the long-read sequencing market. For instance, in the U.S., genomics research and development projects are funded through the National Institutes of Health (NIH) as well as numerous other groups from around the globe.

Technological advancements

The rise in technological advancements in sequencers is propelling the growth of the market. These advancements have made sequencing more efficient, accurate, and portable. For instance, long reads generated by SMRT sequencers span around possible repetitive regions and give a comprehensive view of the whole genome. Similarly, in 2018, Pacific Biosciences of California (PacBio) announced the enhancements to their Sequel System, which comprises a new version of its software, new consumables including reagents, and a new SMRT Cell (1M v3).

Market Segmentation

The global long-read sequencing market is segmented into components, technology, workflow, application, end user, and company. Based on components, the market is divided into instruments, consumables, and services. Based on technology, the market is divided into single-molecule real-time sequencing (SMRT), nanopore sequencing, and others. Based on workflow, the market is divided into pre-sequencing, sequencing, and data analysis. Based on application, the market is divided into oncology, infectious diseases, rare diseases, genetic disorders, metabolic disorders, and others. Based on end-user, the market is divided into hospitals & clinics, biotechnology & pharmaceutical companies, academic & research institutions, and others. In terms of country, the United States is expected to be a lucrative market in the forecast period due to rising incidences of hematologic malignancies in the country.

Market Players

Agilent Technologies, Inc., BGI Group, Bionano Genomics, Inc., Circulomics Inc, Oxford Nanopore Technologies plc, Longas Technologies Pty Ltd, Novogene Co., Ltd., Illumina, Inc., F. Hoffmann-La Roche AG, Pacific Biosciences of California, Inc., Quantapore, Inc., QIAGEN NV, PerkinElmer, Inc, Thermo Fischer Scientific, Inc., and Takara Bio, Inc. are some of the leading companies operating in the market.

Report Scope:

In this report, global long-read sequencing market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□Long Read Sequencing Market, By Component:

o□Instruments

o□Consumables

o□Services

-□Long Read Sequencing Market, By Technology:

o Single-Molecule Real-Time Sequencing (SMRT)
o Nanopore Sequencing
o Others
- Long Read Sequencing Market, By Workflow:
o Pre-Sequencing
o Sequencing
o Data Analysis
- Long Read Sequencing Market, By Application:
o Oncology
o Infectious Diseases
o Rare Diseases
o Genetic Disorders,
o Metabolic Disorders
o Others
- Long Read Sequencing Market, By End User:
o Hospitals & Clinics
o Biotechnology & Pharmaceutical Companies,
o Academic & Research Institutions
o Others
- Long Read Sequencing Market, By Region:
o North America
- United States
- Canada
- Mexico
o Asia-Pacific
- China
- India
- Japan
- Australia
- South Korea
o Europe & CIS
- Germany
- France
- United Kingdom
- Spain
- Italy
o South America
- Brazil
- Argentina
- Colombia
o Middle East & Africa
- South Africa
- Saudi Arabia
- UAE
Competitive Landscape
Company Profiles: Detailed analysis of the major companies present in Global Long Read Sequencing Market
Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:
Company Information
-Detailed analysis and profiling of additional market players (up to five).

Table of Contents:

Long Read Sequencing Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, 2017-2027
Segmented By Component (Instruments, Consumables, Services), By Technology (Single-Molecule Real-Time Sequencing (SMRT), Nanopore Sequencing, Others), By Workflow (Pre-Sequencing, Sequencing, Data Analysis), By Application (Oncology, Infectious Diseases, Rare Diseases, Genetic Disorders, Metabolic Disorders, Others), By End User (Hospitals & Clinics, Biotechnology & Pharmaceutical Companies, Academic & Research Institutions, Others), By Region, By company and By Region

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