

Oligonucleotides: Global Markets

Market Research Report | 2024-03-27 | 126 pages | BCC Research

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Report description:

Description

Report Scope:

This report covers the worldwide market for oligonucleotide synthesis, which consists of four main product types: oligonucleotide drugs, synthesized oligos, equipment and reagents, and services. Based on application, the market for oligonucleotide synthesis is divided into research and diagnostics and therapeutics.

By geography, the market in this report is divided into four regions: North America, Europe, Asia-Pacific, and Rest of the World (RoW). For market estimates, data has been provided for 2022 as the base year, with forecasts for 2023 through 2028.

The report also covers approved drugs, the oligonucleotide synthesis process, innovative research, opportunities within the market and profiles of leading companies in the oligonucleotide synthesis industry.

Report Includes:

- 31 data tables and 48 additional tables
- Overview and an analysis of the global markets for oligonucleotides
- Analyses of the global market trends, with historical market revenue data (sales figures) from 2020 to 2022, estimates for 2023, and projections of compound annual growth rates (CAGRs) through 2028
- A discussion of the current and future market potential of oligonucleotide synthesis, as well as the competitive landscape, market dynamics, ongoing research, and trends in market growth
- Estimate of the market size and revenue forecasts, and a corresponding market share analysis based on product type, application and region
- Coverage of the total market for oligonucleotide synthesis, which includes RNA oligos, DNA oligos, and the platform services

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offered by many companies

- Overview of the sustainability trends and ESG developments, with an emphasis on consumer attitudes, ESG score analysis, and the ESG practices followed by leading companies
- A look at the recent developments in the market and emerging technologies
- An analysis of the key patents and recent clinical trials on oligonucleotide synthesis-based products and applications
- Competitive intelligence, including the major vendors' market shares, recent M&A activity, and venture funding outlook
- Profiles of the leading global players, including Thermo Fisher Scientific Inc., Agilent Technologies, Inc., Integrated DNA Technologies, Inc., Eurofins Scientific, and Biolytic Lab Performance Inc.

Executive Summary

Summary:

The term oligonucleotide is derived from the Greek word oligo, which means small or few. The base length of the oligos is usually identified as "mer," which means "part" in the Greek language. Oligonucleotides are short DNA/RNA strands. These can be made based on client requirements by solid phase chemical synthesis. They are made up of 13 to 25 bases to hybridize to complementary sequence. These oligos are primarily used in polymerase chain reaction (PCR) as a probe, but are also used in DNA based microarray techniques, Southern blot assay, FISH (Fluorescent In Situ Hybridization), and ASO analysis.

Relatively short nucleic acid fragments can be synthesized chemically with a well-defined structure or sequence in the oligonucleotide synthesis method. This process is very helpful in modern laboratory practice because it offers quick and affordable access to custom-made oligonucleotides with the desired sequence. It is also helpful for molecular diagnosis of various diseases, including infectious diseases like SARS-COV2 and hepatitis. It is also helpful for the diagnosis of cancer.

Along with its diagnostics and research uses, oligonucleotides are also being used as therapeutic drugs for a wide range of diseases. This type of drug focuses on the gene silencing technique, as well as splice modulation and gene activation modalities for treatment. Oligonucleotide drugs offer personalized medicine approaches to target the specific gene sequences responsible for the occurrence of a specific disease. In 1998, the first oligonucleotide drug, Vitravene (fomivirsen) got approval for the treatment of cytomegalovirus retinitis (CMV). To date 15 drugs have received FDA approval for therapeutic usage for the treatment of liver, spinal cord, and skeletal muscle-based disorders. For oncology treatment, more than 200 oligonucleotide drugs are in various phases of clinical trials.

The global market for oligonucleotides was valued at \$6.3 billion in 2022 and is expected to reach \$11.7 billion by 2028.

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BIOLYTIC LAB PERFORMANCE INC.
EUROFINS SCIENTIFIC
GENSCRIPT
INTEGRATED DNA TECHNOLOGIES INC.
LC SCIENCES
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