

Global DNA Synthesis Market to Surge to USD 9,999.6 Million by 2033, a significant CAGR of 13.2% | FMI

Exploring Growth and Trends in the DNA Synthesis Market: A Deep Dive into Key Projections and Future Opportunities.

NEWARK, DE, UNITED STATES, May 12, 2025 /EINPresswire.com/ -- The global <u>DNA synthesis</u> market is set to experience remarkable growth, with its valuation expected to increase from USD 2,898.3 million in 2023 to an impressive USD 9,999.6 million by 2033. The market is anticipated to grow at a compound annual growth rate (CAGR) of 13.2% during the forecast period, driven by ongoing



advancements in technology, biotechnology, and genomics.

DNA synthesis, also known as gene synthesis or gene assembly, has emerged as a cornerstone technology across several industries, including genetic research, biotechnology, drug development, and <u>personalized medicine</u>. The artificial creation of DNA molecules with specific sequences has become indispensable in pushing the boundaries of scientific discovery, with applications ranging from gene therapy to synthetic biology.

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The expansion of gene editing technologies has significantly accelerated the market's growth, enabling more accurate, scalable, and cost-effective DNA production. The increasing demand for custom DNA sequences for research and therapeutic applications is further fueling this expansion. Next-generation gene synthesis technologies have revolutionized the field, offering unprecedented precision and efficiency that make DNA synthesis accessible to a wider range of industries.

One of the key areas propelling growth in the DNA synthesis market is the rise of gene therapy and gene editing technologies. As the need for precise genetic modifications becomes more ٢

The DNA synthesis market continues to witness significant growth, driven by advancements in biotechnology and increased demand for synthetic biology applications." Sabyasachi Ghosh, Principal Consultant. Future Market

Insights

crucial in therapeutic interventions, DNA synthesis plays an essential role in enabling these advancements. This trend is expected to continue as researchers and clinicians explore new ways to treat and potentially cure genetic diseases.

Research and development (R&D) efforts remain a key driver in the DNA synthesis market, contributing to 41.7% of market share. The ongoing focus on technological advancements, customization of DNA sequences, and collaborations with academic institutions continue to foster innovation in the field. These efforts are critical to meeting the growing demands of the life sciences industry.

Biopharmaceuticals represent another significant market segment, holding a dominant share of 44.2%. The increasing emphasis on biologics, gene therapies, and personalized medicine is fueling the demand for DNA synthesis, particularly in the development of DNA vaccines, monoclonal antibodies, and other therapeutic applications.

As the field of genomics and personalized medicine continues to evolve, the DNA synthesis market is poised for continued advancements and applications. The technology is set to remain a pivotal player in shaping the future of biotechnology and life sciences, offering new solutions to some of the world's most pressing health challenges.

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Key Takeaways: DNA Synthesis Market Insights

• R&D Leads the Charge with 41.7% Market Share

Research and development play a pivotal role in the DNA synthesis market, driven by technological advancements, customization needs, therapeutic innovation, academic collaborations, and regulatory compliance. These factors fuel continuous innovation and application expansion across biotechnology and pharmaceutical sectors.

• Biopharmaceuticals Dominate with 44.2% Share

The growing emphasis on biologics, gene therapies, and DNA vaccines has led biopharmaceutical companies to heavily rely on synthetic DNA. Their focus on personalized medicine and immune response solutions has significantly contributed to their dominance in the market. • North America Remains the Market Leader (41.0% Share)

North America leads the global DNA synthesis market, powered by a surge in gene therapybased drug development and robust healthcare R&D infrastructure.

• Europe Emerges as a Growth Hub (31.4% Share)

Europe is expected to witness strong market growth, driven by increasing R&D activities in gene synthesis for vaccine development, presenting immense future opportunities.

• India Poised for Transformative Growth (18.1%)

India is rapidly emerging as a key global player, backed by a thriving biotech ecosystem, supportive government policies, and an expanding pool of skilled professionals. Demand is particularly strong in genetic research, drug discovery, and personalized therapies.

Competitive Landscape

Leaders in the DNA Synthesis Market

Key players in the DNA synthesis market are driving growth to new heights with their strategic efforts. These industry leaders are recognized for their exceptional expertise and employ a variety of marketing strategies to maximize revenue. Through partnerships, collaborations, and other innovative approaches, these market leaders have been expanding their influence and advancing market growth in recent years.

Recent Developments

• Ribbon Biolabs earned a United States Patent in July 2022 for its process for synthesizing nucleotide molecules using a range of oligonucleotides. The approach contains a pre-built library of oligonucleotides for ease of use.

• The AccuLoaderTM, a unique concept auxiliary device announced by BIONEER Corporation in February 2021, is designed to speed up sample preparation by assisting in distributing samples and reagents into the right wells.

• LGC's genomics division stated in November 2018 that it is rebranding as LGC Biosearch Technologies, a portfolio brand that merges optimized genetic analysis techniques and technology to accelerate scientific outcomes.

Key Companies Profiled

Brooks Automation, Inc. (GENEWIZ); Boster Biological Technology; ProteoGenix; Biomatik; ProMab Biotechnologies, Inc; Thermo Fisher Scientific, Inc; Integrated DNA Technologies, Inc; OriGene Technologies, Inc

Future-Proof Your Healthcare Business with Our Reports! <u>https://www.futuremarketinsights.com/industry-analysis/life-science-and-biotechnology</u> Key Segments Covered in the Market Report

By Service Type:

- Oligonucleotide
- Universal Oligonucleotide
- Custom Oligonucleotide
- Gene
- Custom Gene
- Gene Library

By Application:

- Research and Development
- Academic Applications
- Industrial Applications
- Diagnosis
- Therapeutics

By End User:

- Biopharmaceutical Companies
- Academic and Research Institutes
- Contract Research Organizations

By Region:

- North America
- Latin America
- Western Europe
- Eastern Europe
- Asia Pacific Excluding Japan (APEJ)
- Japan
- The Middle East & Africa (MEA)

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