

Global Synthetic Biology Market Expected to Achieve 26.3% CAGR, Reaching USD 75.9 Billion by 2030

The global synthetic biology market size was USD 9.26 Billion in 2021 and is expected to register a revenue CAGR of 26.3% during the forecast period.

NEW YORK CITY, NY, UNITED STATES, June 22, 2023 /EINPresswire.com/ -- The global [Synthetic Biology Market](#) size in 2021 was USD 9.26 Billion, and it is projected to experience a revenue

compound annual growth rate (CAGR) of 26.3% throughout the forecast period. The market's revenue growth is primarily driven by rapid advancements in scientific and clinical aspects of synthetic biology, an increase in innovative products based on synthetic biology due to extensive research and development (R&D) activities, and growing investments by companies in synthetic biology research.

Synthetic biology is a rapidly progressing field that combines engineering and scientific principles such as standardization, modularity, and abstraction to design and control living systems using tools from both engineering and science. This integration supports technological advancements in various industries, including healthcare and energy. Manufacturers are investing in synthetic biology solutions to develop high-performance and sustainable solutions more efficiently. Synthetic biology has the potential to revolutionize existing technologies in fields such as biocomputing, electronic interfacing, multiplexed diagnostics, therapeutic genome editing, living therapeutics, and third-generation biorefineries. These factors are anticipated to contribute to the revenue growth of the synthetic biology market in the forecast period.

Get Free Sample PDF (To Understand the Complete Structure of this Report [Summary + TOC]) @ <https://www.reportsanddata.com/download-free-sample/1476>

Synthetic biology differs from traditional genetic engineering in terms of the complexity of organisms or systems generated by researchers. In genetic engineering, individual genes are transferred from one microbe or cell to another. However, synthetic biology involves assembling new microbial genomic sequences using standardized genetic elements, which are then



Reports And Data

introduced into a microbe or cell.

Segments Covered in the Report –

- The synthetic biology market encompasses various technologies that drive advancements in the field. One of these technologies is nucleotide synthesis and sequencing, which involves the production and analysis of DNA and RNA sequences. This technology plays a crucial role in understanding and manipulating genetic information.
- Another important technology in synthetic biology is genome engineering. It focuses on modifying and reprogramming the genetic material of organisms to create desired traits or functionalities. Genome engineering enables the development of new applications and the production of valuable compounds through genetic modifications.
- Integrated systems are also a significant component of synthetic biology. These systems involve the combination of multiple genetic components and regulatory elements to create complex biological circuits. Integrated systems enable the design and construction of sophisticated genetic networks, which can perform specific functions or respond to environmental cues.
- Microfluidics is a technology that allows for precise control and manipulation of small volumes of fluids. In synthetic biology, microfluidics is used for various applications, such as DNA synthesis, cell culture, and high-throughput screening. It offers benefits such as increased automation, reduced costs, and improved experimental efficiency.
- Functional genomics is another technology that contributes to synthetic biology research. It involves the study of gene function and interactions on a genome-wide scale. Functional genomics techniques, such as gene expression analysis and gene knockout, provide valuable insights into the roles of genes in biological systems.
- Various tools are used in synthetic biology research to facilitate the design and construction of biological systems. Synthetic DNA and oligonucleotides are essential tools for gene synthesis, DNA assembly, and genetic engineering. Enzymes play a crucial role in DNA manipulation and modification processes. Synthetic cells, which are artificial constructs that mimic the characteristics of living cells, provide a versatile platform for studying biological processes. Chassis organisms, such as bacteria or yeast, are commonly used as hosts for genetic modifications and the production of desired products. Xeno-nucleic acids, including non-natural nucleic acid analogs, offer alternative building blocks for genetic engineering applications.
- Synthetic biology finds applications across various fields. In the medical and healthcare sector, it contributes to advancements in diagnostics, therapeutics, and personalized medicine. It also plays a role in artificial tissue and tissue regeneration, offering solutions for tissue engineering and regenerative medicine.

- The environmental and agricultural sectors benefit from synthetic biology through the development of sustainable solutions. Synthetic biology enables the engineering of microbes for bioremediation, biofuels production, and agricultural improvements.
- The bioprocess industry relies on synthetic biology for the optimization and production of valuable compounds. It offers opportunities for bio-based manufacturing, including the synthesis of pharmaceuticals, chemicals, and industrial enzymes.
- The end users of synthetic biology solutions include biotechnology and pharmaceutical companies, which leverage these technologies for product development and innovation. Academic and government research institutions also play a vital role in advancing the field through fundamental research and knowledge generation. Additionally, other industries and organizations utilize synthetic biology for various purposes, including environmental conservation, biosecurity, and bio-art.

Access Full Report Description with Research Methodology and Table of Contents @ <https://www.reportsanddata.com/report-detail/synthetic-biology-market>

Strategic development:

Twist Bioscience Corporation, a provider of high-quality synthetic DNA, and Ginkgo Bioworks, a platform provider for cell programming, have announced an expanded supply agreement on 5 April 2022. Twist Bioscience will continue to supply its synthetic DNA through its silicon platform to Ginkgo Bioworks for the next four years. This agreement allows Ginkgo Bioworks to acquire additional synthesis capacity to keep up with its projected growth.

Codex DNA, Inc., an automated benchtop synthetic biology system company, has recently introduced its BioXp mRNA synthesis kits with CleanCap Reagent AG on 29 November 2021. CleanCap Reagent AG is a patented mRNA capping technology developed by TriLink BioTechnologies, a division of Maravai LifeSciences. The new automation kits provided by Codex DNA enable customers to efficiently produce large volumes of high-quality, capped mRNA. This advancement in automation expedites the discovery and development of mRNA-based vaccines and therapies.

Competitive Landscape:

The global synthetic biology market exhibits a fragmented competitive landscape with numerous key players operating both globally and regionally. These players are actively involved in product development initiatives and strategic alliances to enhance their product portfolios and establish a strong position in the global market. Prominent companies in the market include Amyris, Inc., Ginkgo Bioworks, Codexis, Inc., Novozymes AG, Twist Biosciences, GenScript Corporation, Merck KGaA, Codex DNA, Inc., Eurofins Scientific, Inc., and Amgen, Inc. These players play a vital role in

driving market revenue growth through their diverse strategies.

To capture a larger market share and strengthen their competitive edge, market players are implementing various strategic approaches. These strategies include mergers, acquisitions, collaborations, partnerships, and joint ventures. By engaging in such activities, companies aim to expand their product offerings, leverage technological advancements, and explore new market opportunities. These initiatives foster innovation, enhance research and development capabilities, and enable the development of cutting-edge synthetic biology solutions.

Moreover, market players focus on continuous product improvements, advancements, and launches to meet evolving customer demands and stay ahead in the competitive landscape. By investing in research and development, these companies strive to develop innovative products that address specific industry needs, such as healthcare, agriculture, and energy.

Request a customization of the report @ <https://www.reportsanddata.com/request-customization-form/1476>

Overall, the competitive landscape of the global synthetic biology market is dynamic and characterized by the active participation of key players. Their strategic initiatives, including product development and strategic alliances, are expected to drive market revenue growth during the forecast period.

Browse for more reports:

Hereditary Testing Market - <https://www.reportsanddata.com/report-detail/hereditary-testing-market>

Healthcare Patent Filing Outsourcing Market - <https://www.reportsanddata.com/report-detail/healthcare-information-system-market>

Hangover Rehydration Supplements Market - <https://www.reportsanddata.com/report-detail/hangover-rehydration-supplements-market>

Empty Intravenous (IV) Bags Market - <https://www.reportsanddata.com/report-detail/empty-intravenous-bags-market>

COVID-19 Vaccine Packaging Delivery Device Market - <https://www.reportsanddata.com/report-detail/covid-19-vaccine-packaging-delivery-device-market>

Nikhil Morankar
Reports and Data
+ 12127101370
[email us here](#)

Visit us on social media:

[Facebook](#)

[Twitter](#)

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/640867216>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2023 Newsmatics Inc. All Right Reserved.