

# **Global Synthetic Biology Market Size Study & Forecast, by Products (Synthetic DNA, Synthetic Oligos, Synthetic Genes, Software Tools, Chassis Organisms, Synthetic Clones, Synthetic Cells) by Technology (Nucleotide Synthesis and Sequencing, Bioinformatics, Microfluidics, Genetic Engineering), by Application (Pharmaceuticals & Diagnostics, Chemicals, Biofuels, Bioplastics, Others) and Regional Analysis, 2023-2030**

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## **Abstracts**

Global Synthetic Biology Market is valued at approximately USD XX billion in 2022 and is anticipated to grow with a healthy growth rate of more than XX% over the forecast period 2023-2030. Synthetic biology is an interdisciplinary branch of biology and engineering that combines principles from biology, engineering, mathematics, and computer science to design and construct new biological parts, devices, and systems, or to redesign existing biological systems for useful purposes. It involves the application of engineering principles to biology, to create synthetic biological systems that can perform specific functions. Moreover, factors like rising funding from government and private organizations, a growing number of research facilities, increasing demand for sustainable solutions, and rapid expansion of biotechnology and biopharmaceutical industries are anticipated to create a lucrative demand for the market during the forecast period 2023-2030.

Increasing funding for research in synthetic biology plays a crucial role in supporting the growth of the synthetic biology market. Funding enables researchers to explore new ideas, develop novel technologies, and push the boundaries of synthetic biology. This

fosters innovation and drives the development of new products, applications, and solutions, expanding the market. For instance, in July 2022, SynbiCITE, the National Centre for Industrial Translation of Synthetic Biology in the United Kingdom, was awarded a grant of USD 6.6 million (GBP 5.5 million) by SynBioVen. This financial support will empower the Imperial-hosted Centre to sustain its mission of assisting synthetic biology startups and small to medium-sized enterprises (SMEs). Furthermore, it will bolster the burgeoning economy of the United Kingdom and unlock the invaluable societal advantages that synthetic biology offers. Similarly, in January 2022, Ribbon Biolabs, a DNA synthesis company, raised USD 19.12 million (EUR 18 million) in a series A financing fund. The company enabled commercial-scale production facilities and the United States expansion for DNA synthesis technology with this fund. Moreover, the growing demand for bio-fuels and bioplastics are anticipated to create a lucrative opportunity for the market. However, the ethical concerns stringent regulations, and bio-safety and bio-security issues stifle market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Synthetic Biology Market study include Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the significant investment from government agencies, private investors, venture capitalists, and corporations that fuel research and development in synthetic biology, and the presence of a strong research infrastructure. Whereas the Asia Pacific is expected to grow with the fastest growth rate during the forecast period, owing to factors such as rising investments in research and development, the growing biotechnology sector, supportive government policies and initiatives, increasing demand for sustainable solutions, and strong academic and research institutions.

Major market players included in this report are:

Fisher Scientific, Inc. (US)

Merck KGaA (Germany)

Agilent Technologies (US)

Novozymes (Denmark)

Ginkgo Bioworks (US)

Precigen, Inc. (US)

GenScript (China)

Twist Bioscience (US)

Synthetic Genomics (US)

Eurofins Scientific (Luxembourg)

Recent Developments in the Market:

In January 2021, Merck bolstered its product portfolio by acquiring AmpTec, a German company. This strategic move enhances Merck's capabilities in developing and manufacturing mRNA, which is pivotal for the production of vaccines, treatments, and diagnostics. The Merck's strategic move to acquire AmpTec enhances its position in the synthetic biology market by strengthening its product portfolio, expanding its capabilities in mRNA technology, and enabling it to capitalize on emerging opportunities in vaccine development and other applications of synthetic biology

Global Synthetic Biology Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered – Products, Technology, Application, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent to up to 8

analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define the market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters to detailed information about the crucial aspects such as driving factors & challenges that will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Products:

Synthetic DNA

Synthetic Oligos

Synthetic Genes

Software Tools

Chassis Organisms

Synthetic Clones

Synthetic Cells

By Technology:

Nucleotide Synthesis and Sequencing

Bioinformatics

Microfluidics

Genetic Engineering

By Application:

Pharmaceuticals & Diagnostics

Chemicals

Biofuels

Bioplastics

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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