

Global Computational Biology Market Size study & Forecast, by Application (Cellular & Biological Simulation, Drug Discovery & Disease Modelling, Preclinical Drug Development, Clinical Trials, Human Body Simulation Software), by Services (Contract, In-house), by End Use (Academics & Research, Commercial) and Regional Analysis, 2023-2030

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Abstracts

Global Computational Biology Market is valued at approximately USD 6.57 billion in 2022 and is anticipated to grow with a healthy growth rate of more than 19.50% over the forecast period 2023-2030. Computational Biology is an interdisciplinary field that combines computational science and biological research to gain a deeper understanding of biological systems and solve biological problems using computational techniques and tools. It involves the application of mathematical modeling, statistical analysis, and computer algorithms to analyze and interpret biological data, simulate biological processes, and make predictions about biological systems. The Computational Biology market is expanding because of factors such as increasing bioinformatics research and an increasing number of clinical studies in pharmacogenomics and pharmacokinetics.

Bioinformatics and computational biology have undergone a lot of developments during the past 15 years, firmly establishing themselves as crucial components of modern biology. For instance, according to Department of Biotechnology (DBT) publications from February 2022, the demand for bioinformatics tools and knowledge has increased as a result of the expansion of sequence databases as a result of genome sequencing operations. According to the Alliance for Regenerative Medicine, Companies involved

are working on cell and gene therapies raised around USD 23.1 billion in funding globally in 2021, an increase of about 16% from the USD 19.9 billion total year 2020. These, rising investments have led to a rise in the demand and adoption of bioinformatics biology, resulting in market growth. In addition, the growth of drug designing and disease modelling and growing R&D for drug discovery is creating a lucrative opportunity for the market. However, the high cost of computational biology stifles market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Computational Biology Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the dominance of key market players, rising investment in drug discovery and research and development activities. Asia Pacific is expected to grow at a fastest rate during the forecast period, owing to factors such as an increase in the number of collaborations for product development, geographic expansion of key players, and active participation of government and nonprofit organizations in the market space.

Major market player included in this report are:

Nimbus Discovery LLC

Insilico Biotechnology AG

Compugen Ltd.

Simulation Plus Inc

Chemical Computing Group

Rhenovia Pharma SAS

Dassault Systèmes SE

Genedata AG

Rosa & Co. LLC

Strand Life Sciences

Recent Developments in the Market:

In May 2021 update, the World Health Organization (WHO) and the Swiss Confederation signed a Memorandum of Understanding (MoU) to start the first WHO BioHub Facility as a part of the WHO BioHub System. The facility, located in Spiez, Switzerland, acts as a hub for the secure receipt, sequencing, storage, and preparation of biological samples for transfer to other laboratories, and it also supports worldwide pathogen preparedness and informs risk assessments.

In April 2021, Peptilogics, announced the completion of its Phase I clinical trial for its lead compound PLG0206, a potent, broad-spectrum anti-infective that has been given the United States Food and Drug Administration Orphan Drug Designation and

Qualified Infectious Disease Product Designation for its initial focus on the treatment of prosthetic joint infections (PJI).

Global Computational 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 – Application, Services, End Use, Region

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

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to 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 detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Application:

- Cellular & Biological Simulation
- Drug Discovery & Disease Modelling
- Preclinical Drug Development
- Clinical Trials
- Human Body Simulation Software

By Services:

- Contract
- In-house

By End Use:

- Academics & Research
- Commercial

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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