

## **3D Cell Culture Market: Global Industry Analysis, Trends, Market Size, and Forecasts up to 2030**

Market Report | 2023-07-28 | 255 pages | Infinium Global Research and Consulting Solutions

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### **Report description:**

The report on the global 3D cell culture market provides qualitative and quantitative analysis for the period from 2021-2030. The revenue generated by the market was USD 1500.61 Million in 2022 and is expected to reach USD 3843.85 Million in 2030, with a CAGR of 13.49% till 2030 during the projected period. The study on 3D cell culture market covers the analysis of the leading geographies such as North America, Europe, Asia Pacific, and RoW for the period of 2021-2030.

The utilization of 3D cell culture involves growing cells in a manner that closely resembles their natural environment, incorporating a third dimension to simulate the intricate interactions between cells and the extracellular matrix (ECM). Unlike traditional 2D cell cultures where cells are primarily exposed to the culture dish and media, 3D cell cultures provide a more realistic environment where cells interact with each other and the ECM. The market for 3D cell culture is primarily driven by the growing adoption of this technique in diverse healthcare settings, including diagnostic centers, hospitals, pharmaceutical companies, and biotechnology firms. The recognition of the limitations of 2D cell cultures and the increasing demand for more accurate and representative cell culture models have contributed to the significant uptake of 3D cell culture techniques in these sectors.

The product type segment of the 3D cell culture market is dominated by scaffold-based 3D cell culture. Scaffold-based 3D cell culture refers to the use of scaffold materials, such as hydrogels, scaffolds, and microcarriers, to provide structural support for cell growth in three-dimensional environments. Scaffold-based 3D cell culture offers several advantages over other types of 3D cell culture techniques. The use of scaffolds allows for the creation of a more physiologically relevant microenvironment that closely mimics the extracellular matrix (ECM) found in vivo. This enables better cell-cell and cell-ECM interactions, leading to improved cell viability, differentiation, and functionality. Furthermore, scaffold-based 3D cell culture provides a platform for the study of cell behavior, tissue development, and disease modeling. It is widely used in various research applications, drug discovery and development, regenerative medicine, and tissue engineering. Thus, these factors are propelling the growth of the segment in the market.

The North American market for 3D cell culture is primarily propelled by several factors. These include the presence of advanced healthcare infrastructure and developed economies, which provide a solid foundation for the growth of the market. Moreover, the region benefits from the presence of key players who actively contribute to market expansion through their expertise and

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strategic initiatives. Furthermore, a favorable regulatory framework that encourages the development of 3D cell culture models supports the market in North America. The government's support for such advancements, coupled with the involvement of numerous research organizations and universities investigating stem cell-based approaches, further drives the regional market.

#### Report Findings

##### 1) Drivers

- The increase in the adoption of 3D cell culture in diagnostic centers, hospitals, and pharmaceutical and biotech companies and the rise in demand in organ transplantation, tissue regeneration, and regenerative medicine is driving the growth of the 3D cell culture market.

- Using microchips to implement cell culture with micro-fabricated tissue components is anticipated to boost the growth of the 3D cell culture market.

##### 2) Restraints

- The lack of infrastructure is likely to hamper the growth of the 3D cell culture market.

##### 3) Opportunities

- The emergence of microfluidics-based 3D cell culture is providing several growth opportunities for the global 3D cell culture market.

#### Research Methodology

##### A) Primary Research

Our primary research involves extensive interviews and analysis of the opinions provided by the primary respondents. The primary research starts with identifying and approaching the primary respondents, the primary respondents are approached include

1. Key Opinion Leaders associated with Infinium Global Research
2. Internal and External subject matter experts
3. Professionals and participants from the industry

Our primary research respondents typically include

1. Executives working with leading companies in the market under review
2. Product/brand/marketing managers
3. CXO level executives
4. Regional/zonal/ country managers
5. Vice President level executives.

##### B) Secondary Research

Secondary research involves extensive exploring through the secondary sources of information available in both the public domain and paid sources. At Infinium Global Research, each research study is based on over 500 hours of secondary research accompanied by primary research. The information obtained through the secondary sources is validated through the crosscheck on various data sources.

The secondary sources of the data typically include

1. Company reports and publications
2. Government/institutional publications
3. Trade and associations journals
4. Databases such as WTO, OECD, World Bank, and among others.
5. Websites and publications by research agencies

#### Segment Covered

The global 3D cell culture market is segmented on the basis of product type, application, and end user.

#### The Global 3D Cell Culture Market by Product Type

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- Scaffold-based 3D Cell Culture
- Scaffold-free 3D Cell Culture
- Microfluidics-based 3D Cell Culture
- Magnetic Levitation
- 3D Bio Printing

#### The Global 3D Cell Culture Market by Application

- Drug Discovery
- Toxicology
- Cancer
- Stem Cell Research
- Tissue Engineering and Regenerative Medicine

#### The Global 3D Cell Culture Market by End User

- Pharmaceutical and Biotechnology Companies
- Research Laboratories and Institutes

#### Company Profiles

The companies covered in the report include

- Thermo Fisher Scientific Inc.
- Merck KGaA
- Tecan Trading AG
- REPROCELL Inc.
- PromoCell GmbH
- CN Bio Innovations Ltd
- Lena Biosciences
- SYNTHCON, INCORPORATED
- 3D Biotek LLC
- Emulate, Inc.

#### What does this Report Deliver?

1. Comprehensive analysis of the global as well as regional markets of the 3D cell culture market.
2. Complete coverage of all the segments in the 3D cell culture market to analyze the trends, developments in the global market and forecast of market size up to 2030.
3. Comprehensive analysis of the companies operating in the global 3D cell culture market. The company profile includes analysis of product portfolio, revenue, SWOT analysis and latest developments of the company.
4. IGR- Growth Matrix presents an analysis of the product segments and geographies that market players should focus to invest, consolidate, expand and/or diversify.

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