

# **Global 3D Bioprinting in Medical Market Size study, by Products and Solutions (Bioprinters, Consumables and accessories, Software and services) by Technology (Extrusion based bioprinting, Inkjet based bioprinting, Laser assisted bioprinting, Others), by Application (Tissue engineering and regenerative medicine, Drug discovery and development, Others), by End User (Biotechnology and pharmaceutical companies, Academic and research institutes, Others) and Regional Forecasts 2022-2032**

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## **Abstracts**

Global 3D Bioprinting in Medical Market is valued approximately at USD 1.27 billion in 2023 and is anticipated to grow with a healthy growth rate of more than 15.5% over the forecast period 2024-2032. 3D bioprinting in the medical field represents a revolutionary approach to tissue engineering and regenerative medicine. It involves the precise layer-by-layer deposition of biomaterials, cells, and growth factors to create three-dimensional structures that mimic the complex architecture and functionality of native tissues and organs. This cutting-edge technology holds immense promise for a wide range of applications, including organ transplantation, drug screening, disease modeling, and personalized medicine. Global 3D Bioprinting in Medical Market trends towards multi-material and multi-cellular printing which allows the creation of complex tissue structures with heterogeneous compositions. By incorporating different cell types and biomaterials into the printing process, researchers can mimic the diverse microenvironments found in native tissues and organs, enhancing the functionality and biological relevance of the constructs.

The Global 3D Bioprinting in medical Market is experiencing robust growth, propelled by several key factors. The escalating prevalence of chronic diseases, coupled with the pressing need for more accurate models to study disease progression and develop targeted therapies. This is driving the demand for 3D bioprinting in disease modeling and drug testing applications. For instance, significant investments, exceeding USD 300 million, have been granted to Advanced Regenerative Manufacturing Institute (ARMI) by leading manufacturers, universities, nonprofit organizations, and the federal government. This funding aims to foster the development of scalable manufacturing processes for engineered tissues and organs, reflecting the industry's commitment to advancing 3D bioprinting technologies. Furthermore, Global 3D Bioprinting in medical Market is driven by rising advancements in 3D bioprinting technologies and rising spending in medical research and development activities. However, complexity of tissue engineering and high costs associated with 3D bioprinting systems is expected to stifle the market growth between 2022 and 2032.

The key regions considered for the global 3D Bioprinting in Medical market study includes Asia Pacific, North America, Europe, Latin America, and Rest of the World. In 2023, Europe was the largest regional market in the market place. The regional market growth is propelled by the presence of key players such as 3D Systems Corporation and Organovo Holdings, Inc., alongside advancements in the manufacturing technology of 3D bioprinting for medical applications. Furthermore, the region has well-established healthcare infrastructure and substantial investment in research and development (R&D), fostering an environment conducive to the advancement and adoption of cutting-edge technologies like 3D bioprinting. These factors collectively drive market growth, positioning the region as a hub for innovation and development in the field of medical 3D bioprinting. The market in Asia Pacific, on the other hand, is expected to grow at the fastest rate over the forecast period.

Major market player included in this report are:

3D Systems Corporation

Desktop Metal, Inc.

Organovo Holdings, Inc.

Cyfuse Biomedical K.K

Medprin Biotech GmbH

Advanced Solutions, Inc.

CollPlant Biotechnologies Ltd

REGEMAT 3D S.L

The Bio Convergence Company

## Shining 3D

The detailed segments and sub-segment of the market are explained below:

### By Products and Solution

Bioprinters

Consumables and accessories

Software and services

### By Technology

Extrusion based bioprinting

Inkjet based bioprinting

Laser assisted bioprinting

Others

### By Application

Tissue engineering and regenerative medicine

Drug discovery and development

Others

### By End User

Biotechnology and pharmaceutical companies

Academic and research institutes

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  
RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

## Contents

### **CHAPTER 1. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET DEFINITION AND RESEARCH ASSUMPTIONS**

- 1.1. Research Objective
- 1.2. Market Definition
- 1.3. Research Assumptions
  - 1.3.1. Inclusion & Exclusion
  - 1.3.2. Limitations
  - 1.3.3. Supply Side Analysis
    - 1.3.3.1. Availability
    - 1.3.3.2. Infrastructure
    - 1.3.3.3. Regulatory Environment
    - 1.3.3.4. Market Competition
    - 1.3.3.5. Economic Viability (Consumer's Perspective)
  - 1.3.4. Demand Side Analysis
    - 1.3.4.1. Regulatory frameworks
    - 1.3.4.2. Technological Advancements
    - 1.3.4.3. Environmental Considerations
    - 1.3.4.4. Consumer Awareness & Acceptance
- 1.4. Estimation Methodology
- 1.5. Years Considered for the Study
- 1.6. Currency Conversion Rates

### **CHAPTER 2. EXECUTIVE SUMMARY**

- 2.1. Global 3D Bioprinting in Medical Market Size & Forecast (2022- 2032)
- 2.2. Regional Summary
- 2.3. Segmental Summary
  - 2.3.1. By Products and Solutions
  - 2.3.2. By Technology
  - 2.3.3. By Application
  - 2.3.4. By End User
- 2.4. Key Trends
- 2.5. Recession Impact
- 2.6. Analyst Recommendation & Conclusion

### **CHAPTER 3. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET DYNAMICS**

*Global 3D Bioprinting in Medical Market Size study, by Products and Solutions (Bioprinters, Consumables and ac...*

- 3.1. Market Drivers
- 3.2. Market Challenges
- 3.3. Market Opportunities

## **CHAPTER 4. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET INDUSTRY ANALYSIS**

- 4.1. Porter's 5 Force Model
  - 4.1.1. Bargaining Power of Suppliers
  - 4.1.2. Bargaining Power of Buyers
  - 4.1.3. Threat of New Entrants
  - 4.1.4. Threat of Substitutes
  - 4.1.5. Competitive Rivalry
  - 4.1.6. Futuristic Approach to Porter's 5 Force Model
  - 4.1.7. Porter's 5 Force Impact Analysis
- 4.2. PESTEL Analysis
  - 4.2.1. Political
  - 4.2.2. Economical
  - 4.2.3. Social
  - 4.2.4. Technological
  - 4.2.5. Environmental
  - 4.2.6. Legal
- 4.3. Top investment opportunity
- 4.4. Top winning strategies
- 4.5. Disruptive Trends
- 4.6. Industry Expert Perspective
- 4.7. Analyst Recommendation & Conclusion

## **CHAPTER 5. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET SIZE & FORECASTS BY PRODUCTS AND SOLUTIONS 2022-2032**

- 5.1. Bioprinters
- 5.2. Consumables and accessories
- 5.3. Software and services

## **CHAPTER 6. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET SIZE & FORECASTS BY TECHNOLOGY 2022-2032**

- 6.1. Extrusion based bioprinting
- 6.2. Inkjet based bioprinting
- 6.3. Laser assisted bioprinting
- 6.4. Others

## **CHAPTER 7. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET SIZE & FORECASTS BY APPLICATION 2022-2032**

- 7.1. Tissue engineering and regenerative medicine
- 7.2. Drug discovery and development
- 7.3. Others

## **CHAPTER 8. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET SIZE & FORECASTS BY END USER 2022-2032**

- 8.1. Biotechnology and pharmaceutical companies
- 8.2. Academic and research institutes
- 8.3. Others

## **CHAPTER 9. GLOBAL 3D BIOPRINTING IN MEDICAL MARKET SIZE & FORECASTS BY REGION 2022-2032**

- 9.1. North America 3D Bioprinting in Medical Market
  - 9.1.1. U.S. 3D Bioprinting in Medical Market
    - 9.1.1.1. Products and Solution breakdown size & forecasts, 2022-2032
    - 9.1.1.2. Technology breakdown size & forecasts, 2022-2032
    - 9.1.1.3. Application breakdown size & forecasts, 2022-2032
    - 9.1.1.4. End User breakdown size & forecasts, 2022-2032
  - 9.1.2. Canada 3D Bioprinting in Medical Market
- 9.2. Europe 3D Bioprinting in Medical Market
  - 9.2.1. U.K. 3D Bioprinting in Medical Market
  - 9.2.2. Germany 3D Bioprinting in Medical Market
  - 9.2.3. France 3D Bioprinting in Medical Market
  - 9.2.4. Spain 3D Bioprinting in Medical Market
  - 9.2.5. Italy 3D Bioprinting in Medical Market
  - 9.2.6. Rest of Europe 3D Bioprinting in Medical Market
- 9.3. Asia-Pacific 3D Bioprinting in Medical Market
  - 9.3.1. China 3D Bioprinting in Medical Market
  - 9.3.2. India 3D Bioprinting in Medical Market

- 9.3.3. Japan 3D Bioprinting in Medical Market
- 9.3.4. Australia 3D Bioprinting in Medical Market
- 9.3.5. South Korea 3D Bioprinting in Medical Market
- 9.3.6. Rest of Asia Pacific 3D Bioprinting in Medical Market
- 9.4. Latin America 3D Bioprinting in Medical Market
  - 9.4.1. Brazil 3D Bioprinting in Medical Market
  - 9.4.2. Mexico 3D Bioprinting in Medical Market
  - 9.4.3. Rest of Latin America 3D Bioprinting in Medical Market
- 9.5. Middle East & Africa 3D Bioprinting in Medical Market
  - 9.5.1. Saudi Arabia 3D Bioprinting in Medical Market
  - 9.5.2. South Africa 3D Bioprinting in Medical Market
  - 9.5.3. Rest of Middle East & Africa 3D Bioprinting in Medical Market

## **CHAPTER 10. COMPETITIVE INTELLIGENCE**

- 10.1. Key Company SWOT Analysis
  - 10.1.1. Company
  - 10.1.2. Company
  - 10.1.3. Company
- 10.2. Top Market Strategies
- 10.3. Company Profiles
  - 10.3.1. 3D Systems Corporation
    - 10.3.1.1. Key Information
    - 10.3.1.2. Overview
    - 10.3.1.3. Financial (Subject to Data Availability)
    - 10.3.1.4. Product Summary
    - 10.3.1.5. Market Strategies
  - 10.3.2. Desktop Metal, Inc.
  - 10.3.3. Organovo Holdings, Inc.
  - 10.3.4. Cyfuse Biomedical K.K
  - 10.3.5. Medprin Biotech GmbH
  - 10.3.6. Advanced Solutions, Inc.
  - 10.3.7. CollPlant Biotechnologies Ltd
  - 10.3.8. REGEMAT 3D S.L
  - 10.3.9. The Bio Convergence Company
  - 10.3.10. Shining 3D

## **CHAPTER 11. RESEARCH PROCESS**



## 11.1. Research Process

### 11.1.1. Data Mining

### 11.1.2. Analysis

### 11.1.3. Market Estimation

### 11.1.4. Validation

### 11.1.5. Publishing

## 11.2. Research Attributes

## List Of Tables

### LIST OF TABLES

TABLE 1. Global 3D Bioprinting in Medical market, report scope

TABLE 2. Global 3D Bioprinting in Medical market estimates & forecasts by Region  
2022-2032 (USD Billion)

TABLE 3. Global 3D Bioprinting in Medical market estimates & forecasts by Products  
and Solution 2022-2032 (USD Billion)

TABLE 4. Global 3D Bioprinting in Medical market estimates & forecasts by Technology  
2022-2032 (USD Billion)

TABLE 5. Global 3D Bioprinting in Medical market estimates & forecasts by Application  
2022-2032 (USD Billion)

TABLE 6. Global 3D Bioprinting in Medical market estimates & forecasts by End User  
2022-2032 (USD Billion)

TABLE 7. Global 3D Bioprinting in Medical market by segment, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 8. Global 3D Bioprinting in Medical market by region, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 9. Global 3D Bioprinting in Medical market by segment, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 10. Global 3D Bioprinting in Medical market by region, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 11. Global 3D Bioprinting in Medical market by segment, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 12. Global 3D Bioprinting in Medical market by region, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 13. Global 3D Bioprinting in Medical market by segment, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 14. Global 3D Bioprinting in Medical market by region, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 15. Global 3D Bioprinting in Medical market by segment, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 16. Global 3D Bioprinting in Medical market by region, estimates & forecasts,  
2022-2032 (USD Billion)

TABLE 17. U.S. 3D Bioprinting in Medical market estimates & forecasts, 2022-2032  
(USD Billion)

TABLE 18. U.S. 3D Bioprinting in Medical market estimates & forecasts by segment  
2022-2032 (USD Billion)

TABLE 19. U.S. 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 20. Canada 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 21. Canada 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 22. Canada 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 23. UK 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 24. UK 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 25. UK 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 26. Germany 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 27. Germany 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 28. Germany 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 29. France 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 30. France 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 31. France 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 32. Italy 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 33. Italy 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 34. Italy 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 35. Spain 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 36. Spain 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 37. Spain 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 38. RoE 3D Bioprinting in Medical market estimates & forecasts, 2022-2032

(USD Billion)

TABLE 39. RoE 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 40. RoE 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 41. China 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 42. China 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 43. China 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 44. India 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 45. India 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 46. India 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 47. Japan 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 48. Japan 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 49. Japan 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 50. Australia 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 51. Australia 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 52. Australia 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 53. South Korea 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 54. South Korea 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 55. South Korea 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 56.

TABLE 57. RoAPAC 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 58. RoAPAC 3D Bioprinting in Medical market estimates & forecasts by

segment 2022-2032 (USD Billion)

TABLE 59. RoAPAC 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 60. Brazil 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 61. Brazil 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 62. Brazil 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 63. Mexico 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 64. Mexico 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 65. Mexico 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 66. RoLA 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 67. RoLA 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 68. RoLA 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 69. Saudi Arabia 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 70. Saudi Arabia 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 71. Saudi Arabia 3D Bioprinting in Medical market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 72. South Africa 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 73.

TABLE 74. South Africa 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 75. South Africa 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 76. RoMEA 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 77. RoMEA 3D Bioprinting in Medical market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 78. RoMEA 3D Bioprinting in Medical market estimates & forecasts by segment

2022-2032 (USD Billion)

TABLE 79. List of secondary sources, used in the study of Global 3D Bioprinting in Medical Market.

TABLE 80. List of primary sources, used in the study of Global 3D Bioprinting in Medical Market.

TABLE 81. Years considered for the study.

TABLE 82. Exchange rates considered.

## List Of Figures

### LIST OF FIGURES

- FIG 1. Global 3D Bioprinting in Medical market, research methodology
- FIG 2. Global 3D Bioprinting in Medical market, market estimation techniques
- FIG 3. Global market size estimates & forecast methods.
- FIG 4. Global 3D Bioprinting in Medical market, key trends 2023
- FIG 5. Global 3D Bioprinting in Medical market, growth prospects 2022-2032
- FIG 6. Global 3D Bioprinting in Medical market, porters 5 force model
- FIG 7. Global 3D Bioprinting in Medical market, pestel analysis
- FIG 8. Global 3D Bioprinting in Medical market, value chain analysis
- FIG 9. Global 3D Bioprinting in Medical market by segment, 2022 & 2032 (USD Billion)
- FIG 10. Global 3D Bioprinting in Medical market by segment, 2022 & 2032 (USD Billion)
- FIG 11. Global 3D Bioprinting in Medical market by segment, 2022 & 2032 (USD Billion)
- FIG 12. Global 3D Bioprinting in Medical market by segment, 2022 & 2032 (USD Billion)
- FIG 13. Global 3D Bioprinting in Medical market by segment, 2022 & 2032 (USD Billion)
- FIG 14. Global 3D Bioprinting in Medical market, regional snapshot 2022 & 2032
- FIG 15. North America 3D Bioprinting in Medical market 2022 & 2032 (USD Billion)
- FIG 16. Europe 3D Bioprinting in Medical market 2022 & 2032 (USD Billion)
- FIG 17. Asia pacific 3D Bioprinting in Medical market 2022 & 2032 (USD Billion)
- FIG 18. Latin America 3D Bioprinting in Medical market 2022 & 2032 (USD Billion)
- FIG 19. Middle East & Africa 3D Bioprinting in Medical market 2022 & 2032

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