

# **Cell Therapy Manufacturing Market by Type of Cell Manufactured (Immune Cells, Stem Cells and Others ), Source of Cell (Autologous and Allogeneic), Scale of Operation (Preclinical, Clinical and Commercial), Purpose of Manufacturing (In-house and Contract) and Key Geographical Regions (North America, Europe, Asia Pacific and Rest of the World): Industry Trends and Global Forecasts (5th Edition), 2022-2035**

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## **Abstracts**

The cell therapy manufacturing market is expected to reach USD 4.5 billion in 2022 anticipated to grow at a CAGR of 12% during the forecast period 2022-2035.

Cellular therapies have garnered considerable attention in the healthcare sphere due to their promising potential in treating rare disorders. Notably, more than 1,035 clinical studies focusing on these therapies have commenced since 2019. Certain commercialized cell therapies, such as Kymriah®, have achieved significant sales exceeding USD 1.5 billion since their launch in 2018. As the clinical benefits of these biologic drugs are increasingly validated, there is a heightened emphasis on refining the cell therapy manufacturing process. Efforts have been directed towards developing advanced automation tools, such as the emerging concept of GMP-In-A Box, aimed at reducing manufacturing costs associated with these intricate therapeutic products. However, the complexity of cell therapy manufacturing poses challenges to complete automation. Additionally, the lack of specialized infrastructure and expertise in this field hampers progress.

The current market landscape for cell therapy manufacturing is diverse, encompassing

in-house manufacturers and contract service providers. Many innovator companies in this domain offer contract services alongside their in-house capabilities to optimize resource utilization and generate additional revenue. To meet the growing demand for cell therapies, industry players are expanding their capacities, leading to a noticeable surge in partnerships and expansions within the cell therapy domain starting in 2020. The involvement of major pharmaceutical companies has significantly bolstered the adoption of these therapies. Big pharma players have initiated strategic partnerships and expansion projects to strengthen their cell therapy manufacturing capabilities. With stakeholders persistently striving to overcome manufacturing challenges and a heightened focus on advancing these therapies, the cell therapy manufacturing market is poised for substantial growth in the forecasted future.

## Report Coverage

The report conducts an examination of the cell therapy manufacturing market, focusing on the types of cells produced, cell sources, operational scales, manufacturing purposes, and key geographical regions.

It evaluates the factors—such as drivers, restraints, opportunities, and challenges—that impact market growth.

The report assesses both the potential advantages and obstacles within the market, providing insights into the competitive landscape for top market players.

Revenue forecasts for market segments are provided concerning four major regions.

A comprehensive review covers multiple aspects of cell therapy manufacturing, commencing with an overview that encompasses challenges and influencers within the market. It also explores automation tools and technologies enhancing manufacturing processes, along with future prospects.

Extensive analysis of the market landscape involves examining key players engaged in manufacturing cell-based therapies. This includes details on cell types produced (immune cells, stem cells, etc.), cell sources (autologous, allogeneic), operational scales (preclinical, clinical, commercial), purposes (in-house, contract services), offered capabilities/services (R&D, quality testing, etc.), and global headquarters and manufacturing facilities.

Discussion extends to cell therapy manufacturing regulations across various regions (North America focusing on the US, Europe, Asia with emphasis on Japan and China), encompassing diverse certifications from regulatory bodies.

The overview includes global agencies' roadmaps aiming to advance cell therapy manufacturing processes. It delves into the role of technology automation, comparing costs between manual and automated processes.

Detailed profiles of industry players providing cell therapy manufacturing services at clinical and commercial scales are presented. This includes their service portfolios, capabilities, facilities, recent partnerships, and future prospects. Similarly, profiles of non-industry players in this domain are outlined.

Examination of non-profit organizations' roles in cell-based therapy development across different regions, along with international/national societies disseminating related knowledge.

Analysis of completed, ongoing, and planned clinical trials is presented, covering parameters like trial phases, sponsors, therapeutic areas, and industry/non-industry players involved. Recent partnerships in cell therapy manufacturing (2016-2022), collaborations, and expansion initiatives undertaken by service providers during the same period are explored.

Initiatives by big pharma in cell therapy manufacturing, installed capacity estimates, annual demand projections, factors influencing pricing, considerations for in-house manufacturing versus CMO engagement, and comprehensive representations (3D grid analysis, logo landscapes, world maps) of cell therapy manufacturers' distribution are included.

The study concludes by summarizing key insights derived from the gathered information, emphasizing details of cell therapy manufacturing providers across continents.

Furthermore, affiliated trends, key drivers, challenges, and industry impacts are analyzed using a SWOT framework, showcasing their relative effects through a Harvey ball analysis.

Insights derived from a market-wide survey, capturing inputs from experts involved in cell-based therapy development and manufacturing, are synthesized.

## Key Market Companies

AGC Biologics

Charles River Laboratories

KBI Biopharma

Thermo Fisher Scientific

BioNTech Innovative Manufacturing Services

Cell and Gene Therapy Catapult

Lonza

RoslinCT

Cell Therapies

FUJIFILM Cellular Dynamics

Minaris Regenerative Medicine

MEDINET

Nikon CeLL Innovation

WuXi AppTec

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- 24.5. Analysis by Source of Cells
- 24.6. Analysis by Type of Cell Culture System Used
- 24.7. Analysis by Availability of Fill / Finish Services

## **25. INTERVIEW TRANSCRIPTS**

- 25.1. Chapter Overview
- 25.2. RoslinCT
  - 25.2.1. Company Overview
  - 25.2.2. Interview Transcript: Peter Coleman, Chief Executive Officer
- 25.3. Discovery Life Sciences
  - 25.3.1. Company Overview
  - 25.3.2. Interview Transcript: Dominic Clarke, Chief Technical Officer, Cell and Gene Therapy
- 25.4. Glycostem Therapeutics
  - 25.4.1. Company Overview
  - 25.4.2. Interview Transcript: Troels Jordansen, Chief Executive Officer
- 25.5. Bio Elpida
  - 25.5.1. Company Overview
  - 25.5.2. Interview Transcript: Gilles Devillers, President
- 25.6. Gracell Biotechnologies
  - 25.6.1. Company Overview
  - 25.6.2. Interview Transcript: Wei (William) Cao, Chief Executive Officer
- 25.7. Kadimastem
  - 25.7.1. Company Overview
  - 25.7.2. Interview Transcript: Arik Hasson, Executive VP Research and Development
- 25.8. RoslinCT
  - 25.8.1. Company Overview
  - 25.8.2. Interview Transcript: Fiona Bellot, Ex-Business Development Manager
- 25.9. University of Minnesota
  - 25.9.1. Company Overview
  - 25.9.2. Interview Transcript: David Mckenna, Professor and American Red Cross Chair in Transfusion Medicine
- 25.10. Lion TCR
  - 25.10.1. Company Overview

25.10.2. Interview Transcript: Victor Lietao Li, Ex- Co-Founder and Chief Executive Officer

25.11. Center for Commercialization of Cancer Immunotherapy / C3i

25.11.1. Company Overview

25.11.2. Interview Transcript: Arnaud Deladeriere, Ex-Manager, Business Development & Operations-cGMP Manufacturing Unit

25.12. Waisman Biomanufacturing

25.12.1. Company Overview

25.12.2. Interview Transcript: Brian Dattilo, Manager of Business Development

25.13. Yposkesi

25.13.1. Company Overview

25.13.2. Interview Transcript: Mathilde Girard, Ex-Department Leader, Cell Therapy Innovation and Development

25.14. Cell Therapies

25.14.1. Company Overview

25.14.2. Interview Transcript: Tim Oldham, Ex-Chief Executive Officer

25.15. CiMaas

25.15.1. Company Overview

25.15.2. Interview Transcript: Gerard MJ Bos, Chief Executive Officer

## **26. APPENDIX 1: TABULATED DATA**

## **27: LIST OF COMPANIES AND ORGANIZATIONS**

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