

Plasmid DNA Manufacturing Market: Distribution by Scale of Operation (Commercial, Clinical and Preclinical), Application Area (Cell Therapy Manufacturing, Gene Therapy Manufacturing, DNA / RNA Vaccine Development, Viral Vector Manufacturing, and Other Application Areas), Therapeutic Area (Metabolic Disorders, Neurological Disorders, Oncological Disorders, Rare Disorders, and Other Disorders), and Geography (North America, Europe, Asia, Latin America, Middle East and North Africa, and Rest of the World): Industry Trends and Global Forecasts, 2023-2035

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Abstracts

The global plasmid DNA manufacturing market is estimated to be USD 539 million by 2035 and anticipated to grow at a CAGR of 15% during the forecast period 2023-2035.

The realm of biotechnology and genetic research is witnessing dynamic growth within the manufacturing market for plasmid DNA. This form of genetic material, characterized by its circular, double-stranded DNA structure capable of self-replication apart from chromosomal DNA, holds pivotal significance in the development of advanced therapy medicinal products (ATMPs). Notably, it plays a fundamental role in cell and gene therapy, as well as in the creation of nucleic acid vaccines. The adaptability of plasmid DNA through genetic engineering renders it an invaluable asset in scientific advancements. The demand for plasmid DNA has seen exponential growth, largely

driven by the expanding landscape of cell and gene therapies. This demand spiked notably during the global COVID-19 pandemic, where plasmid-based delivery mechanisms became essential in developing RNA/DNA vaccines and therapeutic solutions. Industry leaders like Moderna and Pfizer-BioNTech utilized plasmid-based platforms for their mRNA vaccines, significantly amplifying the necessity for plasmid DNA.

However, the production of plasmids presents several challenges, including low yields, plasmid instability, and stringent regulatory considerations. Consequently, specialized facilities and adherence to rigorous good manufacturing practices (GMP) are imperative. As a result, an increasing number of researchers and pharmaceutical developers are turning to specialized contract service providers equipped with expertise and advanced technologies to fulfill their GMP plasmid manufacturing requirements. These service providers offer comprehensive solutions encompassing process development, optimization, plasmid construction, design, and engineering. Additionally, these specialized entities streamline the plasmid DNA manufacturing process, optimizing resource allocation and ensuring the delivery of high-quality plasmid DNA that adheres to regulatory standards and research requirements. The soaring demand for ATMPs and the growing trend of outsourcing plasmid DNA manufacturing operations are expected to drive significant growth in this market throughout the forecast period.

Report Coverage

The report conducts an analysis of the plasmid DNA manufacturing market, considering factors such as scale of operation, application area, therapeutic area, and geography.

It examines the various elements influencing market growth, including drivers, restraints, opportunities, and challenges.

The report evaluates the potential advantages and impediments within the market, providing insights into the competitive landscape for major players.

Revenue forecasts for market segments are provided across six major regions.

Economic factors impacting the plasmid DNA manufacturing market are assessed by studying historical trends, currency fluctuations, foreign exchange impacts, recessions, and inflation measurements.

Research insights are presented to offer a concise and comprehensive view of the current state of the plasmid DNA manufacturing market, along with short-term, mid-term, and long-term projections.

Various plasmid types are detailed based on their functions, focusing on pharmaceutical applications, manufacturing challenges, and the growing trend of outsourcing production.

Service providers are examined based on establishment, employee count, headquarters' location, company types, venture structures, services offered, manufacturing facilities, offerings, and application areas.

Market trends are analyzed, considering factors such as company size, headquarters' location, venture type, key offerings, scale of operation, grade of plasmid DNA, and application areas.

Partnerships among stakeholders since 2015, including manufacturing agreements, product development, technology utilization, service alliances, and development agreements, are investigated.

Detailed examination of acquisitions in the plasmid manufacturing market from 2015-2023 is included, encompassing acquisition types, geographical locations, company sizes, key value drivers, and deal multiples.

Estimation of industry players' manufacturing capacity is conducted, considering factors like company size, plasmid DNA grade, operation scale, and manufacturing facility location.

Service providers' competitiveness is evaluated based on supplier power, capabilities, partnership activity, services offered, plasmid DNA grade, operation scale, acquisitions, and agreement types.

Leading service providers are elaborated upon, including establishment year, employee count, headquarters location, financial performance (if available), recent developments, and future outlook.

Current and future plasmid DNA demand is assessed considering operation scale, application areas, geography, patient population, dosing frequency, and strength for 2023-2035.

Factors affecting plasmid DNA manufacturing market growth, identifying drivers, restraints, opportunities, and challenges influencing the industry's trajectory, are thoroughly examined.

Key Market Companies

AGC Biologics

Aldevron

Biomay

Catalent Pharma Solutions

Charles River

Cytovance Biologics

Forge Biologics

GenScript ProBio

Thermo Fisher Scientific

VGXI

Contents

1. PREFACE

- 1.1. Introduction
- 1.2. Project Objectives
- 1.3. Scope of the Report
- 1.4. Inclusions and Exclusions
- 1.5. Key Questions Answered
- 1.6. Chapter Outlines

2. RESEARCH METHODOLOGY

- 2.1. Chapter Overview
- 2.2. Research Assumptions
- 2.3. Project Methodology
- 2.4. Forecast Methodology
- 2.5. Robust Quality Control
- 2.6. Key Market Segmentations
- 2.7. Key Considerations
 - 2.7.1. Demographics
 - 2.7.2. Economic Factors
 - 2.7.3. Government Regulations
 - 2.7.4. Supply Chain
 - 2.7.5. COVID Impact / Related Factors
 - 2.7.6. Market Access
 - 2.7.7. Healthcare Policies
 - 2.7.8. Industry Consolidation

3. ECONOMIC AND OTHER PROJECT SPECIFIC CONSIDERATIONS

- 3.1. Chapter Overview
- 3.2. Market Dynamics
 - 3.2.1. Time Period
 - 3.2.1.1. Historical Trends
 - 3.2.1.2. Current and Forecasted Estimates
 - 3.2.2. Currency Coverage
 - 3.2.2.1. Overview of Major Currencies Affecting the Market
 - 3.2.2.2. Impact of Currency Fluctuations on the Industry

3.2.3. Foreign Exchange Impact

3.2.3.1. Evaluation of Foreign Exchange Rates and Their Impact on Market

3.2.3.2. Strategies for Mitigating Foreign Exchange Risk

3.2.4. Recession

3.2.4.1. Historical Analysis of Past Recessions and Lessons Learnt

3.2.4.2. Assessment of Current Economic Conditions and Potential Impact on the Market

3.2.5. Inflation

3.2.5.1. Measurement and Analysis of Inflationary Pressures in the Economy

3.2.5.2. Potential Impact of Inflation on the Market Evolution

4. EXECUTIVE SUMMARY

5. INTRODUCTION

5.1. Chapter Overview

5.2. Overview of Plasmids

5.2.1. Structure of a Plasmid DNA

5.3. Types of Plasmids (By Function)

5.3.1. Fertility Plasmids

5.3.2. Resistance Plasmids

5.3.3. Virulence Plasmids

5.3.4. Degradative Plasmids

5.3.5. Col Plasmids

5.4. Plasmid DNA Manufacturing

5.4.1. Steps Involved in Plasmid DNA Manufacturing

5.5. Applications of Plasmid DNA in Pharmaceutical Industry

5.5.1. Cell and Gene Therapy Manufacturing

5.5.2. Viral Vector Manufacturing

5.5.3. Vaccine Development

5.5.4. Other Research Applications

5.6. Challenges Associated with Plasmid DNA Manufacturing

5.7. Need for Outsourcing Plasmid DNA Manufacturing

5.8. Future Perspectives

6. OVERALL MARKET LANDSCAPE

6.1. Chapter Overview

6.2. Plasmid DNA Service Providers: Overall Market Landscape

6.3. Analysis by Year of Establishment

6. 4. ANALYSIS BY COMPANY SIZE

6.5. Analysis by Location of Headquarters

6.6. Analysis by Type of Company

6.7. Analysis by Type of Venture

6.8. Analysis by Type of Service(s) Offered

6.8.1. Analysis by Location of Manufacturing Facility

6.9. Analysis by Key Offerings

6.10. Analysis by Grade of Plasmid DNA

6.11. Analysis by Scale of Operation

6.12. Analysis by Application Area(s)

7. KEY INSIGHTS

7.1. Chapter Overview

7.2. Plasmid DNA Service Providers: Key Insights

7.2.1 Analysis by Company Size and Location of Headquarters

7.2.2. Analysis by Company Size and Type of Venture

7.2.3. Analysis by Key Offerings and Location of Headquarters

7.2.4. Analysis by Scale of Operation and Company Size

7.2.5. Analysis by Grade of Plasmid DNA and Application Area(s)

7.2.6. Analysis by Scale of Operation, Application Area(s) and Location of Manufacturing Facility

8. PARTNERSHIPS AND COLLABORATIONS

8.1. Chapter Overview

8.2. Partnership Models

8.3. Plasmid DNA Services: Partnerships and Collaborations

8.3.1. Analysis by Year of Partnership

8.3.2. Analysis by Type of Partnership

8.3.3. Analysis by Year and Type of Partnership

8.3.4. Analysis by Type of Partner

8.3.5. Analysis by Type of Partnership and Type of Partner

8.3.6. Analysis by Grade of Plasmid DNA

8.3.7. Analysis by Scale of Operation

8.3.8 Analysis by Geography

- 8.3.8.1. Local and International Agreements
- 8.3.8.2. Intercontinental and Intracontinental Agreements
- 8.3.9. Most Active Players: Analysis by Number of Partnerships

9. ACQUISITIONS

- 9.1. Chapter Overview
- 9.2. Acquisitions Models
- 9.3. Plasmid DNA Services Providers: Acquisitions
 - 9.3.1. Analysis by Year of Acquisition
 - 9.3.2. Analysis by Type of Acquisition
 - 9.3.3. Analysis by Geography
 - 9.3.3.1. Local and International Acquisitions
 - 9.3.3.2. Intercontinental and Intracontinental Acquisitions
 - 9.3.4. Ownership Change Matrix
 - 9.3.5. Analysis by Company Size
 - 9.3.6. Analysis by Key Value Drivers
 - 9.3.7. Valuation Analysis: Acquisition Deal Multiples
 - 9.3.8. Most Active Players: Analysis by Number of Acquisitions

10. CAPACITY ANALYSIS

- 10.1. Chapter Overview
- 10.2. Key Assumptions and Methodology
- 10.3. Plasmid DNA Manufacturing: Global Installed Capacity
 - 10.3.1. Analysis by Company Size
 - 10.3.2. Analysis by Scale of Operation
 - 10.3.3. Analysis by Location of Manufacturing Facility
- 10.4. Concluding Remarks

11. COMPANY COMPETITIVENESS ANALYSIS

- 11.1. Chapter Overview
- 11.2. Assumptions and Key Parameters
- 11.3. Methodology
- 11.4. Plasmid DNA Manufacturing Service Providers: Company Competitiveness Analysis
 - 11.4.1. Benchmarking of Service Strength
 - 11.3.2. Benchmarking of Partnership Activity

- 11.3.3. Very Small Companies Offering Plasmid DNA Manufacturing
- 11.3.4. Small Companies Offering Plasmid DNA Manufacturing
- 11.3.5. Mid-Sized Companies Offering Plasmid DNA Manufacturing
- 11.3.6. Large Companies Offering Plasmid DNA Manufacturing
- 11.3.7. Very Large Companies Offering Plasmid DNA Manufacturing

12. COMPANY PROFILES

- 12.1. Chapter Overview
- 12.2. AGC Biologics
 - 12.2.1. Company Overview
 - 12.2.2. Service Portfolio
 - 12.2.3. Recent Developments and Future Outlook
- 12.3. Aldevron (Acquired by Danaher)
 - 12.3.1. Company Overview
 - 12.3.2. Service Portfolio
 - 12.3.3. Financial Information
 - 12.3.4. Recent Developments and Future Outlook
- 12.4. Biomay
 - 12.4.1. Company Overview
 - 12.4.2. Service Portfolio
 - 12.4.3. Recent Developments and Future Outlook
- 12.5. Catalent Pharma Solutions
 - 12.5.1. Company Overview
 - 12.5.2. Service Portfolio
 - 12.5.3. Financial Information
 - 12.5.4. Recent Developments and Future Outlook
- 12.6. Charles River
 - 12.6.1. Company Overview
 - 12.6.2. Service Portfolio
 - 12.6.3. Financial Information
 - 12.6.4. Recent Developments and Future Outlook
- 12.7. Cytovance Biologics
 - 12.7.1. Company Overview
 - 12.7.2. Service Portfolio
 - 12.7.3. Recent Developments and Future Outlook
- 12.8. Forge Biologics
 - 12.8.1. Company Overview
 - 12.8.2. Service Portfolio

- 12.8.3. Recent Developments and Future Outlook
- 12.9. GenScript ProBio (a Subsidiary of GenScript)
 - 12.9.1. Company Overview
 - 12.9.2. Service Portfolio
 - 12.9.3. Financial Information
 - 12.9.4. Recent Developments and Future Outlook
- 12.10. Patheon pharma services (Acquired by Thermo Fisher Scientific)
 - 12.10.1. Company Overview
 - 12.10.2. Service Portfolio
 - 12.10.3. Financial Information
 - 12.10.4. Recent Developments and Future Outlook
- 12.11. VGXI
 - 12.11.1. Company Overview
 - 12.11.2. Service Portfolio
 - 12.11.3. Recent Developments and Future Outlook
- 12.12. 53Biologics
 - 12.12.1. Company Overview
 - 12.11.2. Service Portfolio
- 12.13. Boehringer Ingelheim
 - 12.13.1. Company Overview
 - 12.13.2. Service Portfolio
- 12.14. Centre for Breakthrough Medicine (CBM)
 - 12.14.1. Company Overview
 - 12.14.2. Service Portfolio
- 12.15. JAFRAL Biosolutions
 - 12.15.1. Company Overview
 - 12.15.2. Service Portfolio
- 12.16. PackGene
 - 12.16.1. Company Overview
 - 12.16.2. Service Portfolio
- 12.17. Acural Bio
 - 12.17.1. Company Overview
 - 12.17.2. Service Portfolio
- 12.18. Hanmi BioPlant
 - 12.18.1. Company Overview
 - 12.18.2. Service Portfolio
- 12.19. BioCina
 - 12.19.1. Company Overview
 - 12.19.2. Service Portfolio

- 12.20. NorthXBiologics
 - 12.21.1. Company Overview
 - 12.22.2. Service Portfolio
- 12.21. Xpress Biologics
 - 12.21.1. Company Overview
 - 12.21.2. Service Portfolio
- 12.22. Eurogentec
 - 12.22.1. Company Overview
 - 12.22.2. Service Portfolio
- 12.23. ESCO Aster
 - 12.23.1. Company Overview
 - 12.23.2. Service Portfolio
- 12.24. Southern RNA
 - 12.24.1. Company Overview
 - 12.24.2. Service Portfolio
- 12.25. Richter-Helm
 - 12.25.1. Company Overview
 - 12.25.2. Service Portfolio
- 12.26. Aurigene Pharmaceutical Services
 - 12.26.1. Company Overview
 - 12.26.2. Service Portfolio
- 12.27. Wuxi AppTech
 - 12.27.1. Company Overview
 - 12.27.2. Service Portfolio

13. DEMAND ANALYSIS

- 13.1. Chapter Overview
- 13.2. Key Assumptions and Methodology
- 13.3. Global Demand for Plasmid DNA, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
 - 13.3.1. Analysis by Scale of Operation
 - 13.3.1.1. Commercial Demand for Plasmid DNA, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
 - 13.3.1.2. Clinical Demand for Plasmid DNA, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
 - 13.3.1.3. Preclinical Demand for Plasmid DNA, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
 - 13.3.2. Analysis by Application Area

13.3.2.1. Plasmid DNA Demand for Cell Therapy Manufacturing, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.2.2. Plasmid DNA Demand for Gene Therapy Manufacturing, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.2.3. Plasmid DNA Demand for DNA / RNA Vaccine Development, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.2.4. Plasmid DNA Demand for Viral Vector Manufacturing, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.2.5. Plasmid DNA Demand for Other Application Areas, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3. Analysis by Geography

13.3.3.1. Demand for Plasmid DNA in North America, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3.2. Demand for Plasmid DNA in Europe, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3.3. Demand for Plasmid DNA in Asia, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3.4. Demand for Plasmid DNA in Latin America, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3.5. Demand for Plasmid DNA in Middle East and North Africa, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

13.3.3.6. Demand for Plasmid DNA in Rest of the World, Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

14. MARKET IMPACT ANALYSIS: DRIVERS, RESTRAINTS, OPPORTUNITIES AND CHALLENGES

14.1. Chapter Overview

14.2. Market Drivers

14.3. Market Restraints

14.4. Market Opportunities

14.5. Market Challenges

14.6. Conclusion

15. GLOBAL PLASMID DNA MANUFACTURING MARKET

15.1. Chapter Overview

15.2. Assumptions and Methodology

15.3. Global Plasmid DNA Manufacturing Market, Historical Trends (2018-2022) and

Forecasted Estimates (2023-2035)

15.3.1. Scenario Analysis

15.4. Key Market Segmentations

15.5. Dynamic Dashboard

16. PLASMID DNA MANUFACTURING MARKET, BY SCALE OF OPERATION

16.1. Chapter Overview

16.2. Key Assumptions and Methodology

16.3. Commercial Products: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

16.4. Clinical Products: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

16.5. Preclinical Products: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

16.6. Data Triangulation

16.6.1. Insights from Primary Research

16.6.2. Insights from Secondary Research

16.6.3. Insights from In-house Repository

17. PLASMID DNA MANUFACTURING MARKET, BY APPLICATION AREA

17.1. Chapter Overview

17.2. Key Assumptions and Methodology

17.3. Cell Therapy Manufacturing: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

17.4. DNA / RNA Vaccine Development: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

17.5. Viral Vector Manufacturing: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

17.6. Other Application Areas: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)

17.8. Data Triangulation

17.8.1. Insights based on Primary Research

17.8.2. Insights based on Secondary Research

17.8.3. Insights from In-house Repository

18. PLASMID DNA MANUFACTURING MARKET, BY THERAPEUTIC AREA

- 18.1. Chapter Overview
- 18.2. Key Assumptions and Methodology
- 18.3. Metabolic Disorders: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 18.4. Neurological Disorders: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 18.5. Oncological Disorders: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 18.6. Rare Disorders: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 18.7. Other Disorders: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 18.8. Data Triangulation
 - 18.8.1. Insights based on Primary Research
 - 18.7.2. Insights based on Secondary Research
 - 18.7.3. Insights from In-house Repository

19. PLASMID DNA MANUFACTURING MARKET, BY GEOGRAPHY

- 19.1. Chapter Overview
- 19.2. Key Assumptions and Methodology
- 19.3. North America: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.4. Europe: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.5. Asia: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.6. Latin America: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.7. Middle East and North Africa: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.8. Rest of the World: Historical Trends (2018-2022) and Forecasted Estimates (2023-2035)
- 19.9. Data Triangulation
 - 19.9.1. Insights based on Primary Research
 - 19.9.2. Insights based on Secondary Research
 - 19.9.3. Insights from In-house Repository

20 CONCLUSION

21. EXECUTIVE INSIGHTS

- 21.1. Chapter Overview
- 21.2. JAFRAL Biosolutions
 - 21.2.1. Company Snapshot
 - 21.2.2. Interview Transcript
- 21.3. Aldevron (Acquired by Danaher)
 - 21.3.1. Company Snapshot
 - 21.3.2. Interview Transcript
- 21.4. 53Biologics
 - 21.4.1. Company Snapshot
 - 21.4.2. Interview Transcript
- 21.5. Center for Breakthrough Medicines (CBM)
 - 21.5.1. Company Snapshot
 - 21.5.2. Interview Transcript

22. APPENDIX 1: TABULATED DATA

23. APPENDIX 2: LIST OF COMPANIES AND ORGANIZATIONS

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