

# **Nanoparticle Formulation Market: Technologies and Services - Distribution by Type of Nanoparticle Formulated (Organic Nanoparticles (Polymeric Nanoparticles, Lipid Nanoparticles, Viral Nanoparticles, Protein-based Nanoparticles and Other Organic Nanoparticles), Inorganic Nanoparticles and Carbon-based Nanoparticles), Scale of Operation (Preclinical, Clinical and Commercial) and Key Geographical Regions (North America, Europe, Asia-Pacific, Middle East and North Africa, and Latin America): Industry Trends and Global Forecasts, 2023-2035**

<https://marketpublishers.com/r/ND4A161C567AEN.html>

Date: May 2023

Pages: 246

Price: US\$ 4,799.00 (Single User License)

ID: ND4A161C567AEN

## **Abstracts**

The global nanoparticle formulation market is expected to reach USD 5.1 billion in 2023 anticipated to grow at a CAGR of 9.4% during the forecast period 2023-2035.

Over time, nanoparticles have evolved into a versatile avenue for precise drug delivery, offering targeted treatment for a spectrum of diseases. Their unique attributes, including their minute size, adaptable surface properties, and multifunctional behavior, distinguish them from conventional drug delivery systems. These advancements in nanoparticle technology present a myriad of benefits, encompassing heightened treatment specificity, improved stability, increased solubility in water, and prolonged retention within the body. Furthermore, these innovative nanoparticles not only revolutionize drug delivery but also wield considerable influence across diverse healthcare domains,

spanning diagnostic assays, dentistry, tissue engineering, and medical imaging.

However, the development and formulation of nanoparticles represents a complex and financially demanding endeavor. The process involves intricate engineering employing advanced techniques that necessitate specialized technical expertise. Consequently, researchers and drug developers are increasingly turning to specialized contract service providers equipped with the requisite knowledge and technological prowess to engineer and formulate these nanoparticles. With the escalating demand for nanoparticle-based therapies, the market for nanoparticle formulation is poised for significant expansion in the foreseeable future.

## Report Coverage

An executive summary of the insights captured during our research. It offers a high-level view on the current state of nanoparticle formulation technologies and services market and its likely evolution in the mid-term and long term.

An overview of the nanoparticles, highlighting the different types of nanoparticles and methods of nanoparticle formulation. It also features the various applications of nanoparticle-based systems in the biotechnology and pharmaceutical industry. Further, it discusses the various challenges associated with formulation of nanoparticles, as well as the growing need for outsourcing the formulation of such products.

Detailed assessment of the current technology landscape of nanoparticle formulation technologies, based on several relevant parameters, such as type of nanoparticle(s) formulated, type of molecule(s) delivered, therapeutic area(s), compatible dosage form(s) and route(s) of administration.

Technology competitiveness analysis of nanoparticle formulation technologies based on developer power (in terms of the experience of the developer), technology strength (in terms of type of nanoparticle(s) formulated, formulation method(s) used, type of molecule(s) delivered, compatible dosage form(s), compatible drug release mechanism, compatible for long-acting drug delivery and route(s) of administration) and technology applicability (in terms of therapeutic area(s)).

Detailed competitiveness analysis of nanoparticle formulation service providers based on company strength (in terms of years of experience and company size)

and service strength.

Detailed profiles of prominent players developing technologies and offering services in the nanoparticle formulation domain across North America, Europe and Asia-Pacific.

A detailed analysis of the partnerships inked between stakeholders engaged in this domain, since 2018, covering technology licensing agreements, research and development agreements, product development agreements, manufacturing agreements, mergers and acquisitions, technology integration agreements and other relevant agreements

An in-depth analysis of various patents that have been filed / granted related to nanoparticle formulation, since 2018, taking into consideration parameters, such as publication year, geographical region, CPC symbols, leading players (in terms of number of patents filled / granted) and type of organization.

An insightful framework evaluating type of nanoparticles based on various parameters, such as number of technologies, number of drugs in clinical trials, trends highlighted in published literature and patents, and business models adopted by industry stakeholders. It also provides a value addition matrix for respective types of nanoparticles currently adopted by stakeholders.

A comprehensive market forecast and opportunity analysis, highlighting the future potential of the nanoparticle formulation services market till 2035. We have segregated the current and upcoming opportunity based on type of nanoparticle (organic nanoparticles (polymeric nanoparticles, lipid nanoparticles, viral nanoparticles, protein-based nanoparticles and other organic nanoparticles), inorganic nanoparticles (metal nanoparticles, quantum dots, silica nanoparticles, magnetic nanoparticles and other inorganic nanoparticles) and carbon-based nanoparticles), scale of operation (preclinical, clinical and commercial) and key geographical regions (North America, Europe, Asia-Pacific, Middle East and North Africa, and Latin America).

## Key Market Companies

Ascension Sciences

DIANT Pharma

ExonanoRNA

Nanoform

NanoVation Therapeutics

NanoVelos

NTT Biopharma

Organoid-X BioTech

Vaxinano

## Contents

### 1. PREFACE

- 1.1. Introduction
- 1.2. Key Market Insights
- 1.3. Scope of the Report
- 1.4. Research Methodology
- 1.5. Frequently Asked Questions
- 1.6. Chapter Outlines

### 2. EXECUTIVE SUMMARY

### 3. INTRODUCTION

- 3.1. Chapter Overview
- 3.2. Introduction to Nanoparticles
- 3.3. Classification of Nanoparticles
  - 3.3.1. Organic Nanoparticles
  - 3.3.2. Inorganic Nanoparticles
  - 3.3.3. Carbon-based Nanoparticles
- 3.4. Methods of Nanoparticle Formulation
- 3.5. Applications of Nanoparticle-based Systems
- 3.6. Challenges associated with Nanoparticle Formulation
- 3.7. Need for Outsourcing Nanoparticle Formulation
- 3.8. Concluding Remarks

### 4. TECHNOLOGY LANDSCAPE

- 4.1. Chapter Overview
- 4.2. Nanoparticle Formulation: Technology Landscape
  - 4.2.1. Analysis by Type of Nanoparticle(s) Formulated
  - 4.2.2. Analysis by Type of Organic Nanoparticle(s) Formulated
  - 4.2.3. Analysis by Type of Inorganic Nanoparticle(s) Formulated
  - 4.2.4. Analysis by Type of Molecule(s) Delivered
  - 4.2.5. Analysis by Therapeutic Area(s)
  - 4.2.6. Analysis by Compatible Dosage Form(s)
  - 4.2.7. Analysis by Route(s) of Administration
- 4.3. Nanoparticle Formulation: Technology Developer Landscape

- 4.3.1. Analysis by Year of Establishment
- 4.3.2. Analysis by Company Size
- 4.3.3. Analysis by Location of Headquarters
- 4.3.4. Analysis by Company Size and Location of Headquarters
- 4.3.5. Most Active Players: Analysis by Number of Technologies

## **5. SERVICE PROVIDERS LANDSCAPE**

- 5.1. Chapter Overview
- 5.2. Nanoparticle Formulation: Service Providers Landscape
  - 5.2.1. Analysis by Year of Establishment
  - 5.2.2. Analysis by Company Size
  - 5.2.3. Analysis by Location of Headquarters
  - 5.2.4. Analysis by Company Size and Location of Headquarters
  - 5.2.5. Analysis by Location of Facilities
  - 5.2.6. Analysis by Type of Service Provider(s)
  - 5.2.7. Analysis by Type of Nanoparticle(s) Formulated
    - 5.2.7.1. Analysis by Type of Organic Nanoparticle(s) Formulated
    - 5.2.7.2. Analysis by Type of Inorganic Nanoparticle(s) Formulated
  - 5.2.8. Analysis by Type of Service Provider(s) and Type of Nanoparticle(s) Formulated
  - 5.2.9. Analysis by Service(s) Offered
  - 5.2.10. Analysis by Company Size and Service(s) Offered
  - 5.2.11. Analysis by Scale of Operation
  - 5.2.12. Analysis by Application Area(s)

## **6. TECHNOLOGY COMPETITIVENESS ANALYSIS**

- 6.1. Chapter Overview
- 6.2. Assumptions / Key Parameters
- 6.3. Methodology
- 6.4. Technology Competitiveness Analysis
  - 6.4.1. Nanoparticle Formulation Technologies Offered by Players based in North America
    - 6.4.1.1. Nanoparticle Formulation Technologies Offered by Small Players based in North America
    - 6.4.1.2. Nanoparticle Formulation Technologies Offered by Mid-sized and Large Players based in North America
  - 6.4.2. Nanoparticle Formulation Technologies Offered by Players based in Europe
  - 6.4.3. Nanoparticle Formulation Technologies Offered by Players based in Asia-

Pacific, Middle East and North Africa, and Rest of the World

## **7. COMPANY COMPETITIVENESS ANALYSIS**

7.1. Chapter Overview

7.2. Assumptions / Key Parameters

7.3. Methodology

7.4. Company Competitiveness Analysis

7.4.1. Nanoparticle Formulation Service Providers based in North America

7.4.2. Nanoparticle Formulation Service Providers based in Europe

7.4.3. Nanoparticle Formulation Service Providers based in Asia-Pacific, and Middle East and North Africa

## **8. COMPANY PROFILES**

8.1. Chapter Overview

8.2. Ascension Sciences

8.2.1. Company Overview

8.2.2. Technology Portfolio

8.2.3. Service Portfolio

8.2.4. Recent Developments and Future Outlook

8.3. DIANT Pharma

8.3.1. Company Overview

8.3.2. Technology Portfolio

8.3.3. Service Portfolio

8.3.4. Recent Developments and Future Outlook

8.4. ExonanoRNA

8.4.1. Company Overview

8.4.2. Technology Portfolio

8.4.3. Service Portfolio

8.4.4. Recent Developments and Future Outlook

8.5. Nanoform

8.5.1. Company Overview

8.5.2. Technology Portfolio

8.5.3. Service Portfolio

8.5.4. Recent Developments and Future Outlook

8.6. NanoVation Therapeutics

8.6.1. Company Overview

8.6.2. Technology Portfolio

- 8.6.3. Service Portfolio
- 8.6.4. Recent Developments and Future Outlook
- 8.7. NanoVelos
  - 8.7.1. Company Overview
  - 8.7.2. Technology Portfolio
  - 8.7.3. Service Portfolio
  - 8.7.4. Recent Developments and Future Outlook
- 8.8. NTT Biopharma
  - 8.8.1. Company Overview
  - 8.8.2. Technology Portfolio
  - 8.8.3. Service Portfolio
  - 8.8.4. Recent Developments and Future Outlook
- 8.9. Organoid-X BioTech
  - 8.9.1. Company Overview
  - 8.9.2. Technology Portfolio
  - 8.9.3. Service Portfolio
  - 8.9.4. Recent Developments and Future Outlook
- 8.10. Vaxinano
  - 8.10.1. Company Overview
  - 8.10.2. Technology Portfolio
  - 8.10.3. Service Portfolio
  - 8.10.4. Recent Developments and Future Outlook

## **9. PARTNERSHIPS AND COLLABORATIONS**

- 9.1. Chapter Overview
- 9.2. Partnership Models
- 9.3. Nanoparticle Formulation Technologies and Services: Partnerships and Collaborations
  - 9.3.1. Analysis by Year of Partnership
  - 9.3.2. Analysis by Type of Partnership
  - 9.3.3. Analysis by Year and Type of Partnership
  - 9.3.4. Analysis by Type of Partner
  - 9.3.5. Analysis by Location of Headquarters of Partner
  - 9.3.6. Analysis by Type of Partnership and Location of Headquarters of Partner
  - 9.3.7. Most Active Players: Analysis by Number of Partnerships
  - 9.3.8. Analysis by Geography
    - 9.3.8.1. Intercontinental and Intracontinental Deals
    - 9.3.8.2. Local and International Deals



## **10. PATENT ANALYSIS**

- 10.1. Chapter Overview
- 10.2. Scope and Methodology
- 10.3. Nanoparticle Formulation Domain: Patent Analysis
  - 10.3.1. Analysis by Publication Year
  - 10.3.2. Analysis by Type of Patent and Publication Year
  - 10.3.3. Analysis by Geography
  - 10.3.4. Analysis by CPC Symbols
  - 10.3.5. Analysis by Type of Organization
  - 10.3.6. Leading Industry Players: Analysis by Number of Patents
- 10.4. Patent Benchmark Analysis
  - 10.4.1. Analysis by Patent Characteristics
- 10.5. Patent Valuation Analysis

## **11. NANOPARTICLE EVALUATION FRAMEWORK**

- 11.1. Chapter Overview
- 11.2. Key Assumptions and Methodology
- 11.3. Organic Nanoparticles
  - 11.3.1. Number of Clinical Trials
  - 11.3.2. Extent of Innovation
  - 11.3.3. Trends in Research Activity
  - 11.3.4. Current Global Competition
  - 11.3.5. Nanoparticle Evaluation Framework: Organic Nanoparticles
- 11.4. Inorganic Nanoparticles
  - 11.4.1. Number of Clinical Trials
  - 11.4.2. Extent of Innovation
  - 11.4.3. Trends in Research Activity
  - 11.4.4. Current Global Competition
  - 11.4.5. Nanoparticle Evaluation Framework: Inorganic Nanoparticles
- 11.5. Carbon-based Nanoparticles
  - 11.5.1. Number of Clinical Trials
  - 11.5.2. Extent of Innovation
  - 11.5.3. Trends in Research Activity
  - 11.5.4. Current Global Competition
  - 11.5.5. Nanoparticle Evaluation Framework: Carbon-based Nanoparticles
  - 11.5.6. Nanoparticle Evaluation Framework: Concluding Remarks

## **12. MARKET FORECAST AND OPPORTUNITY ANALYSIS**

12.1. Chapter Overview

12.2. Key Assumptions and Forecast Methodology

12.3. Global Nanoparticle Formulation Services Market, 2023-2035

12.4. Nanoparticle Formulation Services Market: Analysis by Type of Nanoparticle Formulated

12.4.1. Nanoparticle Formulation Services Market: Analysis by Type of Organic Nanoparticle Formulated

12.4.1.1. Nanoparticle Formulation Services Market for Polymeric Nanoparticles, 2023-2035

12.4.1.2. Nanoparticle Formulation Services Market for Lipid Nanoparticles, 2023-2035

12.4.1.3. Nanoparticle Formulation Services Market for Viral Nanoparticles, 2023-2035

12.4.1.4. Nanoparticle Formulation Services Market for Protein-based Nanoparticles, 2023-2035

12.4.1.5. Nanoparticle Formulation Services Market for Other Organic Nanoparticles, 2023-2035

12.4.2. Nanoparticle Formulation Services Market: Analysis by Inorganic Nanoparticle Formulated

12.4.3. Nanoparticle Formulation Services Market: Analysis by Carbon-based Nanoparticle Formulated

12.5. Nanoparticle Formulation Services Market: Analysis by Scale of Operation

12.5.1. Nanoparticle Formulation Services Market for Preclinical Operations, 2023-2035

12.5.2. Nanoparticle Formulation Services Market for Clinical Operations, 2023-2035

12.5.3. Nanoparticle Formulation Services Market for Commercial Operations, 2023-2035

12.6. Nanoparticle Formulation Services Market: Analysis by Key Geographical Regions

12.6.1. Nanoparticle Formulation Services Market in North America, 2023-2035

12.6.2. Nanoparticle Formulation Services Market in Europe, 2023-2035

12.6.3. Nanoparticle Formulation Services Market in Asia-Pacific, 2023-2035

12.6.4. Nanoparticle Formulation Services Market in Middle East and North Africa, 2023-2035

12.6.5. Nanoparticle Formulation Services Market in Latin America, 2023-2035

## **13. CASE STUDY: TECHNOLOGY LICENSING DEALS**

- 13.1. Chapter Overview
- 13.2. Recent Technology Licensing Deals
- 13.3. Concluding Remarks

## **14. CONCLUSION**

## **15. EXECUTIVE INSIGHTS**

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

## **17. APPENDIX 2: LIST OF COMPANIES AND ORGANIZATIONS**

## I would like to order

Product name: Nanoparticle Formulation Market: Technologies and Services - Distribution by Type of Nanoparticle Formulated (Organic Nanoparticles (Polymeric Nanoparticles, Lipid Nanoparticles, Viral Nanoparticles, Protein-based Nanoparticles and Other Organic Nanoparticles), Inorganic Nanoparticles and Carbon-based Nanoparticles), Scale of Operation (Preclinical, Clinical and Commercial) and Key Geographical Regions (North America, Europe, Asia-Pacific, Middle East and North Africa, and Latin America): Industry Trends and Global Forecasts, 2023-2035

Product link: <https://marketpublishers.com/r/ND4A161C567AEN.html>

Price: US\$ 4,799.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/ND4A161C567AEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970