

Nanoparticles in Biotechnology, Drug Development and Drug Delivery Systems

Market Research Report | 2023-06-20 | 174 pages | BCC Research

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Report description:

Description

Report Scope:

The scope of the report includes an overview of the global market for nanoparticles in biotechnology, drug development and formulation, drug delivery systems, and diagnostics as well as analyses of global market trends, using 2022 as the base year and forecasting market sizes for 2023 through 2028 with compound annual growth rate (CAGR) projections.

The report includes an analysis of leading and emerging drug products for each nanoparticle type. Profiles of manufacturers of leading products and their specific products are provided. This report also assesses companies poised to introduce products during the forecast period and discusses how these introductions will change the face of the competitive environment. The competitive environment is examined with a special focus on how new products will alter the quality of life of patients receiving nanoparticle-associated drugs.

Market figures are based on revenues at the manufacturer level and are projected in dollar value. Inflation is not computed into the projection figures. Trends are assessed based on projected sales for existing products, new product introductions, expanded markets for existing products, and other factors affecting the market.

The study is arranged to offer an overview of existing nanoparticle technology and drug markets; it is accompanied by nanoparticle, company, geography, and mechanism of action, with forecasts broken down and covered by geographic regions and countries. Patent and clinical trial information is reviewed for various candidate nanodrugs. The status of approvals of drugs in each segment by the FDA and regulatory agencies in other countries is reviewed.

Figures are reported in U.S. dollars and each case reflects currency fluctuations within the performance of revenue change.

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Revenue figures do not account for variations in local currencies. All market share data presented is on a global basis unless specifically mentioned.

Regional analysis includes North America (U.S., Canada, Mexico), Europe (U.K., Germany, France, Spain, Italy, and the Rest of Europe), Asia-Pacific (China, India, Japan, and Rest of Asia-Pacific), and the Rest of the world (South America, and the Middle East and Africa).

Report Includes:

- 25 data tables and 40 additional tables
- An updated overview and in-depth analysis of the global markets for nanoparticles in biotechnology, drug development and drug delivery systems
- Analyses of the global market trends, with historical market revenue data (sales figures) from 2020 to 2022, estimates for 2023, and projections of compound annual growth rates (CAGRs) through 2028
- Estimation of the actual market size and revenue forecast for nanoparticles in biotechnology, drug development and drug delivery systems market, and corresponding market share analysis by technology, application and region
- Highlights of the drug development, formulation, and the development of new drug delivery systems and detailed product analyses within health and wellness subsegments
- In-depth information (facts and figures) concerning the major factors influencing the progress of the market (benefits and industry-specific challenges) with respect to specific growth trends, upcoming technologies, prospects, and contributions to the overall market
- Discussion on the role of nanotechnology in the COVID-19 vaccine production, mechanism of action, components and methods in vaccine design for COVID-19 and challenges for vaccine disruptions
- Review of the leading and emerging drug products for each nanoparticle type, clinical trial landscape for various candidate nanodrugs, status of approvals of drugs in each segment, and penetration of technologies and research initiatives within the ecosystem
- Updated information on patents and patent applications on nanoparticles in biotechnology, drug development and drug delivery systems, and related scientific publications
- Identification of the major stakeholders and analysis of the competitive landscape based on recent developments, financial performances, and segmental revenues
- Descriptive company profiles of the leading global players in the market, including Bristol-Myers Squibb Co., Camurus, GlaxoSmithKline PLC, Merck & Co. Inc. and Novartis AG

Executive Summary

Summary:

Nanoparticle technology has made major advances in particle types, production, and application in all areas of the life sciences in the past two decades. The most rapid advances have been made in the application of nanoparticles in drug research and development, drug formulation, and the development of novel drug delivery systems using nanoparticle carriers. The development of nanoparticles and their rapid incorporation into research and development has also given rise to a new area of application in biotechnology and diagnostics involving particle materials in the nanometer size range.

Nanoparticles used in life sciences applications are usually considered to be in the range of REDACTED nanometers to REDACTED nanometers in diameter. The size and shape of nanoparticles is an important aspect to determine their properties and influences the drug performance and efficacy on the body. Developing particles from various starting materials that remain stable in this size range has become one of the fastest-growing and most potentially useful emerging technologies in the last several decades.

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The nanoparticles market has been witnessing increased popularity in the field of life sciences applications mainly due to extensive research and favorable clinical trial results. Currently, North America holds the largest number of patents in the nanoparticle area. This is largely due to the early commercialization of some nanoparticle products by U.S.-based companies. It also demonstrates the major contribution of this region in the research and development of new technologies and drugs compared to other regions. Europe is the second-largest market for nanoparticle drug technology. France, Germany, and the U.K. are the major contributors to its market share. Drug formulation and drug delivery systems are major application areas that are lucrative for startups in Europe, thus contributing to the market's growth.

The methods for producing nanoparticles vary depending on the starting substrate materials and the size particle desired as a product. This report will provide an overview of various production methods and indicate new advances in the production area.

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HOFFMANN-LA ROCHE INC.
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