

Lipid Nanoparticle Manufacturing Market: Services and Technologies, 2023-2035 - Distribution by Type of Lipid Nanoparticle (Solid Lipid Nanoparticles and Nanostructured Lipid Carriers), Type of Molecule Delivered (Nucleic Acids, Small Molecules, Proteins/Peptides and Others), Company Size (Very Large and Large, Mid-sized and Small), Target Therapeutic Area (Infectious Diseases, Oncological Disorders, Blood Disorders, Rare Diseases and Other Disorders), Type of End-user (Pharmaceutical and Biotechnology Companies, Academic and Research Institutes, and Other End-users) and Key Geographical Regions (North America, Europe, Asia-Pacific and Rest of the World): Industry Trends and Global Forecasts

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Abstracts

The global lipid nanoparticle manufacturing market is expected to reach USD 0.66 billion in 2023 anticipated to grow at a CAGR of 11.8% during the forecast period 2023-2035.

In recent years, the pharmaceutical industry has seen substantial growth, marked by a rising number of drugs undergoing approval processes or exploration in preclinical studies and clinical trials. However, a persistent challenge in drug development remains

the poor water solubility and bioavailability of many compounds. Around 90% of drugs in development and approximately 40% of existing pharmacological products face issues related to solubility or permeability. These challenges often result in premature elimination from the body before effective absorption, impacting their efficacy. As a result, pharmaceutical companies are actively seeking solutions to overcome these hurdles. Among various strategies to improve the solubility and bioavailability of therapeutic agents, lipid nanoparticles (LNPs) and similar lipid-based additives have garnered considerable attention from drug developers. LNPs are considered a versatile platform in nanomedicine delivery due to their ability to encapsulate diverse molecules and provide controlled drug release. Alongside the advancements in this field, the knowledge base regarding the use of LNPs in drug delivery has also expanded.

However, manufacturing lipid nanoparticles is a complex and costly process that requires diverse expertise. Consequently, pharmaceutical firms are increasingly turning to specialized contract manufacturing organizations (CMOs) equipped with the necessary technology and expertise to address technical and operational challenges. Outsourcing to such service providers allows sponsors to leverage innovative LNP technologies and gain operational flexibility. With inherent advantages like small size, multifunctional properties, and customizable surfaces, the market for LNP-based therapeutics is expected to grow significantly in the near future. This growth will consequently lead to an expansion in the lipid nanoparticle manufacturing market in the projected period.

Report Coverage

The report comprehensively examines the lipid nanoparticle manufacturing market, categorizing it by type of lipid nanoparticle, type of molecule delivered, company size, target therapeutic area, type of end-user and key geographical regions

It analyzes market growth factors (such as drivers, restraints, opportunities, and challenges) and assesses potential advantages and obstacles faced by stakeholders. The report also delves into the competitive landscape among top market players.

Revenue forecasts for market segments are provided concerning four major regions. The study employs a comprehensive methodology encompassing assumptions, methodologies, and quality control measures to ensure accuracy and reliability of findings.

Historical trends, currency fluctuations, foreign exchange impact, recession, and inflation measurements are considered as influential factors shaping the lipid nanoparticle manufacturing market.

A high-level overview is presented, capturing the current state and potential evolution of the lipid nanoparticle manufacturing market in the medium to long term.

The report explores lipids, their types, advantages, applications in pharmaceuticals, formulation challenges, and the increasing necessity for outsourcing manufacturing operations.

Evaluation criteria include establishment year, company size, headquarters location, manufacturing facility location, operational scale, delivered molecule types, therapeutic areas, and additional services offered.

Assessment parameters cover formulation methods, molecule types, compatible dosage forms, administration routes, therapeutic areas, establishment year, company size, headquarters location, business models, and active market players.

Examination criteria involve establishment year, company size, headquarters location, manufacturing facilities, operational scale, lipid types, product types, additional services offered, and competitiveness analysis.

Comparative analysis of lipid nanoparticle contract manufacturing organizations is conducted based on company strength, service quality, and the number of manufacturing facilities.

In-depth analysis is provided based on developer strength, technological aspects, and applicability in therapeutic areas.

Detailed profiles of key players in LNP manufacturing services and technology are presented, including company overviews, portfolios, recent developments, and future outlooks.

The report evaluates partnerships among stakeholders since 2019, considering various parameters and regional distribution of involved companies.

An assessment is made regarding potential partnerships between mRNA vaccine and therapeutics developers and lipid nanoparticle manufacturers, considering multiple criteria.

Detailed exploration of factors influencing companies' decisions to outsource LNP manufacturing or develop in-house capabilities is provided.

Analysis of global installed capacity among LNP contract manufacturers is conducted based on company size, operational scale, and geographical distribution.

Identification and analysis of key drivers, potential restraints, emerging opportunities, and existing challenges impacting lipid nanoparticle manufacturing market growth.

Key Market Companies

Acuitas Therapeutics

Ascendia Pharmaceuticals

Avanti Polar Lipids

BIOVECTRA

CordenPharma

Creative Biolabs

Curapath

Curia

Emergent Biosolutions

EUROAPI

Evonik

Formumax Scientific

Fresenius Kabi

Fujifilm

Integrated Nanotherapeutics

leon-nanodrugs

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Merck

Pantherna Therapeutics

Precision NanoSystems

TLC Biosciences

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