

Nanomedicine

From Concept to Vial



Your Expert Partner

for Nanomedicine Services

Benefit from our fully-integrated solution for **lipid supply, formulation development, cGMP production of non-viral delivery systems** – including Lipid Nanoparticles (**LNPs**) and Liposomes – and aseptic **fill & finish**, all under one roof.

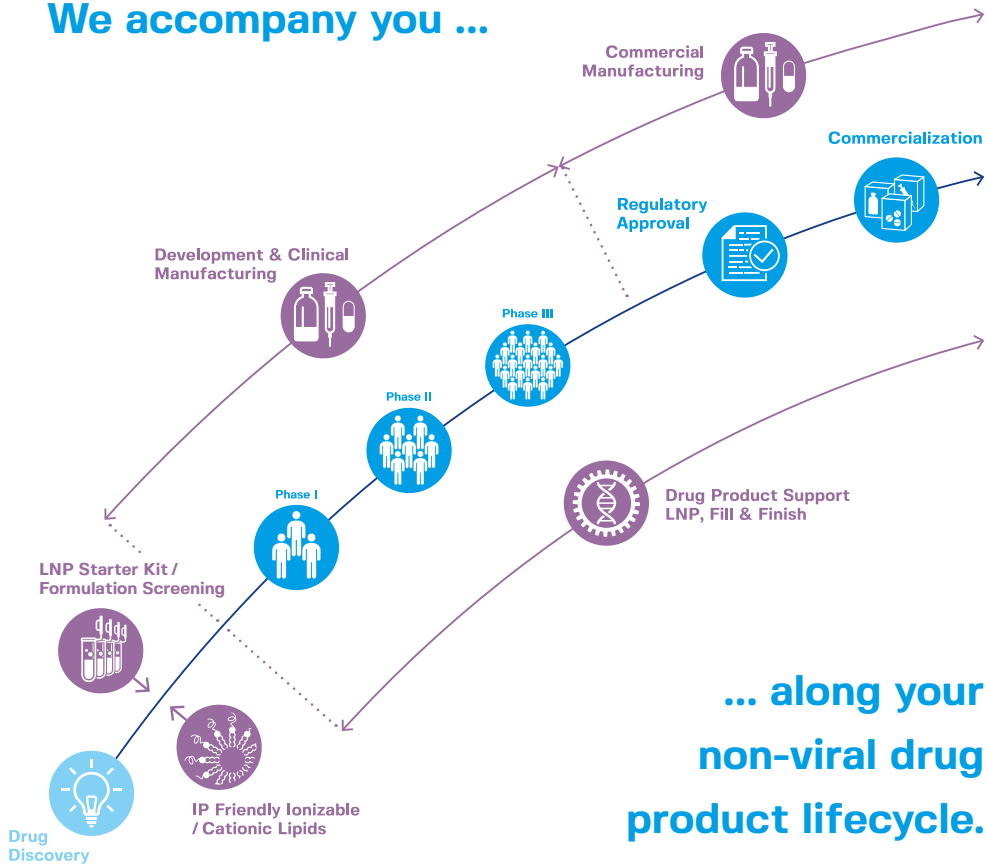
Since 2020, our **R&D and GMP suite**, approved by the AIFA (Italian Medicines Agency), supports the encapsulation of payloads in LNPs, ranging from milligram to multi-gram scales, for applications such as vaccines and rare diseases.

Compliant with FDA and EMA aseptic guidelines, our **end-to-end Nanomedicine CDMO services** ensure a smooth transition from early development to commercial manufacturing.

Bioburden reduction
filtration at the LNP GMP
manufacturing facility at
CordenPharma Capanago (IT).



We accompany you ...



**... along your
non-viral drug
product lifecycle.**

Your One Partner Benefits



Formulation & Process Development

Get expert guidance from pre-formulation screening to full process development.



Analytical Method Development

Access tailor-made analytics to efficiently bring your formulation to global markets.



Scale-up & cGMP Manufacturing

Achieve efficient scale-up with full compliance to cGMP manufacturing standards.



Aseptic Fill & Finish

Benefit from ready-to-fill technology materials, flexible batch sizes and a wide range of formats, including vials, Pre-Filled Syringes (PFS), and cartridges. Lyophilisation available in two lyophilizer capacities.



Regulatory Support

Leverage regulatory expertise to manage your product's compliance at every step, including DMFs and CMC preparation, backed by a strong regulatory track record.



Packaging & Logistics

Profit from our dedicated capabilities for secondary packaging and current serialization technologies with highly flexible distribution systems.

LNP Assembly Technologies

By offering **multiple mixing technologies**, including Impingement Jets Mixing (Knauer) and NxGen (Cytiva, formerly known as PNI), at both our R&D and cGMP facilities, we ensure a **seamless transition from early formulation to clinical manufacturing**.

Partnering with us, you can either **continue with your preferred mixing platform** or

switch to an optimized technology without disruptions, maintaining consistency with robust quality control and scalable processes.

Our flexible, **technology-agnostic approach** helps RNA developers achieve their Target Product Profile (TPP) while optimizing stability, drug loading, and manufacturing efficiency.



LNP GMP
manufacturing
facility at
CordenPharma
Caponago (IT).



Discover our LNP GMP
manufacturing services

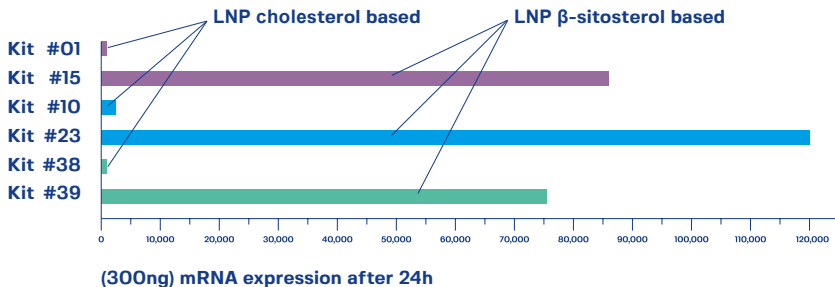


LNP Starter Kits



Our innovative LNP starter kits are designed for developers to **test different lipid ratios and optimize LNP payload delivery**. These kits contain **four lipid components** that are pre-dissolved and weighed in individual vials: ionizable / cationic lipid, helper lipid, sterols, and stabilizers.

Some kits contain a cholesterol derivative, β -Sitosterol, replacing the classic cholesterol, which demonstrated a 25–45% higher rate of mRNA in-vitro transfection into HeLa cells.



More info about
our LNP starter kits

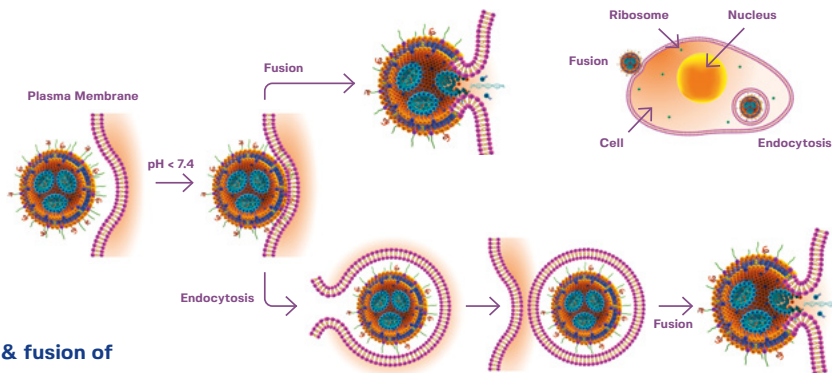


More info
about β -Sitosterol

Targeted Lipid Nanoparticle Approaches

At CordenPharma we offer multiple solutions to bring your formulations to the global markets faster, effectively and safer. We have **lipid solutions for click chemistry** such as DSPE-PEG-2000-maleimide, mPEG-5000-DBCO or mPEG-2000-DSPE-GalNAc, or we can manufacture **your peptide of choice** in one of our facilities.

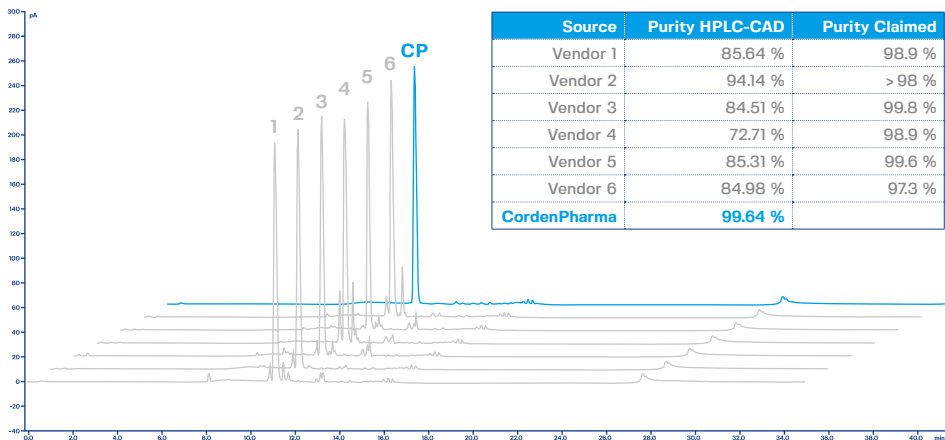
Alternatively, if you are looking for a **targeting solution for your LNP formulation**, we have a patented technology called **pHLIP®** (pH-Low Insertion Peptides), pH-sensitive peptides that exploit pH differences between healthy and diseased cells as a biomarker for targeting and delivering therapeutic and imaging agents to cells in acidic diseased tissues.



Targeting & fusion of peptide-coated LNPs by pHLIP®

Ultrapure Lipids

Our lipids are of high purity, and we can prove it. In one example, our lipid development team used advanced HPLC-CAD analysis to compare LP-01 ionizable lipids from multiple global suppliers (EU, Asia, US). The results showed significant variability in purity, with CordenPharma's LP-01 delivering the highest purity level and outperforming all other samples. This is just one demonstration of our commitment to providing high-quality lipids backed by robust analytical validation.



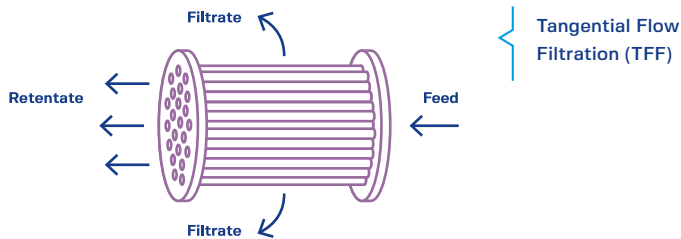
Comparison of the purity of commercially-available ionizable lipid LP-01 by HPLC-CAD developed by CordenPharma

TFF Purification

With deep expertise in purification and diafiltration, we know what it takes to **optimize a Tangential Flow Filtration (TFF) process for successful scale up** - and we apply this expertise to **LNP formulations** too.

After LNP formulations are produced, a **buffer exchange step** is critical to adjust pH and reduce ethanol content, ensuring stability and efficacy. **Ultrafiltration / diafiltration (UF/DF)** is done by TFF instruments and it plays a key role in removing residual solvents and concentrating the RNA-LNP drug product into its final formulation buffer.

Whether you're in early formulation development or preparing for large-scale manufacturing, our **expertise in non-viral delivery purification** ensures a seamless path to success.



Discover our
LNP services



Fully-Integrated Services

for All Your Product Needs

Products	Services	Manufacturing Sites
Integrated lipid excipients supply	<ul style="list-style-type: none">→ Standard and custom supplier of lipid-based nanoparticles→ DMF filling	CP Liestal, CH CP Chenôve, FR
Integrated peptide API supply	<ul style="list-style-type: none">→ Early stage to commercial peptide production for your targeted RNA delivery	CP Colorado, US CP Frankfurt, DE
Integrated oligonucleotide API supply	<ul style="list-style-type: none">→ Early-stage to phase 3 clinical supply of oligonucleotide production of your silenced RNA therapeutics	CP Colorado, US
Sterile drug product manufacturing	<ul style="list-style-type: none">→ Fill & finish→ Packaging & logistics	CP Caponago, IT

* **Our cGMP facilities** are fully compliant with current regulatory requirements and applicable standards, while undergoing frequent regulatory inspections and customer audits.





Peptides



Oligonucleotides



Lipids & LNPs



Injectables



Highly Potent
& Oncology



Small Molecules

CordenPharma

International

Aeschenvorstadt 71
4051 Basel
Switzerland

cordenpharma.com

Get in touch
with our experts

