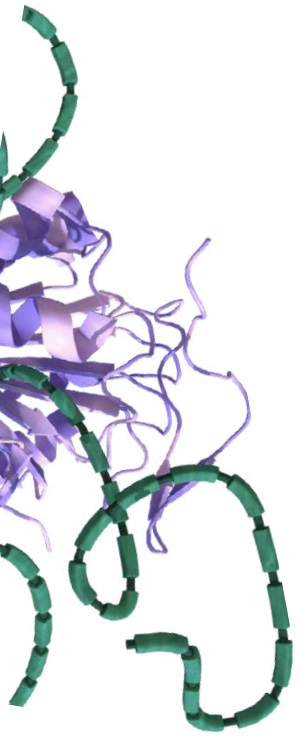




CURAPATH



# CDMO Services



REACH OUT



RESOURCES



SOCIAL MEDIA



CURAPATH

More than a CDMO

# About Curapath



**Curapath is a specialized CDMO focused on advanced drug delivery technologies using precision lipid- and polymer-based systems.** We provide end-to-end support, from early formulation and process development to GMP manufacturing of Drug Substance and Drug Product (F&F), delivering tailored, reliable, and regulatory-ready solutions.

Our expertise in LNPs, PNPs, and next-generation polymers enables the delivery of genetic material, peptides, small molecules, and more, supporting the development of innovative therapeutic products.

Curapath is more than a CDMO, it is your trusted partner driving innovation in non-viral delivery for gene therapy and beyond.

## Our sites



## The team



### Employees per team



# Your Trusted CDMO Partner for your GMP needs

From preclinical to commercial Curapath empowers your non-viral delivery journey with proven GMP expertise in polymer and lipid-based therapeutics.



## Novel Excipients

Innovative lipids & polymers including PEG alternatives



## GMP Manufacturing

Manufacturing of lipid, polymers & Bioconjugates from R&D up to GMP



## Nanoparticle Formulation

End-to-end solutions for nanoparticle drug product manufacturing



## Product Catalog

Off-the-shelf components to accelerate your clinical research

## Our integrated CDMO offer:

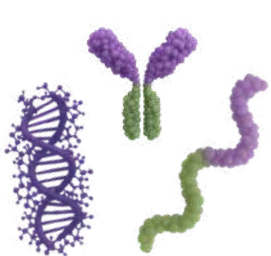
GMP Manufacturing and Formulation Development to Fill & Finish

Drug substance

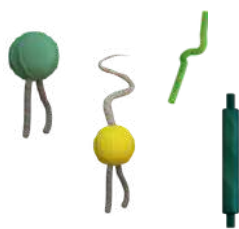
Excipients

Drug Product

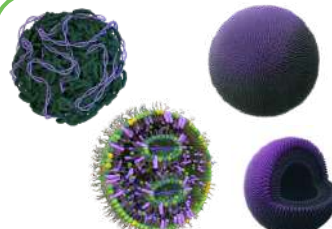
Packaging



Customer API



High purity *off the shelf* and custom polymers and lipids

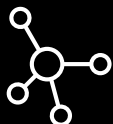


Formulation Development & adaptable workflow to your process needs



Fill & Finish: liquid and lyophilized

# Comprehensive support on your journey to market authorization



## Preclinical Development

From discovery to preclinical, we support early-stage development.

- Process development
- Formulation screening
- Pilot batch manufacturing for non-clinical and GLP tox studies
- Analytical method development



## Clinical Supply

Accelerating your path to clinic, from candidate optimization to GMP production.

We enable smooth progression toward IND filing for novel excipients, drug substances, and drug products.

- Clinical supply of investigational products
- Fill & Finish
- Process & Method validation
- Quality by Design
- Regulatory support for clinical trial submission



## Commercial Manufacturing

From late-stage development to global market launch, we deliver quality at scale.

We offer fully integrated GMP manufacturing with regulatory support to ensure timely, compliant, and reliable supply.

- Commercial batch release
- End-to-end tech transfer, scale-up & commercial readiness
- Regulatory support for NDA/BLA submissions across major markets



Supporting

**+15**

Ongoing Clinical Programs



**+100**

Customers worldwide



**2**

Life changing therapies  
(FDA license ongoing)



**61**

Customer NPS  
Industry average <20

### % Project per clinical phase

**36%** Preclinical

**17%** Phase 1

**3%** Phase 2

**20%** Phase 3

**24%** Commercial/  
recurrent manufacturing

### % Project per payload type

**73%** Nucleic Acid

**20%** Small molecule

**6%** Biologics

### Product type

**44%** Polymer excipient

**8%** Conjugate

**3%** Lipid excipient

**9%** LNP

**8%** PNP

**16%** Polymer drug

**13%** Other

### Service

**32%** Analytical Service

**12%** DP Manufacturing

**17%** DS Manufacturing

**11%** Formulation Development

**10%** Regulatory support

**18%** Other

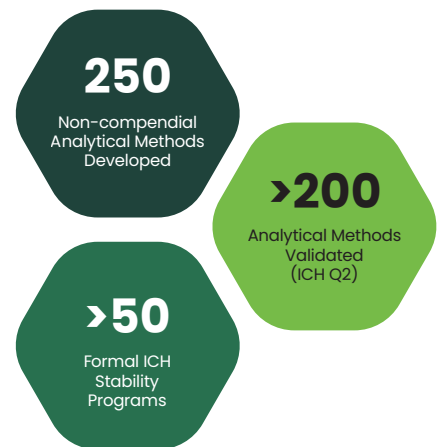
# Analytics

## Analysis, Testing Capabilities, and Milestones

Curapath's QC scientists support the development of Drug Substances and Drug Products through the entire project life-cycle. Quality control an analytical characterization will be an intrinsic part of your project. Equipment and skills are especially suited but not limited to method development, validation and stability studies. All analytical work is performed using qualified equipment within state-of-the-art GMP & GLP certified facilities.

## Curapath Analytical Experts Offer

- Routine characterizations.
- In-process and quality control.
- Identity, quantitative & limit tests.
- Impurity profiles.
- Analysis according to current monographs (e.g., Ph. Eur., USP).
- Method development and validation.
- Comprehensive cGMP documentation and release certificates.



## Method Development & QC

- Analytical method development for release, raw material control, in-process controls, and cleaning verification.
- Compendial and non-compendial methods.
- Method qualification and validation (ICH Q2).
- Forced degradation studies & ICH formal stability program including placebos.

## Relevant Assays

### Lipid & Polymer Nanoparticle Characterization

(Drug Product, Aseptic F&F)

- Particle Size, distribution, Z-potential & disparity
- API Identity & total concentration
- API % encapsulation
- Total API purity
- Lipid and polymer excipient identity & concentration
- Appearance, viscosity, osmolality, pH, VIC
- Residual solvents
- Endotoxin, bioburden, sterility, SVP, content uniformity
- Target Degree for targeted Nanoparticles

### Polymer & Lipid Excipients (Functional Excipient, Bulk Solid Release)

- Lipid & polymer identity and purity
- Polymer Mw, polydispersity and degree of polymerization
- Residual solvents
- Water content
- Mw & DP by end group analysis
- Impurities (elemental, process and degradation related)
- Enantiomeric excess
- And End Group functionalisation degree Characterisation

### Polymer-Drug Conjugates (Drug Substance, Bulk Solid Release & Drug Product)

- API identity & total concentration
- API conjugation % & free API
- Residual solvents
- Polymer Mw, polydispersity and degree of polymerization
- Enantiomeric excess
- Impurities (elemental, process and degradation related)
- Appearance, viscosity, osmolality, pH, VIC
- Endotoxin, bioburden, sterility, SVP, content

# Manufacturing Capabilities from Pre-clinical to Commercial

To reduce scale-up time and regulatory risk, this process will be based on our strong know-how of precision polymers and in our comprehensive understanding of production processes.

Curapath bridges the gap between small to medium quantities (grams to multiple hundred kilograms per year) and the highest GMP-compliant manufacturing standards.

## Manufacturing Facilities

- Four qualified clean-rooms
- Reactors up to 100 L
- Temperature range from  $-5\text{ }^{\circ}\text{C}$  to  $+200\text{ }^{\circ}\text{C}$
- Freeze dryers
- Distillation equipment
- Nutsche filters
- Tangential Flow Filtration (TFF)



## Polymer & Lipid Drug substances

- Ring-opening polymerization (NCA-ROP, Cationic-ROP...)
- Reversible Addition-Fragmentation Chain-Transfer (RAFT)
- Step-growth polymerization (Michael Addition, polycondensation...)
- Free-radical polymerization

## Bioconjugations

- Polymer Drug Conjugates
- Polymer Protein Conjugates
- Polymer Excipients
- Glycopolymers
- Linking Chemistry Optimization
- Activated Polymers

## Drug Products

- Polymeric Non-viral Vectors
- Lipid Nanoparticles
- Polymer Nanoparticles Colloidal Nanoparticles
- Hydrogels
- Hydrophilic Drug Conjugates

**Our company provides proven scale-up capabilities, analytic development and a comprehensive CMC package, including**



Preclinical Development



GMP Manufacturing



Method Development, Validation & ICH stability studies



Technology Transfer



Drug Product Formulation, Fill & Finish services to support clinical development



CMC Regulatory support for IND & BLA submission



## 0.5-10/kg batch

For clinical and commercial stage supply  
Capacity increase plan (during 2026-2027)

**+200** GMP batches Manufactured  
**+250** Non-Compendial Methods Validated

# Fill & Finish capabilities

## Our Aseptic Filling operations are ideal for Gene and Cell Therapies and Orphan Drug trials

In addition to the development of drug delivery systems, Curapath develops customized Fill & Finish approaches based on your request. As a CDMO, we can perform sterile Fill & Finish activities for a wide range of substances such as biologicals, DNA, RNA, proteins, nanocarriers, and controlled substances.

## Aseptic Fill & Finish



### Flexible formats

#### Semiautomatic filling line

- 2-20R Vials, up to 1500 vials/Batch
- 100-500mL Bottles
- 1-5L Bags

#### Automated line (through qualified partner network)

- Up to 10,000 liquid vials/batch, 2R, 10R, 20R, 50R
- Up to 4,000 lyophilized vials/batch (for 10R)



### Environmental Monitoring, Sterility Assurance & Qualified Person release



### Bulk Formulation up to 50L batch (Bioburden reduction available for shipment to third parties F&F)



Production following each market's regulatory requirements:

- Controlled rooms for **medical-device ingredients**
- ICH Q11-guided **excipient development**
- GMP / ICH Q7-aligned **drug-substance** manufacturing



# Complete set of technologies to accelerate clinical development and go-to-market strategies

	Lab	Tech batch	GMP clinical & commercial
<b>Manufacturing</b>			
Non-GMP reactors up to 50 L	✓	✓	
GMP reactors for Drug Substance up to 100 L			✓
GMP Reactors for Drug Product Formulation up to 100 L			✓
<b>Downstream</b>			
TFF / Tangential Flow Filtration (Cassettes, hollow fiber) up to 15L	✓	✓	✓
Flash Chromatography	✓	✓	✓
High Pressure Preparative Chromatography	✓	✓	✓
Crystallization / Precipitation	✓	✓	✓
Lyophilization Drug Substance	✓	✓	✓
Lyophilization Drug Product	✓	✓	Established Partnership
Knauer mixing device for LNP / PNP	✓ HTS	✓	✓
Fill & Finish capabilities up to 1500 vials / batch		✓	✓
Sterile filtration	✓	✓	✓
<b>Analytics</b>			
Analytical methods development and validation (HPLC/MS, HPLC/CAD, SEC-MALS-RI, SLS, IC, KF, ATR-FTIR...)		✓	
Stability studies / ICH guidelines		✓	
Compatibility studies		✓	
Particle characterization (CE, qPCR, Fluorescence, PSD Malvern, DLS, Zpot, UV-Assay, LC)		✓	
In vitro testing (cells bank: liver, kidney, ...)		✓	
In vivo testing / Tox studies		Established partnership	

# With this capabilities Curapath can cover all steps from preclinical to commercial phase

## Clinical, Product and Process Development lifecycle

### Clinical Development Phases



### Product and Process Development Stages



### QbD Risk Assessments & Milestones



1. Target Product Profile (TPP) identification
2. Quality Target product profile (QTTP) definition
3. Critical quality Attributes (CQA) risk assessment
4. Initial process risk assessment (pCPPs)
5. Process risk assessment

6. Design space definition
7. Control Strategy risk assessment
8. Control strategy definition
9. Ongoing improvement and support

For Polymers, Lipids & Nanoparticle formulation

## What our customers say

**61**  
Customer NPS  
Industry average <20

**9.2 AAA**  
Most Reviewed CDMO  
Best Lipid nanoparticles formulation supplier  
Best Lipid Excipient Supplier  
**SciRank**  
Make Informed Decisions

ORPHA TRADE

We only have a small project with Curapath, but communication have always been impeccable. They are easy and quick to understand what I as a customer want and need, they come up with proposals and solutions, they are always responsive, and well-prepared for The R&D team works diligently, with proper care of the product, and the holistic project strategy in mind.

**Claudia Turetscheck** Director of R&D



We have found with Curapath a partner who has a profound know-how in both technical aspects of developing and manufacturing real innovative carriers in the field of polymer therapeutics and, furthermore, a deep understanding of the administrative and documentation necessities in the pharma world.

Both are extremely important and valuable, as new developments in the field of biopharmaceuticals require a solid technical understanding from chemistry to pharmacology to biochemistry and medicinal chemistry, as well as the special regulatory aspects, which have to be matched by any party acting in the health industry.

CSO & VP BUSINESS DEVELOPMENT  
**Thomas Bruckdorfer, Iris Biotech GMBH, Germany**



Curapath has proven itself to be a capable and reliable partner. Over the past four years we have been repeatedly impressed by their knowledge and professionalism. The Curapath team has been both skilled and responsive to our needs, as well as innovative in meeting ne llenges. Simply stated, Curapath has brought real value to our programs and to company. We look forward to the next phases of our relationship.

**DANIEL J. HUANG & MICHAEL BEVILACQUA**  
Vice President of Operations & MD., PhD  
CEO, CSO, Director & Co-Founder on Macro Biologics



# CURAPATH

## CDMO Services



REACH OUT



RESOURCES



SOCIAL  
MEDIA



## CURAPATH

More than a CDMO