

Morpho

Alfasigma Contract
Development & Manufacturing

Morpho intends to be recognized as leading **Tech Driven Specialty CDMO** belonging to a global pharmaceutical company, focused on value-added development and manufacturing technologies.

It provides **end-to-end** pharmaceutical and nutraceutical solutions, tailored to meet the specific needs of its partners worldwide.

By **driving innovation**, **leveraging cutting-edge technologies**, and **offering end-to-end capabilities** with a team of skilled, accountable professionals, Morpho builds on over 75 years of contract manufacturing experience to deliver excellence at every level.



Who we are

Morpho is a **dynamic, full-service CDMO** with a **robust heritage and a clear vision for the future**. With a network of state-of-the-art facilities in Europe—specialized in complex pharmaceutical formulations—and in the United States—focused on nutraceutical production—Morpho guarantees high standards of quality and reliability at every stage.

Morpho's capabilities span a wide range of pharmaceutical forms—including sterile injectables, vaccines, oral solids, semi-solids, and more—supported by advanced formulation research, clinical batch preparation, and process validation services.

Dedicated teams of business development, project management and R&D follow and support tech transfer projects from early stage (pre-clinical and clinical trials) to commercial production.



Just as *Morpho* in **Ancient Greek** refers to shape and transformation, our CDMO is specialized in transforming raw materials into high quality Pharmaceutical products through innovative, precise, and flexible processes.



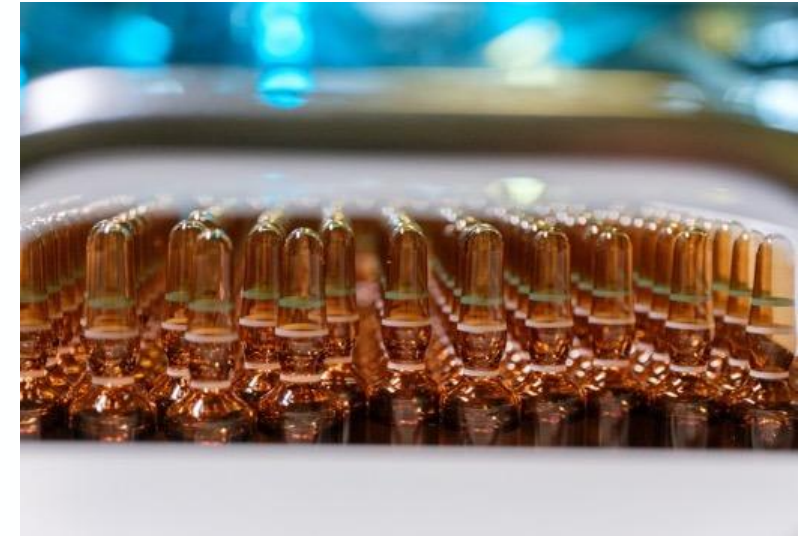
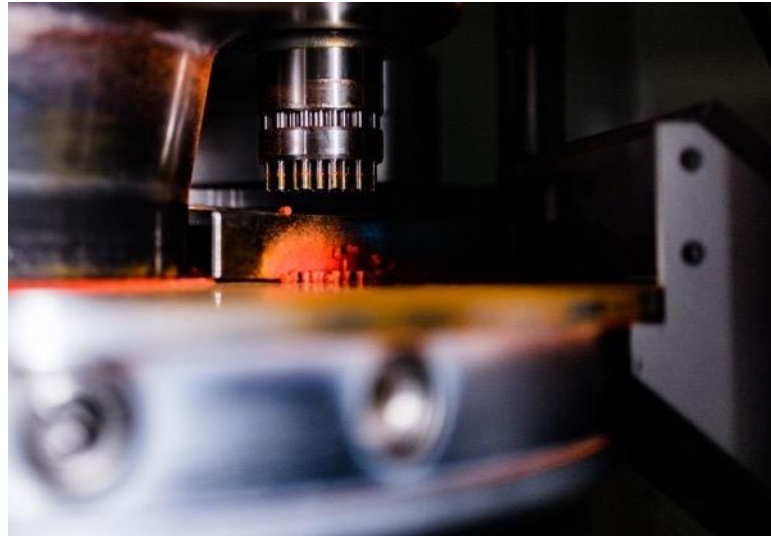
Our Path Forward

A Leading Tech-Driven Specialty CDMO within a Pharmaceutical Company

Morpho is evolving to a fully integrated CDMO by continuously expanding its capabilities in pharmaceutical technologies and analytical sciences.

The 'D' in CDMO reflects Morpho's increasing focus on advancing a pipeline of technologies and products with the goal of becoming a leading tech-driven specialty CDMO.

This transformation is supported by close collaboration between business development, project management, and R&D, enabling fast and agile responses to client needs.



Morpho in a nutshell

Morpho intends to be recognized as leading **Tech Driven Specialty CDMO** belonging to a global pharmaceutical company, focused on value-added development and manufacturing technologies.

Through its three divisions **Pharma Tech (Alanno, Pomezia and Labio 4.0)**, **Fine Chemicals (Biosint. Sermoneta)**, and **Nutra & Medical Food (US, Shreveport LA)**, Morpho provides end-to-end pharmaceutical and nutraceutical solutions, tailored to meet the specific needs of its partners worldwide.

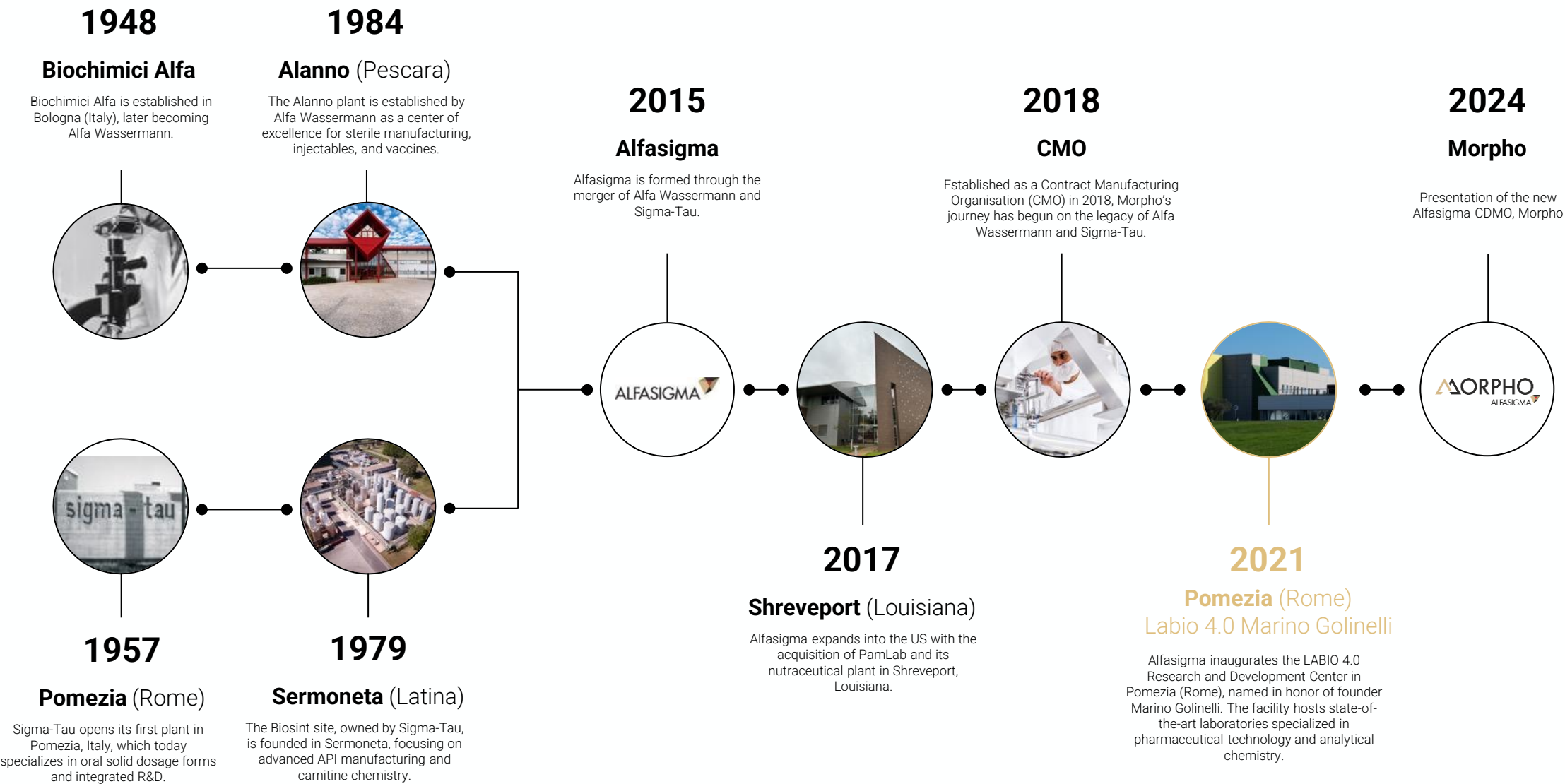
Pharma Tech

Fine Chemicals (Biosint)

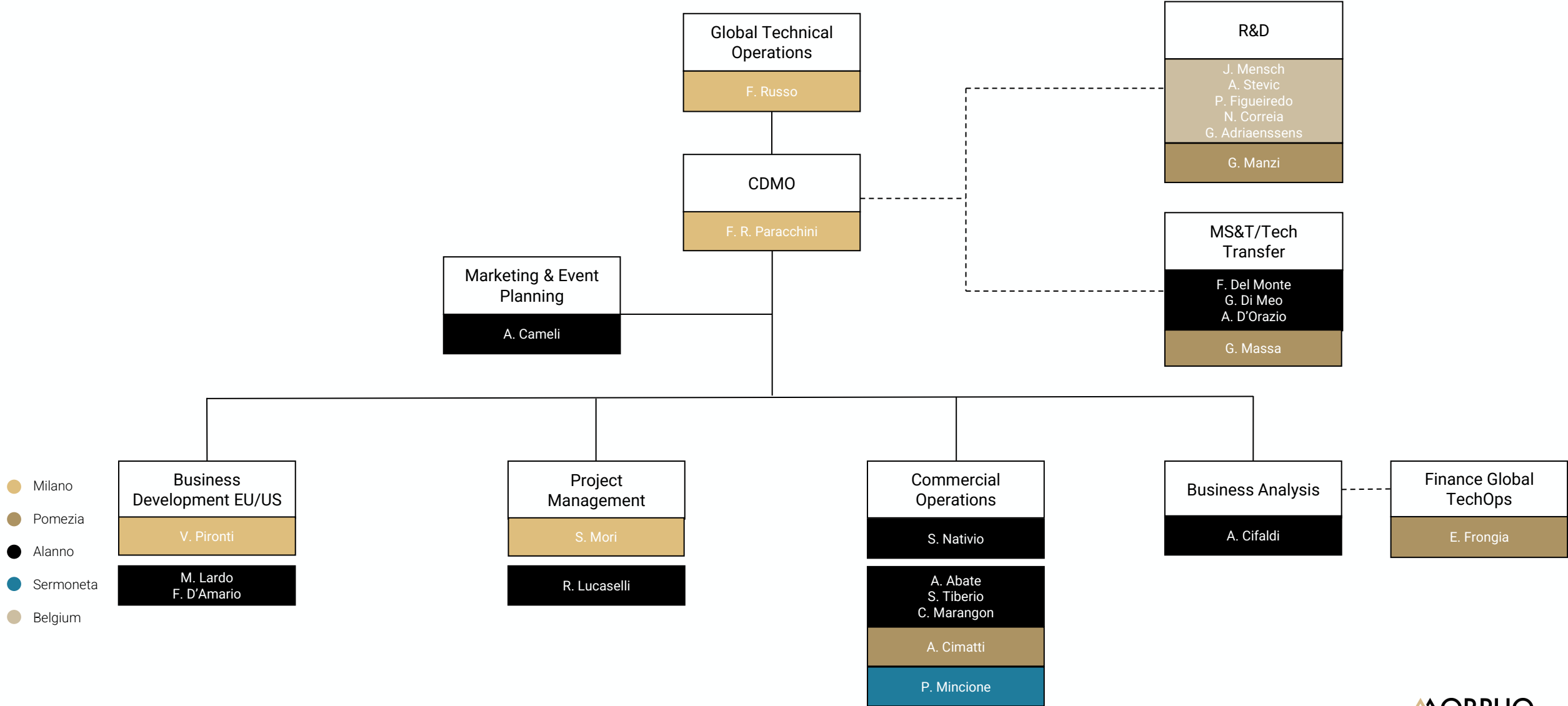
Nutra & Medical Food (US)



Strategic Milestones and Expansion



Morpho - international & diverse Org. structure

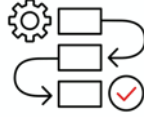


Morpho 4 pillars to our customers



Customer-centric approach

Morpho adopts a customer-centric approach, managing third-party production with the **same care** and **high standards** applied to Alfasigma's own branded products.



Integrated tech approach

It is characterized by an integrated approach combining both **development and manufacturing capabilities**, ensuring **flexibility**, **efficiency**, and **innovation** throughout the entire pharmaceutical value chain.



Providing tailored high quality services

This comprehensive model allows Morpho to support customers **from formulation development to the production of commercial batches**, for a wide range of pharmaceutical forms, providing tailored, high-quality services that meet specific client needs.



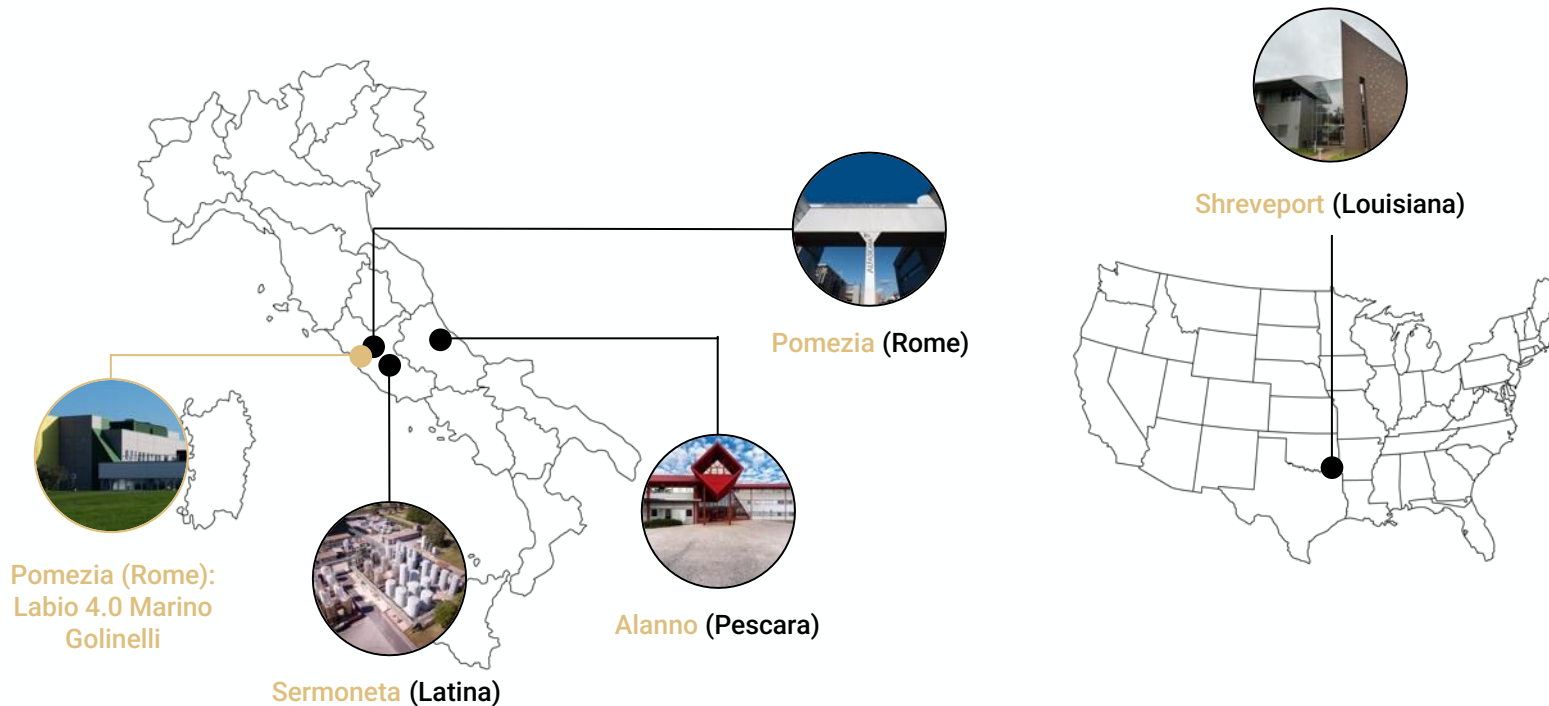
Firewall and IP Segregation

Morpho employs a pragmatic approach to **IP and Know-How segregation** to ensure maximum protection of client data. This is achieved through the establishment of "Chinese walls" to maintain the separation of proprietary information.

More-for-you is our brand promise, firmly rooted in building lasting relationships with companies that share our dedication to innovation and quality.

Our comprehensive network

Morpho's development and manufacturing network offers specialized capabilities to meet a wide range of pharmaceutical needs, with strategic locations across **Europe** and the **USA**.



Pharmaceutical forms



Liquid Injectables

Terminally sterilized & aseptic ampoules and vials, pre-filled syringes, and cartridges, vaccines



Sterile Powders and Lyophilized Products

In vials and ampoules



Semi solids and liquids oral

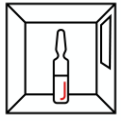
(Syrups, softgels, suppositories, vaginal pessaries)



Oral solids

(Tablets, capsules, sachets, granules in sachets, stick pack)

Expertise



Containment &
cleanroom standards



Regulatory affairs –
Quality Control & assurance



Process development
& analytical excellence



Aseptic fill-finish
technologies



Scale-up and tech-transfer
platform



GMP manufacturing

Capabilities

		Alanno Plant	Pomezia Plant	Labio 4.0 Pharm. Dev.	Shreveport Plant (for nutraceutical)	Sermoneta Plant (API only)
STERILE	Lyophilized products	✓				
	Sterile powders	✓				
	Sterile liquids	✓				
ORAL SOLIDS	Oral solids		✓	✓	✓	
	Semi-solids		✓			
	Non-sterile liquids	✓	✓			
	Biological medicinal products	✓	✓			
CHEM. SYNT.	Chemical synthesis					✓
PRIMARY PACKAGING	Blister		✓	✓	✓	
	Soft-gel		✓			
	Prefilled syringe	✓				
	Cartridges	✓				
	Vials	✓				
	Ampoules	✓				
SEC. PACK.	Secondary packaging	✓	✓		✓	✓
DEV.	Formulation & analytical dev.	✓	✓	✓	✓	
	Clinical batch manufacturing	✓	✓	✓		

Alanno (Pescara)

Italy Operations

A centre of excellence for sterile manufacturing, equipped with state-of-the-art facilities for injectable products and vaccines.



*Including corticosteroids & sexual hormones

**Including vaccines

LYOPHILIZED PRODUCTS*

- Ampoules
- Vials

STERILE POWDERS

- Sterile powder vials filling

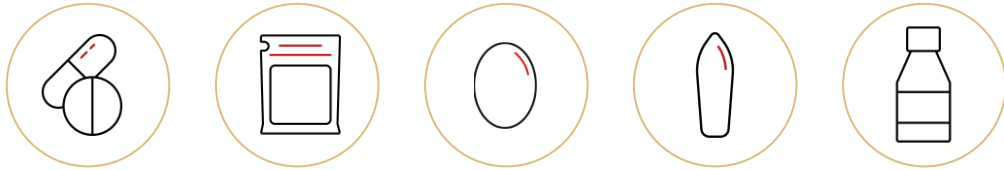
STERILE LIQUIDS*

- Small volume liquids ampoules (terminally sterilised & aseptic process)
- Small volume liquids vials (terminally sterilised & aseptic process)
- Prefilled syringes and cartridges** (terminally sterilised & aseptic process)

Pomezia (Rome)

Italy Operations

Specialising in oral solid dose forms with integrated R&D capabilities.



*Including corticosteroids & sexual hormones

ORAL SOLIDS

- Tablets* (incl. film coated)
- Capsules
- Sachets

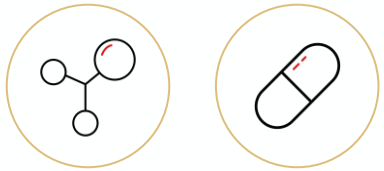
SEMI-SOLID DOSAGES AND NON-STERILE LIQUIDS

- Soft Gels
- Suppositories and vaginal pessaries
- Syrups

Sermoneta (Latina)

Italy Operations

Advanced manufacturing facility (Biosint, Alfasigma Group), with particular expertise in **carnitine** chemistry, salts and derivatives, both as **APIs and nutraceutical ingredients**, in compliance with GMPs standards. Our carnitines are Halal, Kosher, ISO 9001 certified.



PHARMACEUTICAL CARNITINES

- Levocarnitine
- Acetyl L-Carnitine Inner Salt
- Acetyl L-Carnitine Hydrochloride
- Propionyl L-Carnitine Hydrochloride

Sermoneta (Latina)

List of Carnitines L

(Carnitine, its salts, and derivatives, both as APIs and nutritional ingredients)

OUR NUTRACEUTICAL INGREDIENTS

Nutraceutical applications for our carnitines, include: newborn formula, sport management, weight reduction programs, general wellbeing, fitness and physical maintenance, mental performance, anti-stress solutions and more.

Carnitine type	Features & formulation	Application	Main benefits
L-Carnitine Base	100% active ingredient. Most suitable for formulation requiring high concentration of the active ingredient and for liquid formulations due to its great capacity to absorb water.	Infant formula Sport & Energy Drinks	- Enriches soy-based and milk infant formula - Useful for general well-being - Boosts athletic performances and accelerates Recovery
L-Carnitine Hydrochloride	82% L-Carnitine Base. It is characterized by a higher density. It is soluble, thus, can be used for effervescent formulations and tablets in general. It is not recommended for jelly capsules.	Sports & Energy Drinks	- Useful for general well-being - Boosts athletic performances - Accelerates Recovery
L-Carnitine Tartrate	68.7% L-Carnitine Base. Given its solubility is indicated for liquid and effervescent formulations.	Sports & Energy Drinks Sports tablets	- Useful for general well-being - Boosts athletic performances - Accelerates Recovery
L-Carnitine Fumarate	58.5% L-Carnitine Base. It is the most stable of all L-carnitine salts and the most palatable. Recommended for effervescent formulations, tablets and capsules.	Sports & Energy Drinks Sports & Weight loss tablets & Capsules	- Useful for general well-being - Boosts athletic performances - Accelerates Recovery - Co-factor in weight reduction program
Ultrafine L-Carnitine Fumarate	L-Carnitine Fumarate (patented) 58.0%, 2% carnitine, 41.5% + 1% fumaric acid. Mesh size: Passes 150 mesh conditioned with fumes food grade silica.	Sports & Energy Drinks Sports & Weight loss tablets & Capsules	- Finer particle size - Increases bioavailability - Decreases hygroscopicity - Conveniently formulated with oil-based ingredient
Acetyl L-Carnitine Hydrochloride/ Taurinate	Carnitine derivative, very soluble in water and suitable for liquid and solid formulations.	Memory, Learning & Concentration Beverages, Tablets, Capsules	- Memory enhancement & reduction of mental decline - Learning and concentration enhancement - Mood improvement (anti-depressant)
Propionyl L-Carnitine Hydrochloride	Carnitine derivative, very soluble in water and suitable for liquid and solid formulations.	Blood circulations Sports drinks	- Blood circulation peripheral improvement - Physical performances tolerances increase - Favours better results in longer walking distance



Shreveport (Louisiana)

US Operations

Dedicated nutraceutical production facility.



NUTRACEUTICAL & MEDICAL FOOD SOLID DOSAGES

- Tablets
- Capsules
- Stick pack
- Bottle packaging
- Blister packaging



*Including corticosteroids & sexual hormones



Labio 4.0 Marino Golinelli

Pharmaceutical Development Hub – Italy

A flexible, cross-functional facility supporting customized solutions in formulation, process optimization and regulatory readiness.



* Including High Potent/ OEL4 Drug Substances

ORAL SOLID PILOT PLANT*

Flexible. Scalable. Reliable.

- **Product Development & Scale-Up**
From concept to clinical trial readiness.
- **Scale-Down Capabilities**
For troubleshooting, process optimization and problem-solving.
- **IMP Manufacturing**
Compliant production of Investigational Medicinal Products.
- **Clinical Supply Management**
Efficient support for small-scale clinical trials.
- **Small Batch Commercial Production**
Cost-effective and high-quality manufacturing for niche markets.



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ANALYTICAL DEVELOPMENT / QUALITY CONTROL*

Precision-driven insights. Quality-assured outcomes.

- **Method Development & Validation**
Robust, reproducible analytical techniques tailored to your product.
- **Impurity Detection & Identification**
Sensitive analysis of trace impurities in formulations.
- **Structural Elucidation (NMR)**
In-depth characterization of known and suspected impurities.
- **Regulatory Support Data**
Comprehensive documentation for filings and compliance.
- **Release Testing & Batch Certification**
Ensuring each batch meets exacting quality standards.
- **Stability Studies**
Long-term assurance of product efficacy and safety.



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PHARMACEUTICAL TECHNOLOGY LABS

Innovating formulations. Optimizing processes.

- **Formulation & Process Development**
From concept to scalable manufacturing solutions.
- **Conventional & Enabling Technologies**
Including advanced drug delivery platforms and techniques.
- **Design of Experiments (DoE)**
Data-driven approach for troubleshooting and optimization.
- **Solid State Characterization**
In-depth analysis of physical forms to ensure product stability and performance.



Why partnering with Morpho

Combining **development and manufacturing capabilities** with a strong commitment to solving customers' challenges, Morpho stands out as both a solution provider and a trusted partner.

Driven by **patient-centered innovation**, Morpho aspires to deliver solutions that place patients and their needs at the core of every project.

Looking forward, Morpho is strategically positioned to become a **leading tech-driven specialty CDMO**.

By focusing on innovation, differentiated technologies and long-term partnerships, committed to creating exceptional value for our clients.



Thank You

If you want more information please
contact the Morpho - CDMO Office:

Morpho@alfasigma.com

