











Hovione has developed a range of customized particle engineered APIs with superior powder properties and a suite of innovative, highly specialized Device Platforms that are able to address the challenges in your formulation development.

Inhalation

Particle Engineered/Customized APIs

Corticosteroids

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
Fluticasone Furoate	 Inhalation  Nasal	397864-44-7	✓	CEP, US DMF
Fluticasone Propionate	 Inhalation  Nasal  Topical	80474-14-2	✓	CEP, US DMF, JP DMF, CN DMF, KR DMF
Mometasone Furoate Anhydrous	 Inhalation  Nasal  Topical	83919-23-7	✓	CEP, US DMF
Mometasone Furoate Monohydrate	 Inhalation  Nasal	141646-00-6	✓	CEP, US DMF, CN DMF







LABA/LAMA

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
Umeclidinium Bromide	 Inhalation	869113-09-7	✓	DEV, TECH PACK
Vilanterol Trifenatate	 Inhalation	503070-58-4	✓	GMP, TECH PACK
Salmeterol Xinafoate	 Inhalation	94749-08-3	✓	CEP, US DMF

Formulation Services

- Carrier-based, composite and carrier-free formulation development
- Generic deformation and formulation services
- Novel formulation development
- Spray Drying, Jet Milling and Wet Polishing particle engineering capabilities
- API particle customization to tailor formulation performance
- Dry powder inhalation drug product manufacturing:
 - High and low shear powder blending
 - Capsule, reservoir, and blister filling
- Biorelevant analytical formulation testing
- Integrated API, excipient, blending, device and analytical formulation capabilities

Patented Device Platforms

DEVICE	ROUTE OF ADMINISTRATION	TYPE	DOSING	DOSE RANGE	APPLICATIONS
Nasal Powder Device	 Nasal	Capsule	Single-use	Up to 40mg	Acute treatments and Rescue therapies
Sunriser® DPI	 Inhalation	Capsule	Multi-use	Up to 50mg	Asthma, COPD, Cystic Fibrosis and more
TwinCaps® DPI	 Inhalation	Reservoir	Single-use	Up to 2 x 30mg	Anti-virals, Vaccines, rescue therapies and more
Large Dose DPIs	 Inhalation	Reservoir	Single-use	Up to 8 x 50mg	Antibiotics, Biologics, Anti-virals and more
PowdAir® DPI	 Inhalation	Capsule	Reusable	Up to 50mg	Asthma, COPD, Cystic Fibrosis and more
Papillon DPI	 Inhalation	Blister	Reusable	Up to 50mg	Asthma, COPD, Cystic Fibrosis and more

- Available for integrated formulation-device development, licensing, supply and customization
- Active collaborations with device partners to bring the right dry powder inhalation device for every formulation

From feasibility to commercial



Contact our experts today to know how to integrate API, excipient, blending, device and analytical formulation capabilities.

hovione.com



Oral, Injectable, Topical and Ophthalmic

Security of supply

Hovione provides the peace of mind of a high-quality manufacturer who is a founding member of Rx-360 and has an unblemished regulatory track record.

Antibiotics

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
Doxycycline Hyclate	Oral Injectable	24390-14-5	✓	CEP, US DMF, JP DMF, CN DMF
Doxycycline Monohydrate	Oral	17086-28-1	✓	CEP, US DMF

Corticosteroids

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
Betamethasone Acetate	Ophthalmic Injectable	987-24-6		US DMF
Betamethasone Disodium Phosphate	Ophthalmic Injectable Topical	151-73-5		US DMF, JP DMF, CA DMF
Halobetasol Propionate	Topical	66852-54-8	✓	ASMF, US DMF, CA DMF
Hydrocortisone Aceponate	Topical	74050-20-7	✓	ASMF & VMF

Antiparasitic

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
Ivermectin	Oral Topical	70288-86-7		CEP, US DMF, JP DMF

Excipients

PRODUCT	ROUTE OF ADMINISTRATION	CAS NUMBER	CUSTOMIZED PARTICLE SIZE	REGULATORY STATUS
DTPA (Pentetic Acid)	Injectable	67-43-6		GMP, TECH PACK, CN DMF

High-purity, cGMP-compliant chelating agent, suitable for use as a biopharmaceutical excipient and bioprocessing chemical in radiopharmaceutical applications, and others.

Drug Delivery Expertise

- Solubility Enhancement Platforms:
 - ASD-HIPROS, Dispersome®
- Sustained Release
- Ophthalmic
- Inhalation and Nasal

Manufacturing Services

- Integrated offer: from chemical synthesis to drug product manufacturing
- Bottom-up and Top-down particle engineering by:
 - Spray drying, Spray congealing, Hot melt extrusion, Co-precipitation, Crystallization and Milling
- Batch tableting and precision capsule filling
- Continuous Tableting

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