Pfizer CentreOne

Small molecule APIs made with **compelling science**

An **altogether different** approach to small molecule manufacturing

Small molecule APIs made with compelling science.

Open dialogue. Successful delivery.

Welcome to Pfizer CentreOne. We're a global CDMO backed by Pfizer resources specializing in small molecule API synthesis.

We can perform almost any kind of chemistry you need.

Discover the difference with Pfizer CentreOne. Science at its best.

Working together with our customers, we combine our technical and commercial knowledge with open dialogue to solve challenges. At Pfizer CentreOne, we're dedicated to delivering on what we promise. Which is surprisingly refreshing.

An open and collaborative approach with Pfizer CentreOne.

With over 40 years of experience, there are not many situations or challenges we haven't encountered. And we pass those learnings on to help improve your project.

Our manufacturing capabilities span the requirements of Pfizer's global small-molecule portfolio. Our open and collaborative approach means we can harness all of these resources as we strive to offer you what you need, when you need it.

Our Kalamazoo, Michigan facility serves your small molecule API manufacturing needs, with more than one million kilograms of finished API per year.

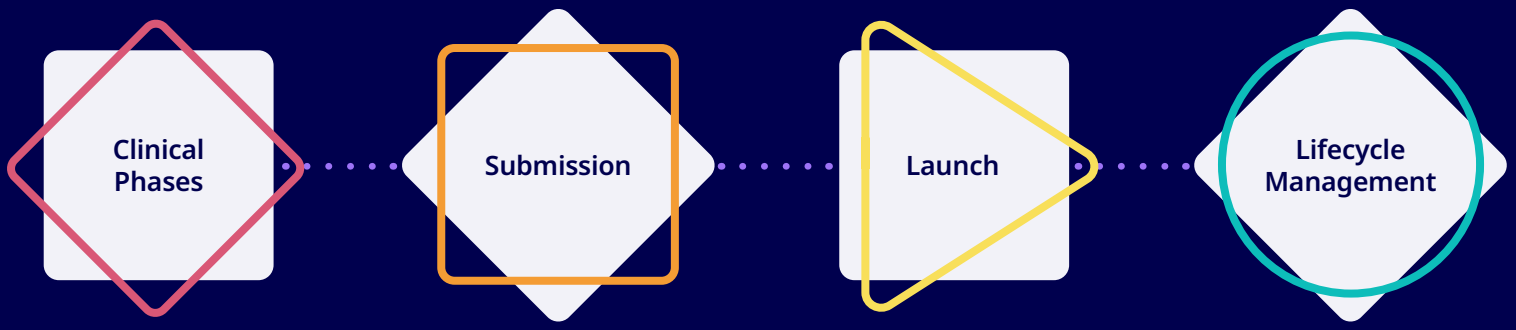
Our capabilities include:

- Complex organic synthesis
- Fermentation and bioprocessing up to 150,000-liter scale with several isolation technologies
- Milling and micronizing
- Process optimization and scale-up
- Process industrialization

You can rely on us for high-quality API synthesis, from process development through long-term supply. Discover the difference with Pfizer CentreOne. Science at its best.

Capabilities at a glance:

Compound types	Most small molecules excluding cytotoxics and betalactams
Batch sizes	From 100 grams to 3+ metric tons
Analytical development	• cGMP-compliant laboratories • Full suite of analytical tools • Method development services • Structure elucidation
Process development	• Route selection • Process optimization, including: – Telescoping – Reaction monitoring through PAT • Process throughput • Cleaning method development, validation and recovery studies
	• Pilot/scale-up • Stability • Raw material sourcing • Cleaning validation • Process safety management • Starting material justification • Regulatory submission support



- Development & manufacturing
- Technical transfer
- Formulation
- Scale-up/validation

- CMC preparation
- Final package
- Pre-approval inspection

- Drug to market
- Production efficiency studies

- Cold-chain management
- Supply/distribution
- Drug delivery expansion

Small-scale cGMP manufacturing.

As your API demand grows, we grow with you. While we can manufacture volumes in metric tons, we can also go small. If you have a chemistry-based compound and need smaller batches for clinical or commercial use, we can offer the quantities you need at our cGMP small-scale/pilot facilities until you're ready for full-scale manufacturing.

We work to scale with you, every step of the journey.

We have a roster of analytical chemists, organic chemists and engineers who are adept at developing and trouble-shooting analytical methods and processes and have the expertise to help scale up your API process.

Capabilities in detail:

Organic synthesis	Hydrogenation Acetylene chemistry Cyanide Hydrofluoric acid Hydride Cryogenic processing Gaseous HCl Organometallic (Grignard/ organometallic) DIBAL reductions Chlorine Chromatography Chlorinated solvents Ozone
Particle sizing	Sieving Air classifier milling Comil (low-energy deagglomeration) Hammer mill Sturtevant micronizer Jetpharma micronizer
Fermentation and bioprocessing	Microbial/small molecule fermentation Algae, E coli, yeast fermentation Biotransformations Enzymatic conversions Centrifugation Decanting centrifugation Resin adsorption Nanofiltration Pilot-scale capabilities Culture/process development
Containment and segregation	Potent OEL: < 1 µg/m^3 (0.5–60 kg) OEL: 1– 10 µg/m^3 Controlled substance CII, CIII Steroids and hormones Prostaglandins
Regulatory overview cGMP inspections	ANVISA, EMA, FDA, Health Canada, MHRA, NMPA, PMDA, Korean FDA, TGA

Discover how we're **altogether different**

Visit us at **www.pfizercentreone.com**

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