



Advancing Small Molecules with Science, Scale and Speed

From Grams to Multi-Ton Manufacturing: KSMs,
RSMs, Intermediates & APIs



From route scouting and process development to cGMP manufacturing and commercial supply, Cohance Lifesciences delivers integrated small molecule solutions that combine scientific expertise, advanced process technologies, and manufacturing excellence to accelerate molecules to market.

Development Excellence



Route Scouting

Efficient synthetic pathway design



Process Development

Robust and scalable processes



Analytical Development

Methods, validation & impurity profiling



Process Safety

RC1, DSC & ARC



Regulatory Support

IND, IMPD & DMF



Specialized Chemistry

Hydrogenation, Cyanation, Cryogenics & Flow Chemistry

Scale-Up & Manufacturing Excellence



5 Manufacturing Sites

Flexible capacity across development, pilot and commercial scales



1,300+ KL Reactor Capacity

Supporting gram-scale batches through multi-ton commercial supply



400+ Reactors

Wide range of reactor sizes and configurations for efficient scale-up



Global GMP Network

USFDA-audited facilities with strong regulatory compliance



Advanced Manufacturing Technologies

Flow chemistry, High-pressure systems, Cryogenic operations & Automation



Flexible Supply Models

Clinical Supply, Validation Batches & Commercial Manufacturing



Manufacturing Footprint (India)

- Nacharam*
- Jeedimetla
- Pashamylaram*
- Parawada (Vizag)
- Suryapet

*US FDA Audited

Route Scouting → Process Development
→ Scale-Up → GMP Manufacturing
→ Commercial Supply



Case Study

Continuous Flow Process Intensification

Accelerating Manufacturing Through Automation and Flow Chemistry

A leading pharmaceutical manufacturer faced capacity constraints while producing a key intermediate for an anti-Parkinson therapy. The conventional batch process was characterized by long reaction times, high reactor occupancy, lower yields, and elevated manufacturing costs, limiting production flexibility and future growth.

To overcome these challenges, developed a fully automated Continuous Plug Flow Reactor (PFR)-based process. By optimizing critical process parameters including temperature, pressure, residence time, and reagent ratios, the team transformed a resource-intensive batch process into a highly efficient continuous manufacturing platform.

The result was a safer, faster, and more scalable process delivering significant gains in productivity, quality, capacity utilization, and cost efficiency.

The Transformation

Parameter	Conventional Batch Process	Automated Continuous PFR
Reaction Time	24 Hours	90 Minutes
Reaction Time	36 Hours	~17 Hours
Reaction Time	53%	80%
Reaction Time	5.04 MT	13.44 MT

Key Technologies

Continuous Plug Flow Reactor (PFR)

Real-Time Process Monitoring

Process Safety & Scale-Up Engineering

Automated Process Control System

Advanced Flow Chemistry Platform

Business Impact

- **94% reduction** in reaction time
- **2.7× increase** in manufacturing capacity
- Yield improvement from **53% to 80%**
- Annual savings of **~US\$172K**
- Enhanced safety through reduced operator intervention
- Industry 4.0-ready automated manufacturing platform

Outcome

Transforming a conventional batch process into a high-efficiency continuous manufacturing platform, enabling faster delivery, improved quality, greater capacity, and sustainable cost advantages.



Global GMP Network | Back-integrated supply chain

Cohance



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