



Aptar Pharma Launches Integrated System-Level Framework to Support Injectable Drug Development

Combines partner collaboration, system-level testing and performance data packages to support earlier development decisions and help address evolving USP <382> expectations

Crystal Lake, Illinois, July 17, 2026 – Aptar Pharma, a global leader in drug delivery, dosing, protection technologies and services, today announced a collaborative system-level framework for injectable drug delivery systems. Building on more than a decade of supporting pharmaceutical customers in respiratory and ophthalmic drug development, Aptar Pharma will work with partners to develop data packages that combine integrated system-level testing and performance data for injectable therapies. Designed to provide earlier insight into assembled-system performance, these data packages help customers make more informed development decisions, better manage risk across development programs and support the delivery of safe and effective therapies to patients.

As biologics, sensitive vaccines and combination products evolve, pharmaceutical companies are seeking earlier insight into assembled-system performance to support development decisions and address the expectations of USP <382>.

Aptar Pharma's Injectables division is built on more than 60 years of experience in elastomeric components for injectable drug delivery systems. By developing elastomeric solutions for these systems and working with leading partners across the injectable value chain, including pre-filled syringe (PFS) manufacturers, Aptar Pharma brings together partner collaboration, component expertise and integrated data to support customers throughout development. The current focus is on partner PFS platforms incorporating Aptar Pharma rigid needle shields (RNS) and PremiumCoat® elastomeric plungers for sensitive drug formulations, including highly viscous biologics.

Container closure systems are often assessed component by component, requiring co-ordination across multiple suppliers and issue resolution as development progresses. This can make it challenging for customers to establish a complete view of assembled-system performance early in development. Aptar Pharma's approach helps address this by supporting earlier system-level evaluations with partners and generating data on interactions between critical system components, in line with USP <382> principles.

Through its partner network, Aptar Pharma is developing data packages covering functional performance, container closure integrity testing (CCIT), sealing performance and component interactions to help customers:

- **Support** earlier container closure decisions with relevant system-level data
- **Inform** internal testing strategies in line with evolving USP <382> expectations
- **Build** confidence in assembled-system performance before late-stage scale-up.

Different biologics and vaccines require different system configurations depending on molecule characteristics, development pathways and manufacturing requirements. This collaborative system-level framework is designed to support different development pathways through multiple supply options, established high-quality components and relevant performance data.



“As injectable therapies become more complex with the rise of biologics and combination products, USP <382> places greater emphasis on system-level understanding,” said Audrey Chardonnet, VP Global Market Development, Aptar Pharma Injectables. “Our approach is designed to help customers make more informed development decisions while preserving the flexibility required for different molecules and formats.”

Aptar Pharma’s framework is designed to support customers’ development decisions with system-level insights and data packages, while customers remain responsible for demonstrating the suitability and compliance of their final drug product packaging and delivery systems.

Next Steps

Aptar Pharma plans to progressively introduce other partner collaborations and supporting data packages as part of this approach, with each initiative designed to address specific system configurations and development needs across biologics and vaccine applications.

About Aptar Pharma

Aptar Pharma is part of AptarGroup, Inc., a global leader in drug delivery, dosing and protection technologies, and consumer product dispensing. Aptar partners with the world’s top healthcare and consumer brands to deliver medicines and create exceptional user experiences. Serving diverse markets, from pharmaceutical to beauty to food and beverage, Aptar combines market expertise with proprietary design, engineering and science to develop innovative solutions that help improve lives worldwide. Headquartered in Crystal Lake, Illinois, Aptar employs 14,000 dedicated people across 20 countries. Learn more at www.aptar.com.

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