MGA MedTech and Inside Therapeutics: An Industrial Partnership Serving Innovation in Nanomedicine

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MGA MedTech, a specialist in the industrialization of high-precision medical devices, announces its partnership with Inside Therapeutics (InsideTX) for the production of TAMARA, a revolutionary microfluidic platform for nanomedicine development.

When Industrial Excellence Meets Deeptech Innovation

This partnership illustrates the convergence of two complementary areas of expertise serving tomorrow's healthcare. On one side, **Inside Therapeutics**, a French TechBio company founded in 2022 and recognized as Deeptech by Bpifrance, which is streamlining lipid nanoparticle (LNP) formulation through its proprietary technology. On the other, **MGA MedTech**, with its proven experience in industrializing complex medical devices and its Industry 4.0 facility based in Mably.

TAMARA: THE GAME-CHANGING PLATFORM FOR RNA THERAPY DEVELOPMENT

The TAMARA system represents a major game changer for pharmaceutical laboratories and biotech working on RNA-LNP-based therapies—the nanomedicines that notably enabled the rapid development of mRNA vaccines against COVID-19.

A Unique Microfluidic Technology

TAMARA distinguishes itself through several major technological innovations:

- **An Unparalleled "All-in-One" System**

Unlike competing solutions that require two separate machines, TAMARA covers the entire preclinical R&D workflow on a single platform. With an operating range from 200 µL to 30 mL, the system allows seamless transition from low-volume screening to larger-scale in vivo studies.

- **Reusable chips & Zero formulation waste: A Decisive Economic Advantage**

In nanomedicine development, reagents like RNA can cost several thousand euros per milligram. TAMARA's optimized fluidic design completely eliminates "head and tail losses," enabling near 100% sample recovery. Combined with reusable microfluidic chips, this feature offers laboratories a drastic reduction in operational costs.

- **A Flexible Dual-Mixer Microfluidic Chip**

Each chip integrates two distinct mixing geometries—a Herringbone mixer and a Baffle mixer—offering researchers utter flexibility to optimize their formulations. This approach transforms the chip from a simple consumable into a versatile research tool.

Validated Performance

TAMARA delivers remarkable quality results:

- Flexibility in nanoparticle types: From RNA-LNP, to liposomes, polymeric and peptides nanoparticles
- Particle size adjustable from 50 to 300 nm
- Polydispersity index (PDI) below 0.2, ensuring highly uniform nanoparticle populations
- Encapsulation efficiency up to 98% for RNA-LNP formulations
- Exceptional reproducibility with less than 3% variation between batches
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Integrated Cutting-Edge Technology

The system's core relies on integration of Elveflow's high-performance OB1 microfluidic flow controller. This strategic technological partnership guarantees:

- Precise, contact-free flow control, eliminating cross-contamination risks
- Excellent responsiveness and stability to ensure 100% sample use
- Total control of critical parameters (TFR and FRR) to finely adjust nanoparticle characteristics

MGA MEDTECH'S ROLE: FROM R&D TO INDUSTRIAL PRODUCTION

For InsideTX, choosing MGA MedTech as an industrial partner is based on several key factors:

Expertise in High-Precision Industrialization

MGA MedTech has recognized experience in producing complex medical devices requiring tight tolerances and impeccable quality. This expertise is essential for transitioning from prototype to initial TAMARA production runs while maintaining the system's exceptional performance.

An Industry 4.0 Facility Serving Quality

The Mably facility integrates the most advanced technologies in traceability, quality control, and production management. This infrastructure ensures consistency and reliability of TAMARA systems produced—an absolute prerequisite for equipment destined for the pharmaceutical sector.

Responsiveness and Agility

MGA MedTech's ability to respond quickly to market developments and InsideTX's specific needs is a major asset in a rapidly evolving sector like RNA therapies.

An Eco-Responsible Approach

Local production in France, process optimization, and MGA MedTech's commitment to eco-design fully align with a sustainable development approach—a value shared by both companies.

A team fit

Both Inside Tx and MGA teams consider human fit as a key asset for long-term relationship, especially considering tech hardware industry. Local production, France reindustrialization and positioning in the healthcare industry are shared objectives of the two companies.

A PARTNERSHIP SERVING ACCESS TO INNOVATIVE THERAPIES

Beyond the purely industrial aspect, this partnership is part of a common vision: **accelerating patient access to RNA-based therapies**.

Nanomedicines represent the future of many therapies, from cancer to rare genetic diseases. But their development remains complex and costly. By providing laboratories with a tool that simplifies, accelerates, and reduces preclinical R&D costs, InsideTX and MGA MedTech directly contribute to bringing these promising therapies closer to the patients who need them.

Prestigious Clients and International Expansion

TAMARA technology has already convinced major players in the pharmaceutical industry and research, including OSE Immunotherapeutics, Eli Lilly, Servier, University Medical Center Utrecht, ETH Zurich, and UCL London.

After a strong start in Europe, InsideTX is pursuing international expansion with strategic distribution partnerships in Asia & North America

Future Prospects

This partnership marks an important milestone for both companies. For InsideTX, it's about securing reliable, quality production capacity to meet growing market demand. For MGA MedTech, it's an opportunity to strengthen its positioning in the biotechnology sector and contribute to an innovation that could transform the therapeutic landscape of coming decades.

Production of the first TAMARA systems by MGA MedTech is already underway, with the first five units delivered in September 2025.

ABOUT MGA MEDTECH

MGA MedTech is a French specialist in the industrialization and production of high-precision medical devices. Based in Mably, the company applies its engineering expertise, Industry 4.0 facility, and mastery of quality processes to serve medical innovations.

ABOUT INSIDE THERAPEUTICS

Inside Therapeutics is a French MedTech company founded in 2022, recognized as Deeptech by BPI France. The company develops cutting-edge instruments and services to streamline nanomedicine development, particularly RNA-LNP-based therapies. Its TAMARA platform revolutionizes nanoparticle formulation in preclinical R&D.

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