

## Evonik expands its formulation capabilities for lipid nanoparticles used for mRNA and gene therapies

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- Collaboration with KNAUER to streamline and improve the scale-up of LNP formulations
- Significantly cuts initial pre-clinical development times
- Further expansion of offerings for mRNA and gene therapies

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**Essen, Germany.** Evonik is collaborating with KNAUER Wissenschaftliche Geräte GmbH, a manufacturer of scientific instruments, to improve the upscaling of lipid nanoparticle (LNP) formulations. By combining Evonik's formulation and scale-up expertise with KNAUER's technological know-how, customers can improve efficiency and increase speed to market, significantly cutting the initial pre-clinical development time.

As part of the company's Nutrition & Care division, Evonik's Health Care business is leveraging partnerships with life science and industry leaders to expand its portfolio of biosolutions, including innovations in nucleic acid-based medicines.

"Our extensive expertise in chemistry and formulation science has enabled us to capture a significant proportion of the growing market for mRNA and gene therapies. Thanks to our collaboration with KNAUER, we are now even better positioned to offer differentiation options," said Yann d'Hervé, head of the Health Care business line at Evonik.

Nucleic acid therapeutics represent a huge and expanding proportion of the overall parental drugs market. Evonik supplies pharmaceutical companies worldwide with lipids and LNP drug product development activities. The LNP market alone is estimated to be over US\$600 million (up to US\$1 billion) with continued growth projected over the next decade.

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"Together with KNAUER, we can increase the speed with which we go from very small-scale prototypes to production-scale lead formulations, and then directly into GMP production of drug products," said Andrea Engel, head of Growth Projects Evonik Health Care.

KNAUER is known for its high-end scientific instruments used in research and commercial applications. Recently, Evonik implemented KNAUER's IJM NanoScaler Pro technology, which addresses the long-standing challenges in nucleic acid LNP formulations by reducing the need for labor-intensive and time-consuming experiments, thereby significantly reducing the time and material costs associated with screening for optimal LNP formulations on platforms that do not necessarily upscale when introduced into more proven IJM large scale systems.

"By working hand-in-hand with Evonik, we are confident that our areas of expertise complement each other, and that exceptional formulation and technology will lead to improved patient outcomes," said Anja Fuss, head of Purification & Customized Solutions at KNAUER.

Lipids are the building blocks of living cells and are essential for the efficient encapsulation and delivery of mRNA and other nucleic acid-based drugs. The nucleic acids are encased in an LNP composed of specific lipids, which not only protects the nucleic acid from degradation, but also ensures its safe delivery into cells where it can be released. LNPs have emerged as the most advanced drug delivery system, highlighted by their role in the global fight against COVID-19.

Evonik Vancouver Laboratories, formerly known as Transferra Nanosciences Inc. or Northern Lipids, has been a leading CDMO for LNP/liposome-based formulations for nearly 30 years. The site has an unparalleled track record in early-stage development, scale-up and production of lipid-based formulations for gene delivery and other advanced nanomedicines. It complements Evonik's global lab and production network, which includes a cGMP facility in Hanau, Germany, for the development and manufacture of small batches of lipids for clinical and small-scale

commercial manufacturing. Construction is also underway at Evonik's Tippecanoe site in Indiana, USA, for a new manufacturing facility for the rapid scale-up and production of specialty lipids.

### **Further Information**

Learn more about mRNA and gene delivery at Evonik:  
<https://healthcare.evonik.com/en/drugdelivery/mrna-and-gene-delivery>

Learn more about Knauer: <https://www.knauer.net/>

### **Company information**

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €15.3 billion and an operating profit (adjusted EBITDA) of €1.66 billion in 2023. Evonik goes far beyond chemistry to create innovative, profitable, and sustainable solutions for customers. More than 33,000 employees work together for a common purpose: We want to improve life today and tomorrow.

### **About Nutrition & Care**

The focus of the business of the Nutrition & Care division is on health and quality of life. It develops differentiated solutions for active pharmaceutical ingredients, medical devices, nutrition for humans and animals, personal care, cosmetics, and household cleaning. In these resilient end markets, the division generated sales of €3.61 billion in 2023 with more than 5,600 employees.

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