

Towards a new concept in drug delivery

The Challenge

As many as 10,000 compounds or molecules are screened every year for drug development purposes, but only few of them successfully achieve clinical launch.

Additionally, the safety and effectiveness of many medical therapies are limited due to poor drug uptake, non-specificity to target tissues, systemic side effects, or poor adherence to therapy. Reasons why, an improved drug delivery system that enhances efficacy outcomes and patients' life quality is needed.

The Company

In 2022, Lifesome Therapeutics was created as a new start-up committed to engineering the future of drug delivery. At Lifesome, a talented team of scientists is harnessing the unique characteristics of a revolutionary product development technology to create novel **therapeutic nanocarriers** that can address critical unmet needs and transform treatment outcomes.

The Technology

To address these critical unmet needs, Lifesome is using its proprietary lipid technology: **OHMLINE**.

Unlike the vast battery of drug delivery systems or platforms, Ohmline offers the unique feature of acting as a therapeutic nanocarrier itself, which allows a rational design of synergistic drug encapsulation. Additionally, this lipid can be used as a monomer or can be easily engineered as another different conformational structure like nanotubes, nanoparticles or hydrogel for depot, which provides significant advantages, compared to other available technologies in the market. Our delivery platform is designed and manufactured to create the next generation of therapeutic nanocarriers with improved delivery compliance, safety and efficacy.

The molecule, synthesis method and therapeutic uses are protected by proprietary patents PCTW02011/101408A1 and PCTEP2023086117

The Pipeline

Lifesome's lead product, Ohmline, presents therapeutic properties itself, thus constituting the first therapeutic nanocarrier in the market. Its efficacy has been demonstrated *in vivo*, significantly reducing cell migration and metastasis even at low concentrations, thus enhancing its safety profile. In fact, no adverse effects were observed at therapeutic doses (and higher). In addition, Ohmline has also shown antibiotic properties *in vitro*. Lifesome plans to initiate clinical development for Ohmline cancer treatment by late 2025.

Lifesome is also developing Ohmline as an antimicrobial nanocarrier and exploring how this unique technology can address other important diseases and potential applications.

Discovery	Research	Lead- optimization	Pre-clinical	Phase I/II
Ohmline Cancer&metas	tasis			
Ohmline Antimicrobial r	esistance			
Other undisclo projects	sed			