

## CASE STUDY

# MARKEN DELIVERS LIFE-SAVING GENE THERAPY TREATMENT OVER 3,000 MILES FROM GERMANY TO THE UAE IN UNDER 48 HOURS

## DELIVERING HOPE TO CHILDREN IN NEED, ONE SHIPMENT AT A TIME

To treat Duchenne muscular dystrophy (DMD) in children aged 4 to 5 years with a confirmed mutation in the dystrophin gene, pharma manufacturers have developed a single-dose, adeno-associated virus (AAV)-based gene transfer therapy. It is designed to address the underlying genetic cause of this severe, progressive condition, which leads to muscle weakness and degeneration throughout the body.

FDA-Approved, this therapy brings hope to children who suffer from this debilitating rare disease, however its effectiveness is directly dependent on reaching the patients who critically need it.



### OBJECTIVE

Given less than 24 hours' notice, Marken was tasked with implementing a proactive, specialized supply chain strategy to expedite the safe delivery of the temp-sensitive, advanced therapy at  $-75^{\circ}\text{C}$  from Germany to the United Arab Emirates (UAE). This vital treatment required transport across 3,000 miles in under 48-hours to a young child in the hospital suffering from Duchenne muscular dystrophy (DMD).

### CHALLENGE

- **International Route Planning:** Reliable, secure transit route for accelerating distribution from Germany to the UAE via Switzerland
- **Treatment Specifications:** Qualified packaging required to maintain temperature integrity at  $-75^{\circ}\text{C}$  for 3,000 mile transport, with stringent handling protocols, including dry ice replenishment
- **Accelerated Timelines:** Shipment executed with less than 24 hours' notice, ensuring the therapy reached the patient across the globe within 48-hours
- **Supply Chain Visibility:** Real-time end-to-end tracking and chain of custody to all stakeholders throughout the entire shipment journey

Faced with numerous complexities due the hypersensitive nature of this treatment, combined with accelerated turnaround times, end-to-end visibility requirements, regulatory compliance challenges and cross country lane mapping, Marken Germany teams were ready to support.

## SOLUTION

Marken's Advanced Therapy Division (ATD) meticulously designed and implemented a customized supply chain solution, safeguarding pharmaceutical integrity throughout the entire shipment journey.

With operational readiness being paramount, Marken performed shipping lane verifications, in-depth risk assessments and contingency planning to anticipate and mitigate any unforeseen disruptions. To ensure pertinent transit specifications were met, Marken team members underwent rigorous training such as dry-ice handling and refilling processes and driver qualification testing. Working closely with the client, Marken developed Client Operating Procedures (COP), bespoke tools and protocols to maintain maximum visibility and high-touch care over the international transport.

To optimize service performance and quality excellence, Marken proactively conducted comprehensive test shipments in collaboration with external partners in the UAE. Marken's global trade compliance team provided brokerage support, streamlined customs clearance and confirmed adherence to local laws, regulations and guidelines in the UAE and surrounding areas.

Leveraging Marken's proprietary transportation management software, Maestro™, the ATD and the Advanced Therapy Control Towers, Marken provided real-time tracking and oversight, adhering to specific client instructions and the unique needs of the product.

By aligning the robust experience and expertise of Marken's cross-functional global teams, including the ATD, global operations, advanced therapy project managers, and cell and gene control towers, Marken seamlessly coordinated a unified distribution strategy that delivered for our client and their patient.

## OUTCOME

The advanced therapy shipment arrived on time and within the strict temperature requirements, reaching the patient at the hospital to receive the intravenous infusion of the critical treatment. With a passion for patients and commitment to enhance healthcare accessibility, Marken continuously strengthens our risk mitigation strategies, innovative tech solutions and collaborative approach to ensure the efficient delivery of personalized genetic medicines to patients with rare diseases worldwide.

## ABOUT MARKEN

Marken is the clinical precision logistics and advanced therapy subsidiary of UPS Healthcare. The UPS Healthcare network consists of 200+ locations worldwide. Marken offers a state-of-the-art GMP-compliant depot network and logistic hubs for clinical drug product storage and distribution in 46 locations worldwide, while maintaining the leading position for cell and gene therapy services, direct-to-patient and home healthcare services, biological sample shipments and biological kit production. Marken's dedicated 2,600+ staff members manage 200,000 drug product and biological sample shipments every month at all temperature ranges in more than 220 countries and territories and have orchestrated 17,500+ home healthcare visits. Additional services such as ancillary material sourcing, storage and distribution, shipment lane verification and qualifications, as well as GDP, regulatory and compliance consultancy add to Marken's unique position in the pharma and logistics industry.

Delivering What Matters From Clinical to Commercial.