ATELERIX

CASE STUDY: o2h discovery

# No More Dry Ice: Cutting Costs and Complexity in Cell Preservation

## EXECUTIVE SUMMARY

**Atelerix's CytoStor technology has transformed o2h Discovery's cell transport process, making it five times cheaper than traditional frozen shipping methods and eliminating reliance on dry ice. In a real-world test, CytoStor prevented cell death during a 5-day customs delay in extreme temperatures, maintaining 40% viability compared to 60% with dry ice. The seamless integration required no changes to existing workflows, enabling on-demand shipments between the UK and India while also providing a secure backup for long-term cell storage.**

## BACKGROUND AND CHALLENGE

**o2h Discovery, operating biology sites in both Cambridge, UK, and Ahmedabad, India, faced significant challenges in transporting cell lines between locations. The previous method relied on frozen shipping using large quantities of dry ice, which was not only expensive but also logistically complex. High temperatures in India and frequent customs delays further exacerbated the risk of compromised cell viability.**

## SOLUTION IMPLEMENTATION

**To address these challenges, o2h Discovery integrated Atelerix's CytoStor™ technology into their workflows. This innovative cell preservation solution allowed for ambient temperature transport, reducing the dependency on dry ice and simplifying logistics. Notably, CytoStor™ required no major changes to existing processes, making adoption seamless.**

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## METHODOLOGY AND RESULTS

o2h Discovery conducted internal evaluations to compare CytoStor™ against their traditional frozen shipping methods.

- Due to an unexpected 5–7 day delay at customs in Mumbai, the usual 2–3 day shipping timeline was extended to around 12 days, essentially creating an unplanned 'stress test'.
- Even under these suboptimal conditions, approximately 40% of the cells survived, compared to around 60% viability typically observed with standard 2–3 day shipping using dry ice.
- More impressively, the shipped cells successfully regrew in India and continued thriving in subsequent experiments.

## OUTCOME AND BENEFITS

The adoption of Atelerix's CytoStor™ provided o2h Discovery with multiple benefits:

- Cost Savings: Traditional dry ice shipping cost approximately £2,000 per shipment, whereas CytoStor™ reduced costs to £160 - a twelve-fold reduction.
- Logistical Efficiency: o2h Discovery no longer needs to accumulate sufficient cell lines before shipment, enabling on-demand transfers between sites.
- Increased Research Capabilities: The solution allowed for better allocation of biological work across sites, leveraging different team skill sets.
- Enhanced Storage Security: o2h Discovery is now exploring CytoStor™ for long-term storage of critical cell stocks as a backup to cold storage systems.

## FUTURE IMPLICATIONS

Atelerix's technology has fundamentally changed how o2h Discovery operates. With greater flexibility in cell line sharing and storage, the company can optimise research processes, expand their cell line repository, and enhance overall scientific output. Moving forward, o2h Discovery anticipates leveraging CytoStor™ for even broader applications in preserving high-value cell stocks.

## LESSONS LEARNED

**Reflecting on their experience, o2h Discovery offers the following insights for other organisations considering Atelerix's technology:**

- ✔ **The ease of implementation means teams can transition seamlessly without major disruptions.**
- ✔ **The cost-effectiveness makes it an attractive alternative for companies regularly transporting cells.**
- ✔ **The technology is robust enough to withstand unforeseen delays and extreme conditions.**

"what a no-brainer!"

**Sunil Shah, CEO, o2h Ventures:**

"When I first saw this technology being pitched at Cambridge Angels, I was intrigued. Our tests confirmed its effectiveness, even in an extreme shipping delay. The cost savings alone make it a game-changer, and I was excited to invest and join the Board."

**Keith Woodley, Scientist, o2h Discovery:**

"One of the best technologies and biggest game-changing innovations I've seen in my career."

## CONCLUSION

**o2h Discovery's experience with Atelerix highlights a groundbreaking shift in cell preservation and transport. The integration of CytoStor™ has provided significant cost, efficiency, and research benefits, proving its potential as a transformative technology in the field of biotechnology.**