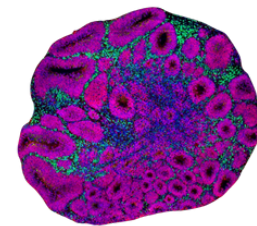




SHIPPING ELECTRICALLY ACTIVE BRAIN ORGANOIDS ACROSS CONTINENTS



Ambient preservation enabling global shipment of mature brain organoids

How Atelerix's preservation system supported international transport of mature human iPSC-derived 3D neural organoids for collaborative research.

Human iPSC-derived neural organoids support disease modelling, toxicology and functional neuroscience research.

Challenge

Many laboratories cannot generate mature neural organoids reproducibly in-house.

Human iPSC-derived 3D neural organoids and brain microphysiological systems provide highly relevant human biology for developmental neurotoxicity, disease modelling, mechanistic toxicology and functional neuroscience.

However, generating high-quality organoids reproducibly requires specialist stem cell expertise, controlled differentiation protocols, long maturation timelines and rigorous quality control.

For many collaborating laboratories, this creates a major barrier. To broaden access, mature ready-to-use organoids need to be transported reliably without compromising viability or function.

Solution

Mature brain organoids were shipped internationally using Atelerix's preservation system.

Atelerix's preservation system enabled mature brain organoids to be shipped internationally to collaborators in Europe, the United States and Australia.

On arrival, recipient laboratories only required appropriate medium and a shaker to maintain the organoids in culture, allowing them to focus on the biological question rather than spending months or years establishing the model themselves.

For brain organoids, preserving function is critical. Viability alone is not enough. The organoids must recover network activity and remain suitable for electrophysiological assays.

fantastic!



"Brain organoids are highly sensitive, functionally active living tissues, so shipping them internationally has been a major bottleneck. Using Atelerix's preservation system, we were able to send mature brain organoids to collaborators in Europe, the United States, and Australia. In one remarkable case, a shipment to Australia was delayed in customs for about a week, yet the organoids were recovered successfully and remained electrically active. This type of logistics solution can make advanced human organoid models available on demand to laboratories that do not have stem cell or organoid-generation expertise."



Lena Smirnova, PhD
Assistant Professor, Johns Hopkins University

Key outcomes



Global shipment

Sent to Europe, the United States and Australia



Functional recovery

Recovered successfully and remained electrically active



Broader access

Advanced models without in-house generation expertise



oh crumbs!