

Product

Device for storing and transporting cell grafts

Indication

Retinal Cell Therapy

Value Propositions

- ▶ Device that allows for safe storage and transportation of retinal tissue
- ▶ Increased viability of cell graft
- ▶ Decreased risk of contamination and loss of graft

Market

- ▶ \$7.75 billion—
Global age-related macular degeneration
(6.9% CAGR 2018-2028)

Intellectual Property

- ▶ Provisional Patent Pending*
- ▶ Available for licensing

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Background on CU5706H

Retinal degenerative diseases, like age-related macular degeneration (AMD), remain incurable. AMD is the leading cause of irreversible vision loss in the United States occurring in 25% of Americans over the age of 74. The new frontier for treatment of these diseases is subretinal cell or tissue transplantation. Since this a new procedure, adequate surgical equipment has not yet been created to optimize storage, transportation, and viability of the cell or tissue grafts. Therefore, there exists a need to develop new surgical devices to ensure cell therapy is a safe and viable treatment option for retinal disease.

Technical Innovation

CU inventors lead by Dr. Kang Li have created a device for transporting retinal cells or tissue from a manufacturing facility to the clinic for the treatment of retinal diseases. This device includes a custom-designed trephine for the production of tissue transplants and a carrier for storage and transportation. Viability studies confirmed biocompatibility of the transplant carrier and successful preservation of transplants during storage. This transportation device is designed to safely transport the retinal transplants, ensuring proper orientation of the transplant, and avoiding preservation media leakage, contamination, and any mechanical damage to the transplants. The device not only maintains cell viability for up to 24 hours but also orients the sample for proper grasping and loading into the companion surgical delivery device (CU5701H). It is part of a reliable system that protects against mechanical damage, contamination, and allows for storage in multiple temperature environments.

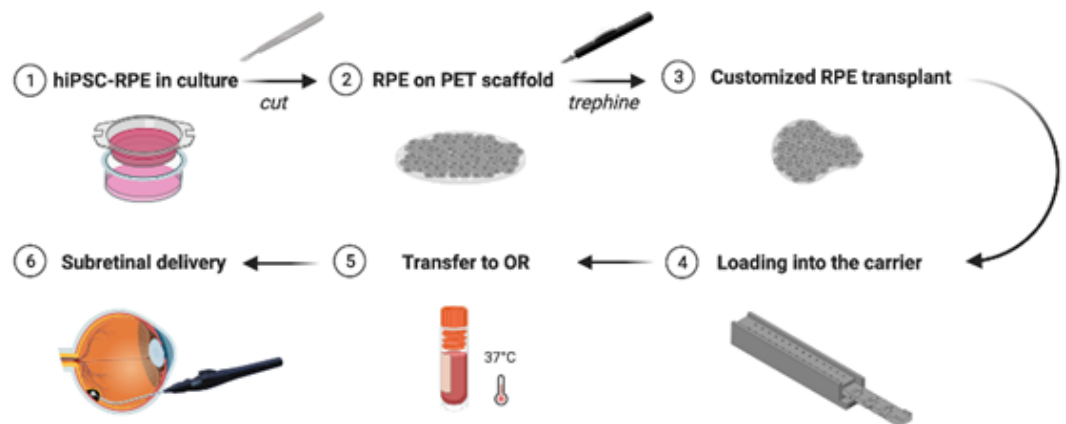


Figure: A brief workflow outlining production, preservation, transportation, and sub-retinal delivery of hiPSC-RPE transplants