

## **Application of Encapsulated Cell Technology for Retinal Degenerative Diseases**

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**Purpose:** Long-term sustained intraocular delivery of CNTF by encapsulated cell technology (ECT) implant for treating retinal degenerative diseases.

**Methods:** The ECT-CNTF implants were manufactured using standard protocols and met the pre-established product release criteria. The CNTF-secreting devices were implanted intravitreally in patients with retinitis pigmentosa or geographic atrophy associated with dry age-related macular degeneration. The duration of implantation ranged from 6 months to 2 years. The explanted devices were pulsed for CNTF release and subjected histological analysis.

**Results:** The ECT-CNTF devices released consistent levels of CNTF during the 2-year implantation period. All explanted devices contained viable cells evenly distributed throughout the device.

**Conclusions:** The encapsulated cell technology platform was able to deliver a therapeutic agent directly into the eye in a consistent manner for a 2-year period. Both the implant and surgical procedure were well tolerated. This technology could be used to delivery a variety of therapeutic agents for a broad range of indications where long-term treatment is required.