The Realisation of Research

Stem Cell Therapy Replacement for Retinal Ganglion Cells: Treatment for Glaucoma and Other Eye Diseases

Case ID:
88-012

Web Published:
Mar 1, 2011

Category(s):
Gene/Cell Therapy

Description:

Stem Cell Therapy Replacement for Retinal Ganglion Cells: Treatment for Glaucoma and Other Eye Diseases

Available For: Exclusive licensing

Summary

Glaucoma is disease in the eye characterised by the progressive loss of retinal ganglion cells. Stem cell based therapeutics provide a method for restoration of neurons damaged by retinal disease. We have identified a population of neural stem cells in the adult human eye that can be isolated from donor retina. Stem cells can differentiate into retinal neurons in vitro and in vivo following transplantation into animal models of retinal degeneration.

The Technology and its Advantages

The restoration of visual function is one of the aims in vision therapy. Present treatments for severe diseases leading to blindness such as glaucoma only slow progression and do not restore visual function. We have developed a stem cell transplantation therapy which has been shown to preserve retinal integrity and attenuate the loss of retinal ganglion cell function when transplanted. We have also developed a complimentary treatment which allows the integration of such stem cells into the retina. This therapy can be used to treat and restore the vision in a range of diseases including glaucoma, diabetic retinopathy, retinitis pigmentosa and optic nerve injury.

Market Opportunity

According to Business Insights the forecast of prevalence of glaucoma across the 5 major European countries plus the US and Japan is set to rise from 15m in 2010 to 15.7m by 2014. These figures do not include the high incidence of glaucoma in India and China. In 2008 the sales of anti-glaucoma preparations by the 10 leading companies in the market was $5,124m and showed a growth of 11% growth for the period 2007-08.

Intellectual Property Status

The Stem Cell Therapy is protected by two patents.

For Information, Contact:

Rachel Hemsley
Senior Business Manager
UCL Business PLC
020 7679 9000
r.hemsley@uclb.com

Inventors:

Astrid Limb

Peng Khaw

Keywords:

Ophthalmology & Optometry

Direct Link:

http://uclb.technologypublisher.com/technology/6499