Diagnosing Apoptosing Retinal Cells: Diagnostic for Glaucoma & Alzheimers Disease

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Description:

DARC: An Early Stage Diagnostic for Glaucoma, Alzheimer's and other Neurodegenerative Diseases

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Summary

DARC: the Diagnosis of Apoptosing Retinal Cells is a new early stage diagnostic method for glaucoma, Alzheimer's and other neurodegenerative diseases. DARC can also be used as an end point marker for the evaluation of neuroprotective drugs.

The Technology and its Advantages

Nerve cell loss as a result of apoptosis is one of the earliest stages in chronic and devastating neurodegenerative disorders such as glaucoma, diabetic retinopathy, Alzheimer's Disease and other neurodegenerative diseases.

Nerve cell apoptosis is a form of programmed-cell death that occurs before any evidence of functional or physiological loss can be detected in the eye. The current gold standard method for measuring glaucoma is visual field perimetry. A combination of visual field perimetry tests are currently used as the results obtained using the different methodologies do not align. All current clinical technologies e.g. disc profile measurements and retinal thickness tools, are only useful in the late stages of disease after a significant percentage of RGCs are dead. Hence the onset of glaucoma cannot be reversed.

Glaucoma is strongly age-related and the current lack of a screening test results in the late diagnosis which often results in a significant cause of disability.

The advantage of DARC is that it provides a single method of detecting glaucoma potentially up to 10 years earlier than the current gold standards. This technology will provide an early stage screen for glaucoma which will allow earlier treatment and potentially the reversal of the disease.

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 $5,214m and showed a growth of 11% for the

period 2007-08.

Intellectual Property Status

DARC is covered by a portfolio of patents.

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