



INNOVUS

## AN OPHTHALMIC MEDICAMENT FOR GLAUCOMA

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Glaucoma, if left untreated, eventually leads to blindness. It is the second leading cause of blindness in the world affecting more than 300 000 people in South Africa and nearly 70 million people worldwide. This new treatment, which is both affordable and easy to administer, relies on the use of a topical preparation to relieve pressure in the eyeball.



### **Brief Description**

The medicament involves the topical use of a well-known compound, in an ophthalmic solution, for the treatment of glaucoma and the relief of intra-ocular pressure.

### **Target Market**

The discovery is of primary interest to pharmaceutical companies, medical health providers, hospitals and clinics.

### **Value Proposition/ Benefits**

Glaucoma is an eye disorder where the major risk factor is increased intra-ocular pressure, which can lead to irreversible damage to the optic nerve and visual field. Traditional treatment of glaucoma has various limitations:

- high cost and compliance of drugs
- surgical intervention is drastic and costly

However, the effects of the compound of the current invention on the human body are well known and has been safely used in humans for decades.

### **Unique Characteristics**

The discovery proposes an ophthalmic solution for treatment - with or without enhancers to improve absorption and surface contact time. The topical formulation is preferred over the oral formulation due to the decreased side effects.

### **Technical Description**

The ophthalmic solution is applied in prescribed regular dosages directly to the eye in droplets. Corneal penetration is significantly improved when the compound is suspended in polyacrylic acid gel as opposed to a phosphate buffered saline suspension.

It is suspected that the mechanism of action is through the compound's indirect activation of certain central nervous system receptors that have been recognised as important therapeutic targets for the reduction of intra-ocular pressure.

### **Innovation Status**

The medicament has been tested in animals and is currently undergoing human trials. Frequency of dosage remains to be optimised. A national phase application was filed for this invention.

### **Principal Researcher**

Prof. D. Meyer, Head of Ophthalmology at the Faculty of Health Sciences, holds a MB,ChB-degree as well as a PhD in Pharmacology.

*Photograph: Topical ophthalmic solution*

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