

NEW COMPOUND TO SUCCESSFULLY TREAT DEGENERATIVE DISEASES OF THE RETINA

P PATENTED TECHNOLOGY

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ABSTRACT

The research group *Neurobiología del sistema visual y terapia de enfermedades neurodegenerativas* of the University of Alicante has discovered the use of the compound 3-(2-isothiocyanatethyl)-5-methoxy-1H-indol, and its pharmaceutically acceptable salts, for the preventive or therapeutic treatment of degenerative diseases of the retina, such as: pigmentary retinosis, diabetic retinopathy, glaucoma or age-related macular degeneration. This compound has demonstrated, in vitro and in vivo, its neuroprotective capacity in various models under laboratory conditions. This compound is characterized by a 20% increase in neuronal survival, a 35% increase in visual acuity, and a 15% increase in contrast sensitivity. Therefore, it has very promising properties that could position it as the first effective treatment against degenerative diseases of the retina. We are looking for companies interested in acquiring this patent for commercial exploitation.

ADVANTAGES AND INNOVATIVE ASPECTS

The compound which is the subject of this invention has demonstrated the following advantages over the medicines currently used to treat degenerative diseases of the retina (including melatonin and sulforaphane):

- 1) It possesses a **combination of biological activities** whose great therapeutic effect.
- 2) It is a **powerful inducer of the signaling pathway Nrf2**, effect that does not possess melatonin.
- 3) Rescued **visual responses** regarding rd10 mice treated with the vehicle (control).
- 4) Increased **visual acuity** up to **35.6%**.
- 5) Increased **contrast sensitivity** from **11% to 15%**.

INNOVATIVE ASPECTS OF THE TECHNOLOGY

The compound of the present invention differs from the current drugs because:

- It has a **reducing effect on retinal degeneration** associated with different degeneration models.
- It is a powerful **inducer of the signalling pathway Nrf2**, unlike melatonin.
- It is an **effective antioxidant**, unlike sulforaphane

MARKET APPLICATIONS

The present invention is framed in the **pharmaceutical sector**, specifically, in the **preventive or therapeutic treatment of the degenerative diseases of the retina**, that cause destruction of cellular structures, such as:

- Retinitis pigmentosa.
- Glaucoma.
- Diabetic retinopathy.
- Age-related macular degeneration.

COLLABORATION SOUGHT

We are looking for companies interested in acquiring this compound for **commercial exploitation** through:

- Patent licensing agreement.
- Development of new applications.
- Agreements regarding technology and knowledge transfer.

Company profile searched:

→ **Pharmaceutical companies** interested in prevention or treatment of degenerative diseases of the retina, among them:

- Retinitis pigmentosa.
 - Glaucoma.
 - Diabetic retinopathy.
 - Age-related macular degeneration.
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