

SEAWEED EXTRACT (ULVA AUSTRALIS) FOR THE PREVENTION AND/OR TREATMENT OF NEURODEGENERATIVE RETINAL DISEASES



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RESUMEN

The Phytopathology research group of the University of Alicante has obtained an extract of *Ulva australis* that has antioxidant activity and cell proliferative activity.

This extract could be used as a pharmaceutical formulation for the prevention and/or treatment of neurodegenerative diseases of the retina, especially those involving oxidative stress or photoreceptor loss, such as: age-related macular degeneration, glaucoma, hereditary retinal dystrophies, diabetic retinopathy and retinitis pigmentosa.

This extract, which is protected by a patent application, has been developed at laboratory scale. Companies interested in its commercial exploitation are sought.

VENTAJAS Y ASPECTOS INNOVADORES

MAIN ADVANTAGES OF THE TECHNOLOGY

The main advantages of this technology are the following:

- The extract obtained from *U. australis* is an extract with natural antioxidant capacity.
- Large quantities of the raw material used are available in the natural environment.
- The extract is obtained in an easy way and using a sustainable and environmentally friendly method.
- The extraction method employed allows for higher yields, a higher number of thermosensitive molecules, as well as higher molecular integrity than conventional methods using temperatures above 60°C.

INNOVATIVE ASPECTS

The main innovative aspect of this technology lies in the use of an algal extract of *U. australis* to protect retinal cells from oxidative damage. In addition, the extract significantly increases cell proliferation, an effect not described in other algal extracts.

APLICACIONES DE LA OFERTA

The present invention is framed in the field of **biomedicine**, specifically it provides a **natural source of antioxidant compounds** that also have the capacity to enhance the **cell proliferation** of retinal photoreceptors, and therefore its use is proposed for the **treatment of neurodegenerative diseases**, especially those affecting the **retina**.

These retinal degenerative diseases include, but are not limited to, age-related macular degeneration, glaucoma, hereditary retinal dystrophies, diabetic retinopathy and retinitis pigmentosa.

Commercial exploitation of this *U. australis* extract could therefore be of interest to pharmaceutical, biotechnology and ophthalmology companies.

COLABORACIÓN BUSCADA

Companies interested in acquiring this technology for **commercial exploitation** are sought:

- Patent licence agreements.
- R&D projects for the joint development of technology according to the needs of the company.

Types of companies sought:

- Pharmaceutical companies, especially those focused on neurodegenerative therapies.
 - Companies specialising in ophthalmology developing treatment for eye diseases and/or gene and cell therapy technology.
 - Biotechnology companies developing new therapies and seeking innovations in the treatment of chronic and neurodegenerative diseases.
 - Nutraceutical companies developing bioactive ingredients for health and nutrition applications.
 - Cosmetic companies
 - Food industry, companies producing functional foods and superfoods.
 - Companies in the agriculture and aquaculture sector, especially those involved in the cultivation and exploitation of seaweed.
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