PATENT

CERIUM NANOPARTICLES TO TREAT DISEASES OF POSTERIOR SEGMENT OF THE EYE

The Need

Alternative strategies and pharmaceutical compositions maintaining long-term dispersion stability of CeO_2 nanomaterials with safe and effective treatment of diseases, such as age-related macular degeneration, addressing upstream pathological mechanisms that drive disease progression, not only suppressing angiogenesis.

The Solution

New cerium oxide nanoparticles have been developed as a treatment for disorders of the posterior segment of the eye, such as wet age-related macular degeneration. Nanoparticles are stabilized for preventing their aggregation both before and after administration as therapeutic agent, even in high salinity and low-protein media.

Innovative Aspects

Good stability in aqueous solution before administration

Significant reduction in aggregation after intravitreal administration

Viable co-formulation with other active agents

Stable conjugates with nanoparticles

Good compatibility with existing intravitreal excipients

Suitable aqueous intravitreal injection composition

Stage of Development: Preclinical

Intellectual Property

European patent application (Priority date: October 23, 2025)

Suitable for international extension (PCT application)

Available for:

- **Licensing**
- **Further development**

Contact details

fsantos@ciber-bbn.es

www.ciber-bbn.es