

Nanomedicine – Glaucoma Treatment

Background and challenges

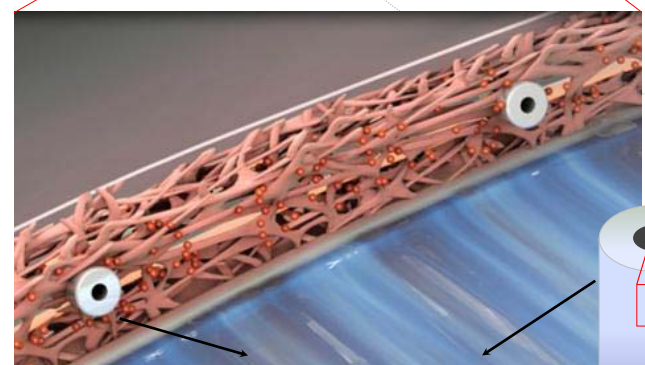
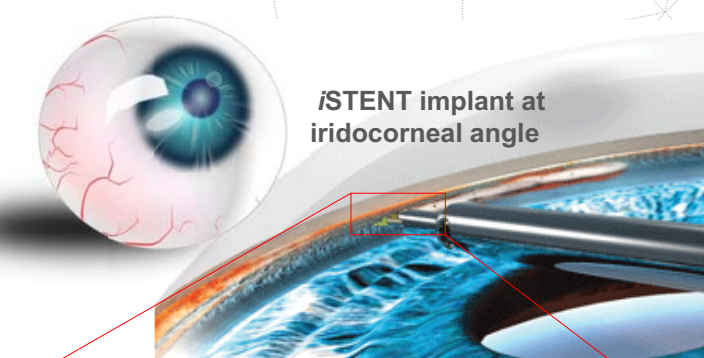
The Problem

Glaucoma is one of the most degenerative troubling diseases, globally considered the second leading cause of blindness by the World Health Organization. The current treatment is based on eye drops administration and it has limitations such as fast drug loss and poor patient compliance.

Our solution

Intraocular devices with drug delivery systems that replaces the actual medical treatment decreasing the patient non compliance and therefore avoiding the glaucoma progression.

Description and main innovation



Intraocular device

The iSTENT is coated with a nanostructured film which supports nanocapsules to deliver drugs for the glaucoma treatment



Nanostructured coatings with nanocapsules to deliver glaucoma drugs

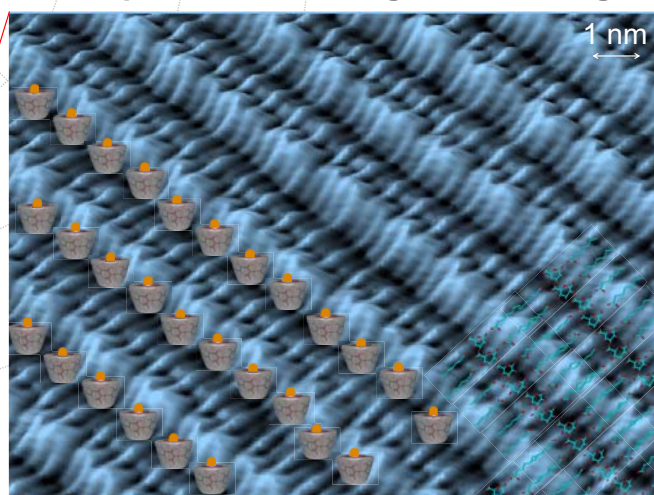
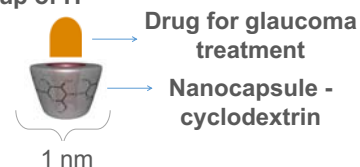


Image obtained by a high resolution microscope (*Scanning Tunneling Microscope - STM*) existing in the Organic Electronics Group of IT



Achievements

- Nanomatrices to cover intraocular devices with drug delivery functions

Funding

- FCT project EXPL/CTM-NAN/0837/2012
- Applying for H2020: Call for Nanotech, Advanced Materials and Production, Total Budget € 64M

Collaborations

- Pattern and Image Analysis Group of IT (Lisboa)
- Centro Hospitalar de Lisboa Central, Ophtalmology department
- Glaukos Corporation, California - ophthalmic medical device company