Nanoscale delivery system for glaucoma

DESCRIPTION:

To develop a nanoscale delivery device for prostaglandin release to be implanted under the Tenon capsule.

ABSTRACT:

Previous studies have demonstrated that a nanoscale silicon membrane can deliver drugs in a very efficient and controlled way (see figures). We aim to test this technology in the glaucoma field to produce a reservoir to deliver the drug in a controlled manner for a period up to two years. This will have a major impact on the treatment of glaucoma in which, although the pharmaceutical agents are very effective, the clinical results may be hampered by the low patient compliance. This problem is believed to involve as much as 40% of the patients. Glaucoma is a serious and diffuse social disease and up to 60 million of people are estimated to be affected worldwide. The potential spread of such a device is thus very high.