



Universidad
de Alcalá



DOUBLE PORT INJECTOR TO CORNEAL TRANSPLANT DMEK

Patent

ES2395681 B1

Code

BIO_UAH_18

Application areas

- Biological Sciences, Health and Pharma



Type of Collaboration

- Technical cooperation
- License agreement

Main Researchers

Prof. Ma del Mar Royuela
Dra. Ma Paz de Miguel González

CONTACT



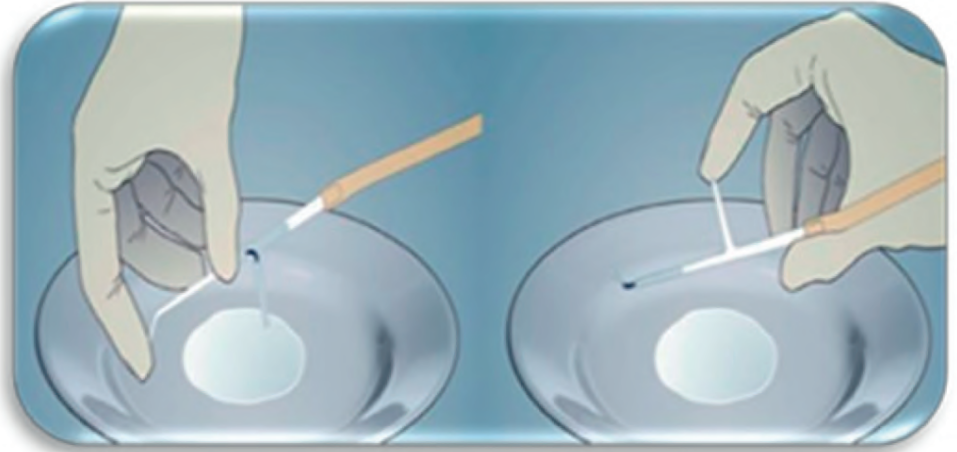
OTRI Universidad de Alcalá
Escuela Politécnica Superior
Campus Científico-Tecnológico
28805, Alcalá de Henares
(Madrid)
(+34) 91 885 45 61
otriuah@uah.es



@otriuah



OTRI Universidad de Alcalá



ABSTRACT

A Corneal Endothelium Injector with two asymmetric and separate entrances ways. The entrance with a wider lumen is used to graft insertion without friction. The entrance with thinner lumen, located in the injector's tip, has been designed for the controlled exit of the endothelium through a minimal incision.

This double port design allows to reduce the compression that affects the graft when it goes in through the port, unlike what it happens with injectors with one entrance, where the graft has to be compressed to pass through the same track that uses to go out, increasing the friction.

The use of a closed system allows to vacuum the graft without touching it, besides with this invention it is unnecessary the use of viscoelastic agents that could interfere with the adhesion of the graft inside the eye.

All the process takes place continuously, there's no need to disable the injector from the aspiration/suction system, like happens with other injectors now in the market. The injector is made in crystal to prevent adhesions and reduce the graft friction with the walls.

ADVANTAGES AND INNOVATIONS

- The main difference of this invention against other models nowadays in the market, is that it presents a double port with asymmetric lumen to separate the way of entrance and the way out. That will also reduce the graft compression when going through the injector. This is main difference with the one line injectors that share entry and exit.
- The injector is made in crystal to reduce adhesion and friction with the walls compared to plastic injectors.
- Both ports are separated and independent from the suction system, which makes the whole process take place continuously without need of disassemble the injectors from the aspiration system.

In conclusion, this new design tries to diminish the endothelial damage during corneal endothelial graft implantation in the eye's anterior chamber.