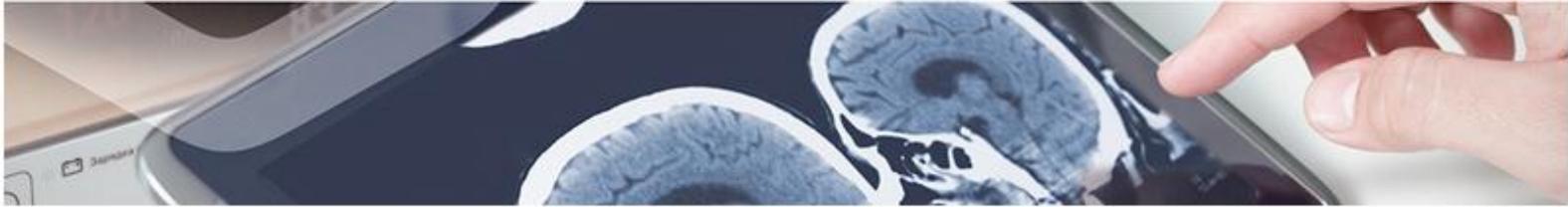


Medical Devices

Open retinoscope

A research group of the Andalusian Public Health System and the Hospital San Juan de Dios del Aljarafe (Seville), has developed a new open retinoscope useful for eyes exploration comprising a universal adapter for smartphone.



Description

The potential of smartphones is also reaching the field of ophthalmology, where the value of the images is particularly relevant and where, thanks to its integrated cameras and videos, are beginning to be used as exploratory tools. Currently, back of the eye (retina) examination in most medical consultations is based on the use of conventional direct ophthalmoscopes. However, this device has a limited use since, for example, the scanned visual field is too narrow to assess the peripheral retina. Furthermore, this device does not allow obtaining graphic images for a subsequent assessment or share.

Nowadays, there are more sophisticated ophthalmoscopes in the market such as the PanOptic ophthalmoscope, which enables to view a wider field of the retina and to obtain images and videos of the back of the eye when used together with the specific adapter for iPhone (iExaminer, Welch Allyn), or the specific adapter between smartphones and ophthalmic non-contact lenses (EyeGo adapter). Nevertheless, these adapters have a series of disadvantages: (i) In most cases, they can only be attached to a particular version of smartphone; (ii) Not easy to use and expensive; (iii) When used without pupillary dilation, the provided vision is not too wide; (iv) Require the modulated light from the smartphone to perform the eye examination. Therefore, these adapters are not suitable as autonomous scanning tools without the aid of a particular smartphone specifically attached to the adapter which offer certain functions and features.



Advantages

The present technology is a new open retinoscope designed for exploration of the back of the eye (retina)

which combines a light source to Volk-like ophthalmic lens, allowing the physician to assess the retina of a patient more easily and with much greater visual field than with any actual direct ophthalmoscope. This open retinoscope includes an adapter that allows coupling any model of smartphone to collect the images obtained during the examination. This new retinoscope is portable, inexpensive and easy to handle. In addition, because it has its own light source, it allows exploration of the retina in an autonomous way, i.e. without attaching a smartphone.



Intellectual Property

This technology is covered by a Spanish patent application with the possibility of international extension.



Aims

We are looking for a partner interested in a license or/and collaboration agreement to further develop and exploit this innovative technology.



Classification

Area: Medical devices
Pathology: Ophthalmology and Optometry