# HIFUK- HIGH INTENSITY FOCUSED ULTRASOUND KERATOPLASTY

This invention relates to application of ultrasonic waves for ocular imaging and thermal keratoplasty. With this specific technology we offer a device, system and method for performing thermal keratoplasty to be used for the treatment of presbiopic astigmatism and hyperopia and even some cases of irregular optical aberations by changing the shape of the cornea.

#### **Potential Applications**

This technology may serve for non-invasive refractive corneal surgery, mainly for regressive disorders for the people above 40 years of age, as the surgical treatment can be redone multiple times.

## **Customer Benefits**

Dual modality saves time and benefits cost performance.

### **Technology Features & Specifications**

This specific technology provides a device for thermal keratoplasty comprising a plurality of ultrasonic transducers is focused on a corresponding area of the cornea in order to heat these area and cause collagen shrinkage and at least one of the transducers is capable of receiving ultrasound waves for ocular imaging.



### CONTACT: Iclal Arguc

- 1 0090 216 4839110
- ₿ 0090 536 6490033
- 📧 iclal@sabanciuniv.edu



## **Market Trends and Opportunities**

The ophthalmology market is experiencing an impressive growth globally majorly due to tremendous increase in demand for novel diagnostic technological platforms and efficient treatment methodologies.

The global Ophthalmology Devices market was valued at USD26,012.6million in 2012 and estimated to reach a market worth USD40,381.6 million in 2019 at a CAGR of 6.6 % from 2013 to 2019.







FACULTY OF ENGINEERING AND NATURAL SCIENCES

SABANCI UNIVERSITY SUNUM NANOTECHNOLOGY RESEARCH AND APPLICATION CENTER