# Maculaser

## Preventive treatment for AMD

Age-related macular degeneration is a degenerative retinal disease that causes a progressive loss of vision. There are currently 200 million people living with AMD, and the disease has a global direct healthcare cost of 200 B€ annually. At present, there is no effective treatment for dry AMD, which is the most common form of the disease, and no means to prevent the disease from progressing to its quickly blinding wet form. Our goal is to develop a technology that enables AMD treatment already in its early stages before visual impairment occurs. In our treatment, we apply heat to the fundus of the eye with ophthalmic laser where the challenge lies in reaching the narrow therapeutic temperature window reliably. Our novel innovation allows us to control the thermal dose on fundus individually which makes the treatment effective, safe and non-invasive.

**Teemu Turunen, M.Sc.,**

Maculaser project manager

Teemu has several years of experience from vision research and technical development of electrophysiological methods from his PhD project. Additionally, Teemu has worked as an innovation agent with the responsibility of scouting for potential innovations and assisting with IPR issues in Aalto University.

**Ari Koskelainen, PhD,**

Professor of Engineering Physics (biological physics)

Ari and his group has a strong expertise in experimental vision research and methodology development. His studies relate to improving the knowledge on molecular level functions and electrical signaling of photoreceptors in our visual system.

SPARK VALUE: We expect the SPARK program to steer us towards translating our invention to routine medical treatment. We hope to expand our networks and find medical partners which are crucial for our project to reach and pass the upcoming clinical trials. SPARK enables us to get valuable feedback from seasoned industrial partners and from fellow scientists.