



Fund “Nauka” Project № 19018 Resume – Competition-Based Session 2019:

“Establishment of a bank for clinical photographs for educational and scientific purposes”

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Biomicroscopy is a basic and irreplaceable method in clinical practice and eye health care, allowing diagnosis, treatment and follow-up. The biomicroscope is an irreplaceable tool in contactology for adjusting soft and hard contact lenses.

The main goal of the project is to train all specialists in eye health for observation, imaging and creating a database of clinical photographs through non-invasive examination of the ocular adnexa, anterior and posterior segment of the eye in normal and pathology with educational focus and for scientific purposes.

Methods:

Biomicroscopy is a non-invasive method that allows visualization, repeatability of tests, the ability to perform qualitative and quantitative assessment of pathological changes as well as to document, monitor and comparative analysis of the condition.

Based on the classical method – biomicroscopy and created algorithms for visualization and documentation of the anterior and posterior segment of the eye in normal and pathology, will be performed systematic collection of data and training of young scientists and medical professionals involved in eye health.

Expected results:

In the age of new technologies and digitalization, digital visualization plays a key role in the diagnosis, treatment, tracking and training of patients, students and professionals. As a result of the project implementation, a significant improvement in the quality of training is expected, as well as the improvement of practical skills.

The creation of a virtual simulation photographic center will help to improve the learning process and improve the skills of medical professionals in eye health and to illustrate teaching aids, but its main task is to accumulate information on the application of artificial intelligence to analyze changes in ocular structures in normal and pathology.

Achieved results:

In 2019, an infrastructure project “Creating a bank for clinical photography for educational and scientific purposes” was launched. Its main goal is to create a database of clinical photographs through non-invasive examination of the eye adnexa, anterior, posterior ocular segment in norm and pathology with focus on educational and scientific purposes.

As planned, purchase, delivery, installation and commissioning of equipment – biomicroscopes with a modular system – was implemented. The team members and the teachers from the Department of Medical Opticians and the Department of Ophthalmology and Visual Sciences were also trained.

As a result, the preparation of new scientific projects considering the development of the research activity of Medical University of Varna has started.

The implementation of this project and the follow-up scientific and infrastructure projects will contribute to the improvement of the learning process and will enrich the material and research base of Medical University of Varna.