



ЦЕНТЪР ЗА ОБУЧЕНИЕ – БАИ

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Basic Information:

Course Title: Modern electron-microscopy techniques in biomedical research

Lecturers:

Assoc. Prof. Russy Russev, DVM, PhD

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Total Teaching Hours: 30

Annotation (up to 150 words)

The program is designed for the multimedia and practical training of PhD students. Contemporary practical and theoretical aspects of transmission and scanning electron microscopy will be studied. The lectures will be provided to participants in the course of use and self-preparation and will present standardized methods used for research and diagnostic purposes. The aim is to demonstrate that modern electron microscopic techniques offer a wide range of analytical approaches and cover a wide range of research activities in the field of medical biochemistry. Laboratory training is also planned to methodologically master the basic electron microscopic techniques, work organization and familiarization with safety measures in specialized electron microscopic labs.

Course content (brief description by topics or modules)

Topic / Module 1: General introduction to the device and principle of operation of an electron microscope.

Topic / Module 2: Theoretical and practical introduction to the basic methods of elaboration and monitoring of preparations.

Topic / Module 3: Final interview and summary review of acquired knowledge and skills.

Teaching and assessment methods

Theoretical and practical activity as described in the modules.

Competencies acquired as a result of training (3–5 points)

The purpose of the training is for doctoral students to gain a general idea of the possibilities of this high-tech methodology, to gain initial knowledge of its application so that they can apply it independently or in collaboration in the future.



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Literature:

Molecular biology of the gene, Watson James, 2014, Internet Archive – free download, 828 pgs

Molecular biology of the cell, Bruce Alberts, 2015, Internet Archive – free download, 989 pgs