



## Propaedeutics of molecular biology

The course of molecular biology is **obligatory**. The seminars (5 hours) and classes (15 hours) take place in **Department of General Biology and Parasitology** (Anatomicum building, 5 Chałubiński Str., 02-004 Warsaw, tel. (22) 6212607, e-mail: [biologia@wum.edu.pl](mailto:biologia@wum.edu.pl)).

The head of the department is **Daniel Młocicki**, Ph.D., Associate Professor.

The course coordinator is **Monika Dybicz**, Ph.D., Associate Professor, e-mail: [monika.dybicz@wum.edu.pl](mailto:monika.dybicz@wum.edu.pl).

The program contains:

- Human genome structure and function. DNA and RNA structure and function.
- DNA replication. Transcription and translation, DNA repair and recombination, gene expression regulation. Mutagenesis.
- Basic rules of laboratory work. DNA extraction.
- *In vitro* DNA amplification (PCR and modifications). RFLP and other molecular techniques. Electrophoresis.
- GMO (Genetically Modified Organisms).
- Analysis of gene mutations determining the development.

### Obligatory literature

1. Workbook: Molecular Biology - materials for 1st year students of English Division Medicine. Monika Dybicz, Aleksandra Sędzikowska. Oficyna Wydawnicza WUM, Warszawa, 2020 (free pdf available for students).
2. Molecular Biology. Third Edition. David P. Clark, Nanette J. Pazdernik, Michelle R. McGehee. Elsevier, 2019 (free e-book available).

## **The course regulations**

- 1) Students are required to attend all classes.
- 2) Students should be prepared for the subject of the particular class.
- 3) Absence from class is justified on the basis of a medical certificate or certificate of a random accident. The class should be done with another group after prior agreement with the person responsible for the subject.
- 4) Classes start on time, being late is treated as an absence.
- 5) Students should wear a lab coat and a lab gloves during the practical classes.
- 6) Persons applying for transfer of the subject from previous years or from another university should write an application to the Head of the Department of General Biology and Parasitology and obtain permission of the Dean.

## **The course organization**

Taking into account the current epidemiological situation, most of the classes will be held **online on the Microsoft Teams platform.**

All the seminars (5 hours) and part of the exercises will be held online according to the schedule provided by the Dean's office.

Two exercises are planned to take place at the department: groups starting from week 1 will have exercises in weeks 4 and 7, groups starting from week 8 on weeks 11 and 14.

**These are preliminary assumptions that may change depending on the epidemiological situation.**

**If some students are not able to come to Poland and attend classes at the department, then can have the opportunity to complete these classes online.**