

UNIVERSITY OF BELGRADE  
FACULTY OF MEDICINE  
PhD STUDIES

NAME OF THE MODULE: Microbes and Infection

CONTENT OF THE PROGRAM:

Despite tremendous advances in knowledge, prevention and treatment of infectious diseases, microorganisms and infections remain important threats to human health - Covid-19 pandemic and increase in antimicrobial resistance being some of the current examples. The aim of the module is to form researchers knowledgeable and experienced in microbiological, immunological and clinical aspects of infection, by combining clinical and basic approach to biomedical research, while encouraging critical and independent scientific thinking. Curriculum includes three obligatory and ten elective courses, as well as other educational activities:

- Rotations between research units

During the initial study years students learn laboratory and clinical research methods and skills in laboratories of the Institute of Microbiology and Immunology of the Faculty of Medicine, and in clinical research units related to the program, primarily at the Clinic for Infectious and Tropical Diseases UCCS.

- Journal Club

At "Journal Club" type seminars, students present and analyze the latest scientific literature, commenting also their own research results. The aim is to encourage students to critically analyze contemporary scientific literature, and to practice presentation skills for their own scientific work.

- Invited lectures

Students attend lectures by visiting professors/lecturers at the University of Belgrade Faculty of Medicine and other academic institutions, within a wider scientific field of the module program.

- Essays and presentations of candidates' work, publication

Students present their research results (from a wider scientific field of the module program) at scientific meetings of minimally national level, as authors / co-authors (in the form of a poster or oral presentation).

#### ADMISSION REQUIREMENTS:

- Completed 6 years integrated academic studies of medical sciences (360 ECTS); OR
- Completed academic studies of biological or medical orientation of minimum 300 ECTS.
- Application should contain a Motivation Letter for enrolling to the module Microbes and Infection

#### MEMBERS OF THE ADVISORY BOARD:

Prof. Dr. Maja Stanojević, Department of Microbiology, President

Prof. Dr. Vera Pravica, Department of Immunology

Prof. Dr. Miloš Korać, Department of Infectious Diseases

Prof. Dr. Dragana Vuković, Department of Microbiology

Prof. Dr. Aleksandra Knežević, Department of Microbiology

Prof. Dr. Aleksandar Džamić, Department of Microbiology

Prof. Dr. Miloš Marković, Department of Immunology

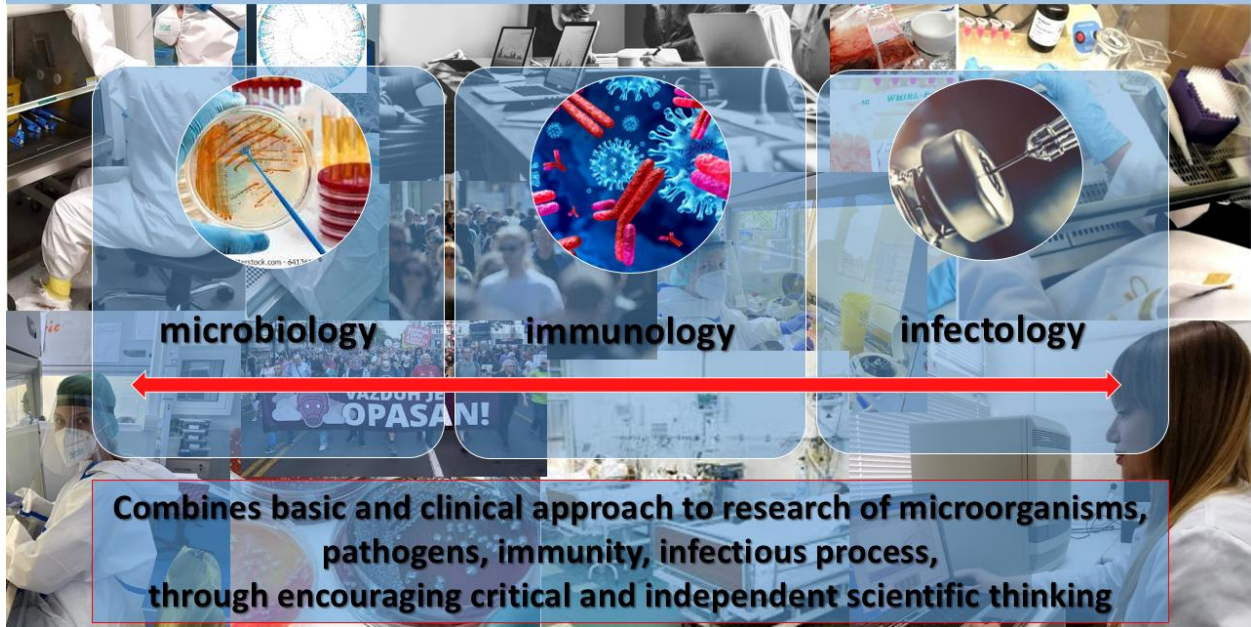
#### OBLIGATORY COURSES:

1. Molecular and cellular pathogenesis of infectious diseases
2. Immunity and Infection
3. Molecular methods in microbiology and immunology

#### ELECTIVE COURSES:

1. Bioinformatics, phylogenetic analysis and evolutionary genetics of pathogens;
2. Bacterial resistance to antibiotics
3. Basic virology
4. Molecular epidemiology of bacteria
5. Basics of medical mycology
6. Immunoprophylaxis of infectious diseases
7. Human microbiome
8. Emerging viruses
9. Oncogenic viruses
10. Viruses and pregnancy

# Microbes and infection



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semester	activities				
1.	<b>Core curriculum general</b> →	<i>common to all modules</i>			
2.	<b>Core curriculum specific</b> →	<ul style="list-style-type: none"> <li>• Molecular and cellular pathogenesis of infectious diseases</li> <li>• Immunity and infection</li> <li>• Molecular methods in microbiology and immunology</li> </ul>	Rotations between research units/laboratories	-Journal Club -Attending invited lectures -Essays and presentation of candidates' individual work, publications	
3.	<b>Electives</b> →	1. Bioinformatics, phylogenetic analysis and evolutionary genetics of pathogens 2. Bacterial resistance to antibiotics 3. Basic virology 4. Molecular epidemiology of bacteria			5. Basics of medical mycology 6. Immunoprophylaxis of infectious diseases 7. Human microbiome 8. Emerging viruses 9. Oncogenic viruses 10. Viruses and pregnancy
4.	<b>Doctoral research – PhD thesis preparation</b>				
5.					
6.					