

Course Title:
Coordinator /contact:

Microbiology with parasitology and Immunology
Prof. Piotr B. Heczko /e-mail: mbheczko@cyf-kr.edu.pl
Prof. Janusz Marcinkiewicz/ e-mail: mmmarcin@cyf-kr.edu.pl

Responsible person/contact:

Dr Agata Pietrzyk /e-mail: a.pietrzyk@uj.edu.pl
Dr Piotr Kochan /e-mail: pkochan@cm-uj.krakow.pl

Address:

Department of Immunology & Chair of Microbiology, 18 Czysta St.
2 year of 6-year program

Year:

Total number of hours:

40+30

Lectures/Seminars:

20+21

Labs/Practicals:

18+9

Exams:

2 (Microbiology with Parasitology and Immunology)

Conduct/Dress Code:

white coat during labs (provided)

Student's Evaluation:

-credit requirements:

attendance of labs, positive result of exam (min. 60%)

-attendance requirements:

2 absences from lab classes allowed

-type of the final exam:

MCQ test (to be arranged)

-retake information:

Oral exam (September), MCQ test possible if many persons fail

Date	Day	Time	Type	N ^o of hours	Group	Topic	teacher	place
19.02.18 February	Monday	8 ⁰⁰ -10 ¹⁵	Lec.	3	whole class	Introduction & overview. Cells of the immune system. Organs of the immune system. Innate immunity	Prof. Janusz Marcinkiewicz	18 Czysta Str, LH
19.02.18 February	Monday	10 ³⁰ -12 ¹⁵	Lab.	2.25	Groups A&B	1.A Antigen-antibody interactions, complement system: Precipitation-based immunoassays (diffusion, immune-double diffusion, radial immunodiffusion, immunoelectrophoresis, rocket immunoelectrophoresis, countercurrent electrophoresis)	Assoc.Prof. S. Józefowski, R.Biedroń Ph.D., M.Walczevska Ph.D.	18 Czysta Str, Lab room
21.02.18 February	Wednesday	8 ⁰⁰ -10 ¹⁵	Lec.	3	whole class	Antigens, Antibodies: Structure, Function. Monoclonal antibodies. Antibody genes and generation of diversity.	Grzegorz Majka Ph.D.	18 Czysta Str, LH
23.02.18 February	Friday	10 ³⁰ -12 ¹⁵	Lab.	2.25	Groups C&D	1.A Antigen-antibody interactions, complement system: Precipitation-based immunoassays (diffusion, immune-double diffusion, radial immunodiffusion, immunoelectrophoresis, rocket immunoelectrophoresis, countercurrent electrophoresis)	Assoc.Prof. S. Józefowski, R.Biedroń Ph.D., M.Walczevska Ph.D.	18 Czysta Str, Lab room
26.02.18 February	Monday	10 ³⁰ -12 ¹⁵	Lab.	2.25	Groups A&B	1B Antigen – antibody interactions, complement system: agglutination- based immunoassays (haemagglutination) Enzyme linked immunosorbent assay (ELISA) Immunoblotting (Western blot)	Assoc. Prof. Szczepan Józefowski Rafał Biedroń Ph.D. Maria Walczewska Ph.D.	18 Czysta Str, Lab room
28.02.18 February	Wednesday	11 ¹⁵ -13 ³⁰	Lec.	3	whole class	Major histocompatibility complex. Antigen processing and presentation. Generation of the humoral immune response.	Prof. JU Krzysztof Bryniarski	16 ŁazarzaStr, LH C
02.03.18 March	Friday	10 ³⁰ -12 ¹⁵	Lab.	2.25	Groups C&D	1B Antigen – antibody interactions, complement system: agglutination- based immunoassays (haemagglutination) Enzyme linked immunosorbent assay (ELISA) Immunoblotting (Western blot)	Assoc. Prof. Szczepan Józefowski Rafał Biedroń Ph.D. Maria Walczewska Ph.D.	18 Czysta Str, Lab room
05.03.18 March	Monday	10 ³⁰ -12 ¹⁵	Lab.	2.25	Groups A&B	2A Cellular immunology and cellular immunology basic assays: NBT (Nitro-blue Tetrazolium Test) MACS (microbeads separation of cells) lymphocyte separation on gradient-Ficoll discontinuous gradient separation isolation of lymphocyte	Prof. JU Krzysztof Bryniarski Katarzyna Nazimek Ph.D. Bernadeta Nowak Ph.D.	18 Czysta Str, Lab room

						subpopulations -rosetting		
07.03.18 March	Wednesday	11 ¹⁵⁻ 13 ³⁰	Lec.	3	whole class	Cell-mediated immunity. Classical cellular response and delayed type hypersensitivity	Prof. JU Krzysztof Bryniarski	16 ŁazarzaStr, LH C
9.03.18 March	Friday	10 ³⁰⁻ 12 ¹⁵	Lab.	2.2 5	Groups C&D	2A Cellular immunology and cellular immunology basic assays: NBT (Nitro-blue Tetrazolium Test) MACS (microbeads separation of cells) lymphocyte separation on gradient-Ficoll discontinuous gradient separation isolation of lymphocyte subpopulations -rosetting	Prof. JU Krzysztof Bryniarski Katarzyna Nazimek Ph.D. Marta Ciszek-Lenda Ph.D.	18 Czysta Str, Lab room
12.03.18 March	Monday	10 ³⁰⁻ 12 ¹⁵	Lab.	2.2 5	Groups A&B	2B Cellular immunology and cellular immunology basic assays: dissection of mouse (demonstration) <u>contact sensitivity reactions</u> (in vivo assay in contact sensitivity (CS)) <u>modern laboratory techniques in immunology</u> – immunofluorescence (Fluorescence Activated Cell Sorter) FACS	Prof. JU Krzysztof Bryniarski Bernadeta Nowak Ph.D. Marta Ciszek-Lenda Ph.D.	18 Czysta Str, Lab room
14.03.18 March	Wednesday	11 ¹⁵⁻ 13 ³⁰	Sem.	3	whole class	Immune regulation and tolerance.	Prof. JU Krzysztof Bryniarski	16 ŁazarzaStr, LHC
16.03.18 March	Friday	10 ³⁰⁻ 12 ¹⁵	Lab.	2.2 5	Groups C&D	2B Cellular immunology and cellular immunology basic assays: dissection of mouse (demonstration) <u>contact sensitivity reactions</u> (in vivo assay in contact sensitivity (CS)) <u>modern laboratory techniques in immunology</u> – immunofluorescence (Fluorescence Activated Cell Sorter) FACS	Bernadeta Nowak Ph.D. Katarzyna Nazimek Ph.D. Marta Ciszek-Lenda Ph.D.	18 Czysta Str, Lab room
21.03.18 March	Wednesday	11 ¹⁵⁻ 12 ⁴⁵	Lec.	2	whole class	Introduction to infectiology: infectious agents, and host immunity; epidemiology of infections	Prof. Piotr B. Heczko	16 ŁazarzaStr, S1
23.03.18 March	Friday	10 ⁴⁵⁻ 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Staining and cultivation of bacteria	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
23.03.18 March	Friday	12 ³⁰⁻ 14 ⁰⁰	Lab.	2	Groups IIIb	Staining and cultivation of bacteria	Dr P. Kochan	18 Czysta Str, Lab room
26.03.18 March	Monday	10 ⁴⁵⁻ 12 ¹⁵	Lab.	2	Groups Ia, Ib	Staining and cultivation of bacteria	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
27.03.18 March	Tuesday	12 ³⁰⁻ 14 ⁰⁰	Lab.	2	Groups IIb	Staining and cultivation of bacteria	Dr P. Kochan	18 Czysta Str, Lab room
04.04.18 April	Wednesday	11 ¹⁵⁻ 12 ⁴⁵	Lec.	2	whole class	Pathomechanisms of bacterial infections	Prof. Piotr B. Heczko	16 ŁazarzaStr, S1
06.04.18 April	Friday	10 ⁴⁵⁻ 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Laboratory diagnosis of infections caused by bacteria	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
06.04.18 April	Friday	12 ³⁰⁻ 14 ⁰⁰	Lab.	2	Groups IIIb	Laboratory diagnosis of infections caused by bacteria	Dr A. Pietrzyk	18 Czysta Str, Lab room
09.04.18 April	Monday	10 ⁴⁵⁻ 12 ¹⁵	Lab.	2	Groups Ia, Ib	Laboratory diagnosis of infections caused by bacteria	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
10.04.18 April	Tuesday	12 ³⁰⁻ 14 ⁰⁰	Lab.	2	Groups IIb	Laboratory diagnosis of infections caused by bacteria	Dr A. Pietrzyk	18 Czysta Str, Lab room
11.04.18 April	Wednesday	11 ¹⁵⁻ 12 ⁴⁵	Lec.	2	whole class	Bacterial genetics and antibacterial drugs; human microbiome in health and disease	Prof. Piotr B. Heczko	16 ŁazarzaStr, S1
13.04.18 April	Friday	10 ⁴⁵⁻ 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Laboratory diagnosis of tuberculosis and mycobacterial infections. Syphilis.	Assoc. Prof. B. Zawilińska Dr P. Kochan	18 Czysta Str, Lab room
13.04.18 April	Friday	12 ³⁰⁻ 14 ⁰⁰	Lab.	2	Groups IIIb	Laboratory diagnosis of tuberculosis and mycobacterial infections. Syphilis.	Assoc. Prof. B. Zawilińska Dr P. Kochan	18 Czysta Str, Lab room

16.04.18 April	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	Laboratory diagnosis of tuberculosis and mycobacterial infections. Syphilis.	Assoc. Prof. B. Zawilińska Dr P. Kochan	18 Czysta Str, Lab room
17.04.18 April	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	2	Groups IIb	Laboratory diagnosis of tuberculosis and mycobacterial infections. Syphilis.	Assoc. Prof. B. Zawilińska Dr P. Kochan	18 Czysta Str, Lab room
18.04.18 April	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Main groups of bacteria as human pathogens	Prof. Piotr B. Heczko	16 ŁazarzaStr LHD
20.04.18 April	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	General characteristics of mycoplasma and chlamydia and their lab diagnostics. General characteristics and methods of viruses cultivation.	Assoc. Prof. B. Zawilińska Dr A. Pietrzyk	18 Czysta Str, Lab room
20.04.18 April	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIIb	General characteristics of mycoplasma and chlamydia and their lab diagnostics. General characteristics and methods of viruses cultivation.	Assoc. Prof. B. Zawilińska Dr A. Pietrzyk	18 Czysta Str, Lab room
23.04.18 April	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	General characteristics of mycoplasma and chlamydia and their lab diagnostics.	Assoc. Prof. B. Zawilińska Dr A. Pietrzyk	18 Czysta Str, Lab room
24.04.18 April	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIb	General characteristics of mycoplasma and chlamydia and their lab diagnostics.	Assoc. Prof. B. Zawilińska Dr A. Pietrzyk	18 Czysta Str, Lab room
25.04.18 April	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Virology: general properties, pathomechanisms of viral infections	Prof. Piotr B. Heczko	16 ŁazarzaStr LHC
07.05.18 May	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	Sterilization, disinfection, chemotherapy and vaccination	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
08.05.18 May	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIb	Sterilization, disinfection, chemotherapy and vaccination	Dr P. Kochan	18 Czysta Str, Lab room
09.05.18 May	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Main groups of human DNA viruses	Prof. Piotr B. Heczko	16 ŁazarzaStr S1
11.05.18 May	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Sterilization, disinfection, chemotherapy and vaccination	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
11.05.18 May	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIIb	Sterilization, disinfection, chemotherapy and vaccination	Dr P. Kochan	18 Czysta Str, Lab room
14.05.18 May	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	General characteristics and methods of viruses cultivation. Lab diagnosis of selected viral diseases.	Dr P. Kochan Assoc. Prof. B. Zawilińska	18 Czysta Str, Lab room
15.05.18 May	Tuesday	8 ⁰⁰ – 10 ¹⁵	Sem.	3	whole class	Inflammation. Hypersensitive reactions mediated by antibodies.	Prof. Janusz Marcinkiewicz	16 ŁazarzaStr LHA
15.05.18 May	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIb	General characteristics and methods of viruses cultivation. Lab diagnosis of selected viral diseases.	Dr P. Kochan Assoc. Prof. B. Zawilińska	18 Czysta Str, Lab room
16.05.18 May	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Main groups of human RNA viruses	Prof. Piotr B. Heczko	lecture to be confirmed
18.05.18 May	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	General characteristics and methods of viruses cultivation. Lab diagnosis of selected viral diseases.	Dr P. Kochan Assoc. Prof. B. Zawilińska	18 Czysta Str, Lab room
18.05.18 May	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIIb	General characteristics and methods of viruses cultivation. Lab diagnosis of selected viral diseases.	Dr P. Kochan Assoc. Prof. B. Zawilińska	18 Czysta Str, Lab room
21.05.18 May	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	Lab diagnosis of selected protozoan diseases	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
22.05.18 May	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	2	Groups IIb	Lab diagnosis of selected protozoan diseases	Dr A. Pietrzyk	18 Czysta Str, Lab room
23.05.18 May	Wednesday	11 ³⁰ – 12 ⁴⁵	Lec.	2	whole class	Medical parasitology: protozoa	Prof. Piotr B. Heczko	16 ŁazarzaStr S1
25.05.18 May	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Lab diagnosis of selected protozoan diseases	Dr A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room

25.05.18 May	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	2	Groups IIIb	Lab diagnosis of selected protozoan diseases	Dr A. Pietrzyk	18 Czysta Str, Lab room
28.05.18 May	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	Lab diagnosis of selected helminthic diseases.	Dr. A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
29.05.18 May	Tuesday	8 ⁰⁰ – 10 ¹⁵	Lec.	3	whole class	Immune responses to infection. Vaccines.	Prof. Janusz Marcinkiewicz	16 Łazarza Str S-1
29.05.18 May	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	2	Groups Iib	Lab diagnosis of selected helminthic diseases.	Dr P. Kochan	18 Czysta Str, Lab room
30.05.18 May	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Medical parasitology: helminths	Prof. Piotr B. Heczko	16 Łazarza Str LHC
01.06.18 June To be confirmed	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Lab diagnosis of selected helminthic diseases.	Dr. A. Pietrzyk Dr P. Kochan	18 Czysta Str, Lab room
01.06.18 June To be confirmed	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	2	Groups IIIb	Lab diagnosis of selected helminthic diseases.	Dr P. Kochan	18 Czysta Str, Lab room
04.06.18 June	Monday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups Ia, Ib	Laboratory diagnostics of selected fungal infections	Prof. A. Macura Dr M. Skóra	18 Czysta Str, Lab room
05.06.18 June	Tuesday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups Iib	Laboratory diagnostics of selected fungal infections	Prof. A. Macura Dr M. Skóra	18 Czysta Str, Lab room
06.06.18 June	Wednesday	11 ¹⁵ – 12 ⁴⁵	Lec.	2	whole class	Medical mycology	Prof. Anna Macura	16 Łazarza Str LHC
08.06.18 June	Friday	10 ⁴⁵ – 12 ¹⁵	Lab.	2	Groups IIa, IIIa	Laboratory diagnostics of selected fungal infections	Prof. A. Macura Dr M. Skóra	18 Czysta Str, Lab room
08.06.18 June	Friday	12 ³⁰ – 14 ⁰⁰	Lab.	1 1	Groups IIIb	Laboratory diagnostics of selected fungal infections	Prof. A. Macura Dr M. Skóra	18 Czysta Str, Lab room
June	To be arranged		Exam	2	whole class	Exam (Microbiology + Immunology)	Chair of Microbiology: Dr A. Pietrzyk Dr P. Kochan Chair of Immunology: Dr B. Nowak Dr R. Biedroń	16 Łazarza Street, Lecture halls

* NB! All labs take place in the Laboratory on top floor of 18 Czysta Str.

Microbiology with parasitology

Academic teachers:

Prof. Piotr Heczko (Course Director)

Prof. Anna Macura

Assoc. Prof. Barbara Zawilińska

Dr Magdalena Skóra

Dr Agata Pietrzyk

Dr Piotr Kochan

Persons that the group representative or students may contact concerning course matters:

Dr Piotr Kochan or Dr Agata Pietrzyk, 18 Czysta Str. after each lab class.

Required book:

Jawetz, Melnick & Adelbergs Medical Microbiology 27/E by Butel, Morse, Caroll. McGraw-Hill Medical 2016. ISBN: 978-1259255342.

Scientific circles/scientific societies:

Students may also join the Parasitology (Dr Kochan) or Microbiology Research Circle (Dr Krzyściak), respectively.

Immunology

Academic teachers:

Prof. Janusz Marcinkiewicz M.D. Ph.D. (Course Director)

Prof. JU Krzysztof Bryniarski Ph.D.

Assoc. Prof. Szczepan Józefowski Ph.D.

Grzegorz Majka Ph.D.

Rafał Biedroń Ph.D.

Marta Ciszek-Lenda Ph.D.

Katarzyna Nazimek Ph.D.

Bernadeta Nowak Ph.D.

Maria Walczewska Ph.D.

Person that the group representative or students may contact concerning Immunology course matters:

Fri. 12:15-13:45 Prof. JU Krzysztof Bryniarski Ph.D., 1st floor (right wing), 18 Czysta Str.

Required books:

Murphy K., Travers P., Walport M.: Janeway's Immunobiology. Garland Science. New York 2008.

Roit I., Brostoff J., Male D.: Immunology. Mosby Elsevier, London, 2009.

Scientific circles/scientific societies:

Students may also join Students' Scientific Society in the Department of Immunology (currently there is no vacancy, if interested in the future - please contact Prof. JU Bryniarski Ph.D. or Dr Nazimek Ph.D.).