

Subject card

Subject name and code	Etiology and pathogenesis of selected immunodeficiencies, PG_00207335						
Field of study	Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		1.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Protein and Nucleic Acid Biochemistry -> Department of General and Medical Biochemistry -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Dorota Żurawa-Janicka				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		2.0		8.0	25
Subject objectives	Understanding the basis of diseases resulting from deficiencies in the mechanisms of the immune response and their consequences for human health.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMU2_W04] has in-depth knowledge of the chosen specialization in the biological sciences	- has in-depth knowledge of immunology	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[BIOLMU2_W01] has a deep knowledge and understanding of natural phenomena and processes at various levels of complexity	- knows the phenomena and processes related to the functioning of the immune system and understands the effects of immune response deficiencies at the cellular and clinical level and their impact on human health (B2_W01)	[SW4] test/exam - oral or written
	[BIOLMU2_U02] is able to proficiently use the scientific literature of the biological speciality studied	- fluently uses scientific literature in the field of immunology (B2_U02)	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[BIOLMU2_K07] is ready to systematically update biological knowledge and information on its practical applications	- systematically updates biological knowledge about the functioning of immune mechanisms and diseases resulting from their dysfunction, and indicates the practical application of this knowledge	[SK7] entries and opinions in the internship diary
	[BIOLMU2_K05] is ready to use recognized sources of scientific and popular information in the field of biological sciences in order to deepen his/her knowledge	- understands the need to use recognized sources of scientific and popular science information in the field of immunology in order to deepen knowledge	[SK8] observation of student's independent or team work
Subject contents	Primary immune deficiencies (PID) and secondary immune deficiencies, epidemiology of PID, problems related to the diagnosis and treatment of PID, diagnostic methods used, discussion of selected PIDs, including those resulting from deficiency of antibody production, leukocyte deficiency and dysfunction. Discussion of selected secondary immunodeficiencies. HIV infection. AIDS - epidemiology, diagnosis and treatment. Mechanism of action and use of selected immunomodulatory drugs, including corticosteroids.		
Prerequisites and co-requisites	Completion of the following courses: Biochemistry/introduction to biochemistry, Basics of molecular and cellular immunology/Cellular and molecular immunology. Knowledge of the structure and properties of basic types of biological macromolecules, molecular mechanisms of the flow of genetic information and the regulation of its expression.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final test	51.0%	100.0%

Recommended reading	Basic literature	Literature used during classes The lecture is an original study of issues related to diseases resulting from deficiencies and dysfunctions of immune response mechanisms. The lecture was prepared based on original source works from scientific literature and experience from research on the biology of diseases resulting from immune system dysfunction. Other sources include: Cellular and Molecular Immunology, Abbas et al., 10th Ed., Elsevier Inc. 2022. Immunology. Male et al., Elsevier Inc. Urban & Partner, 2008. Janeways Immunobiology, Murphy et al., 9th Ed. Garland Science, 2017. Clinical Immunology, Chapel et al., 6th Ed. Willey-Blackwell, 2021. Original source works from scientific journals Literature for self-study: Abbas et al., Immunologia - funkcje i zaburzenia układu immunologicznego. Edra Urban & Partner, 2015. Gołąb J., Jakóbisiak M., Lasek W., Stokłosa T. Immunologia. Wydawnictwo Naukowe PWN, 2017.
	Supplementary literature	Research and review articles from scientific journals.
	eResources addresses	
	Example issues/ example questions/ tasks being completed	Transient infant hypogammaglobulinemia (a) occurs in infants who are not breastfed (b) is caused by a defect in the transport of maternal IgG across the placenta via the neonatal receptor for the Fc fragment of IgG (c) is particularly severe in the first months of life (d) indicates the possibility of autoimmune diseases later in life. Symptoms that indicate the need for diagnosis of primary immunodeficiencies include (a) ear, sinus, bronchial, or pneumonia infections occurring several times a year (b) recurrent infections requiring long-term antibiotic therapy (c) recurrent infections in unusual locations or caused by unusual pathogens, particularly opportunistic pathogens (d) all answers are correct At what stage of the immune response is there a defect leading to the development of chronic granulomatous disease? (a) neutrophil production in the bone marrow (b) neutrophil chemotaxis (c) opsonization and uptake of microorganisms by neutrophils (d) intracellular killing of microorganisms taken up by the neutrophil. Which molecule is the cellular co-receptor for HIV entry? (a) CXCR4 chemokine receptor (b) CCR5 chemokine receptor (c) CD8 (d) At high viral loads, the CD4 receptor alone is sufficient for HIV entry.
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.