University of Gdańsk

Subject card

Subject name and code	Neurobiology of depression and schizophrenia, PG_00117670						
Field of study	Neurobiologia depresji i schizofrenii						
Date of commencement of studies	October 2023		Academic year of realisation of subject	2024/2025			
Education level	Master's studies		Subject group				
Mode of study	full-time studies		Mode of delivery	at the university			
Year of study	2		Language of instruction	Polish			
Semester of study	3		ECTS credits	1.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Laboratory of Neurobiology -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Danuta Lewandowska					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	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		1.0	9.0	25	
Subject objectives	1. to learn and understand the importance of the mutual influence of central nervous system functions and mental phenomena in health and disease.2. To acquire the competence of group work and the ability to deepen and transfer knowledge independently.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMEDMU2_W01] has in-depth knowledge of scientific fields and disciplines relevant to medical biology and the specialty being studied, and knows their main development trends	has in-depth knowledge of health sciences, knows and understands the interrelationship between the function of the nervous system and mental phenomena in health and disease conditions	[SW4] test/egzamin - ustny lub pisemny [SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
[BIOLMEDMU2_U08] is able to independently plan and implement his/her own lifelong learning and inspire others in this regard	independently plans and continues lifelong learning and is able to transfer knowledge to others	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMEDMU2_U07] is able to show initiative and manage team work, as well as to cooperate in planning and implementation of research tasks	is able to show initiative and lead the work in a team as well as interact in a group to prepare a presentation	[SU2] prezentacja/projekt/referat/ raport
[BIOLMEDMU2_W03] knows the structure and functions of the human body, the biological causes of disorders, diseases and social dysfunctions, as well as methods of their assessment using biochemical, molecular, parasitological or neurobiological methods	Knows and understands the complex determinants of the influence of the nervous system on mental phenomena and finds the relationship of disorders in the central nervous system to the pathology of mental functions and the neurobiological methods of their assessment	[SW4] test/egzamin - ustny lub pisemny [SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
[BIOLMEDMU2_W02] is familiar with currently discussed problems in medical biology and related disciplines	is oriented to the development and current state of knowledge in the field of depressive disorders and schizophrenia and indicates its relationship to biological, medical sciences and psychology	[SW4] test/egzamin - ustny lub pisemny [SW1] wypowiedź ustna/rozmowa/ dyskusja [SW2] prezentacja/projekt/referat/ raport
[BIOLMEDMU2_U06] knows and applies specialized English-language vocabulary in the field of biological and medical sciences in everyday professional / scientific activity	knows and uses English-language specialized vocabulary on depression and schizophrenia	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport [SU4] test/egzamin - ustny lub pisemny
[BIOLMEDMU2_U05] has the ability to make oral presentations in Polish or a foreign language, as well as to discuss topics related to the selected specialty	has the ability to give oral presentations in Polish and to discuss issues concerning depression and schizophrenia	[SU1] wypowiedź ustna/rozmowa/ dyskusja [SU2] prezentacja/projekt/referat/ raport
[BIOLMEDMU2_K01] is ready to critically assess themselves, the teams they work for and the content they receive	is ready to critically evaluate himself, the teams in which he works and the content he receives	[SK1] wypowiedź ustna/rozmowa/ dyskusja [SK2] prezentacja/projekt/referat/ raport [SK8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMEDMU2_K02] is willing to recognise the importance of knowledge in solving cognitive and practical problems and to consult experts in the event of difficulties in solving the problem on his/her own	recognizes the importance of knowledge and understands the need for lifelong learning and updating knowledge in the field of depression and schizophrenia	[SK1] wypowiedź ustna/rozmowa/ dyskusja [SK2] prezentacja/projekt/referat/ raport [SK8] obserwacja samodzielnej lub zespołowej pracy studenta

Subject contents

Concept: health and mental illness. The pathogenesis of depression and schizophrenia and the function of the central nervous system. Deficits of cognitive processes in affective disorders and schizophrenia. The role of the immune system in the development/therapy of depressive disorders and schizophrenia. Pharmacotherapy of depression and schizophrenia. Oral multimedia presentation conducted by students in groups, prepared on the basis of current literature, recommended by the instructor.

Prerequisites and co-requisites

Basic knowledge of the structure of the nervous system. "Neurophysiology"

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
paper with multimedia presentation: the sum of points earned is converted into a grade according to the percentage indicator	51.0%	40.0%
written credit test	51.0%	60.0%

<table>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>A. Literature required for final course credit :

A.1. used during the classes

1. Yun H., Park K., Kim E., Kim S., Hong J. Serotonin receptor 6 controls Alzheimer's disease and depression. Oncotarget, 2015, 6, 26716-26728.

2 Jiang Y., Luo C., Li X., Yang H., Li J., Chang X. et al. Changes in white matter functional networks in patients with schizophrenia. NeuroImage, 2018 (doi.org./10.1016/j.neuroimage.2018.04.018).

3 Miller A. Depression and immunity: a role for T lymphocytes? Brain Behav. Immun., 2010, 24, 1-8.

4 Keller W., Kum L., Heidi B., Wehring J., Koola M., Buchanan R. et al. A review of anti-inflammatory agents for symptoms of schizophrenia. J. Psychopharmacol., 2013, 27, 337-342.

5 Kantrowitz, J. N-methyl-D-aspartate glutamate receptor modulators and related drugs to enhance auditory plasticity. Schizophrenia Research, 2018 (doi.org/10.1016/j.schres.2018.02.003).A.2. studied independently by the studentCurrent publications indicated by the lecturer</td></tr>
<tr><td>Supplementary literature</td><td>B. Supplementary literature

1 Kowalski J. Genetic aspects of mental diseases. In: Neuroimmunology. XXV Winter School of the Institute of Pharmacology of the Polish Academy of Sciences, Krakow, 2008, 47-51.

2 Rybakowski J. Neuroimmunology of schizophrenia and affective diseases. In: Neuroimmunology. XXV Winter School of the Institute of Pharmacology of the Polish Academy of Sciences, Krakow, 2008, 47-51.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">1. Neuroinflammation as a substrate for the development of depression.2. Neuroimmunology of schizophrenia.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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