

Subject card

Subject name and code	Plant secondary metabolites, PG_00154175						
Field of study	Biology						
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 polish		
Semester of study	3		ECTS credits		1.0		
Learning profile	academic		Assessment form				
Conducting unit	Department of Experimental Biology and Plant Biotechnology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Wojciech Pokora				
	Teachers		dr Darya Harshkova				
			dr hab. Wojciech Pokora				
			dr hab. Anna Aksmann				
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	Familiarize students with the function of secondary metabolites in plant organisms and their role in the phenomenon of allelopathy; the possibilities of using the knowledge of the occurrence, structure and biological activity of plant secondary metabolites in everyday life, and the evaluation of the effects of plant secondary products on the human body.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[BIOLMU2_W04] the graduate has an in-depth knowledge of the chosen speciality of biological sciences		The graduate has an in-depth knowledge of plant secondary metabolism		[SW2] presentation/project/paper/report		
	[BIOLMU2_U07] the graduate is able to critically confront biological information from a variety of sources and, on this basis, draw valid conclusions		The graduate critically confronts information about secondary metabolites from various sources and on this basis draws reasonable conclusions		[SU2] presentation/project/paper/report		
	[BIOLMU2_U10] the graduate is able to prepare oral presentations in Polish and foreign languages on specific subjects within the chosen specialisation		Graduate has the ability to give oral speeches in Polish on secondary products of plants and their use by humans		[SU1] oral statement/conversation/discussion		
	[BIOLMU2_K01] the graduate is ready to take initiative and act independently and feels the need for lifelong learning		The graduate shows initiative and self-reliance in acquiring scientific literature on plant secondary metabolites		[SK2] presentation/project/paper/report		

Subject contents	The most important products of plant secondary metabolism and their importance for the pharmaceutical and biotechnology industries. Getting to know the pathways biosynthesis of secondary metabolites, their biological activity and chemical and biotechnological methods of their production. The effects of selected of secondary metabolites of plants on animal/human organisms - mechanism of interaction - toxicity and detoxification. Basic methods Isolation, identification and purification of plant secondary metabolites.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Spontaneous oral statements; observation of student work and attitudes	51.0%	25.0%
	paper/oral presentation	51.0%	75.0%
Recommended reading	Basic literature	Kołodziejczyk A., 2006. Naturalne związki organiczne. Wydawnictwo Naukowe PWN Kopcewicz J., Lewak S., 2005 Fizjologia roślin. Wydawnictwo Naukowe PW	
	Supplementary literature	Selected scientific papers Cseke L.J., Kirakosyan A., Kaufman P.B., Warber S.L., Duke J.A., Brielmann H. L., 2006. Natural Products from Plants. CRC Press, Taylor & Francis Group Taiz L., Zeiger E. (red.). 2010. Plant Physiology. The Benjamin/Cummings Publ. Comp. Inc	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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