

DESCRIPTION OF THE COURSE OF STUDY

Course code	12.6-3LEK-F-Far	
Name of the course in	Polish	Farmakogenetyka
	English	Pharmacogenetics

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	medicine
1.2. Mode of study	full-time
1.3. Level of study	uniform Master's study
1.4. Profile of study*	practical
1.5. Specialization*	lack
1.6. Unit running the course of study	Faculty of Medicine and Health Sciences UJK
1.7. Person/s preparing the course description	Dr hab. n. med. Ewa Orlewska, prof UJK
1.8. Person responsible for the course of study	Dr hab. n. med. Ewa Orlewska, prof UJK
1.9. Contact	ewa.orlewska@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	facultative
2.2. Language of instruction	English
2.3. Semesters in which the course of study is offered	6-9 semesters of study
2.4. Prerequisites*	Pharmacology and toxicology, genetics, biochemistry, physiology and pathophysiology

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	Lectures: 15 hours, Classes: 20 hours	
3.2. Place of classes	Lectures – in didactic rooms of the UJK	
3.3. Form of assessment	Students who have $\geq 50\%$ absenteeism during lectures will not obtain credit. Written credit: single choice test, 20 questions	
3.4. Teaching methods	Conversation lecture, discussion	
3.5. Bibliography	Required reading	Pharmacogenomics, ISBN: 9780123919182.
	Further reading	TNR 10

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

4.1. Course objectives (including form of classes)
The aim of the discipline 'Pharmacogenetics' is familiarization of students from the specialty of medicine with terminology and history of pharmacogenetics, and genetic basis of human response to drugs, most important genetically conditioned diseases taking the course with a different reaction to drugs, and teaching the practical use of pharmacogenetics in clinical practice.
4.2. Detailed syllabus (including form of classes)
Lectures:
1. Introduction into pharmacogenetics – definitions and their meaning (2 hours)
2. Genetic polymorphism in pharmacology (2 hours)
3. Undesirable effects and pharmacogenetics (2 hours)
4. Genetic polymorphism of receptors (2 hours.)
5. Drug metabolism and genetic diversity (2 hours)
6. Selected diseases and examples of changed body response to drugs (2 hours)
7. Practical use of pharmacogenetics in psychopharmacology (1 hour)
8. Genetic tests in pharmacogenetics (1 hour)
9. Ethical and economic issues (1 hour)

4.3 Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of KNOWLEDGE:		
W01	knows the basic concepts of genetics;	C.W1.
W02	knows the principles of inheritance, inheritance of quantitative traits, independent inheritance of traits and inheritance of extranuclear genetic information;	C.W5.
W03	knows the factors affecting primary and secondary genetic balance of the population	C.W8.
W04	knows the foundation for the diagnosis of gene and chromosome mutations responsible for hereditary and acquired diseases, including cancer;	C.W9.
W05	knows genetic mechanisms, the acquisition of drug resistance by microorganisms and tumor cells;	C.W11.
W06	understands the indications for genetic testing performed to ensure the individualization of pharmacotherapy;	C.W40.
W07	knows the basic trends of therapy development, in particular the possibility of applying cell therapy, gene therapy as well as targeted therapy in specific diseases;	C.W41.
W08	knows the most common symptoms of acute poisoning, including poisoning with alcohol, drugs and other psychoactive substances, heavy metals and selected classes of drugs;	C.W44.
W09	knows the possibilities of modern cancer therapy (including multimodal therapy), the prospects for cell and gene therapies and their adverse effects;	E.W25.
W10	knows and understand the causes, symptoms, principles of diagnosis and therapeutic management of the most common hereditary diseases;	E.W35.
within the scope of ABILITIES:		
U01	makes a decision on the need to perform cytogenetic and molecular tests;	C.U3.
U02	selects drugs at appropriate doses for correcting the pathological phenomena in the body and in individual organs;	C.U14.

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes		
	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...
W01																					
W02																					
W03																					
W04																					
W05																					
W06																					
W07																					
W08																					
W09																					
W10																					
U01																					
U02																					

*delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	3	61%-68%
	3,5	69%-76%
	4	77%-84%
	4,5	85%-92%
	5	93%-100%
classes (C)*	3	61%-68%
	3,5	69%-76%
	4	77%-84%
	4,5	85%-92%
	5	93%-100%

- **Thresholds are valid from 2018/ 2019 academic year**

5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

Category	Student's workload
	Full-time studies
<i>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</i>	35
<i>Participation in lectures*</i>	15
<i>Participation in classes, seminars, laboratories*</i>	20
<i>Preparation in the exam/ final test*</i>	
<i>Others*</i>	
<i>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</i>	15
<i>Preparation for the lecture*</i>	
<i>Preparation for the classes, seminars, laboratories*</i>	10
<i>Preparation for the exam/test*</i>	5
<i>Gathering materials for the project/Internet query*</i>	
<i>Preparation of multimedia presentation</i>	
<i>Others*</i>	
TOTAL NUMBER OF HOURS	50
ECTS credits for the course of study	2

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

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