«APPORVED»
Head of Department of General and Clinical
Pharmacology and Pharmacognosy,
prof._____Rozhkovskyi Y.V.
«___31_» _____08__ 2023 y.

SELECTIVE ACADEMIC DISCIPLINE
«THE BASICS OF PHARMACOGENETICS»

TOPICS OF SEMINAR CLASSES

№№	Topics	Hrs
1.	Pharmacogenetics. Introduction. Clinical meaning of pharmacodynamics genes' polymorphisms	2
2.	Methods of pharmacogenetic study of the drugs' biotransformation and transport. The interpretation and informativeness of pharmacogenetic tests	2
3.	Drugs' pharmacokinetics (absorption, distribution) and their dependence from human genetic factors	2
4.	Drugs' biotransformation and excretion, and their dependence from human genetic factors	4
5.	The basics of pharmacodynamics of the drugs	2
6.	Pharmacogenetics of the drugs that act on hemostasis	2
7.	Genes' polymorphism that determine the effectiveness of cardiovascular agents	2
8.	Genes' polymorphism that determine the effectiveness of psychotropic agents	4
9.	Genetic polymorphism that determine the effectiveness of the anticonvulsants and analgesics	2
10.	Genetic polymorphism that determine the effectiveness of the antimicrobial and anticancer agents	4
11.	The adverse reactions that depend on genetic polymorphism.	2
12.	Control of practical skills and theoretical knowledge. Final class. Final control of learnt material the discipline.	2
	Total	**30**

TOPICS OF SELF-PREPARATION CLASSIS (SPC)

№№	Topics	Hrs
1.	The emergence and development of pharmacogenetics. Basics of individual sensitivity of a person to the action of drugs.	4
2.	Genetic differences in drug receptors. Clinical significance of pharmacodynamic gene polymorphisms.	4
3.	Types of methods for determining genetic polymorphism	4
4.	Genetic factors that affect the biotransformation activity of the drugs	6
5.	Pharmacology of drugs affecting the blood coagulation system. Gene polymorphism, which determines the features of the action of anticoagulants, antiaggregants and their clinical significance	4
6.	Adverse reactions of drugs affecting leukopoiesis and blood coagulation.	4

	Methods of their prevention.	
7.	Pharmacology of drugs affecting the renin-angiotensin system. Gene polymorphism, which determines the features of the action of ACE inhibitors and their clinical significance	4
8.	Pharmacology of beta blockers. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of beta-blockers.	4
9.	Pharmacology of statins. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of statins.	4
10.	Pharmacology of neuroleptics and antidepressants. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of antipsychotics and antidepressants.	4
11.	Pharmacology of analgesics. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of analgesics.	4
12.	Pharmacology of anticancer drugs. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of analgesics.	4
13.	Pharmacogenetic factor of the adverse effects development.	4
14.	Pharmacology of antimicrobial drugs. Gene polymorphism affecting the pharmacokinetics and pharmacodynamics of antimicrobial drugs.	6
	TOTAL:	**60**

Head of study section, associative professor _____ K.H. Lobashova

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