



CALENDAR-THEMATIC PLAN OF LECTURES
Biochemical Transformation of Medications in the Body
for 3-d course
in specialty 226 Pharmacy, Industrial Pharmacy
(Language of instructions – English)
ФМ23*(4,10д)АНГЛ-01, spring semester, 2024-2025 a.y.

№	Date	Lesson Name	Volume in hours	Lecturer
MODULE 1. FUNCTIONAL BIOCHEMISTRY				
1.	17.02.2025	General principles of xenobiotic biotransformation. Biotransformation systems of drugs. Phase I (functionalization) of xenobiotic metabolism. Metabolism of substrates by enzymes of oxidative systems.	2	ass.prof. Seniuk I.V.
2.	03.03.2025	Phase II (conjugation) of xenobiotic metabolism. Conjugation and transport processes. Features of transformation of medicinal substances. Ways of transformation of certain groups of drugs.	2	ass.prof. Seniuk I.V.
3.	17.03.2025	Factors that affect drug metabolism. Factors that affect drug metabolism.	2	ass.prof. Seniuk I.V.
4.	31.03.2025	The role of metabolism (biotransformation) in drug toxicity. Pharmacogenetics. Polymorphism of phase I enzymes. Polymorphism of phase II enzymes.	2	ass.prof. Seniuk I.V.
5.	14.04.2025	The importance of biotransformation in drug discovery and development.	1	ass.prof. Seniuk I.V.
Total:			9	

Note: the lecture take place on Monday from 10:25 to 12:05 online.

**Head of the Department of
Clinical Laboratory Diagnostics,
Microbiology and Biological Chemistry**

Vira KRAVCHENKO



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OF PRACTICAL LESSONS**
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№	Date	Lesson Name	Volume in hours	Knowledge Assessment System, points	
				min	max
CONTENT MODULE 1. GENERAL PRINCIPLES OF XENOBIOTIC BIOTRANSFORMATION					
1.	17.02.2025	General principles of xenobiotic biotransformation. Biotransformation systems of drugs. Phase I (functionalization) of xenobiotic metabolism.	3	7	10
2.	03.03.2025	Metabolism of substrates by enzymes of oxidative systems. Phase II (conjugation) of xenobiotic metabolism. Conjugation and transport processes.	3	7	10
3.	17.03.2025	Features of transformation of medicinal substances. Ways of transformation of certain groups of drugs.	3	7	10
		Final test of CM 1 assimilation		9	20
Total from CM 1:				30	50
CONTENT MODULE 2. THE ROLE OF METABOLISM (BIOTRANSFORMATION) IN DRUG TOXICITY.					
4.	31.03.2025	Factors that affect drug metabolism. Factors that affect drug metabolism.	3	7	10
5.	14.04.2025	The role of metabolism (biotransformation) in drug toxicity. Pharmacogenetics. Polymorphism of phase I enzymes. Polymorphism of phase II enzymes.	3	7	10
6.	28.04.2025	The importance of biotransformation in drug discovery and development.	3	7	10
7.	12.05.2025	Final test of CM 2 assimilation	2	9	20
		Semester credit of the module: " Biochemical Transformation of Medications in the Body "	1		
Total from CM 2:				30	50
TOTAL RATING FOR MODULE 1:			21	60	100

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