Assessment tools for certification in the discipline «Methods of experimental study of the molecular basis of drug action»
for students of 2023 admission
under the educational program
33.05.01 Pharmacy,
Pharmacy profile
specialty,
full-time form of education
for the 2024-2025 academic year

Assessment tools for conducting midterm assessment in the discipline

Form of current assessment: interview on control questions. Competencies tested: УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9.

Midterm assessment is an interview on control questions.

List of questions for the interview

List of control questions for the interview:

№	Questions for midterm assessment of a student	Indicators of achievement competence
1.	The concept of experimental pharmacology. The purpose and main tasks of the discipline.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
2.	General classification of molecular targets in drug action.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
3.	Methods of searching for biologically active substances that affect various receptors. Concepts of agonists, antagonists and partial agonists.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
4.	Target-directed drug discovery strategy using virtual technologies.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
5.	Effect-directed drug discovery strategy: natural and synthetic antagonists; natural agonists and their analogues; examples of drugs developed using this strategy.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9

6.	Concepts of pharmacological screening of biologically active compounds.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
7.	Basic concepts of modeling experimental pathologies in animals, isolated organs and cell cultures.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
8.	Bioethical standards for pharmacological research on animals.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
9.	Features of keeping animals in the laboratory during preparation and conducting experiments. Basic principles of conducting research on animals.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
10.	Possibilities of using cell cultures, bacteria, fungi, enzymes and isolated organs as test systems in preclinical studies.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
11.	The main stages of preclinical studies (specific activity, toxic effects).	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
12.	Ethical aspects of preclinical research.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
13.	Preclinical studies in accordance with Good Laboratory Practice (GLP) standards: site, equipment and personnel.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
14.	Standard Operating Procedures.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
15.	Key stages of drug safety studies.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
16.	General toxic properties of drugs. The concept of bioavailability.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
17.	The main stages of studying specific types of drug toxicity.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
18.	General concepts about the study of drug pharmacokinetics.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
19.	Absorption, distribution, metabolism and excretion of drugs.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
20.	Evaluation of pharmacokinetic drug interactions.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
21.	Extrapolation of experimental data from pharmacological and toxicological studies from animals to humans.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
22.	Extrapolation Factors: Dose Determination for First-Human Toxicity Trials of Drugs.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9

23.	Routes of administration of drugs.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
24.	Traditional and modern dosage forms of drugs.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
25.	Fundamentals of clinical pharmacology, goals and objectives.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
26.	Objectives and types of clinical trials.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
27.	The purpose and objectives of phase 1 clinical trials.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
28.	Goals and objectives of phase 2-3 clinical trials.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
29.	The purpose and objectives of phase 4 clinical trials.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
30.	The concepts of placebo, control group, blind or double-blind study.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
31.	Side effects and adverse drug reactions.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
32.	Key clinical trial documents (study protocol, informed consent).	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
33.	Ethical and legal standards for conducting clinical trials. Randomization.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
34.	Evidence-based medicine.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
35.	Levels of evidence (A, B, C) and classes of recommendations (I, IIa, IIb, III).	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
36.	The main stages of registration of medicinal products in the Russian Federation.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
37.	Biologically active food supplements (BAA). Difference from medicinal products.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
38.	Nutraceuticals. Classification.	УК-1, УК-6, ОПК-1, ОПК- 6, ПК-7, ПК-9
39.	Parapharmaceuticals. Classification.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
40.	Assessment of the quality and safety of dietary supplements.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9

41.	Animal study of drug poisoning treatment methods.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9
42.	Methods for studying the pharmacological interaction of poison and antidote in in vivo experiments.	УК-1, УК-6, ОПК-1, ОПК-6, ПК-7, ПК-9

Considered at meeting of the department of Pharmacology and bioinformatics

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