


ONMedU, Department of Drug Technology IWS №1. «Subject and objectives of biopharmacy. Biopharmaceutical factors and their role in the development of the composition and technology of drugs.»

**ODESSA NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF DRUGS TECHNOLOGY**

APPROVE
Head of Department



signature (Borisjuk I. Yu.)
«27» august 2021 y.


**METHODICAL DEVELOPMENT OF INDEPENDENT WORK OF
STUDENTS (IWS)**

Course 5 Faculty Pharmaceutical

Course Biopharmacy

Topic №1 **«Subject and objectives of biopharmacy. Biopharmaceutical factors and their role in the development of the composition and technology of drugs.»**

Methodical recommendations on IWS
developed by:
assistant



signature (Akisheva A.S.)

Methodical recommendations of
IWS were discussed at the methodical
meeting of the department
«27» august 2021 y.
Protocol № 1

Odesa - 2021

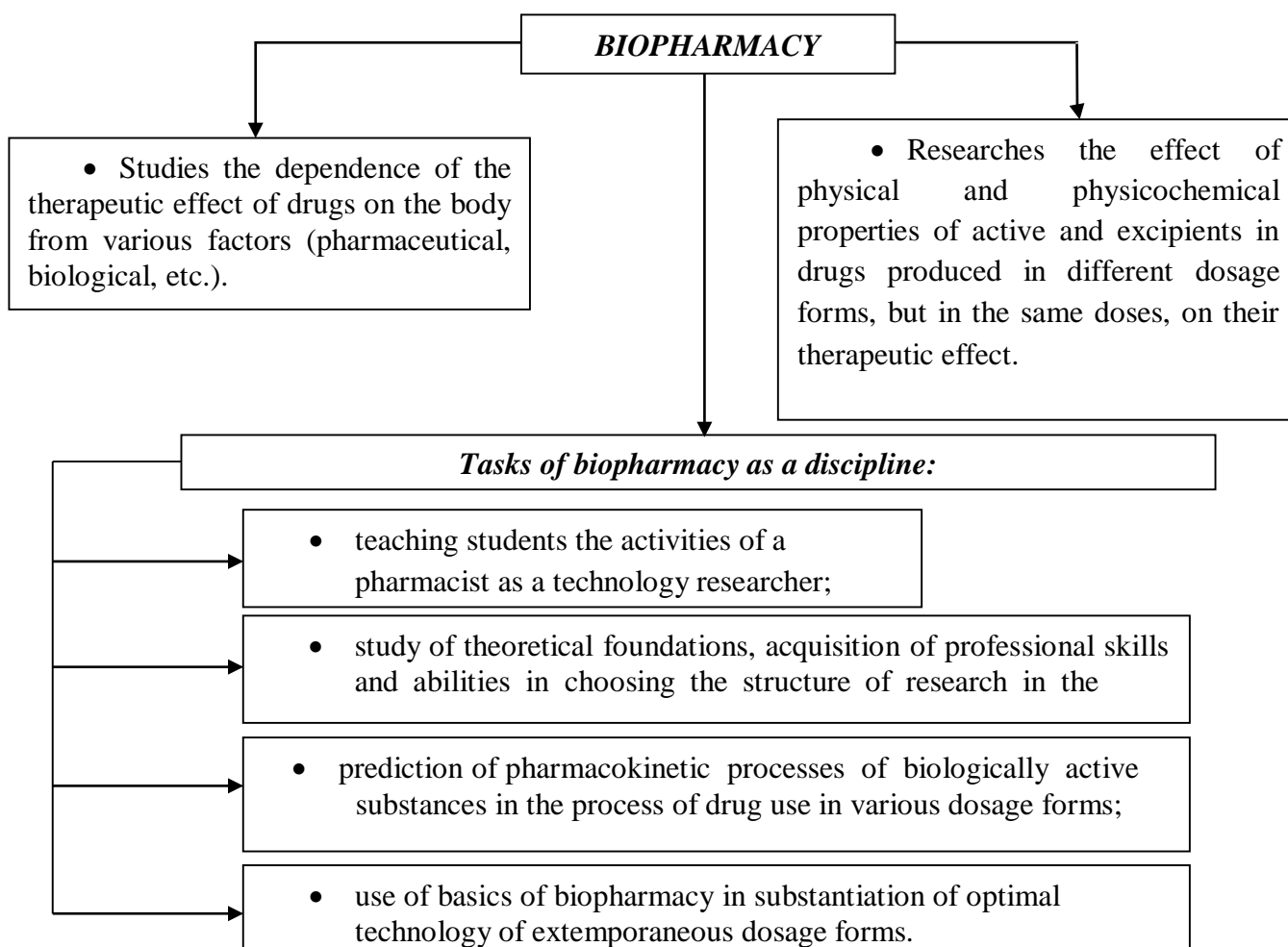
Subject: Subject and tasks of biopharmacy. Biopharmaceutical factors and their role in the development of the composition and technology of drugs "- 6 hours.

Purpose: Substantiation of the purpose and objectives of biopharmacy, history of its origin, basic terms and concepts, the concept of therapeutic non-equivalence of drugs, purpose and objectives of biopharmacy as a new scientific field, as well as the definition of biopharmaceutical factors and their role in creating new drugs.

Basic concepts: generics, polymorphism of medicinal substances.

Plan

I. Theoretical questions for the lesson:



Questions for self-control

1. Biopharmacy as a scientific discipline and its importance in the development of composition and technology of dosage forms.
2. History of biopharmacy development.
3. Basic concepts and terms of biopharmacy.
4. The main tasks of biopharmacy at the present stage and their role for practical health care.
5. The concept of pharmaceutical factors influencing the therapeutic efficacy of drugs, their classification.

6. The physical state of drugs and excipients in dosage forms and its effect on the rate of release and absorption of drugs.
7. The influence of the physical state of drugs on the pharmacological action.
8. The influence of the degree of dispersion of drugs on the therapeutic effect of drugs.
9. The effect of crystal structure and polymorphism of drugs on the pharmacological activity of drugs.
10. The influence of the nature of the solvent, solubility, degree of viscosity and pH of the medium on the absorption of drugs.
11. The degree of purity of the drug and its effect on pharmacotherapy.
12. Dependence of therapeutic activity of drugs on the type and quality of packaging.

Approximate tasks for the study of theoretical material

1. Make a dictionary of basic concepts on the topic
2. Fill in the orientation card for self-preparation of the student using the literature on the topic :

№ z.p.	The main tasks	Instructions	Answers
1.	Define the science of biopharmacy, what it studies, for what purpose?	See answer	Biopharmacy is the theoretical basis of drug technology, the subject of which is the study of the influence of physical and physicochemical properties of active and excipients in drugs that are manufactured in different dosage forms, but in the same doses and differently affect therapeutic activity. Biopharmacy is a science that studies the dependence of the therapeutic effect of drugs on various variables (exogenous and endogenous).

2.	Indicate biopharmaceutical factors and their role in the development of the composition and technology of drugs	See the textbook	1. Biopharmacy: textbook / edited by: Borisyuk IY, Fizzor NS, Akisheva AS Odessa, ONMedU, 2020. - pp. 4-23.
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II. Practical work (tasks) that will be performed in class:

Write recipes in Latin according to the current orders of the Ministry of Health of Ukraine. Justify the technology and make the appropriate calculations. Write a written control passport.

Take: Anesthesia 2.0

Boric acid 1.5

Tar 5.0

Castor oil 2.5

Ethyl alcohol 96% to 50 ml

Mix. Come on. Mark. Apply to hands.

III. Test tasks for self-control

[http://info.odmu.edu.ua/chair/drugs technology / Tests Step-2](http://info.odmu.edu.ua/chair/drugs%20technology%20/Tests%20Step-2) on the following topics:

-Technology of powder preparation. Dosage by weight. Powder quality assessment (ATL)

IV. Individual tasks for students on the topic of the lesson

Prepare a presentation (abstract): Biopharmaceutical factors and their role in the development of the composition and technology of drugs.

List of recommended reading

Main:

1. Біофармація : підруч. для студентів закл. вищ. освіти / О. І. Тихонов [та ін.] ; за ред. О. І. Тихонова. – 2-ге вид., перероб. і допов. – Харків : НФаУ: Золоті сторінки, 2019. – 224 с

2. Настанова СТ-Н МОЗУ 4242-7.1:2005 «Лікарські засоби. Настанова з клінічних досліджень. Дослідження біодоступності та біоеквівалентності» - Київ, 2018.

3. Настанова СТ-Н МОЗУ 4242-7.1:2005 «Лікарські засоби. Настанова з клінічних

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4. Настанова СТ-Н МОЗУ 42-7.2:2018 Лікарські засоби дослідження біоеквівалентності. – Київ, 2018. – 77 с.