

**University of Al-Mustansyria**  
**College of Pharmacy**  
**Department of Pharmacology and Toxicology**  
**Title of the course: Pharmacology Practical II**  
**Level: 4th Class, 1<sup>st</sup> Semester**

**Course Staff: Dr. Wrood Salim (Email: [Wroodmunaf@yahoo.com](mailto:Wroodmunaf@yahoo.com))**

**Dr. Deleen abd alwahab (Email: [wardaali264@yahoo.com](mailto:wardaali264@yahoo.com))**

**Definition:**

The laboratory of pharmacology is one of the laboratories that belong to the pharmacology and toxicology departments which are given to the undergraduate students of the fourth year in the first semester of their study. And it mainly concerned in the evaluation of drugs affects on the laboratory animals and on human as well, and how these affects can be explained

**Objective:**

Learn basic or fundamental laboratory technique and skill. And verify the theory we have learned in pharmacology.

**Instructions:**

In this course, you will be performing experiments and recording and analyzing your data in lab reports. The pre-lab homework must be turned in by the start of lab. The remainder of your lab report will be written during the lab period and must be turned in by the end on the lab.

To do before lab: You are required to read the lab manual prior to the start of lab.

To bring to lab: You must bring medical coat, gloves, lined paper, calculator, and pens to each lab session.

Lab reports: Your lab reports will be written on A4 worksheet paper. Use a ruler for all graphs and tables. All labs must be written in pen, and presented in the order instructed. do not copy or photograph them, and do not share them with other students. Copying the answers, adjusting your lab report, or sharing answers with other students will receive a zero grade.

General lab instruction:

1. Students will be assigned to work in groups and all of them are responsible for completion of the experiment.
2. The experiments will be mostly done on laboratory animals [mice and rats]. The animals should be treated well. Improper handling and treatment of animals may lead to failure, to observe the effects, and will give rise to bad results.
3. The three major rules of any biological laboratory are; - cleanliness, accuracy, and observation.
4. Smoking, drinking, chewing, and eating are absolutely forbidden in the laboratory.
5. All students attending the laboratory room are required to wear white coat with gloves

During the lab

During lab you will take notes in pen as described above. Be sure to include any changes you made to the procedure in the lab handout, even if they were at the instructor's direction; **always show calculations.**

**Course Materials**

There is no laboratory manual for this course. All materials will be present online in the (Dropbox) at the beginning of each laboratory period. Each student should bring a notebook and pen/pencil and should take notes throughout the laboratory period.

Lab Number	Experiment Name	Brief Explanation
1	Mice handling and Routes of administration of the drug	Recognition of different route of administration of drugs and how to handle laboratory animals
2	Barbiturates	Appreciate how the route of administration influences the onset and duration of action of thiopental and Phenobarbital

3	Study Absorption and excretion of drug in Man	Quantitatively estimate the levels of iodide excreted in the saliva
4	Drug Antagonisms and PS drugs effect on glands secretion	Effect of Parasympathomimetic Drugs on Harderian gland secretions in Rats
5	Effect of drugs on human eye	Effect of miotic, Mydriatic and ocular local anesthetic drugs on human eye
6	Evaluation of the NSAIDs on laboratory animals	Notice the effect of some NSAIDs on the laboratory animals and their strength to relieve pain stimulated by using irritant agent
7	Opioid	Evaluation the analgesic effect of opioid drugs
8	B blocker	Evaluation the effect of B-blocker on human

### Exams, Assignments, and Grading Policy

Total grades for this one credit laboratory course is 25 % and are determined by final OSPE exam ,complete laboratory reports, in class quizzes and work evaluations.

Lab quizzes	10
Observation of Laboratory Work	2
Laboratory Reports	3
OSPE	10

### **General laboratory Safety rules**

1- There are generally four routes to exposure to hazardous drugs or chemicals that you should keep in mind while handling them:

- Inhalation– avoid by the use of masks
- Skin & eye contact– avoid by the use of lab coats, gloves, and goggles
- Ingestion– avoid eating or drinking in the lab [Do not bring food or drinks into the lab]
- Injection– dispose of broken glass and needles properly

2- Bites and Scratches

Bites and scratches represent a significant portion of laboratory animal associated hazards. These injuries are readily preventable through proper animal handling technique. Inappropriate animal handling may induce discomfort, pain, and distress in the animal