

SUBJECT TEACHING GUIDE

480 - Neurotransmitter Receptors

Master's Degree in Mental Health Research

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Master's Degree in Mental Health Research			Type and Year	Optional. Year 1
Faculty	Faculty of Medicine				
Discipline	Subject Area: New Mechanisms and Molecular Targets in the Treatment of Psychic Disorders				
Course unit title and code	480 - Neurotransmitter Receptors				
Number of ECTS credits allocated	4	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. FISILOGIA Y FARMACOLOGIA
Name of lecturer	ALVARO MARCELINO DIAZ MARTINEZ
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3.1 LEARNING OUTCOMES

- 1. Know the aspects related to signaling in the central nervous system and its relationship with psychiatric pathology.
- 2. Know the main characteristics of neurotransmitter receptors.
- 3. Understand the implications of drug development in the field of mental health.
- 4. Acquire a critical sense sufficient to understand the relationship between the various aspects of brain signaling and diseases of the nervous system

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- 1. To know the aspects related to the central nervous system signaling and the changes associated with psychiatric disorders.
- 2. To know the main characteristics of the neurotransmitter receptors .
- 3. To understand the implications of drug development in the field of mental health .
- 4. To acquire a critical sense to analyze different aspects of brain signaling and diseases of the nervous system .

4. OBJECTIVES

The main objectives are:

- 1. To understand the relevance, fundamental characteristics, and properties of the cell signaling mechanisms within the nervous system, focusing on those that are receptor-dependent.
- 2. To integrate this information with their knowledge of the etiopathogenesis and pharmacological treatment of various mental illnesses.

6. SUBJECT PROGRAM

CONTENTS

1	General properties of neurotransmitter receptors and mediators. Radiometric and biochemical identification of receptors
2	General properties of neurotransmitter receptors and mediators. Concepts of Agonism and pharmacological antagonism
3	.
4	General properties of neurotransmitter receptors and mediators. General patterns of neuroreceptor structure. Mechanisms of transduction of responses in membrane and nuclear receptors.
5	General properties of neurotransmitter receptors and mediators. Homologous and heterologous regulation of receptors
6	Receptors and signaling systems of special relevance in psychobiology. New perspectives.

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Process exercise: monographic work on one of the topics related to the topics taught during the course.	Work	Yes	Yes	60,00
Quality and quantity in participation in forums.	Others	No	No	5,00
Quality of bibliographic review work....	Work	Yes	Yes	30,00
Quality of participation in face-to-face sessions along the course	Others	No	No	5,00
TOTAL				100,00
Observations				
As it is a face-to-face course, attendance is compulsory (unless the teaching must be non-face-to-face due to health circumstances)....				
Observations for part-time students				
N/A.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
<ul style="list-style-type: none"> - Receptores para Neurotransmisores. JA García Sevilla, A. Pazos. Ediciones en Neurociencia, Barcelona, 2003. - Receptor and Ion Channel Detection in the Brain: Methods and Protocols. Lujan R., Ciruela F. Neuromethods. 1st ed. 2016.