

## SUBJECT TEACHING GUIDE

M1349 - Neurotransmitter Receptors

Master's Degree in Mental Health Research

Academic year 2022-2023

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	M1349 - 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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Other lecturers	MARIA ELENA CASTRO FERNANDEZ MARIA FUENCISLA PILAR CUELLAR ALBERT ADELL CALDUCH				

### 3.1 LEARNING OUTCOMES

- 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. COURSE ORGANIZATION

##### CONTENTS

1	General aspects of neurotransmitter receptors. Pharmacological agonism and antagonism.
2	General aspects of neurotransmitter receptors. Radiometric and biochemical receptor identification.
3	General aspects of neurotransmitter receptors. Functional characterization of receptors.
4	General aspects of neurotransmitter receptors. Receptors structure. Signal transduction mechanisms for membrane and nuclear receptors.
5	General aspects of neurotransmitter receptors. Homologous and heterologous regulation of receptors.
6	Receptors and signalling pathways involved in neuropsychiatric diseases. 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	No	Yes	60,00
Quality and quantity in participation in forums	Others	No	No	10,00
Quality of bibliographic review work	Work	Yes	Yes	20,00
Quality of participation in face-to-face sessions	Others	No	No	10,00
<b>TOTAL</b>				<b>100,00</b>
<b>Observations</b>				
As it is a face-to-face course, attendance is compulsory (unless the teaching must be non-face-to-face due to health circumstances). The maximum number of absences admitted is two classes.				
<b>Observations for part-time students</b>				
N/A				

#### 8. BIBLIOGRAPHY AND TEACHING MATERIALS

##### BASIC

- 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.