Testi del Syllabus

Resp. Did.	**FLORIO CHIARA**	**Matricola: 004090**

Docenti	**CELEGHINI CLAUDIO, 3 CFU** **FLORIO CHIARA, 3 CFU** **STOCCO GABRIELE, 1 CFU**

Anno offerta:	**2017/2018**
Insegnamento:	**779SM - NEUROANATOMIA E NEUROFARMACOLOGIA**
Corso di studio:	**SM54 - NEUROSCIENZE**
Anno regolamento:	**2017**
CFU:	**7**
Settore:	**BIO/16**
Tipo Attività:	**B - Caratterizzante**
Anno corso:	**1**
Periodo:	**Annualità Singola**
Sede:	**TRIESTE**

🇮🇹 Testi in italiano

Lingua insegnamento	English
Contenuti (Dipl.Sup.)	The course is composed of three parts:Part 1 (Prof. Claudio Celeghini): Neuroanatomy.Development of the Nervous System. Nervous tissue. Receptors. Spinal cord: organization of the gray matter and of the white matter. Brainstem. Intrinsic nuclei and nuclei of the cranial nerves. Reticular formation. Diencephalon and telencephalon. Cerebral hemispheres. Basal ganglia. Cerebral cortex. Cerebellum. Morphological, functional and phylogenetic description. Cerebellar cortex. Deep nuclei. Functional connections. Limbic System. Hippocampus. Amygdala. Circuits and connections of the limbic system. Encephalic meninges, venous sinuses of the dura mater. Subarachnoid space and cisterns. Cerebrospinal fluid. Sensory Systems. Types of sensation. System of the dorsal columns-medial lemniscus and anterolateral system. Somatosensory cortex. Motor systems. Medial and lateral pathways. Categories of spinal reflexes. Sympathetic and parasympathetic divisions of the Autonomic Nervous System.Part 2 (Prof. Chiara Florio): Neuropharmacology.Pharmacokinetic: ADME (drug absorption, distribution, metabolism and excretion). Bioavailability. Pharmacokinetic models: linear and non-linear. Half-life. Pharmacodynamic: Drug molecular target. Affinity and efficacy. Gradual and quantal dose-response curves. Allosteric modulation. Drugs of the central nervous system: Autonomic Nervous System. Antidepressant drugs. Antipsychotic drugs. Anxiolytic drugs. Analgesics. Part 3 (Prof. Gabriele Stocco): PharmacogenomicsElements of human genetic variation - basis on genetic variants affecting protein function and epigenetic effects of pharmacological relevance
Testi di riferimento	Part 1: Computer-aided teaching material will be suppliedParts 2 and 3: Rang, Ritter, Flower, Henderson "Rang & Dale's Pharmacology" Eighth Edition, Elsevier 2016

Obiettivi formativi	The aim of the part 1 is to provide students with a basic understanding of the structural organization of the human central nervous system in sufficient depth to form the basis for further clinical or research studies of the nervous system.The purpose of the parts 2 and 3 is to provide robust basis of Neuropharmacology, discussing the principles at the basis of the pharmacokinetic, pharmacodynamic and pharmacogenomic properties of the drugs, particularly of those acting at the peripheral and central nervous system
Prerequisiti	Part 1: Knowledge of the fundamentals of cytology, biology, histology.Parts 2 and 3: Basic knowledge of intracellular signal transduction pathways and synaptic transmission
Metodi didattici	frontal lectures
Altre informazioni	Computer-aided teaching material will be supplied
Modalità di verifica dell'apprendimento	Students are required to take a final oral examination. Regarding parts 2 and 3, verification of learning consists in the discussion of three issues, one for each main topic (Pharmacokinetic, Pharmacodynamic and Pharmacogenomic)
Programma esteso	Part 1 (Prof. Claudio Celeghini): Neuroanatomy.Development of the Nervous System. Nervous tissue. Receptors. Spinal cord: organization of the gray matter and of the white matter. Brainstem. Intrinsic nuclei and nuclei of the cranial nerves. Reticular formation. Diencephalon and telencephalon. Cerebral hemispheres. Basal ganglia. Cerebral cortex. Cerebellum. Morphological, functional and phylogenetic description. Cerebellar cortex. Deep nuclei. Functional connections. Limbic System. Hippocampus. Amygdala. Circuits and connections of the limbic system. Encephalic meninges, venous sinuses of the dura mater. Subarachnoid space and cisterns. Cerebrospinal fluid. Sensory Systems. Types of sensation. System of the dorsal columns-medial lemniscus and anterolateral system. Somatosensory cortex. Motor systems. Medial and lateral pathways. Categories of spinal reflexes. Sympathetic and parasympathetic divisions of the Autonomic Nervous System.Part 2 (Prof. Chiara Florio): Neuropharmacology.Pharmacokinetic: ADME (drug absorption, distribution, metabolism and excretion). Bioavailability. Pharmacokinetic models: linear and non-linear. Half-life. Pharmacodynamic: Drug molecular target. Affinity and efficacy. Gradual and quantal dose-response curves. Allosteric modulation. Drugs of the central nervous system: Autonomic Nervous System. Antidepressant drugs. Antipsychotic drugs. Anxiolytic drugs. Analgesics. Part 3 (Prof. Gabriele Stocco): PharmacogenomicsElements of human genetic variation - basis on genetic variants affecting protein function and epigenetic effects of pharmacological relevance

🇬🇧 Testi in inglese

	English
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Part 1: Computer-aided teaching material will be suppliedParts 2 and 3: Rang, Ritter, Flower, Henderson "Rang & Dale's Pharmacology" Eighth Edition, Elsevier 2016

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