

Scuola Superiore di Catania

CORSO SPECIALISTICO
a.a. 2017-2018

Synaptic dysfunction in cognitive diseases: pathophysiology mechanisms and new therapeutic perspectives.

Disfunzioni sinaptiche in patologie cognitive: meccanismi patofisiologici e nuove prospettive terapeutiche.

Modulo I

1) Neurobiology of Development. 2) Structure and Molecular Organization of synapses. 3) Neurobiology of Autism Spectrum Disorders: from genes to synaptic dysfunctions.

Modulo II

1) Physiological mechanisms underlying learning and memory. 2) Synaptic dysfunction and cognitive impairment in aging and Alzheimer's disease. 3) Serendipity: learning from mistakes.

Modulo III

1) Astrocyte-neuron interactions in synapse development and function. 2) Cholesterol metabolism in the brain. 3) The anatomy and physiology of a research project: lessons from personal experience.

Modulo IV

1) The brain serotonin system: serotonergic pathways and receptors. 2) Modulatory role of serotonin on synaptic transmission and plasticity in brain areas involved in learning and memory. 3) Serotonin receptors as pharmacological targets in cognitive diseases.