

COMPETITION PROGRAM

1. Morpho-functional organization of the nervous system of Non-human Primates (NHP).
2. Communication and neuronal signaling.
3. Functional organization of the visual system in NHP.
4. Functional organization of the auditory system in NHP.
5. Engine systems.
6. Memory, attention and emotion.
7. Experimental methods for electrophysiological studies in NHP.
8. Analysis of multimensional neural data (action potential and macro-signals such as electroencephalogram (EEG) and local field potentials (LFP)).
9. General and local anesthesia techniques for surgical procedures in NHP.
10. Creation and management of NHP.

BIBLIOGRAPHY

1. Principles of Neural Science (4th ed.). Kandel, E.R.; Schwartz J.H., Jessell T.M. (2000).
New York: McGraw-Hill.
2. Neuroscience: Exploring the Brain (3rd ed.). Bear, M.F. ; B.W. Connors, and M.A.Paradiso. (2006). Philadelphia: Lippincott.

3. Neuroscience (4th ed.) Purves, D .; Augustine, G.J .; Fitzpatrick, D.; Katz, L.C .; LaMantia, AS; McNamara, J.O .; Williams, M.S. (2008) Sinauer Associates.

TOPICS FOR DIDACTIC PROOF

1. Functional organization of the visual system of primates
2. Functional organization of the auditory system of primates
3. Somatosensory system of primates
4. Experimental paradigms for investigation of neural signals in non-human primates.
5. Discrete signal analysis (time series of action potentials).
6. Analysis of continuous signals (EEG and LFP signals).

PROFESSIONAL EXPECTATION

A doctoral degree with a solid background in Neurophysiology of Non-Human primates and an academic trajectory focused on basic and/or applied research of the mechanisms, functions and neurophysiological dysfunctions of the nervous system of non-human primates is expected. The researcher should focus on research and post-graduate teaching, but should act also in graduate teaching and outreach activities.