

## **NEUROBIOLOGY OF STRESS AND ADDICTION GROUP**

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The “Neurobiology of stress and addiction” group is directed by Antonio Armario and Roser Nadal, and includes other 9 researchers. The group deals with the following topics: (1) Characterization of biological markers of acute and chronic stress; (2) Understanding brain processing of stressors and the usefulness of different biological markers of neuronal activation; (3) Processes and mechanisms involved in adaptation to chronic stress, and (4) The impact of stress in psychopathology and the underlying neurobiological mechanisms; more specifically, we have characterized animal models of depression and post-traumatic stress disorders. Regarding the impact of early life stress, we are especially interested in the role of maternal behavior and juvenile stress. Although the group focuses mainly in rodent animal models, we are interested in a translational perspective and more recently we are collaborating with other groups that work in humans. Currently our lab has the equipment needed to run experiments in rodents to study: (i) behavioral and physiological consequences of different types of stressors (i.e. immobilization, restraint, forced swim, cat odor), (ii) anxiety/exploration (open field, circular corridor, plus-maze, hole-board, light and dark test, acoustic startle response); (iii) depression-like behavior (forced swim test, anhedonia); (iv) learning/memory (Morris water maze, contextual and auditory fear conditioning, shuttle-box); (v) prefrontal cortex-dependent tasks such as attention, impulsivity and compulsivity (five choice serial reaction time task and delay discounting); and (vi) addiction (cocaine and ethanol operant self-administration, conditioned place preference). We have also a conventional laboratory and a radioactivity facility to carry out biochemical techniques (ELISA, western blot, radioimmunoassay, epigenetic markers), as well as histological techniques (immunohistochemistry, immunofluorescence, in situ hybridization, fluorescent in situ hybridization). We have also the equipment for stereotactic surgery. For more information see: <http://www.nea-uab.org/en/>.

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