



Friday, May 15th 2015 – h 14:00
Seminar Room, NICO

Time-dependent structural, functional and behavioural changes induced by acute stress at excitatory synapses in prefrontal and frontal cortex

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Stress deeply affects gene regulation, neurotransmission and synaptic morphology, and activate a stress response to restore homeostasis. However, when stress exposure is chronic, uncontrollable, or overwhelming, it represents a major risk factor for many diseases, including neuropsychiatric disorders.

Intriguingly, modifications of the glutamatergic system induced by stress in the prefrontal cortex seem to be biphasic. Indeed, while the fast response to stress suggests an enhancement in the number of excitatory synapses, synaptic transmission and working memory, long-term adaptive changes, including those consequent to chronic stress, induce opposite effects.

The identification of neural mechanisms underlying resilience and vulnerability to stress is of crucial importance in the understanding of neuropsychiatric disorders pathophysiology and in the development of improved treatments.

Host: Alessandro Vercelli

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