ADVANCED SCHOOL AI

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ISTC-CNR
Closure of ISTC Research Year

CNR ISTC INSTITUTE OF COGNITIVE SCIENCES AND TECHNOLOGIES

A computational model of propranolol therapy for mouse models of post-traumatic stress disorder (PTSD)

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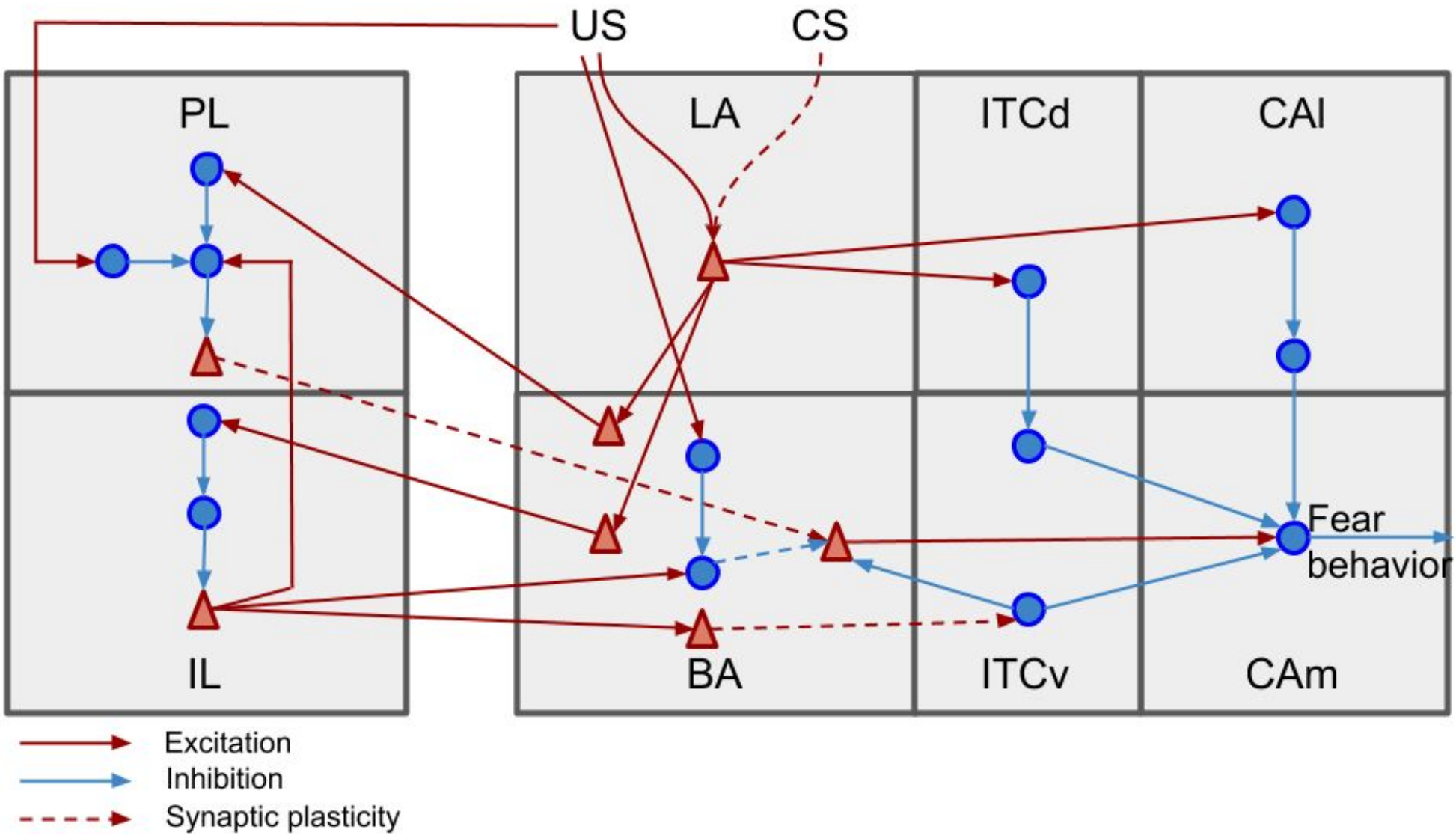
Topic

- Traumatic events are common (nearly 70% of the population has experienced once in life)
- Depending on the traumatic event, PTSD develops with a rate of 6 to 65%
- Psychotherapy is mostly ineffective: about two-third of veterans under therapy still suffer symptoms of the disease
- Recently a new therapy has been developed, aimed to block reconsolidation of fearful memories with the drug propranolol

Aims

- To develop a model of PTSD based on the state of the art knowledge developed with mouse models of the disease
- To provide a causal explanation for the action of propranolol on fearful memories

The model



US: unconditioned stimulus; CS: conditioned stimulus; PL: prelimbic cortex; IL: infralimbic cortex; LA: lateral amygdala; BA: basal amygdala; ITCd, ITCv: dorsal and ventral internal capsule cells; CAl and CAm: lateral and medial central nucleus