

and decreased 5HTT expression in the hippocampus. The 28 group showed an increase of 5HT1A expression and a decrease 5HTT in the PFC. Our results showed that the combine stress induced depression with early cognitive deficit in rats with the hippocampus being the main structure affected, and can be a useful tool in investigating new, comprehensive treatment strategies.

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### P30.74

#### The effect of sexual behavior and social interaction in the memory of old and young male rats

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Several studies have demonstrated neurogenesis in the old brain in animal models and humans, specifically in the hippocampus and olfactory bulb. The hippocampus has a fundamental function in learning and memory. Sexual behavior has been widely reported that enhance neurogenesis and cognitive function in juvenile subjects. On the other hand, different conditions of social interaction have been linked to increase and decrease neurogenesis. Age is a determining factor in several brain trophic processes and cognitive function. Aging has been associated to decrease neurogenesis and cognitive decline, while youthfulness has the opposite effect. Thus, the aim of the present study is to determine the effect of sexual behavior and social interaction of old and young male rats in the performance of learning and memory tasks. Animals were divided into 3 groups per age condition (old and young): sexual interaction, social interaction, and control group. Sexual interaction groups had sexual intercourse once a week (4 tests), the rats in the social interaction groups were housed in groups of 3 rats, and the rats of control groups were housed individually and left undisturbed until the assessment. All groups were tested in three memory tasks: inhibitory passive avoidance test, the novel object recognition test, and water maze test. The results showed better performance of the experimental groups when compared to control groups. Also, there are differences in the performance of the memory tasks between both age conditions.

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### P30.75

#### The effect of chronic cerebral hypoperfusion on the pathology of Alzheimer's disease: A positron emission tomography study in rats

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Cerebrovascular disease is a potential risk factor for Alzheimer's disease (AD). Although acute cerebral hypoperfusion causes neuronal necrosis and infarction, chronic cerebral hypoperfusion induces apoptosis in neurons, but its effects on the cognitive impairment are not clear yet. The purpose of this study was to evaluate the effects of chronic cerebral hypoperfusion on AD pathology and cerebral glucose metabolism. A model of chronic cerebral hypoperfusion was established by ligating the common carotid arteries bilaterally in adult male rats (CAL group). Sham-operated rats underwent the same procedures without artery ligation (control group). At 12 weeks after ligation, expression levels of amyloid- $\beta$  (A $\beta$ ) and hyperphosphorylated tau (p-tau), as well as the regional cerebral glucose metabolism, were evaluated using western blots and positron emission tomography with fluorine-18 fluorodeoxyglucose, respectively. The expression levels of A $\beta$  in the frontal cortex and hippocampus and of p-tau in the temporal cortex were significantly higher in the CAL group than in the control group. The cerebral glucose metabolism of the amygdala, entorhinal cortex, and hippocampus was significantly decreased in the CAL group compared to control. These results suggest that chronic cerebral hypoperfusion can induce AD pathology and may play a significant role in AD development.

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### P30.76

#### Construal level and ego depletion influence on self-control performance of military personnel with and without burnout

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**Background:** Several studies have shown, that the ego depletion effect resulting in reduced self-control performance after the initial execution of self-control, is connected to a lower construal level (Agrawal and Wan, 2009; Bruyneel and Dewitte, 2006; Wan and Agrawal, 2011). A high construal level might prevent from being ego-depleted. In the current study, we tested these assumptions for military personnel with and without a burnout diagnosis.

**Objectives:** In the current study, we assumed that: (1) participants with a burnout diagnosis will display a stronger ego-depletion effect; (2) construal level will increase the self-control performance; (3) participants with a burnout diagnosis will benefit mostly from a high construal level.

**Methods:** We conducted an experiment with 91 participants of the Greek military. Fourteen persons were discarded from