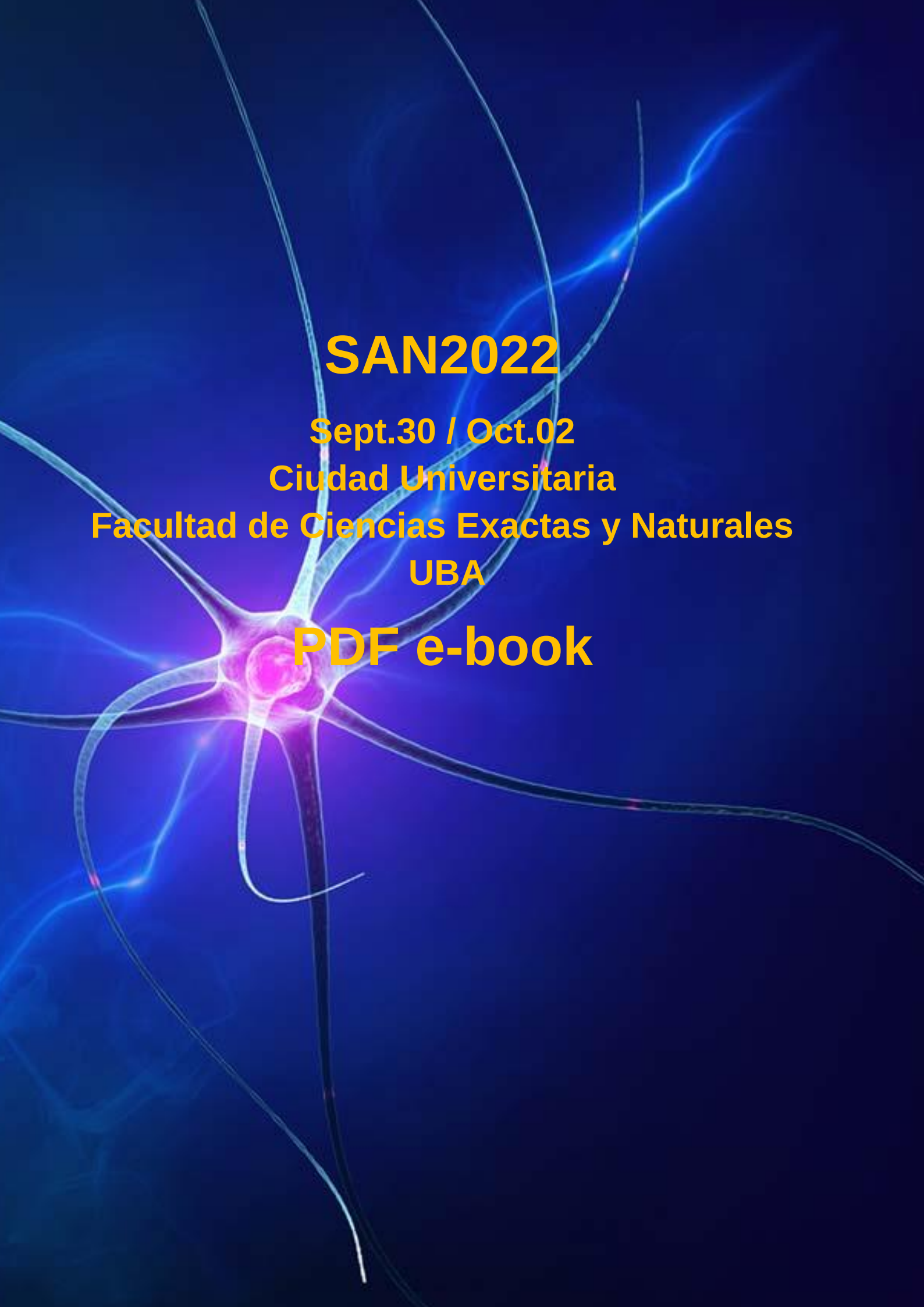

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076 | Ethanol binge-like exposure and possible amelioration of Omega-3 Fatty Acid derived on anxiety-like behavior in adolescent rats

Cognition, Behavior, and Memory

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A report from the Panamerican Health Organization placed Argentina among Latin American countries with the highest per capita alcohol consumption. Alcohol consumption and the problems associated with it show patterns related to age, being adolescents the most exposed. Alcohol exposure may cause neurobiological and behavioral disorders. We can find that ethanol exposure may provoke an increase in anxiety-like behaviors in rodents. On the other hand, long chain polyunsaturated fatty acids ω-3 have proven to decrease alcohol induced anxiety-like behaviors in neonate rats. However, no literature was found about this effect in the adolescent stage. The aim of the present study is to analyze the neurobehavioral effects of a binge-like ethanol exposure and the possible amelioration of an ω-3 treatment in adolescent rats. We administered a dose of 2 g/kg or 0 g/kg of EtOH via i.g. at postnatal days (PDs) 28, 30 and 32. Fifteen min after administration, each animal received a dose of 1mg/kg or 0mg/kg of docosahexaenoic acid (DHA), a member of the ω-3 family via i.p. We are currently studying anxiety-like behavior at PD34 where subjects are being evaluated in an Elevated Plus Maze. Moreover, we assessed the expression of serotonin and GABA in the amygdala, a brain area associated with emotion processing by immunofluorescence technique. We hypothesize that ethanol exposure will produce anxiety-like behaviors and the treatment with DHA can decrease these ethanol induced anxiety.