

hoc analysis among the PTSD and DEP groups with respect to the HC one ( $p < 0.05$ ).

**Conclusions:** Our results suggest the key role of a chronic low-grade inflammatory state in PTSD and in depression, probably related to a dysregulation in HPA axis and cortisol release, with an increase in proinflammatory cytokines including IL-6 that seemed to be more pronounced in PTSD.

**Disclosure of Interest:** None Declared

## EPV0792

### Psychoneuroimmunomodulating effect of lymphocytes with ortho-fluoro-benzonal modulated activity in syngeneic long-term alcoholized recipients

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**Introduction:** Lymphocytes are dysfunctional during long-term ethanol consumption and may contribute the progression from healthy to problem drinking. GABAA receptors are molecular targets of ethanol on lymphocytes, potentiating the effects of alcohol.

**Objectives:** We first demonstrated that original compound *ortho*-fluoro-benzonal, artificial GABA receptor ligand, has immunostimulating properties and is able to restore long-term alcoholized mice lymphocytes activity *in vitro* through GABAA receptors. Based on the previous results we investigated effects of the *ex vivo* *ortho*-fluoro-benzonal modulated lymphocytes in recipients with experimental alcoholism.

**Methods:** Male (CBAXC57Bl/6)F1 mice with 6-month 10% ethanol exposure were undergoing the transplantation of syngeneic long-term alcoholized mice lymphocytes, pretreated *in vitro* with *ortho*-fluoro-benzonal. Recipient's ethanol consumption, parameters of the nervous and immune systems functional activities were estimated.

**Results:** It was shown that lymphocytes modulated *ex vivo* with *ortho*-fluoro-benzonal after intravenous injection caused in syngeneic long-term alcoholized recipients ethanol consumption decrease and stimulation of behavioral activity in the "open field" test against the background of changes in the level of a number of cytokines in pathogenetically significant brain structures. Stimulation of humoral immune response, estimated by the relative number of antibody-forming spleen cells was also detected in recipients after lymphocytes transplantation. The injected immune cells were recorded in the parenchyma of the spleen and brain of recipients, which suggests, in particular, their direct influence on these functions.

**Conclusions:** Results demonstrated that transplantation of *ortho*-fluoro-benzonal-modulated lymphocytes caused positive psychoneuroimmunomodulating effect in long-term alcoholized recipients, which makes it possible to consider adoptive immunotherapy as a promising method in the treatment of alcoholism.

**Disclosure of Interest:** None Declared

## EPV0793

### Central effects of peripherally administered immune cells modulated by a psychoactive substance in aggression

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**Introduction:** It is known that the formation of aggressive behavior is accompanied by neurodegenerative and neuroinflammatory changes. Immune cells have a regulatory effect on the central nervous system functions, including regulation of behavior.

**Objectives:** We first demonstrated that *ex vivo* chlorpromazine - modulated immune cells have a positive aggressive behavior editing effect. The aim of the study was to investigate the influence of the indicated cells on some central mechanisms underlying the development of aggressive reactions.

**Methods:** (CBAXC57Bl/6) F1 aggressive male mice, developed in conditions of chronic social stress, were undergoing the transplantation of syngeneic spleen lymphocytes with *ex vivo* chlorpromazine-modulated functional activity. In recipients the immunohistochemical analysis was performed assessing the expression of the microglial marker Iba1. The levels of brain-derived neurotrophic factor (Bdnf) and cytokines was assessed by ELISA. For histological examination Nissl staining was applied.

**Results:** Aggressive behavior editing after the chlorpromazine-modulated immune cells transplantation registered against the background of some structural and functional changes in the brain. It was found an increase in the density of pyramidal neurons in CA1 and CA3 hippocampal regions and augmented level of Bdnf. The decreased expression of microglial activation marker Iba1, accompanied with decreased levels of pro-inflammatory cytokines (IL-1 $\beta$ , IL-2, IL-6, INF- $\gamma$ ) and increased anti-inflammatory (IL-4) cytokine was found. Visualization of functionally active lymphocytes pre-treated with chlorpromazine in the brain parenchyma of aggressive recipients suggests a direct effect of injected lymphocytes on CNS.

**Conclusions:** The effect of chlorpromazine - modulated immune cells that edits aggressive behavior is realized by stimulating neurogenesis, neuroplasticity and reducing neuroinflammation.

**Disclosure of Interest:** None Declared

## EPV0794

### Psoriasis and Schizophrenia: An immunological link

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