

tic effects. (3) In the new MHPCs, on-site TTT education programme and organisational development have been in place. (4) The activities of the MHPCs have been monitored for knowledge transfer and attitude changes in the local networks. (5) Based on the results, recommendations are being made for the national extension of the model.

**Results and conclusions** The first data ready for analysis will be available by April 2017.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1039

### A comprehensive training program for professionals working in mental health promotion centers in Hungary

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**Background** In a 12 month long mental health promotion pilot programme funded by the Norway Grants, 6 mental health promotion centers (MHPCs) are being set up in various locations in Hungary, employing 2 mental health professionals each, whose main commitment is to develop a local network of key stakeholders. The aim of the project is to enable MHPC professionals to perform network building tasks involving knowledge transfer and attitude changes regarding the following key areas: depression, suicide, dementia, stress and risk assessment.

**Objective** To measure the effectiveness of the training and education process by using indicators for feedback, knowledge transfer and attitude changes.

**Methods** The comprehensive TTT (train the trainers) process of MHPC professionals targets 3 main domains:

- improving presentation skills;
- knowledge transfer (measured with tests);
- elaborative workshops about mental health problems (measured by attitudes at baseline, post-training and 3 months post-training).

**Results** The satisfaction assessment of the initial 3 days long training averaged 4.73 on a 5-point Likert-scale. Altogether, 12 (2/centres) knowledge transfer trainings are being delivered evaluated by attitude change and general satisfaction questionnaires. One elaborating workshop per center has been delivered during the study period. Being a process still underway, the outcome results will only be available by the conference.

**Conclusion** This procedure enables professionals to disseminate trainings and build networks for mental health promotion in their micro-regions. The optimized version of this pilot program will be delivered on a national level in future projects.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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## e-Poster Viewing: Psychoneuroimmunology

#### EV1040

### Oxidative stress, inflammation and mild cognitive impairment

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**Introduction** Oxidative stress (OS) and inflammation are processes known to be implicated in neurodegeneration. Moreover, risk factors for dementia (depression, obesity, sedentary lifestyle, diabetes, etc.) are associated with up-regulation of pro-inflammatory cytokines. OS has been found in animal models to contribute to cerebral amyloid angiopathy. However, investigations of the associations between OS, inflammation and MCI, typically in small clinical samples have produced mixed results.

**Objectives** Clarify associations, between OS, inflammation and MCI in a large cohort of community-living individuals.

**Methods** Cognitively healthy individuals ( $n=211$ , 44% female, 75.2 years) and with MCI ( $n=23$ , 44% female, 75.2 years) from a population sample were included. MCI diagnosis was established based on a detailed neuropsychological assessment. Inflammatory (IL1b, IL4, IL6, IL8, IL10, TNF-a) and OS (total anti-oxidants, NO, neopterin) markers were assessed in plasma samples. Associations between biomarkers, MMSE, and MCI status were tested with multiple linear and logistic regression analyses.

**Results** Univariate analyses showed that log IL4 (estimate:  $-0.175$ , SE: 0.085,  $P=0.041$ ) and NO (estimate: 0.015, SE: 0.006,  $P=0.017$ ) were the only markers associated with MMSE scores. MCI status was predicted by log IL4 (estimate: 0.822, SE: 0.357,  $P=0.021$ ) and total anti-oxidants (estimate:  $-0.007$ , SE: 0.003,  $P=0.014$ ). Controlling for pro-inflammatory conditions (T2D, BMI, depression, hypertension) removed the associations with inflammation but not with OS.

**Conclusions** These results indicate that increased systemic inflammation and increased OS were associated with lower MMSE scores and higher odds of having MCI. This confirms that systemic pro-inflammatory processes are associated with impaired cognition and should be specifically considered in treatment and risk-reduction interventions.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1041

### Effect of original anticonvulsant meta-chloro-benzhydryl-urea on behavioral and immune parameters in mice with active and passive behavior types in experimental alcoholism

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**Objective** Violation of the functional activity of the nervous and immune systems is an essential link in the pathogenesis of chronic alcohol dependence. The search for new psychopharmacological agents whose action is directed to correction of neuroimmune interaction opens new perspectives for the treatment of alcohol dependence.

**Methods** (CBAx57Bl/6) F1 mice with active and passive behavioral types in a state of chronic alcohol dependence owing to 6 month 10% ethanol exposure were undergoing intragastric administration of original anticonvulsant meta-chloro-benzhydryl-urea. Animal's behavioral and immune parameters, brain cytokines synthesis before and after anticonvulsant receiving were estimated.

**Results** In the formation of experimental alcohol dependence in animals the most pronounced changes in motor and exploratory

activities in open field test, brain cytokines synthesis and suppression of immune response were registered in mice with passive type of behavior. Daily consumption of ethanol solution in mice with chronic alcohol dependence decreased sharply starting from 2 days of anticonvulsant administration and led to the cessation of ethanol consumption by the 5 day. After anticonvulsant administration for 10 days behavioral parameters in mice were comparable with those in the control group of healthy animals. It also restored brain cytokines synthesis and significant stimulated humoral immune response, estimated by the relative number of antibody-forming spleen cells.

**Conclusion** Behavior and immune changes following chronic ethanol exposure depended on the behavior status of animals; administration of the original anticonvulsant meta-chlorobenzhydryl-urea may correct both immune and behavior disorders in mice with chronic alcohol dependence, so it has promise in the treatment of alcoholism.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1042

### Lymphocytes with Fas-receptors of readiness to apoptosis in non-psychotic mental disorders

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**Introduction** Apoptosis is a complex physiological process of the organism which supports cellular homeostasis, provides important aspects of development and functioning of the immune system. In various pathological conditions the process of apoptosis can be impaired that leads to decrease or increase in pro-apoptotic activity.

**Materials and methods** We conducted investigation of relative and absolute number of CD3<sup>+</sup>CD95<sup>+</sup>-lymphocytes in groups of patients with adjustment disorders ( $n=90$ ), PTSD ( $n=100$ ), organic emotionally labile (asthenic) disorder ( $n=232$ ), organic personality disorder ( $n=93$ ). Clinical verification was conducted according to ICD-10. Control group included 190 practically healthy persons. Fas protein (CD95) expression on CD3 lymphocytes surfaces was detected using flow cytometry. Cytometric measurements were conducted on flow cytofluorimeter FacsCalibur (Becton Dickinson, US).

**Results** In the control group relative number of CD95<sup>+</sup>-lymphocytes was 11.6%, absolute— $0.21 \times 10^9/L$ . In all examined patients as compared with control the reliable increase both in relative and absolute number of lymphocytes of CD3<sup>+</sup>CD95<sup>+</sup>-phenotype was identified. So, in persons with adjustment disorder content of this indicator made 17.0% and  $0.28 \times 10^9/L$  ( $P=0.0015$ ), in PTSD—18.0% and  $0.33 \times 10^9/L$  ( $P=0.0007$ ) and in patients with organic asthenic disorder—19.0% and  $0.32 \times 10^9/L$  ( $P=0.0048$ ), respectively. The highest content in blood of CD3<sup>+</sup>-lymphocytes, expressing on the surface of membrane the basic marker of apoptosis CD95 is observed in patients with organic personality disorder: 26.0% and  $0.44 \times 10^9/L$  ( $P=0.0003$ ).

**Conclusion** In case of intensification of psychopathological symptoms especially in persons with non-psychotic organic mental disorders a receptor-mediated signaling pathway of apoptosis is activated – process of programmed cell death.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1043

### Inflammatory markers in mild cognitive impairment and anxiety disorders in middle-aged subjects with metabolic syndrome

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Anxiety disorders are increasingly being associated with metabolic and cardiovascular burden, in contrast with depression; the role of inflammation in anxiety has sparsely been discussed. A number of reports of elevated inflammatory markers in mild cognitive impairment (MCI) suggest that inflammation may be a potential early marker of the pathological cascade associated with dementia. The aim of this study was to evaluate a possible association between peripheral blood concentrations of inflammatory factors in patients with MCI and mental processes such as, cognitive impairment and anxiety in obesity.

**Methods and results** The data collected from 271 patients with MetS according IDF criteria, (aged 30–60 years) have been analyzed. Lifetime diagnoses of depression (D), anxiety (A) was self-reported. Current D and A were confirmed by psychodiagnostic interview according to the criteria of ICD-10. All patients passed through: MMSE test, Wechsler memory scale, symbol coding and category Fluency test, scales HADS, HAM-A. Inflammatory markers included CRP, IL-6, IL-1 and TNF- $\alpha$ . Subjects were divided into group A—with D and/or A (139) and group B—without affective disorders (132). Using Mann–Whitney test significant connection between presence of MCI and high levels of inflammation is associated with simultaneous presence affective disorders. High correlations in subjects with A/D were between IL-6, IL-1 and MCI. In-group B, there was no significant correlations between inflammatory markers and MCI.

**Conclusion** There is link between affective disorders and levels of inflammatory markers. Increased levels of IL-6 and IL-1 provoke co-morbidity of MCI and depression or anxiety.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1044

### Autoimmune limbic encephalitis: When psychiatric symptoms are not what they seem

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**Introduction** The autoimmune (AI) limbic encephalitis (LE) can manifests as changes in neuropsychiatric functions and can even occur with isolated psychiatric symptoms. Many times it is a manifestation of paraneoplastic syndromes and it is lately diagnosed.

**Objectives** Our objective is to increase awareness to this pathology, since initial contact with these patients is often performed by a psychiatrist and its early detection and treatment greatly improve the prognosis of the patients.

**Aims** The aim of this presentation is to address the AI LE as a differential diagnosis in patients with psychiatric symptoms.

**Methods** Presentation of a clinical case of AI LE and syndrome revision.