retroviruses (HERVs) are ancient retroviral DNA sequences established into germline. Their tight regulation is mainly achieved by epigenetic mechanisms, which can be altered by environmental factors - viral infections, inflammation, leading to HERV activation. The aberrant expression of HERVs associates with neurological diseases and mood disorders. We showed earlier that HERV-E λ 4-1 activation is associated with the recurrent depression stage of exacerbation and are accompanied by a pronounced increase in the proinflammatory activity of the peripheral blood mononuclear cells (PBMC).

Objectives: The purpose of the study was to evaluate the activity of HERV-E λ 4-1 on PBMCs of patients with recurrent depression in remission, including under the influence of recombinant human IL-1β.

Methods: The study included 30 patients with an established diagnosis of recurrent depression (F 33.0) aged 26–45 years. PBMC were isolated using the Ficoll density gradient method and further cultured in the presence or absence of 1 mkg/ml of recombinant human IL-1β for 24 hours. HERV-E λ 4 − 1 env gene expression was determined by the PCR. Cells proliferative activity was determined by H^3-thymidine incorporation. Cytokines content in culture supernatants was assessed by ELISA.

Results: It was shown that in all samples of PBMC cultured without IL-1β the HERV-E λ 4 − 1 env expression was not determined. After the PBMC cocultivation with recombinant human IL-1β, HERV-E λ 4 − 1 env gene expression was determined in 86,7% of cases. The HERV-E λ 4-1 activation in PBMC after IL-1β influence was accompanied by increased cells proliferative activity and production of IL-1β, IL-6.

Conclusions: Our data indicate that the HERV-E λ 4 − 1 env expression in PBMC of recurrent depression patients in the stage of remission induced by the influence of proinflammatory cytokines, such as IL-1β. This mechanism may be one of the possible regulators of HERV-E λ 4 − 1 activation in recurrent depression.

Disclosure of Interest: None Declared

EPP0216

Depression and Medierranean diet: analysis of the PREDIDEP randomised trial

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Introduction: Unipolar depression is a growing global Public Health challenge. During last years, life factors such as diet, have been identified as a target for the development of adjunctive treatment that could reduce the rates of depression. The Mediterranean Diet (MD) is one of the most studied dietary factors that has been inversely associated with depression (Rahe et al. Eur J Nutr. 2014;53:997–1013). The PREDIDEP study is an ongoing secondary prevention trial aimed at assessing the effect of a MD enriched with extra virgin olive oil (EVOO) on depression recurrence (Sánchez-Villegas et al. BMC Psychiatry. 2019 Feb 11;19(1):63).

Objectives: This study aims to assess the effectiveness of a remote Mediterranean diet–based nutritional intervention in the context of a trial of depression.

Methods: The PREDIDEP study is a 2-year multicenter, randomized, single-blinded trial designed to analyse the effect of the MD enriched with extra virgin olive oil (EVOO) on the prevention of depression recurrence. The inervention group received phone contacts with dietist and had access to web-based information, and the control group had usual care for depressed patients. The 14-item MD Adherence Screener (MEDAS) questionnaire and a semiquantitative food frequency questionnaire (FFQ) were collected by dietitians at baseline and at 1-year and 2-year of follow-up. We used mixed effects linear models to assess changes in nutritional variables according to the group of intervention. The trial was registered at ClinicalTrials.gov NCT03081065.

Results: We observed that participants in the MD group increased their adherence to MD (between-group difference: 2.50; 95% CI 1.88-3.12; p<0.001) after one and two years (between-group difference: 2.57; 95% CI 1.93-3.22; p<0.001) of intervention compared with control group.

MEDAS questionnaire	Control, mean (95% CI)	Intervention, mean (95% CI)	Between group difference, mean (95% CI)	P value
Baseline	6.96 (6.54-7.39)	7 (6.63-7.39)	N/A	N/A
1 year	7.2 (6.82-7.58)	9.74 (9.3-10.18)	N/A	N/A
1-year change	0.23 (-0.19-0.65)	2.74 (2.28-3.19)	2.50 (1.88-3.12)	<0.001
2 years	7.06 (6.66-7.46)	9.68 (9.28-10.07)	N/A	N/A
2-years change	0.10 (-0.38-0.58)	2.67 (2.24-3.1)	2.57 (1.93-3.22)	<0.001

Calculated using mixed-effect models with center as random factor.
P value between group intervention difference.
N/A: not applicable.
MEDAS: Mediterranean Diet Adherence Screener

Conclusions: We found that this multifaceted remote nutritional intervention is a useful tool kit to maintain the quality of the diet according to the goals of the MD among patients at risk of depression.

Disclosure of Interest: None Declared

EPP0217

Progressive grey matter atrophy in adolescents with major depressive disorder revealed by causal structural covariance network

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