CUMS groups, respectively. In immunohistochemical experiments, Iba-1 was overexpressed in CUMS group and BBG significantly reduced the overexpression of Iba-1.
*Conclusion* Our results suggest that chronic administration of BBG has an antidepressant-like activity supporting the notion of P2X7 receptors involvement in depression by modulating microglial activation.
This research was supported by grant from Marmara University, Scientific Research Projects – SAG-C-YLP-110915-0416 and SAG-E-120613-0233.
*Disclosure of interest* The authors have not supplied their declaration of competing interest.

http://dx.doi.org/10.1016/j.eurpsy.2017.02.367

**EW0754**

## Harmane suppresses microglial neuroinflammatory response and induce antidepressant-like effect in rats

F. Aricioglu[1,*], G. Arkan[1], C. Kandemir[2], S. Sirvanci[2], C. Ozkartal[1], T. Utkan[3]
[1] *Marmara University School of Pharmacy, Department of Pharmacology and Psychopharmacology Research Unit, Istanbul, Turkey*
[2] *Marmara University School of Medicine, Department of Histology Embriology, Istanbul, Turkey*
[3] *Kocaeli University School of Medicine, Department of Pharmacology, Kocaeli, Turkey*
* *Corresponding author.*

*Objective* Harmane is a beta-carboline, which binds to imidazoline receptors and it has been previously shown that it may have an antidepressant effect when administered acutely. This study is planned to investigate the effect of harmane on chronic unpredictable mild stress (CUMS) model and microglial (Iba-1) immunoreactivity in the same model as markers of neuroinflammation.
*Methods* Male Wistar Albino rats (290–360 g) were divided into groups such as control (saline), CUMS, CUMS + Imipramine (20 mg/kg; i.p.), CUMS + Harmane5 (5 mg/kg; i.p.), CUMS + Harmane10 (10 mg/kg; i.p.) groups ($n$ = 10–12 in each). In CUMS model, various stressors were applied for 40 days. On day 20, harmane administration was started for 20 days. At the end, sucrose preference and forced swimming tests were performed. Then, brains were removed with paraformaldehyde perfusion for Iba-1 immunohistochemical analysis in hippocampus. One-way analysis of variance and Tukey's test were used for statistical analysis.
*Results* The time of immobility in forced swim test was significantly reduced while sucrose preference was increased in Imipramine and CUMS + harmane10 groups. In immunohistochemical experiments, Iba-1 were overexpressed in CUMS group and Harmane significantly reduced the overexpression of Iba-1.
*Conclusion* Our results suggest that chronic administration of harmane has an antidepressant-like activity in chronic stress model of depression. These results support the notion of imidazoline receptors involvement in depression by modulating neuroinflammation and at least a part of its antidepressant effect might be through modulating microglial activation as a reflection of neuroinflammation.
This research was supported by Marmara University, Scientific Research Projects – SAG-C-YLP-110915-0415 and SAG-E-120613-0233.
*Disclosure of interest* The authors have not supplied their declaration of competing interest.

http://dx.doi.org/10.1016/j.eurpsy.2017.02.368

**EW0755**

## Investigation of chemical interactions of small peptides and vitamin substances at the developed dopamine D2 receptor models

R. Aslancan[1,*], B. Aksoydan[2], I. Kantarcioglu[2], I. Erol[3], R.E. Salmas[2], S. Durdagi[2]
[1] *Bahcesehir University, School of Medicine, Istanbul, Turkey*
[2] *Bahcesehir University, Department of Biophysics, School of Medicine, Istanbul, Turkey*
[3] *Gebze Technical University, Department of Chemistry, Kocaeli, Turkey*
* *Corresponding author.*

*Introduction* Dopamine receptors perform various functions essential to vertebrate central nervous systems and they are the major targets of antipsychotic drugs. Our recent studies pioneered to perform molecular modeling studies of the dopamine D2 receptor (D2R), describing the mechanism and binding affinities of marketed antipsychotics into the active sites of the $D2^{high}R$ and $D2^{Low}R$ [1]. Another study provided significant information about changes of binding cavity properties of D2R [2].
*Objectives* Since the marketed antipsychotics have serious side effects, we aim to explore ligands with better inhibition profiles on D2R with less unwanted outcomes. For this aim, we compare the effectiveness of the marketed drugs with small peptides and vitamin substances.
*Aims* The main goal of the research is to explore novel small molecules that inhibit D2R to be used in schizophrenia.
*Methods* In this study, we used a large number of endogen vitamins and peptides with dopamine D2R active-inactive forms in monomeric-dimeric patterns to understand their interactions at the active sites of targets. Nineteen of antipsychotic drugs, which are widely used in schizophrenia treatment are selected as reference molecules. Molecular docking, molecular screening and molecular modeling approaches were used.
*Results* Some of these endogen molecules showed similar or better inhibition profiles on D2R compared to the known standard inhibitors of the target.
*Conclusions* Proposed molecules may be potent for D2 receptor inhibition with less side effects for the use for schizophrenia.
*Disclosure of interest* The authors have not supplied their declaration of competing interest.
*References*
[1] Durdagi S, Salmas RE, Stein M, Yurtsever M, Seeman P. ACS Chem. Neuroscience 2016.
[2] Ekhteiari Salmas R, Yurtsever M, Stein M, Durdagi S. Mol Divers 2015, http://dx.doi.org/10.1007/s11030-015-9569-3.

http://dx.doi.org/10.1016/j.eurpsy.2017.02.369

**EW0756**

## Pharmacodynamic targets of psychotic patients treated with a long-acting therapy

A. Ventriglio[1], A. Petito[1], A. Gentile[1], G. Vitrani[1], I. Bonfitto[1,*], A.C. Cecere[1], A. Rinaldi[1], C. Dimatteo[2], G. D'Andrea[2], M. Maurizio[2], A. Bellomo[1]
[1] *University of Foggia, Department of Mental Health ASL-FG, Foggia, Italy*
[2] *University of Foggia, Department of Genetics, OO, RR, Foggia, Italy*
* *Corresponding author.*

*Introduction* Given the poor compliance of schizofrenic patients to antipsychotic therapies, are been developed drugs in long-acting formulation that for their pharmacokinetic ensures prolonged therapeutic activities. Currently, we consider that their efficacy depends on hereditary tracts, influencing both pharmacodynamic and pharmacokinetic parameters.