P01-74 - **BENEFICIAL EFFECTS OF CHRONIC TREATMENT WITH AGOMELATINE ON THE ANXIETY- AND DEPRESSION-LIKE STATE INDUCED BY CORTICOSTERONE IN C57BL/6NTAC MICE**

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Recently, we have developed a novel paradigm appropriate and useful for screening early-stage and novel treatments for depression and anxiety based on the chronic delivery of corticosterone via the drinking water. Here, we investigated in mice the behavioral effects of agomelatine an antidepressant melatonergic (MT1/MT2) receptor agonist and 5-HT_{2C} receptor antagonist on various paradigms predictive of antidepressant and anxiolytic activities such the Novelty Suppressed Feeding (NSF) test, the coat state, the splash test (grooming behavior), the Open Field paradigm (OF) and the home cage activity.

Adult mice were treated for 8 weeks with vehicle or corticosterone (35 ug/ml/day) via the drinking water. During the final four weeks, animals were treated with either HEC1%, agomelatine (10 and 40 mg/kg, i.p) or fluoxetine (18 mg/kg, i.p.). Behavioral tests were performed during the last experimental week.

Our results show that a chronic corticosterone treatment established a depressive/anxious-like phenotype in the NSF, OF and grooming behaviors. This state was reversed by a 4-week antidepressant treatment with agomelatine. Moreover, agomelatine blocked the impaired mice coat state induced by corticosterone. In agreement with its mechanism of action, agomelatine increased home cage activity (ratio dark phase/light phase) in both corticosterone and vehicle-treated mice suggesting an increase activity rhythms' amplitude. Fluoxetine validated the behavioral models but without any effect on the synchronization of circadian rhythms. The present study suggests that agomelatine was able to reverse a depressive and anxious-like state in mice induced by elevation of glucocorticoid levels, results in line with the antidepressant/anxiolytic-like properties of the drug.

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