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MEETING ABSTRACT

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Assessment of *Chaenomeles maulei* fruit juice effects in the forced swim test in rats

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Background: Depression is a chronic psychiatric disorder manifesting with lowered pleasure, mood and interest. Although there are many highly effective antidepressants available, there is an increaseing interest in natural antidepressants with fewer side effects. The main bioactive compounds in *Chaenomeles maulei* fruits are polyphenols known for their antidepressant-like activity.
Objectives: The objective of the present study was to assess the forced swim test behavior of rats treated with *Chaenomeles maulei* fruit juice (CMFJ).
Methods: The animals used were 64 male healthy Wistar rats treated orally with CMFJ for either 14 or 30 days. They were divided in eight groups with 8 animals, four groups for each treatment period. CMFJ was given at 2.5, 5 and 10 ml/kg doses and the control groups were treated with distilled water. We assessed the immobility time as a measure of behavioral despair.
Results: After 14 days of administration all doses of CMFJ significantly decreased the immobility time of the rats ($p < 0.05$) in comparison to the control group. After 30 days treatment, the doses of 2.5 and 5 mg/kg significantly shortened the immobility time ($p < 0.05$ *vs.* control) while the effect of the 10 ml/kg dose was not statistically significant.
Conclusion: The forced swim test is based on the assumption that immobility reflects a measure of behavioral despair [1]. Some antidepressants produce antidepressant-like effects by reducing immobility in addition to motor stimulation [2]. CMFJ decreased the immobility time in the FST after 14 and 30 days treatment which might be due either to antidepressant-like activity or increased locomotor activity.

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Keywords: forced swim test – antidepressant – *Chaenomeles maulei* – polyphenols

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