

Research article

## Antidepressant activity of *A. hierochuntica* L. effervescent granules using forced swimming test

Siham Abdoun<sup>\*1</sup>, Tahani I. Hassan<sup>2</sup>, Dalia A. Gaber<sup>1</sup>, Amirah El- Sharekh<sup>3</sup>

<sup>1</sup>Pharmaceutics Department, College of Pharmacy, Qassim University, KSA.

<sup>2</sup>Pharmacology Department, College of Pharmacy, Qassim University, KSA.

<sup>3</sup>Pharm D, College of Pharmacy, Qassim University, KSA.

**Key words:** Effervescent granules, Force Swimming Test, Herbal medicines, Anti-depressant.

**\*Corresponding Author: Siham Abdoun,** Pharmaceutics Department, College of Pharmacy, Qassim University, KSA.

Email: [Siham99100@gmail.com](mailto:Siham99100@gmail.com)

Vol. 6 (2), 38-44, Apr-Jun, 2019.

### Abstract

People in modern society suffer from different psychiatric disorders, in particular depression. Recently, there is a global increase in the use of herbal medicines for psychiatric reasons especial depression. *Anastatica hierochuntica* L. (Kaff-E-Maryam) is a well-known desert zone medicinal plant widely used as traditional drug in Central Asia, Africa, and elsewhere. The study objective is to assess the antidepressant activity of effervescent granules prepared from aqueous extract of *A. hierochuntica* effervescent granules were evaluated for flow property (i.e angle of repose, bulk density, tapped density and Hausner's ratio), particle size distribution and effervescence time. The antidepressant like activity of *A. hierochuntica* aqueous extract and granules was studied in albino mice using forced swimming test (FST). The formulated effervescent granules exhibited excellent flow properties and bulk density. Effervescence time was less than 15 sec. *A. hierochuntica* aqueous extract and effervescent granular formula at dose level 20 mg/kg exhibited significant decrease in duration of immobility in FST as compared to – ve control group ( $p < 0.05$ ). The effect of *A. hierochuntica* was similar to that of imipramine dose 10mg/kg ( $p < 0.05$ ). No significant difference was observed in antidepressant activity of *A. hierochuntica* aqueous extract and the granule form ( $p > 0.05$ ). Effervescent granules showed that it can be used as a novel approach for using *A. hierochuntica* for treatment of depression.