EVALUATION OF MENSTA SYRUP FOR ESTROGENIC ACTIVITY USING FEMALE WISTAR RATS.

Introduction:

The study was conducted to evaluate the effect of Dabur Mensta Syrup in the female reproductive system of experimental animals specifically in the estrogenic line of action. Estrogen is the most important female hormone synthesized in the ovary of both human being and the animals. This hormone is mainly responsible for the regulation of the physiology of the female reproductive system although other hormones have active role in this context. Estrogen is given as a supplementary therapy in cases of dysmenorrhoea, oligomenorrhoea.

Design

The objective of the present study was to investigate the estrogenic activity of Dabur Mensta Syrup on ovariectomized and normal (nonovariectomized) animals.

Two types of animals: Ovariectomized rats (Mensta, estradiol and vehicle)

Non-ovariectomized rats (Mensta, vehicle)

Every day Body weight and terminal uterine weight after the sacrifice of the animals was taken as experimental end point to test the effects of the tested products.

Results :

The results of the present study indicate that Dabur Mensta Syrup and estradiol showed no significant effect on body weight change in ovariectomized rats. Dabur Mensta syrup also showed no significant effect on body weight change in normal non-ovariectomized rats. Mensta syrup showed no significant effect on the rat uterus weight as compared to vehicle control, confirming its non-estrogenic activity on ovariectomized rats. However reference item estradiol showed significant increase in uterine weight. Effect of Mensta syrup showed significant increase in uterine weight as compared to vehicle control, confirming its estrogenic activity in normal rat's ie non-ovariectomized rats. The in-effectiveness of Dabur Mensta Syrup, in ovariectomized rats reveal that this test item does not have the phytoestrogen activity per Se(estrogen like activity).

Present findings in the study indicate that the 7 days oral treatment of Dabur Mensta Syrup showed significant increase in uterine weight that could be due to its estrogen stimulation activity governed by functional ovaries.

Figure 1: Effect of test item DRDC/AY/8058 (DABUR MENSTA SYRUP) and reference item (Estradiol) on % change in animal body weight (ovariectomized)

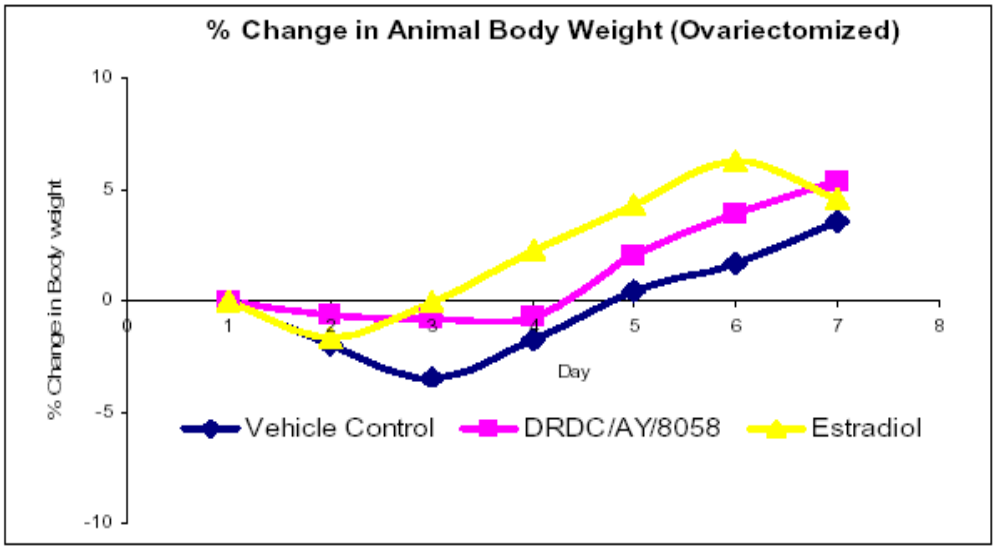


Figure 2: Effect of test item DRDC/AY/8058 (DABUR MENSTA SYRUP) on % body weight change in normal (non-ovariectomized) animals

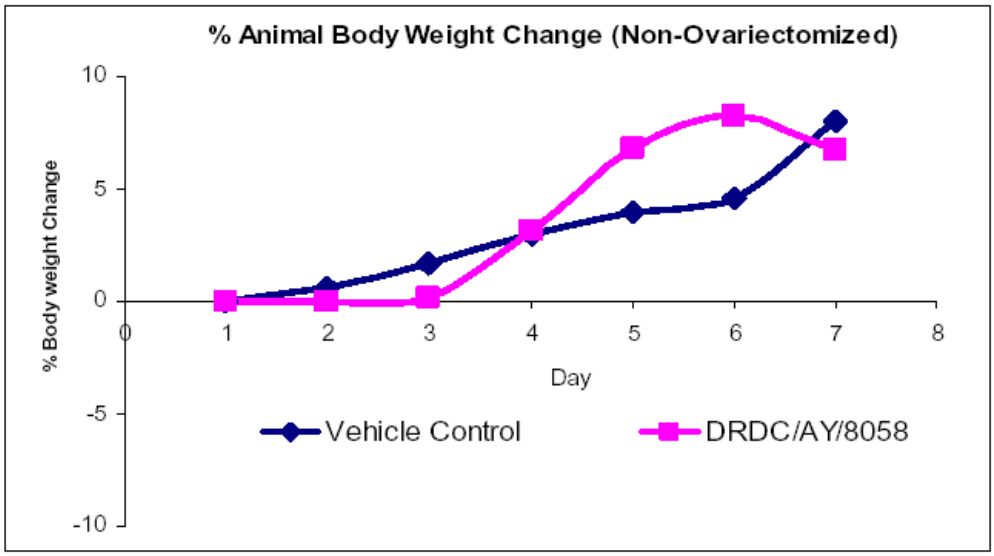


Figure 5: Effect of Test Item DRDC/AY/8058 (DABUR MENSTA SYRUP) and reference item (Estradiol) on fold increase in uterine weight of ovariectomized rats

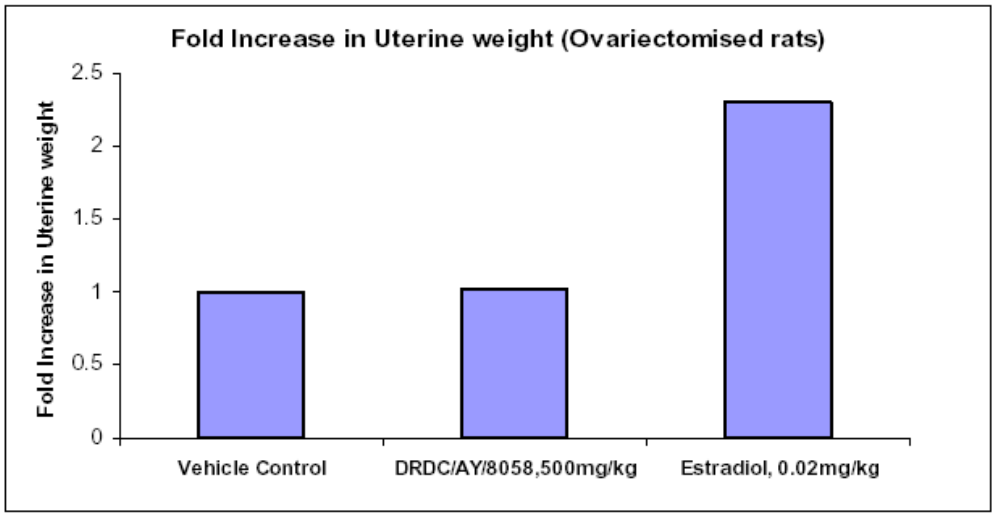
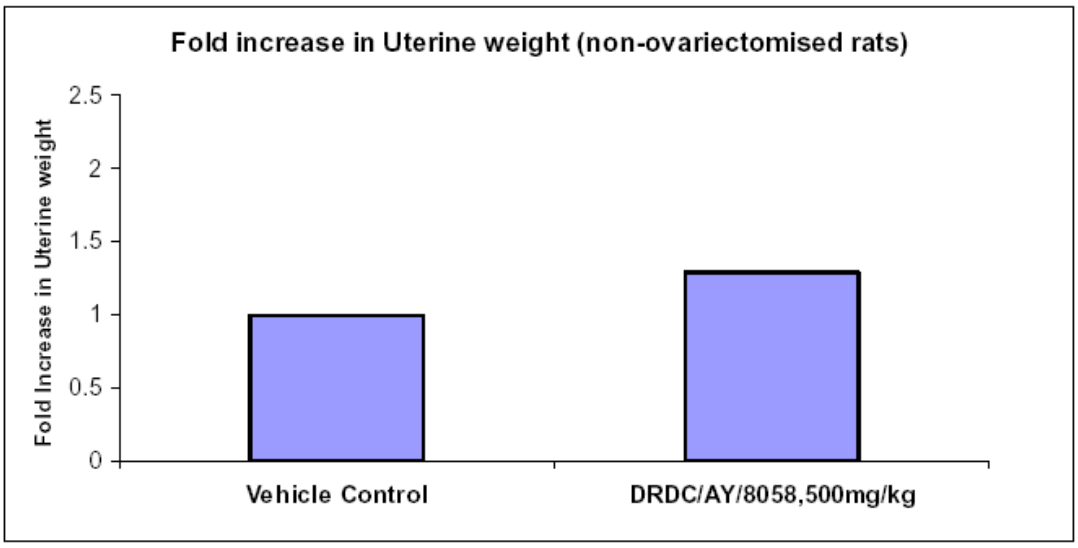


Figure 6: Effect of Test Item DRDC/AY/8058 (DABUR MENSTA SYRUP) on fold increase in uterine weight of normal (non-ovariectomized) rats



EVALUATION OF TEST ITEM (DABUR MENSTA SYRUP) FOR MANAGEMENT OF DYSMENORRHOEA BY QUANTITATION OF PGE2 LEVEL IN WHOLE BLOOD ASSAY SYSTEM

1.1. Introduction:

The mechanisms behind dysfunctional uterine bleeding are not fully determined. However prostaglandins are identified as important contributing factors in painful menstruation. Increased PGE2 relative to PGF2α levels in endometrium and menstrual fluid have been associated with menorrhagia.

In women, increased release of Arachidonic acid before menstruation is at the origin of increased PGF2α and PGE2 production considered responsible for dysmenorrheal and pre-menstrual syndrome. Prostaglandin synthesis inhibition is a significant line of treatment in the management of dysmenorrhoea.

1.2. Study design:

The objective of the study was to determine the potential of Dabur Mensta Syrup to down regulate LPS induced PGE2 levels in whole blood in animal models using female Wistar rats. Effect of Mensta syrup was compared with standard drug Mefenamic acid which is a NSAID and is used for dysmenorrhoea, a condition associated with pain and inflammation.

1.3. Results:

Results of the present study showed that, DABUR MENSTA SYRUP showed concentration dependent decrease in the level of PGE2 secretion/production at different concentrations. Reference item (Mefenamic acid) also showed concentration dependent decrease in the level of PGE2.

1.4. Conclusion:

Dabur Mensta syrup possesses significant PGE2 inhibitory potential, which is one of the key mediators of pain during menorhagia and dysmenorhoea.

Figure 1: Effect of test item DRDC/AY/8058 (DABUR MENSTA SYRUP) on PGE2 level in LPS induced rat whole blood

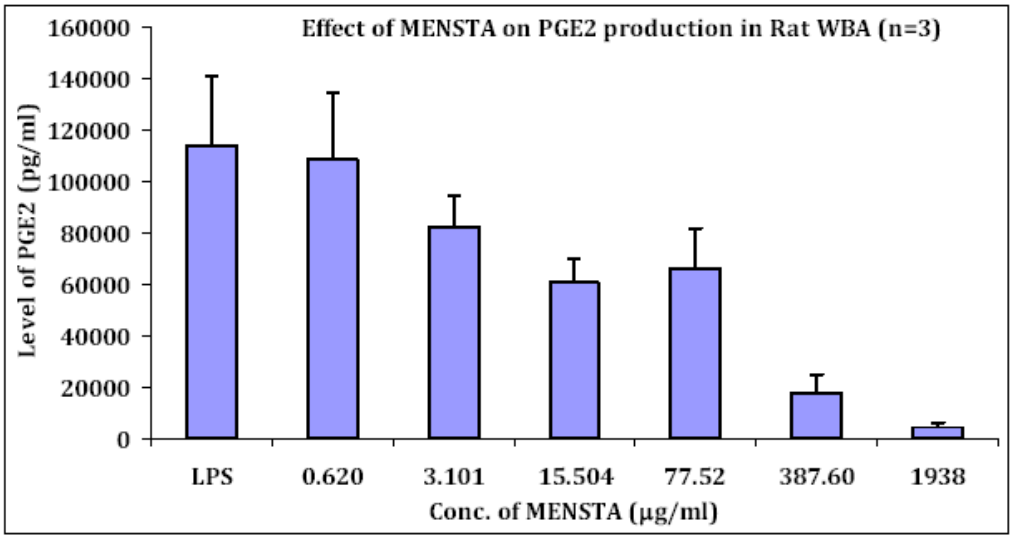


Figure 2: Effect of test item DRDC/AY/8058 (DABUR MENSTA SYRUP) on % inhibition of PGE2 in rat whole blood assay

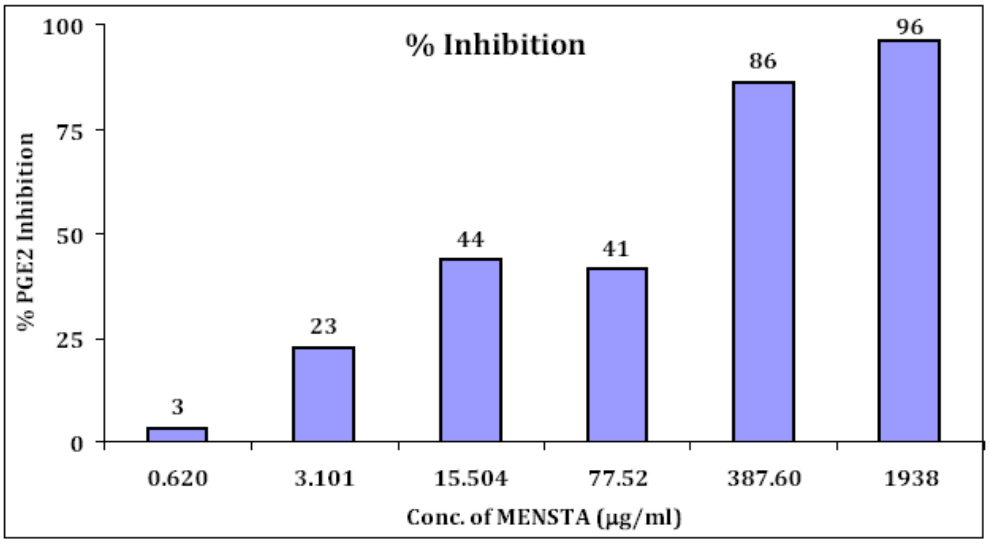


Figure 3: Effect of reference item (Mefenamic acid) on PGE2 level in LPS induced rat whole blood

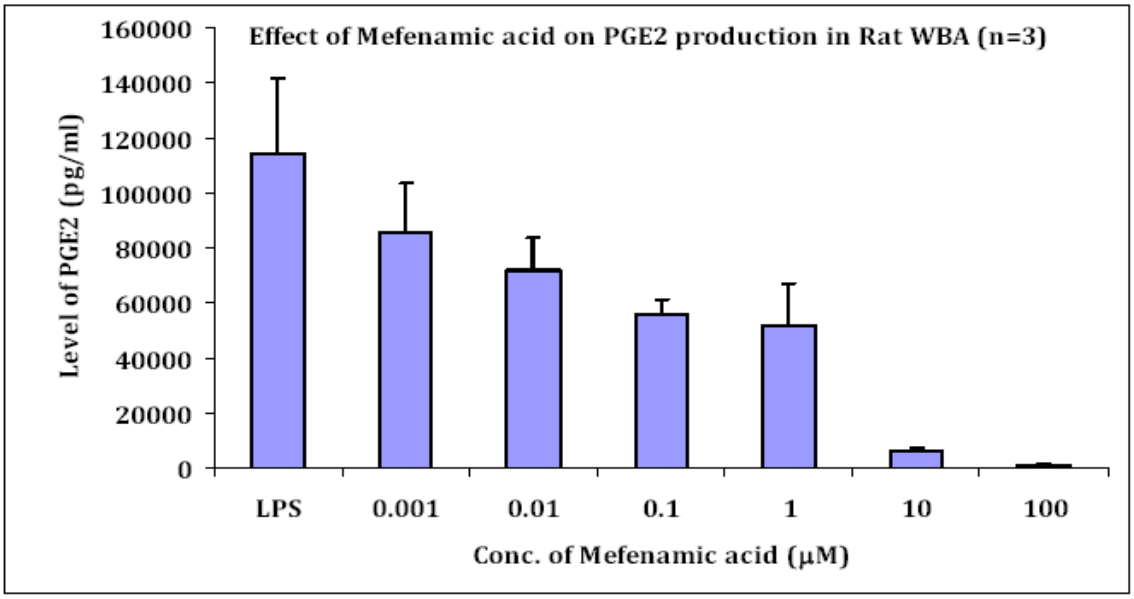


Figure 4: Effect of reference item (Mefenamic acid) on % inhibition of PGE2 in rat whole blood assay