

## Evaluation of *Faba vulgaris* effect on hair reduction in rat

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**Background and Aims:** Unwanted facial and body hair is an important issue in some people. People use several physical and chemical methods for removing hair. In traditional medicine it has been reported hair reduction effects for *Faba Vulgaris*. Thus this study was conducted to survey the effect of *Faba Vulgaris* aqueous extract on hair reduction in rat.

**Methods:** In this study, 24 female wistar rats (150-300 g) were randomly divided into three groups and maintained with normal water and food availability. A patch of skin was shaved on each rat for application of test solutions. Groups were treated with local once-daily applications of normal saline, formic acid (pH 5.5) or *Faba Vulgaris* aqueous extract (200 mg/ml). After 2 weeks, horizontally cut sample biopsies were removed and the number of hair follicles was counted under high field microscopy by a specialist blinded to the treatments.

**Results:** There were no any side effects or evidence for skin sensitivity and toxicity during the study period. Kolmogorov-Smirnov test results indicated a nonparametric distribution for the groups. Although the *Faba Vulgaris* treated group had the lowest hair follicle numbers, the difference was not significant ( $P > 0.05$ ). However, hair follicle counts showed a descending order of normal saline, formic acid and *Faba Vulgaris*. Microscopic view also showed deformity in follicles for *Faba Vulgaris* group. After two months a remarkable hair reduction in *Faba Vulgaris* treated group was found ( $P < 0.05$ ).

**Conclusions:** Decreased hair may be caused by *Faba Vulgaris* aqueous extract that has entered the follicular pore after hair removal, resulting in histological and hair follicle destruction. Therefore, further studies should be conducted to understand the effects of *Faba Vulgaris* aqueous extract on rat hair growth, with longer study durations.

**Keywords:** *Faba vulgaris*; Hair follicle; Hair removal; Rat