



SAFFRON (*CROCUS SATIVUS L.*) AND ITS POTENTIAL APPLICATIONS IN SEXUAL DYSFUNCTION

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Saffron (*Crocus Sativus L.*) has long been known for its medical, aromatic and coloring qualities. Due to its taste and yellow-orange colour, it was used as a dye in Persian, Arab, European and Indian cuisine; moreover it is also a component of liquors, candies and food supplements. It is considered the most expensive and prestigious spice in the world, therefore nicknamed "Red Gold". It is estimated more than 90% worldwide production of saffron come from Iran and that about 5-6 tons of saffron is being produced annually in the Herat region of Afghanistan. The chemical elements which confer to saffron its organoleptic qualities are: crocin, crocetin, picrocrocin and safranal. The main saffron constituents, such as crocin and safranal are known for their many biological functions. It is well documented its potential therapeutic role in cancer, diabetes, atherosclerosis and depression. Saffron has long considered an aphrodisiac drugs (Madan, 1966).

Preclinical and clinical studies support saffron as a treatment for male and female sexual disorders, particularly if related to major depression (Hosseinzadeh et al., 2008). On the other hand, administration of antidepressants such as serotonin reuptake inhibitors (SSRI) is associated with sexual disorders and it has been observed that

the use of saffron improves sexual disorders induced by fluoxetine and other SSRI (Modabbernia et al., 2012; Kashani et al., 2013).

Hosseinzadeh and collaborators (2008) reported that crocin improves sexual behavior in rodents; in addition, crocetin has been shown to induce endothelium-dependent relaxation by increasing eNOS activity. Other studies show that crocin could inhibit extracellular Ca²⁺ influx, and intracellular Ca²⁺, release from deposits of endoplasmic reticulum, which contributes to relaxation of the corpus cavernosum smooth muscle with consequent erection.

- **Preclinical studies reveals an aphrodisiac activity of saffron aqueous extract and its constituent crocin.**
- **Clinical studies reveals that Saffron is efficacious treatment for fluoxetine-related erectile dysfunction.**
- **Despite there being promising preclinical results, further investigations are necessary to confirm the effective use of "Red Gold" and its applications in clinics.**

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