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Behavioural Effects of the Active Constituents of *Crocus Sativus* L., Crocins

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SUMMARY

Crocus Sativus L., (saffron) is a plant cultivated in various parts of the world. Saffron and its active constituents affect a number of neural processes (anxiety, depression memory etc). Crocins are among the active constituents of *Crocus Sativus* L. Ketamine is a non-competitive NMDA receptor antagonists with known psychotomimetic profile. mCPP is a 5-HT_{2c} receptor agonist which exacerbate self-grooming in rats and this is considered as an animal model of obsessive-compulsive disorder (OCD). The first aim of the present study was to investigate in the rat the effects of crocins on recognition memory deficits produced by ketamine. For this aim, the novel object recognition task was chosen. Subsequent-

ly, we evaluated whether or not crocins were able to reduce mCPP-induced excessive grooming. In the first study, post-training administration of crocins (15-30 mg/kg) reversed ketamine-induced performance deficits in the novel recognition task, suggesting that crocins modulate storage and/or retrieval of information. In a subsequent study, pre-training treatment with crocins (15-30 mg/kg) did not affect mCPP-induced excessive grooming. The present results a) support and extend the enhancing effects of crocins on memory and b) provide evidence that these active constituents of *Crocus Sativus* L., might not be involved in the mechanisms mediating the effects of mCPP on grooming.