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**Short communication**

## Anxiolytic-like effects of olanzapine, risperidone and fluoxetine in the elevated plus-maze test in rats

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**Abstract:**

In the present study was examined the effect of treatment with olanzapine or risperidone, given separately or in combination with fluoxetine, in the elevated plus-maze test (an animal model of anxiety) in male Wistar rats. The obtained results showed that treatment with olanzapine (1 mg/kg), risperidone (0.1 and 0.3 mg/kg) or fluoxetine (5 and 10 mg/kg) induced an anxiolytic-like effect in the elevated plus-maze test. Olanzapine, risperidone and fluoxetine, tested in doses effective in the model of anxiolytic-like actions, did not affect motor coordination, while olanzapine (3 mg/kg) and risperidone (0.3 mg/kg) produced a significant reduction of exploratory activity in the open field test. In a combination study, the anxiolytic-like effect of olanzapine or risperidone was significantly antagonized by co-treatment with fluoxetine. Additionally, co-treatment with olanzapine or risperidone and fluoxetine disturbed the motor coordination of rats in a rota-rod test. These findings indicate that olanzapine, risperidone and fluoxetine *per se* may be clinically effective in treating anxiety disorders, but their effects may be attenuated when they are used in combination with other medications.

**Key words:**

olanzapine, risperidone, fluoxetine, elevated plus-maze test, rats

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