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## Synthesis and Influence of Two Quinoxalinone Derivatives on Anxiety- and Depressive-Like Responses in Wistar Rat

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### ABSTRACT

Two new quinoxalinone derivatives have been synthesized adopting the HONG method, and investigated for some neuropharmacological effects (anxiety- and depressive-like responses) in rats. The present experiment sought to determine whether treatment with these compounds produces changes in affective responses. We found that the chronic injection of 6-nitro-2(1H)-quinoxalinone (NQu) showed obvious anxiolytic- and antidepressant-like effects, respectively, measured in the behavioral tests of Elevated Plus Maze (EPM) and Forced Swim Test (FST). At the dose of 30 mg/kg, NQu showed a comparative anxiolytic-like effect in rats as diazepam (Dz) (1 mg/kg), and a comparative antidepressant effect as clomipramine (Clmp) (2 mg/kg; i.p). The 2(1H)-quinoxalinone (Qu) significantly reduced depressive-like responses as evaluated in FST, whereas no anxiolytic-like effect was found as measured by open field test (OF). Additionally, the locomotor activity levels were unaffected by treatment as measured by OF and EPM.

### KEYWORDS

Depression; Anxiety; Quinoxalinone Derivatives; Locomotor Activity; Wistar Rats

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