



### Investigation of the Role of Glucocorticoid Receptors on the Anxiety in Mice: A Preliminary Report

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#### Abstract

Some studies suggested that glucocorticoid receptors activities can modulate fear and anxiety. According to that, the purpose of this research is to assess the modulatory effect of glucocorticoid receptors on the anxiety assessed in plus maze. In this research mice with medium weight of 20-25 g were used. The male and female animals separately sorted in two groups as control and experiment randomly. For experiment groups 0.5-1 mg/kg dexamethasone was intraperitoneally injected as glucocorticoid receptors agonist and for control groups normal saline was injected thirty minutes before test. Before test, mice were put in black wall box for five minutes till their curiousness and movement activities are improved. While assessing their anxiety, the standard indicators were recorded for five minutes through observation. This study indicated that the dexamethasone in experiment groups reduces the anxiety. In comparison with control groups, they needed a significant longer period of time to pass on the arm of the maze ( $P < 0.01$ ). This result shows that glucocorticoid receptors activities have important modulatory role in anxiety reactions in plus maze assessment model.

**Keywords:** Anxiety, Glucocorticoid, Plus Maze, Mice.

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