

**RESEARCH ARTICLE**

**Evaluation of Antidepressant activity of *Ficus carica* leaves extract in experimental animals**

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**ABSTRACT:**

People in modern society suffer from different psychiatric disorders, particularly the depression. The exact cause of depression is unknown, but researchers suggest that depression is due to imbalancing of neurotransmitters like serotonin, norepinephrine, and dopamine in the brain. Factors that may contribute to depression include heredity, stress, chronic illnesses, certain personality traits and hormonal changes. However, several synthetic drugs are available in market, but all are associated with some limitations and there is an urgent need for alternative medications for these disorders. To date the search for novel pharmacotherapy from medicinal plants for psychiatric illness was significantly progressed. Therefore in the present study we evaluate the antidepressant activity of ethanolic extract of *Ficus carica* leaves by using Forced swimming test (FST) and Tail suspension test (TST) models. The results showed that the extract shows decrease in immobility time and significantly increase in the level of biogenic amine along with reduction in monoamine oxidase enzyme that metabolizes biogenic amines in both experimental models as compared to the animals in the control group and Imipramine treated standard group. Therefore, based on present findings the *Ficus carica* can be used as potential resource for natural psychotherapeutic agent against depression. However, further investigations are required to determine the molecular level of target mechanism of the extract for further use in humans.

**KEYWORDS:** Depression, *Ficus carica*, Forced swim test, Tail suspension test.

**INTRODUCTION:**

Depression is a mental disorder that represents an important and growing problem in public health, with an estimated 350 million people of all ages affected worldwide<sup>1</sup>. Depression is a significant contributor to the global burden of disease and affects people in all communities across the world. There are several types of depression. A person with major depression experiences symptoms of depression that last for more than two weeks. A person with dysthymia experiences episodes of depression that alternate with periods of feeling normal. A person with bipolar disorder, or *manic-depressive illness*, experiences recurrent episodes of depression and extreme elation (mania).

WA person with seasonal affective disorder (SAD) experiences depression during the winter months, when day length is short. Although the exact cause of depression is unknown, research suggests that depression is linked to an imbalance of the neurotransmitter's serotonin, norepinephrine, and dopamine in the brain.<sup>2</sup>

Medication is the most common treatment for depression. For example, selective serotonin reuptake inhibitors (SSRIs) are drugs that provide relief from some forms of depression. By inhibiting reuptake of serotonin by serotonin transporters, SSRIs prolong the activity of this neurotransmitter at synapses in the brain. SSRIs include fluoxetine, paroxetine, and sertraline. Other includes tricyclic antidepressants, such as imipramine. Many antidepressant drugs have been introduced recently but the response rates have not improved. The World Health Organization estimates that less than half of the patients receive adequate treatment<sup>1</sup>. In some countries, that rate is less than 10%. In addition