

## News &amp; Comments

**Eucalyptus Oil Show Antistress Activity***Elizabeth Ferrer*

The acute condition causes the homeostatic method of the creature to degenerate into debit, the creature's endurance to become susceptible, and many corpse changes known as universal version condition to occur. Stress is primarily the feedback of the mind and corpse beside transform into homeostasis. Stress is distinguished as a significant and emotional change that disrupts the creature's homeostasis and stability. Hypertension, peptic ulcers, diabetes, immunosuppressants, and reproductive dysfunction are just a few of the syndromes that stress can produce, along with behavioural disorientation, dread, and despair. A centralized neuronal mechanism that assesses motivation, enhanced attention and consideration span, appropriate rage, and concurrent shame of vegetative activities like feeding, sexual behaviour, development, and reproduction are amenities.

Therefore, this research was created to examine the acute toxic effects and antistress potential of eucalyptus leaf oil in mice after analysing a large body of literature on stress and its causes as well as other relevant material.

From the market, *Eucalyptus globulus* pure essential leaf oil was acquired. The pure essential oil had an aromatic odour and was a volatile substance with a greenish hue. The study used Albino mice measuring 15–25 g and 25 Wistar rats weighing 150–200 g for acute toxicity. Acute toxicity testing on pure *Eucalyptus globulus* essential oil was performed after (OECD guideline 423, 2001). Each of the two groups of animals, each with three male rats ( $n = 3$ ), fasted the previous night. The test group was given 2000 mg kg of emulsion oil in water orally, whereas the control group was given normal saline. The most popular behavioural technique for demonstrating antistress behaviour in mice is the Forced Swim Test, devised by Porsolt.

At the dosage level considered, the survivor rat displayed no unfavourable clinical signs.

The animals' behaviour, faeces, urine, or eye colour remain unchanged. There were no symptoms of disease or deaths in the treated rat group. These results led to the selection of eucalyptus oil dose levels for anti-stress activity. The organs of the animals administered *Eucalyptus globulus* leaf oil at a dose of 2000 mg kg<sup>-1</sup> did not differ in colour from those of the control group. The effect of EOE (400 mg kgG1) on the mice's anoxia stress tolerance time was not statistically significant after the first, second, or third weeks of therapy, though. Results of experiments point to the anti-stress properties of *Eucalyptus globulus* leaf oil. Results of TST and AST also pointed to the leaf oil's anti-stress properties. The rats given a dose of 200 mg kg<sup>-1</sup> showed the most notable results. Stress is defined as a physiological or psychological shift that affects the equilibrium and balance of the organism.



Eucalyptus oil is employed in a polyherbal mixture for the antistress action. Eucalyptus oil exhibits anti-stress properties. For respiratory conditions like asthma and allergies, eucalyptus oil is used. Recent findings confirm earlier results, showing that the immobility time was reduced in both treatment groups. This increase was significant when measured against the control group.

The results of the trials show that the immobility times were dramatically shortened when animals were stressed using the FST, TST, and Anoxia stress tolerance test models and were administered with three dosages of EOE (100, 200, and 400 mg kg<sup>-1</sup>, p.o.). By preventing stress brought on by the FST, TST, and Anoxia stress tolerance test models, the current exploratory methodology revealed and proved that eucalyptus oil has antistress action.

#### **JOURNAL REFERENCE**

Afzal, M., I. Kazmi, S.I. Alzarea, K.K. Sharma and C.K. Dubey *et al.*, 2022. Acute toxicity studies and psychopharmacological effects of *Eucalyptus globulus* leaf oil in rodents. *Int. J. Pharmacol.*, 18: 673-681.

#### **KEYWORDS**

Stress, eucalyptus oil, acute toxicity, immobility, FST, AST, TST, immobility

