

***Ocimum basilicum* leaves extract facilitates the glucose uptake by increasing the expression of GLUT 4 in L6 myotubes**

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ABSTRACT

Ocimum basilicum is a common herb that is known for its ornamental and therapeutic importance. The plant has been reported to possess hepatoprotective, immunomodulatory, antihyperglycemic, hypolipidemic, antitoxic, anti-inflammatory, antibacterial and antifungal properties. In the present study an attempt has been made to evaluate the glucose uptake potential of *Ocimum basilicum* leaves extract in vitro. Phytochemical analysis of the leaves extract revealed the presence of phenols, alkaloids, flavonoids, glycosides, saponins, tannins, phytosterols and triterpenoides. The total phenolic and flavonoid content were found to be 284.72 ± 1.44 mg Gallic acid equivalent and 43.65 ± 0.21 mg quercetin equivalent. It has been found that *Ocimum basillium* leaves extract is rich in minerals like copper, magnesium, calcium, zinc, sodium, and potassium. Further, *Ocimum basilicum* leaves extract increases the uptake of glucose through the translocation of GLUT 4 in rat L6 myotubes. The observed glucose uptake potential may be attributed due to the presence of biologically active ingredients present in the *Ocimum basilicum* leaves extract