

# Assessing the Role of Herbal and Plant-Based Remedies in the Treatment of Depression

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## Description

A major global public health concern, clinical depression can result in suicidal thoughts and behaviours. Even though there are medical therapies for depression, only 60% of patients respond well to them and the remaining patients have side effects that force them to stop taking their medicine. Therefore, the development of a novel antidepressant with a unique mechanism of action and controllable adverse effects is urgently needed. Using plant-based traditional medicine or medicinal plants as alternative treatments for mental illnesses is one of the choices. Over forty species of medicinal plants with antidepressant properties were found through a thorough search of the literature; some of these are used in traditional medicine. *Albizia zygia* (DC.), *J.F. Macbr.*, *Calculus bovis sativus*, *Celastrus paniculatus* Willd., *Cinnamomum* sp., *Erythrina velutina* Willd., *Ficus platyphylla* Delile, *Garcinia mangostana* Linn., *Hyptis martiusii* Benth. and *Polygonum multiflorum* Thunb. Were among the plant species mentioned [1-3]. These plants' antidepressant mechanisms were further described according to their modes of action, which included the regulation of the Hypothalamic-Pituitary-Adrenal (HPA) axis, the anti-oxidation system, the anti-inflammatory action, the modulation of different neurotransmitters, the neuroprotective effect.

## Herbal approaches to depression

One of the most widespread mental illnesses, depression affects over 264 million people globally and has increased significantly in the last several decades. Because of the high rate of suicide and other issues associated with sadness and mental health, depression is currently one of the leading causes of death worldwide. A complicated condition, depression is brought on by a combination of environmental, genetic and multiple pathophysiological factors. Negative mood, loss of enthusiasm or enjoyment, tiredness, guilt, hopelessness, difficulties concentrating, problems eating and sleeping and suicidal thoughts are all signs of depression. Additionally, sadness frequently coexists with psychological symptoms like anxiety or panic attacks. An individual may experience severe dysfunction or poor functioning to meet the demands of their daily tasks at work, school, or with families as a result of these

circumstances, which may be chronic or recurring. Depression has resulted in severe emotional suffering as well as a loss of productivity that has led to enormous financial losses. Several therapy approaches have been used to develop effective drugs for mental diseases in an effort to reduce this complex health and social load [4-6]. Monoamine Oxidase Inhibitors (MAOIs) like isocarboxazid, moclobemide and tranylcypromine, Norepinephrine Serotonin Reuptake Inhibitors (NSRIs) like duloxetine, levomilnacipran and venlafaxine, Tricyclic Anti-Depressants (TCAs) like amitriptyline, desipramine, imipramine and selective Serotonin Reuptake Inhibitors (SSRIs) like escitalopram, fluoxetine and paroxetine are among the psychiatric drugs currently used in treatment. Even though these medications were available, about half of the patients did not react adequately to them, making the primary therapy insufficient for the medications currently on the market.

## Natural alternatives for depression

The slow-onset progressive action of conventional antidepressant medications usually takes two to eight weeks to reach the desired therapeutic effect. The Central Nervous System (CNS) side effects (anxiety, insomnia, sedation, nightmares), gastrointestinal side effects (constipation, dry mouth, increase/loss of appetite), difficulty falling asleep, cardiotoxicity, neurotoxicity, orthostatic hypotension and sexual dysfunction are also among the major adverse effects of antidepressants. Due to significant side effects, around half of depressed patients have begun to reduce their antidepressant prescription dosage or have even stopped taking psychiatric meds altogether. People's interest in employing alternatives that contain medicinal plant species has been influenced by these side effects as well as the high cost of medications. Traditional Chinese Medicine (TCM) and ayurveda are two examples of phytotherapy and traditional medicine that have long been used to improve wellness and general health in developing nations. Because allopathic treatment is not readily available to rural regions, these people rely significantly on traditional herbal medicine [7-10]. In fact, more than nineteenth-century medicine has been derived or originated from plants, making them one of the most significant sources of modern pharmaceuticals. Compared to traditional medications, medicinal plant species have shown a therapeutic role in treating a variety of

psychological problems, including mental illnesses, with comparatively cheaper prices and fewer side effects. For instance, a number of phytochemical compounds that have been discovered from natural sources, including  $\alpha$ -pinene,  $\alpha$ -mangostin, myrsinoic acid and mogroside, have been found to have the potential to be new antidepressants or at the very least to be an alternative to improve the way depression is now treated. Understanding the possible mechanism of action of therapeutic plants that have been shown to have such biological effects is important.

## References

1. Kessler CS, Dhiman KS, Kumar A, Ostermann T, Gupta S, et al. (2018) Effectiveness of an Ayurveda treatment approach in knee osteoarthritis-A randomized controlled trial. *Osteoarthritis Cartilage* 26: 620-630.
2. Adra HJ, Zhi J, Luo K, Kim YR. (2022). Facile preparation of highly uniform type 3 resistant starch nanoparticles. *Carbohydr Polym* 294: 119842.
3. Balachandran P, Govindarajan R. (2005). Cancer-an ayurvedic perspective. *Pharmacol Res* 51: 19-30.
4. Adeleke BS, Babalola OO (2021). Roles of endosphere microbes in agriculture - A review. *J Plant Growth Regul* 41: 1411-1428.
5. Ahanger MA, Qin C, Maodong Q, Dong XX, Ahmad P, et al. (2019) Spermine application alleviates salinity induced growth and photosynthetic inhibition in *Solanum lycopersicum* by modulating osmolyte and secondary metabolite accumulation and differentially regulating antioxidant metabolism. *Plant Physiol Biochem* 144: 1-13.
6. Alexander M, Ang QY, Nayak RR, Bustion AE, Sandy M, et al. (2022) Human gut bacterial metabolism drives Th17 activation and colitis. *Cell Host Microbe* 30:17-30.
7. Ashleigh T, Swerdlow RH, Beal MF (2023) The role of mitochondrial dysfunction in Alzheimer's disease pathogenesis. *Alzheimer's Dement* 19:333-342.
8. Cai Y, Chai Y, Fu Y, Wang Y, Zhang Y, et al. (2021) Salidroside ameliorates Alzheimer's disease by targeting NLRP3 inflammasome-mediated pyroptosis. *Front Aging Neurosci* 13:809433.
9. Chan K, Shaw D, Simmonds MS, Leon CJ, Xu Q, et al. (2012) Good practice in reviewing and publishing studies on herbal medicine, with special emphasis on traditional Chinese medicine and Chinese materia medica. *J Ethnopharmacol* 140:469-475.
10. Chen M, Wang T, Yue F, Li X, Wang P, et al. (2015) Tea polyphenols alleviate motor impairments, dopaminergic neuronal injury, and cerebral  $\alpha$ -synuclein aggregation in MPTP-intoxicated parkinsonian monkeys. *Neuroscience* 286:383-392.