



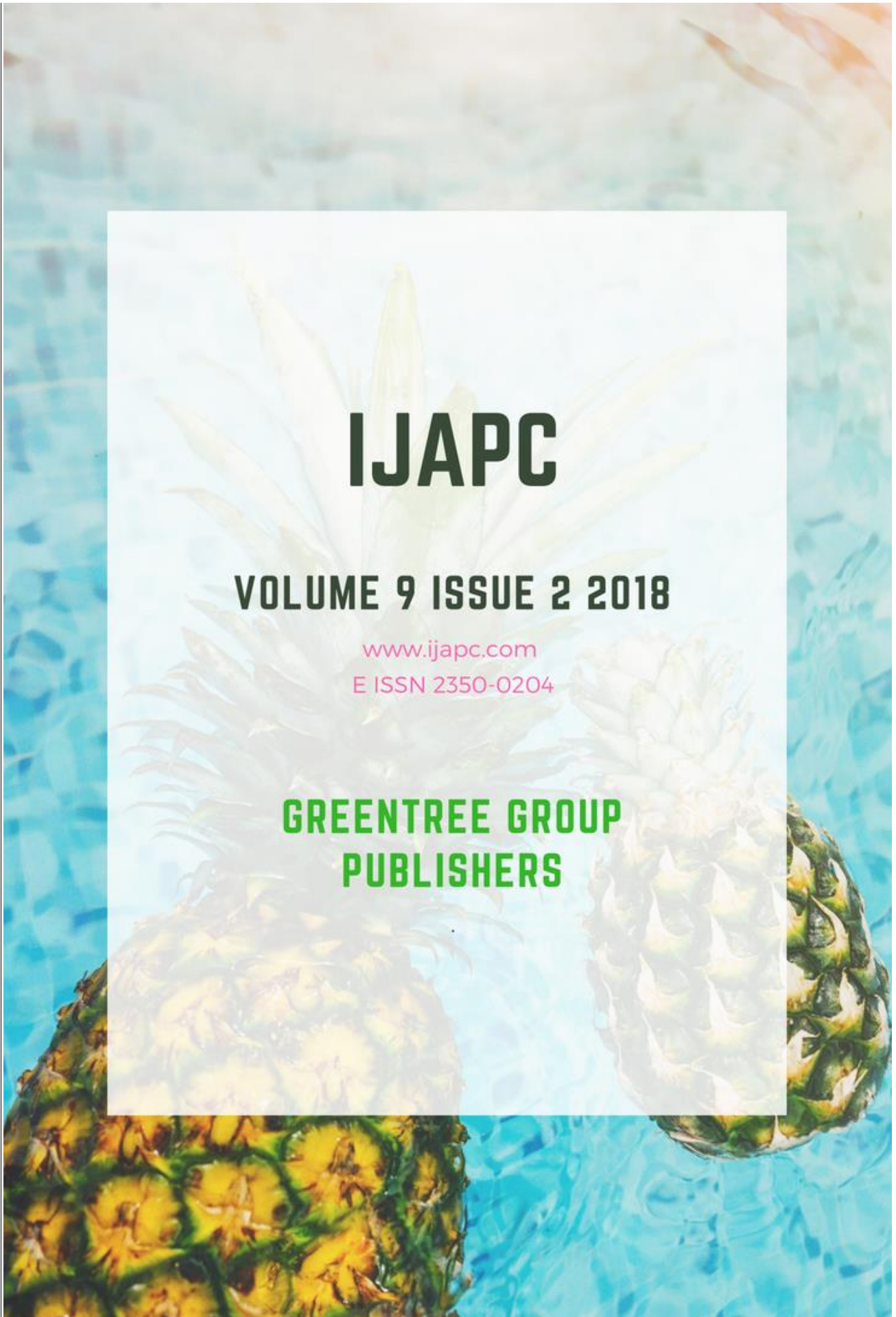
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Medhya Rasayan: A Potential Anxiolytic Drug in Ayurveda

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ABSTRACT

Consumption of *Mandukaparni Swaras*, *Yashtimadhu Churna* with *Ksheer*, *Guduchi Swaras*, and *Shankhapushpi Kalka*. – these *Medhya Rasayana* drugs are anxiolytic in nature, life promoting, disease alleviating, promoters of strength, *agni*, complexion, voice and *medhya*. *Medhya Rasayana* drugs are used for inhibition and dealing of mental disorders of all the age groups. These drugs promote the power of acquisition (*Dhi*), Retention (*Dhriti*) and recalling capacity (*Smriti*). Mood disorders are known to be associated with considerable burden of disease, suicides, poor quality of life and high economic costs. Therefore, it has become a major public health problem today. Unfortunately, modern medicine based on neurological drugs have met with inadequate success in treatment of various neurological disorders. Good qualities of the cells and tissues of the body through better nutrient effect, enhancing the digestion, metabolism and/or augmenting the microcirculation and tissue perfusion are all achieved by consuming *Medhya Rasayan*.

KEYWORDS

Medhya Rasayana, *Mandukaparni Swaras*, *Yashtimadhu Churna*, *Guduchi Swaras*, *Shankhapushpi Kalka*



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INTRODUCTION

Anxiety is characterized as an emotion by an unpleasant state of inner turmoil, which is often accompanied by nervous behaviour such as, somatic complaints, and rumination¹. Anxiety is the subjectively unpleasant feelings of dread over anticipated events, such as the feeling of imminent death². The American Psychological Association (APA) defines anxiety as “an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure.” Anxiety is different from fear, fear is a response to a real or perceived immediate threat or threat of any past event³, whereas in case of anxiety it is an expectation of future threat. Each and every person in this one life must experience anxiety at some point in his or her life. Anxiety can cause both psychiatric and physiological symptoms. Person with anxiety suffers with change in sleeping patterns and changes in habits like increase or decrease in food intake, mental confusion and tension. Around the world about 12% of people are affected by this anxiety disorder in a given year and between 5-30% are affected at some stage in their life⁴ and They occur about twice as often in females as males, and generally begin before the age of 25⁵. The most affected age is between the age of 15 and

35. Unfortunately there is limited success in treatment of various neurological and psychiatric disorders in modern medicine. In modern medicine antidepressants, benzodiazepines, tricyclics, and beta-blockers are normally prescribed but these drugs have many side effects. Benzodiazepines are prescribed, but they can be highly addictive. There are many side effects of Benzodiazepines like jitters, nausea, and sexual dysfunction. According to Ayurveda, equilibrium of *Agni* of *Dhatu*, *Vayu*, *Doshas* and *Srotas* are essential factors for maintaining normal strength, colour, balance and longevity of the life. *Dhee*, *Dhriti* and *Smriti* are considered as *Medhya* and these are interrelated with each other. The subdivision of *Medhya* is as follows; *Grahanshakti* (Power of Acquisition), *Dharana shakti* (Power of Retention), *Vivekshakti* (Power of Discrimination) and *Smriti* (Power of recollection). Consumption of *Medhya Rasayan* help the one to attain longevity, memory, intelligence, freedom from illness, youthfulness, excellence of lustre, complexion and voice, optimum strength of physique and sense organs, perfection in deliberation, respectability and brilliance. *Rasayana* is the means of attaining excellent *dhatu*s i.e. body cells and tissues. The aim of *Rasayana Chikitsa* is to nourish blood, lymph, flesh, adipose tissue and



semen. This prevents the individual from chronic diseases.

2. MODE OF ADMINISTRATION

Effect of *Medhya Rasayan* depends on the mode of administration. *Medhya Rasayan* is of two types: *Kutipravesika* and *Vatatapika*. *Kutipravesika* (*Kuti* means cottage, *Pravesha* indicates enter) is the intake of *Rasayan* as an indoor management in which the person lives in a specially prepared cottage for a particular period of time. In *Vatatapika*- (*Vata* means air and *Atapa* means heat or sun) mainly good for people who are engaged in outdoor activities. By consuming *Mandukparni Swaras*, *Yashtimadhu Churna with Ksheer*, *Guduchi Swaras*, and *Shankhapushpi Kalka* with proper mode of administration helps in Neurological and Psychiatric disorders that are generally associated with loss of memory, cognitive deficits, impaired mental function etc.

3. MEDHYA RASAYANAS

The word '*Medhya Rasayanas*', have been derived from the Sanskrit words '*Medhya*', meaning intellect or cognition, and '*Rasayana*', meaning 'rejuvenation. The medicinal plants in the Ayurvedic system are classed as brain tonics or rejuvenators. Earlier studies indicate that these plants are used both in conventional medicine and herbal medicine. It offers benefit that pharmaceutical drugs lack⁶. *Medhya*

Rasayanas include *Mandukaparni*, *Yashtimadhu*, *Guduchi* and *Shankhapushpi*.

3. A. Mandukaparni (*Centella asiatica* linn.)

Mandukaparni is *Centella asiatica* Linn. Family – Umbelliferae. *It is Tikta Rasa, Laghu Guna, Sita Virya, Madhur Vipaka*. Through the inhibition of AChE it inhibits the memory impairment induced by Scopolamine and it acts on behaviour besides being neuroprotective brain growth promoter. *Mandukaparni* is effective in reducing brain regional lipidperoxidation (LPO) and protein carbonyl (PCO) levels, it has neuronal dendritic growth stimulating property and improve the altered levels of neurotransmitters such as acetylcholine, 5HT, GABA (gamma-aminobutyric acid) and Glutamate, epinephrine, nor-epinephrine and it helps to improve the mental ability of person and fatigability of subjects under stress, inhibit the formation of beta amyloid plaques owing to the oxidative stress and activation of glial cells and thereby delay the neuronal apoptosis. *Mandukaparni* is Useful in treating mental retardation, improves memory span and reaction time, Asiatic acid (AA), a pentacyclic triterpene in *Mandukaparni* attenuates glutamate-induced cognitive deficits of mice and protects SH-SY5Y cells against glutamate-induced apoptosis *in-vitro*, influence the neuronal morphology



and promote the higher brain function of juvenile and young adult mice, cognitive enhancement, prevent oxidative stress, enhance neuronal dendrites, dendritic growth in the hippocampal CA3 neurons in adult rats. antidepressant activity⁷. The significance of *Mandukaparni* as a neuroprotective agent have already been used traditionally since decades in ayurvedic medicine. Various evidences of different modes of action of *Mandukaparni* were reported different studies which includes its neuroprotective potential by its different modes of action such as enzyme inhibition, dopamine neurotoxicity in Parkinson's disease, decreasing oxidative stress and prevention of amyloid plaque formation in Alzheimer's disease⁸. Asiatic acid (AA), a pentacyclic triterpene in *Mandukaparni*, possess neuroprotective effects both *in vitro* and *in vivo*⁹.

3. B. *Yastimadhu* (*Glycyrrhiza glabra* Linn.)

Yastimadhu is *Glycyrrhiza glabra* Linn., Family – Fabaceae. Glycyrrhizin (GL) is a triterpene present in the roots and rhizomes of licorice (*Glycyrrhiza glabra*)¹⁰. It has *Madhur Rasa*, *Guru*, *Snigdha* Guna, *Sita* Virya and *Madhur Vipaka*. Through the inhibition of AChE it inhibits the memory impairment induced by scopolamine and it acts on behaviour besides being neuroprotective brain growth promoter. It

also has role in Spatial learning, preliminary free radical scavenging, cerebral ischemia and antioxidant capacity towards LDL oxidation. The neuroprotective effect was found in the kainic acid induced neuronal cell death in mouse¹¹. This is because of induction of suppression of gliosis and proinflammatory markers. In a study the ethanol extract of *Yastimadhu* (AEGG and EEGG) and anti-convulsant potential of aqueous and its action on markers of oxidant stress is shown in pentylenetetrazole (PTZ)-induced seizure in albino rats¹². Antidepressant-like activity of *Yastimadhu* is demonstrated in mouse models of immobility tests. This is not mediated by increase of serotonin but mediated by increase of brain norepinephrine and dopamine¹³. Memory-strengthening activity of *Yastimadhu* in exteroceptive and interoceptive behavioural models of memory is also shown by other investigators¹⁴.

3.C. *Shankhapushpi* (*Convolvulus pluricaulis* Chois)

Shankhapushpi is *Convolvulus pluricaulis* Chois. Family – Convolvulaceae. *Shankhapushpi* is known worldwide for its action on boosting memory and improving intellect power and advantageous for brain related disorders like epilepsy, mental retardation etc. It is *Tikta Rasa*, *Snigdha*, *Picchil Guna*, *Sita Virya* and *Madhur*



Vipaka. It is effective in anxiety disorders, decrease in Pentobarbitone induced sleep, reverses the social isolation related stress, increased total motor activity and stress-induced antinociception in experimental model. It helps in memory enhancing and has effects on mood elevating, helps to retard brain aging, help in regeneration of brain cells and in Dendritic arborization which is the neuronal basis for improved learning and memory, increase in AGhE activity in CA1 with AS and CA3 and has anxiolytic effect¹⁵. In a study on aqueous extract of *Shankhpushpi* against neurotoxicity induced by Aluminium Chloride in rat cerebral cortex the investigators have found the neuroprotective effect¹⁶. Researchers also found the evidences of anticonvulsant activity of *Shankhpushpi* in many experiments as well as its antioxidant effect is also demonstrated by earlier studies¹⁷.

3.D. Guduchi (*Tinospora cordifolia* (Wild) Miers)

Guduchi is *Tinospora cordifolia* Willd. Miers, Family – Menispermaceae. Guduchi has Antioxidant effect helps in memory enhancing and possess anti-stress action. It is useful for treatment of *Bhrama* (Vertigo), in improving behaviour disorders, mental deficit and IQ levels¹⁸. *It is Tikta, Kasaya Rasa,*

Guru and Snigdha Guna, Usna Virya and Madhur Vipaka. It possesses strong free radical scavenging properties against reactive oxygen and nitrogen species diminishing the expression of iNOS gene, reduction in thiobarbituric acid reactive substances and an increase in reduced glutathione catalase and superoxide dismutase (anti-oxidant). In a study by the investigators involving 6-hydroxy dopamine (6-OHDA) lesion rat model of Parkinson's disease the neuroprotective activity of ethanol extract of *Guduchi* of aerial parts have been found¹⁹. Enhanced verbal learning and memory and logical memory (of immediate and short-term type), enhances cognition (learning and memory) in normal rats and cyclosporine induced memory deficit, anti-stress, anti-depressant and anxiolytic properties, improvement in sensible memory impairment²⁰.

4. Other benefits of Medhya Rasayan

Rasayana helps a person in achieving the finest quality of *Rasadidhatus* which helps to increase life span, improves intelligence, stabilizes youthfulness, cures disease, improves luster, voice, complexion, and makes body and senses strong and healthy etc²¹. Rasayana drugs acts as Adaptogen i.e., Increases the ability of an organism to



adapt to environmental factors, Nootropic- Promote intelligence and functions of brain and Antioxidant- Circumvent the damage caused by oxygen free radical and *Guduchi* causes an overall decrease in the yield of central monoamines, implicating the participation of nor epinephrine, dopamine and 5 HT in learning and memory process towards long term retention of information²². *Guduchi* has anti-pyretic, anti-diabetic, rejuvenative, anti-inflammatory and many other properties. *Guduchi* is one among the four drugs of *Medya Rasayan* which has anxiolytic and tranquilizing effect, which helps to maintain the mental health of human beings²³.

DISCUSSION

Medhya rasayan is considered the best anxiolytic drug in Ayurveda. It helps to decrease the anxiety and help the one to live peaceful and blissful life. Now adays many people work for long hours which automatically build anxiety and stress in people life. *Medhya Rasayan* is a blessing to those people. As stress and anxiety is not caused only by official work it can be caused by many other factors like relationships breakdown, social anxiety, homework stress among students etc. this *medhya rasayan* can be consumed by any

age group and every day. So, everyone should consume *Medhya Rasayan* everyday *Rasayan nitya sevnam*. So, to maintain a balance between social and personal life, to take the perfect benefit of every opportunity, to live a stress free and blissful life *Medhya Rasayan* is a blessing.

CONCLUSION

Charak and *Sushrut* both mentioned four drugs under *medya rasayan* i.e., *Mandukparni Swaras*, *Yashtimadhu Churna* with *Ksheer*, *Guduchi Swaras*, and *Shankhapushpi Kalka*. These help to perform various brain functions and helps to attain anxiety free life. Anxiety is basically the core of many diseases in the present era. These drugs of *Medhya Rasayan* are easily available and every person of any age group can consume it without having any side effects. *Medya rasayan* gives it best effect if consumed with its proper vehicle and proper mode of administration. As many house workers can consume it by *Kutipravesika Vidhi* and other outside workers can consume it with *Vatatapika Vidhi*. Anxiety is affecting many people around the world and leads to severe health problem. *Medhya Rasayan* is a blessing in modern era for many anxiety disorders and hence the best anxiolytic drug in Ayurveda.





REFERENCES

1. Seligman, M.E.P.; Walker, E.F.; Rosenhan, D.L. *Abnormal psychology* (4th ed.). New York: W.W. Norton & Company.
2. Davison, Gerald C. (2008). *Abnormal Psychology*. Toronto: Veronica Visentin. p. 154. ISBN 978-0-470-84072-6.
3. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (Fifth ed.). Arlington, VA: American Psychiatric Publishing. p. 189. ISBN 978-0-89042-555-8.
4. Kessler; et al. (2007). "Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative". *World Psychiatry*. 6 (3): 168–76. PMC 2174588 .PMID 18188442.
5. Chaudhari K, Murthy ARV (2014) Effect of rasayana on mental health-a review study. *International Journal of Ayurveda and Alternative medicine* 2: 1-7.
6. Kumar V (2006) Potential medicinal plants for CNS disorders: an overview. *Phytother Res* 20: 1023-1035.
7. Rao SB, Chetana M, Uma Devi P (2005) *Centella asiatica* treatment during postnatal period enhances learning and memory in mice. *Physiol Behav* 86: 449-457.
8. Orhan IE (2012) *Centella asiatica* (L.) Urban: From Traditional Medicine to Modern Medicine with Neuroprotective Potential. *Evid Based Complement Alternat Med* 2012: 946259.
9. Xu MF, Xiong YY, Liu JK, Qian JJ, Zhu L, et al. (2012) Asiatic acid, a pentacyclic triterpene in *Centella asiatica*, attenuates glutamate-induced cognitive deficits in mice and apoptosis in SH-SY5Y cells. *Acta Pharmacol Sin* 33: 578-587.
10. Luo L, Jin Y, Kim ID, Lee JK (2014) Glycyrrhizin suppresses HMGB1 inductions in the hippocampus and subsequent accumulation in serum of a kainic acid-induced seizure mouse model. *Cell Mol Neurobiol* 34: 987-997.
11. Luo L, Jin Y, Kim ID, Lee JK (2014) Glycyrrhizin suppresses HMGB1 inductions in the hippocampus and subsequent accumulation in serum of a kainic acid-induced seizure mouse model. *Cell Mol Neurobiol* 34: 987-997.
12. Chowdhury B, Bhattamisra SK, Das MC (2013) Anti-convulsant action and amelioration of oxidative stress by *Glycyrrhiza glabra* root extract in pentylenetetrazole- induced seizure in albino rats. *Indian J Pharmacol* 45: 40-43.
13. Dhingra D, Sharma A (2006) Antidepressant-like activity of *Glycyrrhiza glabra* L. in mouse models of immobility tests. *Prog Neuropsychopharmacol Biol Psychiatry* 30: 449-454.
14. Parle M, Dhingra D, Kulkarni SK (2004) Memory-strengthening activity of



Glycyrrhiza glabra in exteroceptive and interoceptive behavioral models. *J Med Food* 7: 462-466.

15. Dhingra D, Valecha R (2007) Evaluation of the antidepressant-like activity of *Convolvulus pluricaulis choisy* in the mouse forced swim and tail suspension tests. *Med Sci Monit* 13: BR155-161.

16. Bihagi SW, Sharma M, Singh AP, Tiwari M (2009) Neuroprotective role of *Convolvulus pluricaulis* on aluminium induced neurotoxicity in rat brain. *J Ethnopharmacol* 124: 409-415.

17. Verma S, Sinha R, Kumar P, Amin F, Jain J, et al. (2012) Study of *Convolvulus pluricaulis* for antioxidant and anticonvulsant activity. *Cent Nerv Syst Agents Med Chem* 12: 55-59.

18. Upadhyay AK, Kumar K, Kumar A, Mishra HS (2010) *Tinospora cordifolia* (Willd.) Hook. f. and Thoms. (Guduchi)–validation of the Ayurvedic pharmacology through experimental and clinical studies. *International Journal of Ayurveda Research* 1: 112-121.

19. Kosaraju J, Chinni S, Roy PD, Kannan E, Antony AS, et al. (2014) Neuroprotective effect of *Tinospora cordifolia* ethanol extract on 6-hydroxy dopamine induced Parkinsonism. *Indian J Pharmacol* 46: 176-180.

20. Bairy KL, Rao Y, Kumar KB (2004) Efficacy of *Tinospora cordifolia* on Learning and Memory in Healthy Volunteers: A Double-Blind, Randomized, Placebo Controlled Study. *Iranian Journal of Pharmacology and Therapeutics* 3: 57-60.

21. Pandey K, Churvedi G, eds *Chikitsasthan, Rasayan Adhyaya, Charaka Samhita*. Varanasi, India: Chaukambha Bhartiya Academy; 2015, shlok7, p.5.Reprint

22. Roushan, R., Tiwari, S., Gehlot, S., & Gambhir, I. S. (2013). Response of *Centella asiatica* in the management of age related problems among elderly with special reference to cognitive problems as per Prakriti. *International Journal of Research in Ayurveda and Pharmacy*, 4(2), 163–167. <https://doi.org/10.7897/2277-4343.04215>

23. Rawat, N., Roushan, R., (2015). *World Journal of Pharmaceutical Research*, 4(12), 1168–1177.