

# A Review on Herbal Neuroactive Drugs

Ravankole Pratiksha Rajkumar<sup>1</sup>, Prof. S. A. Waghmare<sup>1</sup>, Dr. H.V. Kambale<sup>2</sup>

<sup>1,2,3</sup> Dept of pharmaceutical Chemistry

<sup>1,2,3</sup> Loknete shri Dadapatil pharate collage of pharmacy

Mandavgan pharate Tal – Shirur District – Pune, Maharashtra, India.

**Abstract-** *The Nervous System consist the nerve cells which play vital role in transfer the impulse or signals within the body and other external body response. There are so many Depression is play important role in Human disorders. Depression is a disorder has always focus of attention of researchers in India. It is mood disorder which prevents individuals from leading a normal life, at work socially or within family.*

*Seligman (1973) referred to depression as the common cold of Psychiatry because of its frequency of diagnosis. According to cognitive behavioral theory ,depressed people think differently than normal or non-depressed people .It is also known as clinical depression . Over the 50- 60 years , large number of studies has been published from India addressing various aspects of this commonly prevalent disorder. The various studies included epidemiology, demographic and Psychosocial risk factors neurobiology, symptomatology, and diagnosis, impact of depression, treatment related issue and prevention of depression in addition to the efficacy and tolerability of various anti- Depressants.*

*There are so many neuroactive drugs. This article primarily focuses on the study of Anti-Depressant Drugs. The goal of this study is to reduce the Neurological Disorder mostly like Depression. There are so many herbal Anti-Depressant are used to treat Depression.*

**Keywords-** Capsules, Chew caps, Duo caps, Hard Gelatin Capsule, Soft Gelatin Capsule, Vegetarian capsules

## I. INTRODUCTION

There are so many nervous disorder occurs like Alzheimer disease, Parkinsons disease, Depression, Anxiety, Epilepsy, Genetic disorders like Schizophrenia, and Cognitive disorder etc.The drugs which acts on neuron to treat their disorder is called as neuroactive drugs.

There are so many neuroactive drugs are used to treat nervous disorder, both synthetic and natural or herbal drugs are used.The study of Neuroactive Drugs which act on

Depression. Depression is state of a low mood and changes in behavior and feelings and sense of well being.

Depressed people's are may feel sad, anxious ,empty, helpless worried, hopeless, guilty, hurt or restless. They may lost interest in activities that once were pleasurable, experience, loss of appetite, have probleming concentrating, remembering details or making decisions and may attempt suicide. At ancient time or previously the depression called as Melancholia and it is now known as clinical depression. At this condition more than 10 Million cases per year occur in India is very common. The depression occurs in highest aged between 18-40 (21%).The women were likely than men mild, moderate or severe symptoms of depression, because after puberty ,depression rates are higher in female than in male. They are likely to develop depression at the earlier age than boys.

According to WHO, Major Depressive Disorder ( MDD) will account for the second major illness in the world by the year 2020.MDD was contribute to the incidence of suicide and Ischemic Heart Congestive (IHC) and it was ranked the second leading cause of disability world- wide.

People	Age	Major/Minor Occuring
Childrens	6-13	Common
Young Adults	19-40	Moslty Occuring
Adults	41-60	Very Common
Senior/Old	60<	Rare

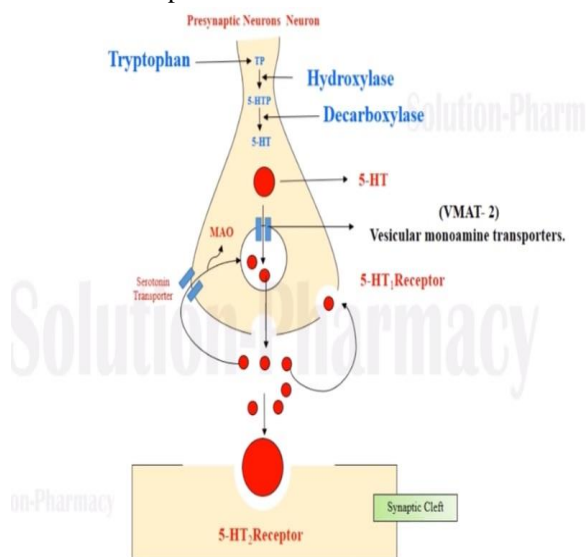
Mechanism of Action of Depression:-

Function Deficiency of the brain monoaminergic transmitters neuroepinephrine (NE) 5-HT and Dopamine .

It causes the hippocampus to reuse its cortisol level impeding the development of neurons in our Brain.

- The tryptophan are converted into 5-hydroxytryptophan (5-HTP) by presence of hydroxylase enzyme in the synapse.

- With the help of decarboxylase enzyme the 5-HTP convert into 5- Hydroxytryptamine
- The 5-HT store in Vesicular monoamine transporters.
- The excessive release of 5-HT into 5-HT receptor causes depression.



**Causes:**

1. Family History
2. Illness and health issues
3. Medication, Drugs and alcohol
4. Personality
5. Trauma and abuse
6. Stress
7. Lifestyle etc.

**Symptoms:**

1. Poor concentration, anger
2. Sleep disturbances and loss interest
3. Lack of appetite
4. Thoughts of suicide or Death

**Risk factors:**

1. History of trauma
2. Gender
3. Poor nutrition
4. Personality traits
5. Medication and substance use
6. Anxiety, migraine and headache

**Anti-Depressants:**

The drugs which are used for to treat depression. The Herbal Anti-Depressant drugs are very effective than synthetic drugs or chemical drugs.

.They are various Herbal Anti-Depressant drugs are used.

The Herbal Anti-Depressant medicines are mainly used for to reduce depression in human being.

There are various Herbal Anti-Depressant medicines are their like Chamomile, Hypericum perforatum (ST John reagent),

**Mechanism of Action of Anti-Depressants Drugs:**

- The Anti-Depressant Drugs it undergo inhibition of serotonin reuptake into the presynaptic cell, increasing the level of serotonin leading to greater post synaptic neuronal activity.
- They do not have significant effect on Norepinephrine and Dopamine.
- Monoamine Oxidant breaks down norepinephrine, serotonin and dopamine.
- When Monoamine Oxidase is inhibited, norepinephrine, serotonin and dopamine are not broken down, increasing the concentration of all three neurotransmitters in the brain. They typically take 2 to 12 weeks to produce improvement in mood.
- They are also decrease the anxiety and depression.

Sr No.	Drugs	Synonym	Family	Chemical constituents	Mechanism of action	Uses
1.	Chamomile	Matricaria Chamomile	Asteraceae	Bisprolol, Matricin, Chamazulene	It is Anti-Oxidant that directly target neurotransmitters and brain receptor to induce relaxation. It serotonin, Dopamine and non-adrenaline	It boost that chemicals which present in brain which can be helpful on depression..
	Hypericum Perforatum	ST John Wort	Hypericaceae	Hyperforin	It responsible to regulate to inhibit reuptake of Serotonin, Dopamine, GABA and Norepinephrine	It lowers the Depression and overall feel good effect in brain.
2.	Coffee	Coffee seed or coffee bean	Rubiceae	Theacrine	It stimulates the CNS acts as Anti-Depressants by elevating serotonin and Dopamine.	It lower the suicidal rates. It is mood boost than other drugs
3.	Tulsi	Holy basil or sacred basil	Lamiaceae	Rosmarinic acid, Eugenol, b-caryophyllene	It helps to reduce toxic stress by relaxing and calming the mind psychological benefits	Reduce readily depression mostly stress.

4.	Ginger	Zingiber or Zingiberis	Zingiberaceae	G- gingerol	It interacts with dopamine and serotonin.	Reduce stress, headache and increase mood boost
5.	Garlic	Allium	Liliaceae	S- allyl cysteine	It interact with the CNS act as Anti-Depressants. It interaction with adrenergic, dopaminergic, serotonergic and gabanergic	It lowers the stress level, help to change mood, decrease the insomnia and anxiety level.
6.	Turmeric	Indian saffron haldi	Zingiberaceae	Curcumin, Phellandrene,	It is responsible for regulating neurotransmitters namely, Dopamine, serotonin, epinephrine and non- epinephrine.	It's acts as Anti- . It helps to relax, improve mood and release anxiety.

### Advantages

- It overcome anxiety
- mild to moderate depression
- mood disorders
- stress due to the presence of vast number of bioactive compounds.
- Improve patient compliance
- Reduce gastric irritation and side effects.
- Relieve the symptoms of severe depression.
- Increase the relaxing mode by calm down.
- Prevent to recurring.
- Decrease the decision of attempt suicide.
- Reduce the stressful life.

### Application:-

- St. John's wort (*Hypericum perforatum*) has a history of use as a medicine dating back to ancient Greece, where it was used for a range of illnesses, including various nervous disorders.
- St. John's wort also has antibacterial, antioxidant, and antiviral properties.
- It is used to treat Schizophrenia.
- It is also used to treat Anxiety.
- It have effective benefit to calm down.
- It is used to treat all neurological disorders.

## II. CONCLUSION

As many people's are undergoing in depression at now a days . Due to this increasing percentage of depressive peoples in world – wide. Some time the depressive people attempt suicide. The avoiding or reducing the attempting suicide which person are under the depression the various Anti-Depressant medicines are identified. The various Herbal Anti-Depressant medicines are their. The Herbal Anti-Depressant medicines are show less side as compare to synthetic medicines. he synthetic medicines are not Sufficient to ensure the Anti-Depressant Activity . That's why Herbal

medicines are used as Anti-Depressant medicine for Depression.

The various Anti-Depressant Activities of Herbal Medicines are examined on different – different animals. The simple Formulation of Anti-Depressants Solution are very effective to treat depression.

The various evaluation test of Anti Solution also examined and detected.

## REFERENCES

- [1] Kishor B. Sharma KC. Preliminary Clinical Evaluation of and new Anti-Depressant Drugs.1967;9:239-46.
- [2] Jay Karen Charan, Deepak Saxena, Indian Journal of Psychological medicine,Quality of Anti-Depressants Drugs Research Articles Published in Indian Medicinal Journal.
- [3] Lie Liu, Changhong, Current Neuropharmacology. Herbal Medicine for anxiety, Depression and Insomnia.
- [4] Roli Gupta, Ahmed siddiqui, International Journal of Pharmaceutical Science and Research University Lucknow, Uttar Pradesh India
  - a. The Action of Herbal Drugs on Anti-Depressant is effective than synthetic drugs .
- [5] El-Sherbiny D. A., Khalifa A. E., Attia A. S., Eldenshary Eel D. (2003). *Hypericum perforatum* extract demonstrates antioxidant properties against elevated rat brain oxidative status induced by amnestic dose of scopolamine. *Pharmacol. Biochem. Behav.* 76 525–533. 10.1016/j.pbb.2003.09.014 [PubMed] [CrossRef] [Google Scholar]
- [6] Emerit J., Edeas M., Bricaire F. (2004). Neurodegenerative diseases and oxidative stress. *Biomed. Pharmacother.* 58 39–46. 10.1016/j.biopha.2003.11.004 [PubMed] [CrossRef] [Google Scholar]
- [7] Mausal Hernandez , public access Herbal Medicine for anxiety and depression; A systematic review with assessment of potential Psycho- onchological relevance 28 feb 2018.
- [8] Indian Journal of Psychiatry ,Halappa, Naveen Gowrapura, Gangadhar B. Jan- Mar 20 Improvement in neurocognitive functions and neurotrophic factor levels in patients with depression treated with Anti-Depressants.
- [9] Anurag Pandey, Mamata Tiwari. World Journal of Pharmacy and Pharmaceutical Science Jan-2020. Anti-Depressants Drugs in India with Special References to Indian Herbal plants.

- [10] Mahabubeh Satorki. Journal of Herbal pharmacology July 2020. Medicinal herbs with Anti- Depressants.
- [11] Melia Bokaeng Bonokwane , 29 June 2022. Anti-Depressants effects of plants ethnobotanical survey, ethnopharmacological and phytochemicals steps.
- [12] Srivastava IK. Shankar E, Gupta S. Chamomile a herbal medicine of the past with bright future. Mol Med Rep. 2010 3(6):89-901. doi: 10.3892/mmr.2010.377 .
- [13] Setorki M. Moshfegh A. Raoufi N. Effect of hydroalcoholic extract of Matricaria chamomilla on passive avoidance memory and pain induced by global cerebral ischemia in Wistar rat. Journal of Shahrekord University of Medical Sciences. 2016,17(6):76-86.
- [14] Xu C., Teng J., Chen W., Ge Q., Yang Z., Yu C., Yang Z., Jia W. 20 (S)-protopanaxadiol, an active ginseng metabolite, exhibits strong antidepressant-like effects in animal tests. Prog. Neuro-Psychoph. 2012;34(8):1402-1411. doi: 10.1016/j.pnpbp.2010.07.010.