

Herbs as Antidepressants: A Review

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Review Article

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Abstract

Medicinal Flora are considered as a biogenetic laboratory for the production of the Chemical constituents, Primary and secondary constituents primary constituents include carbohydrates, fats, vitamins and amino acids and they play physiological role in humans and plants. Besides primary Constituents plants also produce secondary metabolites these secondary constituents provide a therapeutic role when used by humans. These secondary metabolite are also known as phytoconstituents plants utilize these phytoconstituents for their protection .They also have some medicinal value and the usage of plants dates back to the Paleolithic age for different body ailments. Many plants are used for depression which is cited in this article.

Keywords: Plants; Anti-Depressants; Mania

Introduction

Disorders of mood or affect have been described since the 4th century BC. Despite this early acknowledgment, their etiology is still a source of debate. It can be primarily characterized as an illness with emotional symptoms such as anxiety and vegetative symptoms such as sleep disturbances, as per the report of world health organization 45 million are suffering from Behavioral or mental disorders which amounts to 12% of the global burden of the disease and is expected to rise to 20% by 2020 [1]. Depressions can be acute or chronic, depressive symptoms commonly include emotional and biological components. Biological symptoms include retardation of thought or action loss of libido, sleep disturbances and appetite loss, symptoms of emotional components include misery, apathy pessimism, and low self-esteem, consistently feeling of guilt, Inadequacy, Ugliness and loss of motivation [2]. The clinical status of depressed patients, over time, has been is generally described by four terms (Remission, Recovery, Relapse, Recurrence,) as roughly 4

Rs' of depression. *Remission* refers to the swinging cum restoration to normalcy after lasting for 2 months. *Recovery* similar term related to *Remission* but the improvement should have lasted for more than 2 months. The term *Relapse* means returning from the depressive episode within 2 months of improvement, on the other hand if depressive episode occurs after 2 months of improvement it is termed as Recurrence [3-10].

Depression is one of the diseases which are spreading fast affecting the person from all the age groups, Most commonly found now days in the Age group between 10-30years. Children's are also mostly affected now a day because of fare of going school, exam burden and other problems keeping them involved in different bad hobbies such as Smoking etc [11-20].

Although plenty of pharmaceutical agents are available for the treatment of mood disorders, anxiety, insomnia, many patients have difficulty tolerating the side effects, do not respond adequately, or eventually lose

their response and there high costs making it difficult for the common man to go for allopathic treatment of any disease [21-25]. Many Medicinal plants with very less side effects have been discovered which may provide an alternative treatment or can be used to enhance the effect of prescription medications. Among them are the plants which are given below [25-32].

Material and Methods

In this review the data for the preparation of the manuscript was collected using the keywords medicinal

plants, Anti-depressants, Plants as anti-depressants, FST, TST, which were entered in to the international database of web knowledge comprising of PubMed, Scopus, and Google scholar [33-40]. The articles published from 2015 to till date demonstrating Anti-depressant activity of plants were selected. The plants were arranged in tabular form with their families, part of the plant used, solvent used for the preparation of extracts, dosage of the extracts used in extracts used in animals, model used for evaluating the behavioral changes and reference drug used (Table 1).

Results

Sno	Plant name	Family	Part used	Solvent used	Model used	Reference Drug	Dosage
1	<i>Feijoa sellowiana</i>	Myrtaceae	Fruit	Methanol	FST,TST	Imipramine	1500,2000mg
2	<i>Melissa officinalis</i>	Lamiaceae	Leaves	Aqueous	FST	Imipramine Fluoxetine	300mg
3	<i>Moringa oleifera</i>	Moringaceae	Leaves	Ethanolic	FST,TSTLAT	Fluoxetine	100,200mg
4	<i>Lactuca sativa</i>	Asteraceae	leaves	Ethanolic, Aqueous	FST	Fluoxetine	
5	<i>Coccinia indica</i>	Cucurbitaceae	Arial part	Methanol Ethylacetate	FST,OFT	Imipramine	400mg Methanol,50mg EA
6	<i>Gardiana Jasminoids</i>	Rubiaceae		Ethanol	TST,NST	KetamineHCl	0.8mg
7	<i>Stuednera colocasiifolia</i>	Araceae	Leaves	Ethanol	TST,FST	Imipramine	100,200mg
8	<i>Tagates lucida</i>	Asteraceae	Arial part	Aqueous	FST	Fluoxetine	50,100,200mg
10	<i>Ocimum kilimandscharicum</i>	Lamiaceae	Arial part	Aqueous	FST	Imipramine	10,200mg
11	<i>Anethum graveolens</i>	Apiaceae	Leaves	Aqueous	FST	Sertraline	250mg
12	<i>Annanus cosmosus</i>	Bromaliaceae	Fruits	Methanol	FST,TST	Imepamine	3.25,7.5,15 mg
13	<i>Basella alba</i>	Basellaceae		Methanol	FST,TST	Diazepam	25,50mg
14	<i>Beta vulgaris</i>	Chenopodiaceae		Methanol Aqueousc	FST,TST FST,TST	Fluoxetine	200,400mg
15	<i>Vicia faba</i>	Fabiaceae		Methanol	FST,TST	Imepamine	100200400, 800,1200mg
16	<i>Lavendula officinalis</i>	Lamiaceae	Arial part		FST		100,200,400mg
17	<i>Zea mays</i>	Polaceae	Husk	Methanol	OP,TST,FST	Imepamine	150-750
18	<i>Pimpinella anisum</i>	Umbelliferae	Fruits	Ethanol Aqueous	FST,TST	Fluoxetine imepramine	50,100,200
19	<i>Rosa abyssinic</i>	Rosaceae	Fruits	Aqueous	TST,FST,OFT	Imepamine Imepamine	200,400mg
20	<i>Zingiber officinale</i>	Zingiberaceae	Rhizome	Ethanol	TST		50,200Mg
21	<i>Catha edulis</i>	Celastraceae		Ethanol	TST,FST,HD	Escitalopram	100,200,400mg
22	<i>Saraca asoka</i>	Fabiaceae	Bark	Methanol	OFT,FST	Imepamine	
23	<i>Ajuga Bracteosa</i>	Laiateae	Root	Methanol	FST		50mg
24	<i>Melia Azeadarich</i>	Meliaceae	Fruits	Methanol	FST	Imepamine	15mg
25	<i>Vigna Unquiculata</i>	Fabiaceae	Arial part	Aqueous	FST,TST,OFT	Sertraline	

26	<i>Lactuca sativa</i>	Asteraceae			FST	Fluoxetine	10mg
27	<i>Hypericum polyanthemum</i>	Hypericaceae		Isolated compound	TST,FST		20,60mg
28	<i>Nymphaea Lotus</i>	Nymphaeaceae	Leaves	Aqueous	FST,OFT	Diazepam	
29	<i>Catha edulis Forsk</i>	Celastraceae	Leaves	Ethanol	TST,FST,HPT		100,200mg
30	<i>Nelumbo nucifera</i>	Nymphaeaceae	Fruit	Ethanol	FST,LnD	Imipramine	500mg
31	<i>Punica granatum</i>	Punicaceae	Fruit	Aqueous	FST,TST	Imipramine	
32	<i>Citrus macroptera</i>	Rutaceae	Fruit	Ethanol	FST,TST		600,800mg
33	<i>Vigna Unguiculata</i>	Fabiaceae	Arial	Aqueous	FST,TST		
34	<i>Aniba rosaeodora</i>	Lauraceae	Leaves	EO	OFT,EFT,ST,FS T		
35	<i>Aniba parviflora</i>	Lauraceae	Leaves	EO	OFT,EFT,ST,FS T		
36	<i>Aeollanthus suaveolens</i>	Lamiaceae	Leaves	EO	OFT,EFT,ST,FS T		100mg
37	<i>Saraca asoca</i>	Fabiaceae	Bark	Methanol	FST,OST	Escitalopram	200,400mg
38	<i>Macrotyloma uniflorum</i>	Fabiaceae	Stem	Ethanol	FST,TST	Imipramine	10, 20mg
39	<i>Panax ginseng</i>	Araliaceae	Root	Isolated compound Ginsenoside Rg3	FST,TST OFT	Fluoxetine	5,10,20mg
40	<i>Jasmonium grandiflorum</i>	Oleaceae	Flower	Isolated compound Methyl jasmonate	FST,TST	Imipramine	
41	<i>Rosemarinus officinalis</i>	Lamiaceae			FST,TST	Imipramine	10,20,50mg
42	<i>Pelargonium roseum</i>	Geraniaceae	Leaves	EO	OFT,FST	Diazepam	10mg
43	<i>Calistimon citrinus</i>	Myrtaceae	Leaves	Chloroform	TST,FST	Imipramine	100,200Mg
44	<i>Malus Domestica</i>	Rosaceae	Flowers	Fruit juice	FST,TST	Imipramine	1, 2mg
45	<i>Vanda Tassellata</i>	Orchidaceae	Leaves	Ethanol	FST,TST	Imipramine	200, 400mg
46	<i>Bridelia verrucosa</i>	Phyllanthaceae	Leaves	Methanol	ST	Diazepam	200, 400mg
47	<i>Colocasia affinis</i>	Araceae	Sphadix	Methanol	FST,TST	Imipramine	200,400mg
48	<i>Sesamum indicum</i>	Pedaliaceae	Seeds	Methanol	FST,TST,OFT	Imipramine	50,100,200mg
49	<i>Abies wabbiana</i>	Pinaceae	Arial	Ethanol	TST,FST	Fluoxetine	200,400Mg
50	<i>Berberis Aristata</i>	Berberidaceae	Arial	Ethanol	TST,FST	Fluoxetine	200,400Mg
51	<i>Anthemis widemanniana</i>	Asteraceae	Fruits	Methanol	FST,TST	Imipramine Fluoxetine	200mg
52	<i>Monothea Buxifolia</i>	Spotaceae	Bark	Methanol	FST	Imipramine	100,200,500mg
53	<i>Tabernatemonia divaricata</i>	Apocyanaceae	Leaves	Methanol Ethanol	FST	Imipramine	100,200mg
54	<i>Antigonon Leptopus</i>	Polygonaceae	Leaves	Ethanol	FST,TST	Imipramine	150,300mg
55	<i>Hedyotis corymbosa</i>	Rubiaceae		Methanol	OFT,NSF	Fluoxetine	50,100,200mg
56	<i>Perilla frutescens</i>	Lamiaceae	Leaves		FST		12.5,25mg
57	<i>Crocus sativus</i>	Iridaceae	Stigma		FST	Kempferol	15mg
58	<i>Coptis chinensis</i>		Isolated compound jatrorrhizine		TST	Venlafaxine	5,10,20mg

Table 1: Model Used for Evaluating the Behavioral Changes and Reference Drug Used.

Conclusion

Plants have played a vital role in management of human health since the evolution. Medicinal plants exerts great role in discovery of new drugs. Majority of human population worldwide is getting affected by mental

disorders like Depression [41-50]. It is believed that drugs such as TCAs, SSRIs, SNRIs etc are not useful in all cases, because of their side effects like GIT irritation, Erectile dysfunction, Bullered vision, insomnia, Memory loss and much more. Large number of plant species have been used traditionally or as folk medicines against mental

disorders. Many of them have been studied scientifically and proved to be beneficial Anti-depressant agents. 58 plant species belonging to different families have been reported to possess Anti-depressant activity from the Beginning of 2015 till date out of them prominent among them are Lamiaceae, Fabiaceae, Asteraceae and methanolic extract found to be more dominant [51-58]. The active compounds of these plants need to be isolated by proper method of isolation so that these plants can be explored clinically.

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