



## Medicinal Plants Used for Treatment of Psychiatric Disorders in Unani Medicine

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### Abstract

The term mental disease is not restricted to mean insanity and allied conditions of mental derangement but also includes, to a certain extent, the emotional disorders. When emotional factors cross the state of normalcy, one gets deranged to show the syndromes of mental disorder, very often. These pathologies affect all categories of person, race, sex and age. Many synthetic psychoactive molecules such as antiepileptic, antidepressants, anxiolytics are used in modern medicine to treat these pathologies. But allopathic medicine is not found very effective. Further, cost, dependency on diagnostic tools, increasing adverse effects and symptomatic rather than curative approach of allopathic medicine made the world population seeking an alternative medical system. Currently, the world is looking towards traditional medicines, including Unani pathy for a reliable cure for psychiatric disorders. Little research has approached the specific case of plants used to treat nervous system disorders. It is necessary to report psychic disorders treated by medicinal plants in Unani Medicine. It is high time to look back to the Unani system of medicine wherein a number of plants and mineral origin drugs have been described for specific uses for a range of mental disorders. An attempt has been made in this paper to highlight the beneficial Unani plant origin drugs in psychiatric problems. These plants have been reported for their potential in treating many neuropsychiatric problems. Some research studies conducted on the scientific parameters on the plant drugs will also be provided to show the potential of these drugs which may help in development of new intervention or a substitute for conventional drug, or that can be used as an adjuvant.

**Keywords:** Psychiatric Disorders; Unani Medicine; Adjuvant; Amraz-I Nafsaniya

### Introduction

According to the World Health Organization (WHO), neuropsychiatric disorders are a whole of "mental health problems", which are characterized by anomalies of the thought, emotions, behavior and relationship with others [1]. It results in inability to perform or cope up with demands and routine of life. The term mental disease is not restricted to mean insanity and allied conditions of mental derangement but also includes, to a certain extent, the emotional disorders. When emotional factors cross the state of normalcy, one gets deranged to show the syndromes of mental disorder, very often. Factors causing these disorders are essentially genetic, social,

environmental and psychotropic drugs. Mental and neurological disorders represent 13% of the burden of total morbidity in the world. The prevalence of psychiatric illness is almost same in India and the West, about 8 to 10 per 1000 population. During the whole life time about 25 percent persons suffer from psychological health issues [2]. Depression, insomnia and anxiety disorders also affect the other systems of the body such as they impair the function of immune and cardiovascular systems [3]. The World Health Organization anticipated that depression will be the second leading cause of infirmity in 2020. Epilepsy is one of the most common neurological disorders that has affected more than 50 million persons in the world including 80% in developing countries [4].

Many psychoactive molecules such as antiepileptic, antidepressants, anxiolytics are used in modern medicine to treat mood, depressive and other psychotic disorders. But allopathic medicine is not found very effective. Further, cost, dependency on diagnostic tools, increasing adverse effects and symptomatic rather than curative approach of allopathic medicine made the world population seeking an alternative medical system.

It is high time to look back to the ancient Unani medical literature wherein a number of plants origin drugs have been described for specific uses for a range of mental disorders, including convulsion, hysteria, paralysis, dementia, insomnia, anxiety, insanity, depression, etc.

In the Unani system of medicine, psychiatric problems are dealt in detail under the heading of 'Amraz-i Nafsaniya'. Ibn Sina clearly classified the mental or psychiatric diseases due to disturbance or weakness of special powers of mental faculties (*Quwa Nafsani*) [5]. Majusi classified these special powers as Imaginative power/faculty (*Quwwat-i Mutakhayyala*), Thinking faculty (*Quwwat-i Mufakkira*) and memory (*Quwwat-i Zakira or Quwwat Hafiza*) [6]. The centre of these powers lies in the brain and perform planning, imagination, thinking and memory functions [5,7]. The main causative factors for psychiatric disorders are the ill temperament of brain (*Su-i Mizaj*), the quantitative or qualitative changes in humors particularly morbid black bile (*Ghayr Tabai Sawda*) and loss of continuity (*Tafarruq-i Ittesal*) [5] which produces sadness, negative thoughts, hallucination, delusion, mood swings, grief, etc. and discussed under the disease called malikhuliya (depression) [8]. Forgetfulness and dementia occurs due to changes in brain due to old age (Alzheimer's disease), accumulation of morbid phlegm in the brain [9] and excessive dryness causes insomnia [10] (Ibn Hubal Vol III). Accumulation of morbid matter in the brain produces weakness or disturbance of mental faculties giving rise to various mental health issues. *Awariz-i Nafsaniya* (emotions/psychic reaction) produce movement in the *Ruh* (pneuma) through blood. The movement of *Ruh* is seen outward or inward in emotions. The movement of *ruh* is outward and sudden as in anger and is outwards and gradual as in happiness. The movement of *ruh* is inward and sudden as in fear and inwards and gradual as in sadness. This movement of increases the heat in part towards it flow leaving the other part cold. When the cycle of heat and cold becomes excessive, it affects various organs of the body and results in occurrence of disease [6].

The basic principles of the Unani treatment for psychiatric disorders includes: The correction of temperament of the brain (*Tadeel-i Mizaj*) [5,9]; Evacuation of morbid matter (*Istifragh*) [5]; To produce exhilaration (*Tafreeh-i Taba*) [10,11]. To strengthen brain and heart (*Taqwiyat-i Dimagh wa Qalb*) [9]; Analgesia to re-

lieve pain (*Taskeen*); To induce sleep (*Tanwaeem*) [5]; physical and mental rest (*Sukoon-i Jismani wa Nafsani*) and removal of the causative factor [5,9]. For the treatment of mental diseases mainly three treatment modules i.e. dietotherapy, regimenal therapy and pharmacotherapy are mainly used in Unani medicine. In the pharmacotherapy module, various plants origin drugs are mentioned by for the treatment of psychiatric ailments. Some drugs influenced the nervous system by exerting special pharmacological actions which are still unknown (*Zul Khassa*) are also included [12]. According to Unani physicians, evacuation of morbid matter (*Istifragh*) is done with *Munzijat* (maturative) or *Mushilat* (purgative) drugs and use of emolient (*Mulattifat*), resolvents (*Muhallilat*), drugs to remove the morbid matter. Drugs which have refrigerant (*Mubarriid*), moistness producing (*Murattib*) heat producing (musakhkhin) activities helps in alteration of temperament, and drugs that show exhilarant (*Mufarreh*) action play an important role in psychiatric diseases [9]. Ibn Sina has advocated the drugs that increases the substance (*Jawhar*) of brain, purify the brain (*Munaqqi-i Dimagh*), hypnotics (*Munawwimat*), brain tonics (*Muqawwi-i Dimagh*), drugs that improves cognitive functions like (*Muqawwi-i hawaas* and *Muqawwi-i Zehan/Aql*), *Muqawwi-i Qalb* (heart tonic), *Muharrrik-i Dimagh wa Asaab* (stimulants of brain and nerve), memory enhancers (*Muqawwi-i Hafiza*) [14]. To some extend blood purifiers (*Musaffiyat-i dam*) with adoption of psychic measures in the management of psychiatric ailments [9,13]. The drugs which prevent production and movements of gaseous substance towards the brain from other organs of the body are also advocated for the treatment if mental problems are secondary to other diseases such as psychosis (*Malankhulia miraqi*) [13,14].

### Some single drugs useful for mental health promotion and psychoneurotic diseases

#### Aftimoon (*Cuscuta epithymum* Linn.) [12,14-19]

- Part used: Whole plant [18,19].
- Its temperament is hot and dry-3 [14].
- Pharmacological action: Melanagogue (*Mushil-i Sawda*) [14-16], diuretic (*Mudir-i Baul*) [19].
- Therapeutic uses: It is effective for melancholia (*Malankhuliya*) [14], insanity/Schizophrenia (*Junoon/Waswas*) and epilepsy (*Sara*) [12], nightmares (*Kaboos*), *Falij* (paralysis), *Laqwa* (Facial palsy) and *Khadr* (numbness) [15,17,18].
- Dose: 7 gm [14] and decoction- 14 gm [14]; decoction- 17.5 - 24.5 gm and 17 gm with honey to induce purgation [15].
- Pharmacological studies:
  - Anticonvulsant activity [20].
  - Anxiolytic [21].

**Asgand (*Withania somnifera* Linn.) [19,22]**

- Part used: Root [19].
- Its temperament is hot-3, dry-3 [19].
- Pharmacological action: It is memory enhancer (*Muqawwi-i Hafiza*), nervine tonic (*Muqawwi-i Asab*) and health preservative (*Muhafiz-i Sehat*) [22].
- Therapeutic uses: It is useful for *Nasayan* (forgetfulness) and corrects phlegmatic derangement and blood impurities [22].
- Dose: 1 gm with milk [22].
- Pharmacological studies:
  - Mood stabilizer [23].
  - Anti-stress activity [24].
  - Anxiolytic and antidepressant activity [25].

**Bisfayij (*Polypodium vulgare* Linn.) [16,19,26]**

- Part used: Root [19].
- Its temperament is hot-2, dry-3 [16].
- Pharmacological action: It is purgative of black bile and phlegm (*Mushil-i Sawda wa Balgham*) [16], exhilarant (*Mufarreh*), cardiac tonic (*Muqawwi-i Qalb*), brain tonic (*Muqawwi-i Dimagh*) [16,19], blood purifier (*Musaffi-i Khoon*) [22] and analgesic (*Musakkin*) [13].
- Therapeutic uses: It is useful for insanity/schizophrenia (*Junoon*), melancholia/depression (*Malikhuliya*) [19,26] and epilepsy (*Sara*) [27,28].
- Dose: Upto 5 gm [22]; 5 - 10 gm [27]; 3 - 11 gm [28].
- Pharmacological studies:
  - Analgesic activity [29].
  - Antiepileptic [29].
  - Antipyretic [29].
  - Neuro psychopharmacological activity [29].

**Amlaj/Amla (*Embellica officinalis*) [14,15,18,30]**

- Part used: Fruit [30].
- Its temperament is cold and dry-2 [15,17].
- Pharmacological action: It is blood purifier (*Musaffi-i Khoon*), melanagogue (*Mukhrij-i Sawda*), brain and nerve stimulant (*Muharrrik-i Dimagh wa Asaab*), brain tonic (*Muqawwi-i Dimagh*), cardiac tonic (*Muqawwi-i Qalb*), and stomachic (*Muqawwi-i Meda*) [31].

- Therapeutic uses: Melancholia/depression (*Malikhuliya*) [30], cerebral asthenia (*Zof-i Dimagh*) and palpitation (*Khafqan*) [31].
- Dose: 3 - 5 gm [31].
  - Pharmacological studies:
    - Antidepressant and antioxidant [32].

**Badranjboya (*Nepeta hindostana* Haines) [15-17,26,31,33]**

- Part used: Leaf and seed [31].
- Its temperament is hot and dry-2 [33].
- Pharmacological action: It is concoctive of black bile (*Munziz-i Sawda*), exhilarant (*Mufarreh*) [26,33], blood purifier (*Musaffi*) [15,31], brain tonic (*Muqawwi-i Dimagh*), cardiac tonic (*Muqawwi-i Qalb*) [16,17], deobstruent (*Mufatteh Sudad*), enhances memory and intellect [31]. It is useful for anxiety (*Ham*) [26], palpitation (*Khafqan*), paralysis (*Falij*) and epilepsy (*Sara*) [17], Insomnia (*Sahar*) [16] and hypertension (*Fisharuddam*) [34], dementia (*Nisyan*) and vertigo (*Duwar*) [35].
- Dose: 5 - 7 gm [31].
- Pharmacological studies:
  - Anxiolytic activity [36].

**Brahmi (*Bacopa monnieri* (Linn.) Penn.) [18,19,31,37]**

- Part used: Whole plant [19].
- Its temperament is hot-1 and dry [37].
- Pharmacological action: It is *Muqawwi-i Dimagh* (brain tonic) [37], increases intelligence and sharpens memory [19,22,31].
- Therapeutic uses: It is useful for melancholia/depression (*Malikhuliya*) [37] and insanity/schizophrenia (*Junoon*) [22,37].
- Dose: 3 - 5 gm [19,31].
- Pharmacological studies:
  - Memory enhancer and improves brain function (learning) [38].
  - Cognitive function enhancer [39].
  - Antioxidant activity and antinociceptive [40].
  - Anxiolytic activity [41].
  - Anti-stress activity [42].

**Halayla (*Terminalia chebula* Retz.) [14,26,43,44]**

- Part used: Fruit/fruit rind [14,26].
- Temperament of *Halayla Siyah wa Zard* is cold and dry [43] and *Halayla Kabuli* is moderate [18,44].
- Pharmacological action: It is purgative of black bile (*Mushil-i Sawda*), strengthens brain, memory and senses [18,27,44] and stomachic (*Muqawwi-i Meda*) [22].
- Therapeutic uses: It is useful for facial paralysis (*Laqwa*), epilepsy (*Sara*), melancholia/depression (*Malankhuliya/Malikhuliya*), illusion/psychosis (*Waswas*), insanity/schizophrenia (*Junoon*), palpitation (*Khafqaan*) and headache (*Suda*) [14,27,43,44].
- Dose: 3 - 5 gm [22]; 5-10 gm [24].
- Pharmacological studies:
  - Antioxidant activity [45].
  - Anticonvulsant [46].
  - Antidepressant [47].
  - Antidepressant and anxiolytics activity [48].
  - Neuroprotective [49].

**Lisan al-Saur/Gauzaban (*Borago officinalis*) [15,17,19,26]**

- Part used: Leaf, flower, root [15,19].
- Its temperament is hot and wet [17,19].
- Pharmacological action: It is melanagogue (*Mushil-i Sawda*) [15,26], *Mufarreh* (exhilarant) [27], *Muqawwi* (tonic) of vital organs [17], sharpens senses, improves intelligence, demulcent (*Mulattif*) and brain and cardiac tonic (*Muqawwi-i Dimagh wa Qalb*) [19]. It is useful for melancholia/depression (*Malikhuliya*), insanity/schizophrenia (*Junoon*), grief/sadness (*Gham*) and anxiety (*Ham*) [15,17,26].
- Dose: 5 - 10 gm [19].
- Pharmacological studies:
  - Memory enhancer/Alzheimer's disease [50].
  - Antidepressant [51].

**Saad/Saad Kufi (*Cyperus rotundus* Linn.) [14,15,19,52]**

- Part used: Rhizome/root [14,19].
- Its temperament is hot-2 and dry-2 [52].

- Pharmacological action: It is deobstruent (*Mufatteh sudad*), descicant (*Mujaffif*) brain tonic (*Muqawwi-i Dimagh*) [52], enhances memory [14,15] and increases intelligence [52].
- Therapeutic uses: It is useful for weakness of brain/cerebral asthenia (*Zof-i Dimagh*), weakness of memory (*Zof-i Hafiza*) and other neurological diseases [52].
- Pharmacological studies:
  - Antidepressant [53].
  - Neuroprotective and cognitive function enhancer [54].

**Sankhahuli (*Convolvulus pluricaulis* Chois.) [18,19,52]**

- Part used: Seed [52] and root [31].
- Its temperament is cold and wet [31,52].
- Pharmacological action: It is blood purifier (*Musaffi-i Khoon*) [31], laxative (*Mulayyin*) and memory enhancer [52], improves intelligence and cognitive functions of brain [18,19], psycho-stimulant and tranquilizer [55].
- Therapeutic uses: It is useful for *Malikhuliya* (melancholia) [19], *Sara* (epilepsy) and reduces mental tension [55].
- Dose: 3 gm [19] KA, 7 - 10 gm [31].
- Pharmacological studies:
  - Antihypertensive [55].
  - Anxiolytic [56].
  - Anti-stress activity [57].

**Sunbul al-Teeb/Balcchar (*Nardostachys jatamansi* DC.) [12,14,19,52]**

- Part used: Root [52].
- Its temperament is hot- 1, dry-2 [14] and according to some hot, dry-2 [52].
- Pharmacological action: It is brain and cardiac tonic (*Muqawwi-i Dimagh wa Qalb*), exhilarant (*Mufarreh*) and liver tonic (*Muqawwi-i Kabid*) [19,52].
- Therapeutic uses: It is useful for palpitation [14] and melancholia/depression (*Malikhuliya*) [12].
- Dose: 9 gm [19,52].
- Pharmacological studies:
  - Antidepressant activity [58].

**Ward/Gul Surkh (*Rosa damascena* Mill.) [18,19,26,43,59]**

- Part used: Flower/buds/pollens [19].
- Its temperament is *Murakkab al-Quwa* (compound) [18,43], cold -1 and dry-2 [14].
- Pharmacological action: It is brain tonic (*Muqawwi-i Dimagh*) [18,19], exhilarant (*Mufarreh*) [31], purgative of bile (*Mushil-i Safra*) [26,43], cardiac and liver tonic (*Muqawwi-i Qalb wa kabid*) and strengthens pneuma [59].
- It is useful for *Suda* (headache), *Khafqan* (palpitation) and *Sara* (epilepsy) [14,19,59].
- Dose: 5 - 7 gm [31].
- Pharmacological studies:
  - Antidepressant activity [60].
  - Anticonvulsant activity [61,62].
  - Anti-stress activity and anti-hypertensive [63].

**Conclusion**

Plant origin drugs have an important place in Unani system of medicine. Medicinal plants constitute the base of health care system. The recovery of the knowledge and practices associated with these drugs are part of an important strategy linked to the conservation of biodiversity, discovery of new medicines, and the bettering of the quality of life of the mentally ill people. This review paper present the pharmacological actions and therapeutic uses of some single plant origin drugs useful for mental or psychiatric diseases present in Unani literature supported with the available clinical and animal studies endeavoring to highlight the research work of Unani physicians in the field. The pharmacological effects exhibited by this plant have been elaborated in depth with citations from studies that have been conducted on these plant drug. However, problems related to the efficacy, of the isolation techniques and stability of bioactive compounds too needs to be addressed. Emphasis should be laid to investigate plant species that have not been the subject of pharmacological studies, although their popular uses have been reported.

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