

**Potential plants as nervine for Unani system of medicine from the  
Coochbehar district, West Bengal, India**

**Piyasi Bhattacharjee\* and Chanchal Kumar Manna**

Department of Zoology, University of Kalyani, Kalyani, Nadia, West Bengal, India

\*Corresponding Author: piyasicyto@gmail.com

**Abstract**

It is well known that the stress is a major problem for many diseases ranging from psychiatric to endocrine disorders including diabetes mellitus, hypothyroidism, male sexual dysfunction, peptic ulcer, hypertension, ulcerative colitis etc. Today's life style is very frustrated due to busy schedule of even school going children to old aged people. That is the reason to know the medicine related to stress and psychosis has a huge market in the world. As modern medicine can provide some positive results but sometimes did not provide satisfactory results. The scientists are thinking about any alternative medicines produced from the herbs. Herbal medicine are claimed to contribute in revitalising the tissues and thereby maintaining the health of the human being. These are stated to possess rejuvenation power which enhances the vitality of the body. It is similar to the modern concept of adaptogenic agents which gives the protection to the human physiological system against diverse stressors. Recent studies shows that the *Ayurvedic* herbal medicine having adaptogens which could induce a state of non-specific increase of resistance to affect internal homeostasis. The paper enumerates the ethnomedicinal uses of 22 species of plants used by the traditional Rajbanshi medicinemen of the District Coochbehar, West Bengal, India. Information on the medicinal uses gathered from the tribals together with their botanical identity, local name and medicinal are presented. In developing countries, there is an increasing attempt to incorporate traditional medicines, especially herbal preparations in the local health care systems and many modern researchers are involved today to explore the huge potential of ethno botanical knowledge for treating various types of diseases. However, the ethno medicinal plants are under threat due to deforestation, overgrazing and their reckless utilization. So, it indicates the urgent need of their conservation and preservation of traditional knowledge. In spite of researches about the use and status of medicinal plants in various parts of India, no such scientific documentation has been made in the Coochbehar District of West Bengal so far. Tribal societies, throughout the world, have their respective system of medicines. Their concepts and attitudes towards the diseases, and the pharmacopeia are different. Traditional tribal medicine is an age-old medical practice that existed in human societies before the application of modern days scientific studies.

**Keywords :** Ayurved, ethnomedicine, Rajbanshi, traditional practioners.

## **Introduction**

In this modern era, stress has become an integral part of human life. It is vital that stress is kept under control and normal functioning is not hampered due to excessive anxiety and other factors. Stress is considered to be any condition which results in perturbation of the body's homeostasis (Pawar and Shivakuma, 2012). Drugs having antistress properties induce a state of non-specific resistance against stressful conditions. The incidence of toxicity and dependence has limited the therapeutic usefulness of these drugs (Kathleen and Gregory, 2009).

Herbal formulations have been in use for many years not only in Asian countries but also globally for human well-being. The potential utility of safer and cheaper herbal medicines as antistress agents have been reported as they can withstand stress without altering the physiological functions of the body.

Coochbehar is situated in the foothills of Eastern Himalayas, located at 26°22'N 89°29'E in the north of West Bengal. Koch Rajbangshi or Rajbangshi is one of the most ancient tribe of Assam. They belong to the Mongoloid race and are very closely allied to Kacharies and Garos (Gait, 1906; Barua and Phukan, 1999). Koches group of people belong to Kachari and other tribes which was converted themselves to Hinduism; while Rajbangshi literally means the 'Royal Community' which was once dominated in North Bengal, Goalpara and North side of Brahmaputra River (Gait, 1906).

However, the ethnomedicinal studies in are quite scanty. Therefore, an attempt has been made here to collect the recent information about plants parts used by local traditional practitioners. The study is based on interviews with local Traditional practitioners living in

this region and entirely dependent on the plants occurring around them.

## **Methodology**

Field trips were conducted with the local medicine men in the Mathabhanga block of the Coochbehar District. Generally tribals, who know about the herbal medicine do not want to provide all the information because they believe that when the medicinal plant is disclosed to the common people its medicinal properties will be lost. For this reason, the information collected from the tribal is an important aspect of ethnobotanical study. Peoples, who can provide information about medicinal plants, were interrogated thoroughly. The information collected during fieldwork was verified at different places through different informants and in different seasons. Each of the plant species recorded have been collected with the help of the informants. The species were identified with the help of authentic taxonomist Prof. G.G Maiti Department of Botany, University of Kalyani). The voucher specimen were deposited in the Herbarium, Department of Botany, University of Kalyani, Nadia, West Bengal, India.

## **Discussion**

The information generated from the present study will help in creating mass awareness regarding the need for conservation of such plants and also in the promotion of ethno-medico-botany knowledge within the region besides contributing to the preservation and enrichment of the gene bank of such economically important species before they are lost forever. In our fast lifestyle, stress filled world, drugs can provide significant benefits to help relieve the negative impact of constant worry, overwork, inadequate sleep, and unsustainable lifestyles. It is also

**Table 1. List of plants prescribed by the tribal medicine-men of the District Coochbehar for the treatment of anxiety.**

Sl. No	Scientific names of species	Local names of species	Names of respective families	Part used	Prescription
1.	<i>Withania somnifera</i> (L.) Dunal	Ashwagandha	Solanaceae	Roots, leaves	Extract of fresh leaves and roots used as nervine tonic.1 cup extract taken for two week, twice daily.
2.	<i>Jatropha gossypifolia</i> L.	Varenda	Euphorbeaceae	Stems and leaves	Extract of leaves and stems used as anti anxiety agent.1/2 cup extract taken for a month, twice regularly.
3.	<i>Rouwolfia serpentina</i> (L.) Benth. ex kurz	Sarpagandha	Apocynaceae	Roots	Roots extract used in diabetes, and prevent hyper tension. 2-4 teaspoonful extract taken for 7 days.
4.	<i>Bacopa monniera</i> (L.) Penn.	Brahmi	Scrophulariaceae	Leaves	Extract of fresh leaves used in diabetes and used as nervine tonic.1/2 cup leaves extract taken for 7 days.
5.	<i>Bryophyllum pinnatum</i> (Lam.) Kurz	Patharkuchi	Crassulaceae	Leaves	Pulp of fresh leaves used in diabetes.1teaspoonful pulp taken for 10-14 days, once regularly.
6.	<i>Papaver somniferum</i> L.	Posto	Papaveraceae	Seeds	Paste of seeds used to prevent insomnia, induce sleep, relief pain.1 teaspoonful paste taken for 15 days give good result.
7.	<i>Vigna aconitifolia</i> (Jacq.) Marechal	Math/moch	Papilionaceae	Leaves	Fresh leaves extract used to prevent pyorrhoea and jaundice.2 teaspoonful extract taken for 7 days.
8.	<i>Datura stramonium</i> L.	Kaladhutura	Solanaceae	Seeds	Seeds used in diabetes, anti stress agent and act as painreliever.3-5 gm powder mixed with water and taken for 14 days.
9.	<i>Piper chaba</i> Hunter.	Choi	Piperaceae	Leaves	1 cup of fresh leaves extract mixed with1/2 cup milk and taken for the treatment of dysentery, continued for 5 days, twice regularly.
10.	<i>Ludwigia perennis</i> L. Roxb.	Kalo-keshari	Onagraceae	Stems and leaves	Both stems and leaves extract applied externally on scalp for one month.
11.	<i>Scoparia dulcis</i> L.	Chiniswar	Scrophulariaceae	Whole plant	Whole plant used in diabetes, juice of fresh plant applied in cut and wounds to stop bleeding.1 teaspoon full of fresh leaves extract used in fever, cough and in

					jaundice, bronchitis, gastric ulcer.
12.	<i>Ocimum sanctum L.</i>	Tulsi	Labiatae	Leaves	2 teaspoonful fresh leaves extract taken for 3 days twice regularly. Also used as anti stress agent.
13.	<i>Calotropis gigantea R.Br. ex Aiton</i>	Akanda	Asclepiadaceae	Leaves, bark of the root and latex	Leaves used for relieving pain in rheumatism, bark extract mixed with leaves extract and used as nervine tonic.
14.	<i>Enhydra fluctuans Lour</i>	Halencha	Asteraceae	Leaves	One cup fresh leaves extract taken daily at morning for a month. It used as remedy of anxiety.
15.	<i>Azadirachta indica A. Juss.</i>	Neem	Meliaceae	Leaves	Extract of leaves used in treatment of anxiety.
16.	<i>Hemidesmus indicus (L.) R.Br.</i>	Anantamul	Asclepiadaceae	Whole plant	Decoction of whole plant used in stressful condition. Applied for 7-10 days on skin.
17.	<i>Piper betle L.</i>	Pan	Piperaceae	Leaves	2 to 3 teaspoonful of leaves extract is used as anti stress agent, continued for 15 days, once in every morning.
18.	<i>Asparagus racemosus Willd.</i>	Shatamuli	Asparagaceae	Whole plant	3 teaspoonful of whole plant extract, leaf extract used in insomnia and in high blood pressure, continued for 7 days, once in empty stomach daily.
19.	<i>Datura metel L.</i>	Dhutura	Solanaceae	Fruits, seeds	1 teaspoonful leaves and roots paste mixed with water and used in the treatment of asthma, continued for 14 days.
20.	<i>Aloe vera (L.) Wild.</i>	Ghritakumari	Liliacea	Muselage of leaves	Prescribed in, insomnia. 2 teaspoonful gel of leaves once daily for 14 days applied orally to control stress.
21.	<i>Marsilea quadrifoliata L.</i>	Susni	Marsileaceae	Seeds, flowers	Dust of leaves with water two teaspoonful daily is effective for the treatment of anxiety.
22.	<i>Vitex negundo L.</i>	Nisindha	Verbenaceae	Leaves	Act as nervine tonic. Juice of leaves used daily once for better result.

obvious that drugs alone will not make up for lack of sleep, poor diet, lack of exercise, and a host of other issues that are the basic

foundations of health. Nervines are nerve tonics, calming herbs that are mildly relaxing without the overtly suppressant effects of

sedatives. This type of herb restores emotional balance and nourishes the nerves and nervous system. Nervines help to reduce anxiety, prevents stress induced cardiac and gastrointestinal tract symptoms, mild sleeplessness, irritability and hypertension.

A high degree of in vitro study of scavenging activity of the bark of different plants of the genus *Terminalia* sp has been documented (Maulik, 1997). Nujhat and Nazam, (2012) observed the use of *Aloe vera* for CNS activities in mice. Leaves, latex, flowers are also useful as medicine (Batta et al., 1970). *Centella asiatica* effects on blood pressure and heart rate of anaesthetized hypertensive rats. A flavonoid quercetin found in *Centella asiatica* was used as positive control over stress (Formica and Regelson, 1995). *Centella asiatica* has activity to modulate both endogenous and neurotoxicant induced oxidative impairment in the brain and may be effectively employed as neuroprotective adjuvant to lower stress in vivo (George, 2008).

The animal study results, *Bacopa moniaria* appear to have antioxidant activity in the hippocampus, frontal cortex, and striatum (Enz et al., 1993).

*Aloe vera* which may show the CNS depressant activity due to presence of Flavonoids (Hu et al., 2003; Mishra et al., 2011). The potential utility of safer and cheaper herbal medicines as antistress agents have been reported as they can withstand stress without altering the physiological functions of the body. Various herbs like *Withania somnifera*, *Emblica officinalis*, *Asparagus racemosus*, *Ocimum sanctum*, *Tribulus terrestris* and *Piper longum* are claimed to have immuno-modulatory, adaptogenic, anabolic effects and the ability to improve vital energy and antistress activity (Naik et al., 2006).

The information gathered from the present study clearly indicates that the medicinemen of the district Coochbehar, West Bengal, India, use various types of medicinal plants for nervine tonic which helped the people of that area for anti stress activity. Not a single plant has been used by all the medicinemen of the locality. It has also been observed that the betterment of the drug action they have used the medicine with the appropriate talans (other ingredients).

Most herbalist do not recommends herbs for antistress, because of the potential unreliability. Herbal treatment may never reach the level of nervine tonic as the modern nervine tonic and pills but it offers alternatives for those who just want to try in a different way. Very little is known about many of the herbs, or about long term side effects or safety concerns.

From these all recipes only 22 plant species use as anti depressant medicine. So we designed this study to survey the use of medicinal plants among tribal people of Coochbehar District, as well as to check the recent status of the medicinal plants in this area.

#### **Reference**

- Barua, I. and Phukan, R. (1999). Socio-religious aspects of Health among Sonowal Kachari. *The Eastern Anthropology*. 55: 4.
- Batta, S.K. and Santhakumari, G. (1970). The antifertility effect of *Ocimum sanctum* and *Hibiscus rosa sinensis*. *Indian Journal of Medical Research*. 59:77-78.
- Enz, A., Amstutz, R., Boddeke, H., Gmelin, G. and Malanowski, J. (1993). Brain selective inhibition of acetylcholinesterase : a novel approach to therapy for Alzheimer's disease. *Prog. Brain Res*. 98: 431-38.

- Gait, E.A. (1906). A history of Assam. Thacker, Spink and Co. Calcutta.
- George, D.R.(2008).Disease or consequences of the aging process?*Pro.Senectute*.9: 4.
- Kathleen, A. and Gregory, S. K. (2009). Nutrients and Botanicals for Treatment of Stress: Adrenal Fatigue, Neurotransmitter Imbalance, Anxiety, and Restless Sleep. *Alternative Medicine Review*. 14: 114-140.
- Maulik, S.K. (1997). Evaluation of antioxidant effectiveness of a few herbal plants. *Free Radic. Res*. 27(2): 221-228.
- Naik, S. R., Azmathulla, S. and Hule, A. K. (2006). Evaluation of adaptogenic activity profile of herbal formulation. *Indian Journal of Experimental Biology*. 44: 574-579.
- Nuzhat, S. and Najam, R.(2012). Haematological evaluation of *Aloe vera* (L.) burm. and vitamin E. *Asian J. Biol. Life Sci*. 1(1): 66-71.
- Pawar, T. and Shivakuma, M. (2012). A current status of adaptogen: A natural remedy to stress. *Asian pascific journal of tropical disease*. Pp. 5480-5490.
- Formica, J. V. and Regelson, W. (1995). Review of the biology of quercetin and related bioflavonoids. *Fd Chem. Toxic*. 33(12): 1061-1080.
- Hu, J., Chen, L. J., Liu, L., Chen, X., Chen, P. L. and Yang, G. (2008). Liposomal honokiol, a potent anti-angiogenesis agent, in combination with radiotherapy produces a synergistic antitumor efficacy without increasing toxicity. *Exp. Mol. Med*. 40: 617-628.