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Neem: Healer of All Ailments

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ABSTRACT

Neem has rightly been called sarvaroghari. Since time immemorial, Indians have learnt and made use of neem in a variety of ways both for personal and community health by way of environmental amelioration. Its effectiveness is enhanced on account of its easy and plentiful availability and low cost. Medical properties of Neem have been known to Indians since time immemorial. It is now considered as a valuable source of unique natural products for development of medicines against various diseases and also for the development of industrial products. This review gives a view mainly on the biological activities of some of the neem compounds isolated, pharmacological actions of the neem extracts and plausible medicinal applications of neem.

Keywords: biologically active compounds, phytopharmacology, medicinal uses

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INTRODUCTION

The botanical name of Neem is *Azadirachta indica* belongs to the mahogany family Meliaceae. It is one of two species in the genus *Azadirachta*, and is native to Indian Subcontinent, growing in tropical and semi-tropical regions. Neem is a fast-growing evergreen tree that can reach a height of 15–20 m. The neem tree is regarded as mother nature’s gift to the world. A keystone of the ayurveda tradition, neem is known as sarva roga nivarin or healer of all ailments in India [1-3].



Azadirachta indica

Phytopharmacology of Neem

The neem tree gives a mixture of approx 135 biologically active compounds. The kernals are having 45 percent oil. The general class of active compounds is the triterpenes and within this category the most effective are the limonoids, which are abundant in neem oil. Neem also contains more than 20 sulphurous compounds responsible for the characteristic smell of crushed seeds and neem oil. Neem is also effective against the organisms that cause athletes foot, skin and nail infections. The chemicals found abundant in neem tree and recognized for various pharmacological effects are listed in table I and in figure 1. [3-25]

Table 1: Chemicals found in neem and their pharmacological actions

S No	Chemicals	Pharmacological
1	Gedunin	Vasodilator, antifungal
2	Nimbidin	Antibacterial and analgesic
3	Quercetin	Anti-protozoal, antioxidant
4	Salanin	Repellant, anti - feedant

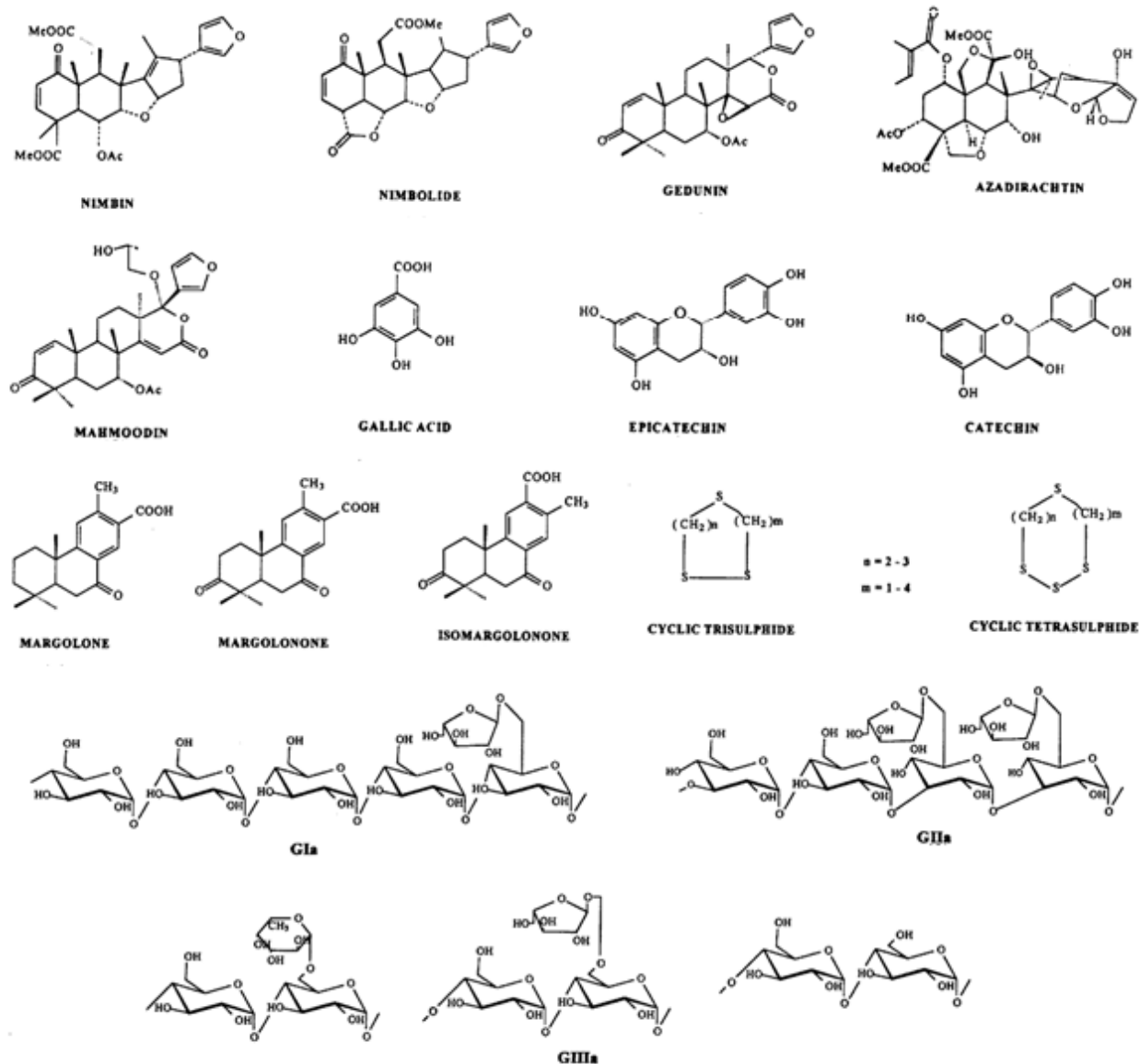


Figure 1: The structure of Neem Compounds

Medicinal uses

The indigenous people of Nilgiris consume the dried and powdered tubers of the terrestrial orchids as an energizing tonic. Neem also holds medicinal value. Each part of neem is used in the medicines. It has been used in Ayurvedic medicines for more than 4000 years. Neem oil extracted from its seeds is used in medicines, pest control and cosmetics etc. Its leaves are used in the treat Chickenpox. According to the Hindus, it is believed that the Goddess of the chickenpox, Sithala lives in the Neem tree. Neem tea is usually taken to reduce the headache and fever. Its flowers are used to cure intestinal problems. Neem bark acts as an analgesic and can cure high fever as of malaria. Even the skin diseases can be cured from the



Neem leaves. Indians even believe that the Neem can even purify diseases.

Skin treatment

Neem is effective in treating skin problems, infections and inflammations such as acne, boils, eczema, psoriasis, yeast infections and warts. To treat your skin problem, what you can do is apply neem oil, cream, lotion or poultice on the affected skin.

Neem is one of the medicinal herbs that is effective in treating scabies. The compounds in neem help kill the mites and the eggs. There are several ways to do it but one effective method is to mix turmeric powder with neem oil and apply the paste on the skin and leave it there to penetrate the burrows dug by the mites. It would really benefit if you take neem supplements in the form of capsule or add a few drops of neem liquid extract into your beverage.

Treating head lice

A university in Egypt did a treatment using neem seed extract shampoo on 60 heavily lice infected children between the age of 4 to 15 years old. The shampoo was left on the children's scalp from between 5 minutes to 30 minutes. The study found that neem seed extract was effective against all stages of head lice and did not produce any side effect to the scalp and skin.

Other Neem Oil Uses

Neem helps fight against malaria and is safer than taking malaria prevention prescription medication.

Neem twigs can be used as a toothbrush. Since neem extract has astringent and anti bacterial property, it is effective in teeth and gum health. Neem toothpaste and mouth wash are available to help fight tooth decay.

It is also able to treat dandruff problems, dry and itchy scalps and also restore dry and damaged hair.

Because of its ability to boost the immune system, taking neem supplement or drinking neem tea may help hinder from the common cold.

Neem has shown to be effective in treating chicken pox by applying the paste on the skin or bathing in water that has been boiled with neem leaves.

Some alternative healing practitioners use neem herb to treat swelling joints, gout, back pain and even gonorrhoea and syphilis.



Today the scientific research validates the traditional uses of neem in the maintenance of general health. In addition, it has been used historically to treat bacterial, fungal, viral infections and to boost the immune system of human body. Another big plus for neem products is their environmental friendliness. The tree grows on marginal soils, and every part of neem tree can be used.

Other uses

People in India use its twigs to brush their teeth. Neem is considered as the useful tree in rehabilitating the waste land areas. Neem seed pulp is useful for methane gas production. It is also useful as carbohydrate which is rich base for other industrial fermentations. Neem bark contains tannins which are used in tanning and dyeing. In south India its wood is used to make the furniture. The bark of the yields the fiber that is woven into ropes. Neem cake is widely used in India as fertilizer for sugarcane, vegetable and other cash crops. Many countries have been consistently growing the Neem tree against the global warming. The worldwide Neem Foundation has helped in making the people aware about the importance of neem and its uses globally.

Cultural Importance

One can find Neem in almost all the parts of India. It is said that planting Neem tree in the house is an ensured passage to heaven. Its leaves are hung on the main entrance to remain away from the evil spirits. Brides take bath in the water filled with the Neem leaves. Newly born babies are laid upon the Neem leaves to provide them with the protective aura. Neem gives out more oxygen than other trees. The neem tree is also connected with the Sun, in the story of Neembark 'The Sun in the Neem tree'. Neem is the wonder tree and finds mention in the number of ancient texts [26-50].

CONCLUSION

Despite all the vicissitudes, India has gone through over the centuries; neem has managed to remain a friend, philosopher and a guide to an average Indian. It is the time this heritage is appreciated and in the area of promotional and preventive healthcare, our indigenous knowledge and resources are made use of an increasing scale as low cost, effective ingredient for the realization of the lofty goal of 'health for all'. Several therapeutically and industrially useful preparations and compounds have also been marketed, which generate enough encouragement among the scientists in exploring more information about this medicinal plant.

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