

Indigenous Medicinal Plants



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- Medicinal plants have been effectively used, since times immorial , in healing, rejuvenating the sick and providing us protection against diseases and infections. Examples are :
- **ADRUKH** : Relief from Asthma , common cold, fevers, headaches and indigestion
- **ARJUN** : lipid Lowering, Anti oxidant
- **BABUNA** : Overcoming mental tension
- **BRAHMI** : Enhances Memory

- CHIRIATA : Restores appetite
- HALDI : Anti-inflammatory
- LASUN : For fevers and heart diseases
- RAUWOLFIA : Management of blood pressure
- SADA-BHAR : Anticancer and Antidiabetic

STRUCTURE ANALYSIS

- ALKALOIDS: 1. Vinblastine
- 2. Vincristine
- 3. Reserpine

- STEROIDS: 1. Guggulsterone
- 2. Guggulsterol

- TERPENOIDS: 1. Mono-
- 2. Di-
- 3. Tetranortri-

- Containing cinnamoyl residue
- 1. Babchi
- 2. Haldi
- 3. Heeng

- The attractive features of medicinal plants are:
 - Safe, relatively free from side effects
 - Cheap &
 - Easily available

In the lecture the following medicinal plants shall be highlighted:

Babchi *Psoralea coryifolia*

Chiriata ... *Swertia Chirayata*

Guggul ... *Commiphora mukul*

Haldi *Curcuma longa*

Heeng *Ferula foetida*

- Kutki : *Picrorhiza Kurrora*
- Neem : *Azadirchta indica*
- Sada-bahar : *Vinca rosea/ catharanthus roseus*
- Yew (Birmi) : *Taxus baccata*

The photographs of the aforesaid mentioned medicinal plants, and their applications, are shown in the following transparencies.

BABCHI



BABCHI

- Useful in the treatment of leucoderma. It can be taken internally or externally as a paste . Melanin production is stimulated and that improves the colour of the skin.
- On account of its antibacterial and biofungicidal action, it provides an eco-friendly option for effective control of microbial origin.
- Aphrodisiac(It promotes sexual desire)
- Babchi roots are useful for dental caries.(It prevents tooth decay)

CHIRIATA



CHIRIATA

- Blood purifier and cures the disease of skin.
- Restores the lost appetite. The bitter principal is 'Amarogentin'.
- Hepatoprotective
- Hypoglycemic
- Anti-inflammatory
- Controls diarrhea
- Exerts anthelmintic activity



GUGGUL



GUGGUL

- Guggulsterones (E- & Z-isomers) exhibit lipid lowering property (i.e., provides relief from obesity) and in addition possesses hypocholesteremic activity. The other accompanying non-ketonic components act as synergists.(Increases its effects)
- Used in incense and as a perfume. Fumes from burning guggul are useful for acute and chronic nasal catarrh. Some of the volatile components of guggul have morphine like properties and act on the central nervous system (CNS) opioid receptors.
- It is employed in the form of mouth-wash, because of antibacterial and antifungal action.

- Guggul is useful in the treatment of Gout, Arthritis, Rheumatism and stiffness in legs.
- It decreases the stickiness of blood , thereby reducing the chances of blood clot formation and prevents myocardial infarction.(Heart attack)

HALDI



HALDI

- Antifungal, antibacterial, antiviral and antiparasitic.
- It is useful for cuts and wounds.
- Useful as food colouring and preservative . It prevents rancidity of meat.
- Prevents the formation of aflatoxin (a fungal product) on moist grains, which when ingested over a period of time, causes liver cancer. Turmeric provides a strong protection to liver , and is employed for the treatment of Jaundice & Hepatitis.
- Turmeric possesses anticarcinogenic, antimutagenic and anti-oxidant properties.

- Useful for digestive disorders.
- Turmeric possesses anti-arthritic activity.
- Topical application of turmeric on skin quenches the free radicals generated by the UV light coming from the sun, and thus offset the ageing effect on the skin.
- Turmeric has an anti-thrombic activity.(blood thinning property)
- It prevents the synthesis of prostaglandins and prostacyclines, which are responsible for causing inflammation.

● HEENG



● HEENG

● USES

- Asafetida is drug which expels wind from the stomach. It has an antispasmodic action.(Prevents the involuntary contraction of the muscles). In view of these properties asafetida is used as an essential ingredient of most digestive powders.
- Heeng is a nervine(nerve) stimulant.
- It is useful for the treatment of respiratory disorders, like bronchitis, asthma & whooping cough.
- Heeng is useful for the treatment of women's body ailments like, for example, sterility, unwanted abortion, premature labor, excessive and painful menstruation.

KUTKI



KUTKI

- Bitter tonic, Appetite stimulant, Digestive Hepatoprotective. It is useful in the diseases related to liver (Jaundice) and spleen . Kutki acts a laxative, if used in a large dose.
- Kutki has anti-oxidant and immune modulating action (adaptogen).
- It acts as a febrifuge.(reduces fever)

NEEM



NEEM

USES:

- Every part of neem tree is useful in prevention & curative health-care. Root , stem, leaves, flowers, fruits, seeds, bark and gum have therapeutic uses.
- Neem is used for insect control, due to its anti-feedant action . It is relatively inexpensive and ecologically sound pesticide. In fact it is superior to commercially available pesticides.
- It has antibacterial, antifungal and antiviral action. The leaves applied externally are very useful in skin diseases. It is especially beneficial in the treatment of boils, chronic ulcers, eruptions of small pox and wounds.

- Neem is useful for livers disorders and diseases related to eyes and ears.
- It serves as anti-inflammatory and increases the immunity of the body.
- Neem is good for maintaining oral hygiene and eliminates bad mouth odors,
- It has anti-hyperglycemic action.
- Neem is the chief constituent of a highly effective polyherbal contraceptive cream. The other constituents are soapnut (reetha) and quinine hydrochloride.

SADABAHAR



SADABAHAR

- Uses
- Sadabahar roots contain reserpine. It decreases the blood pressure and reduces excitement.
- The leaves contain two indole alkaloids, viz, Vincristine and vinblastine. Both of these alkaloids exert anticancer action.
- Sadabahar also shows an antidiabetic action.
- The flowers contain two flavonoidal compounds, viz., Quercetin and kaempferol; both of which show a strong anti-oxidant action.
- It possesses a diaphoretic action (induces profuse perspiration)

YEW

Uses

- The bark of yew tree contains Taxol, which is useful for the treatment of ovarian and breast cancers, as well as cancers of head and neck. This compound has a broad spectrum of activity against some cancers which do not respond to other agents.



- Note

- Only when the tree is about 100 years old, only then it starts synthesizing taxol. The yield is about one gramme per tree . A cancer patient would need about two grammes of the drug for the course of treatment. Some attempts have, therefore , been made for its synthesis, starting with precursor of Taxol, which is available in relatively large amount in the leaves of yew tree.



THANK YOU