



Dr. F. Rehman

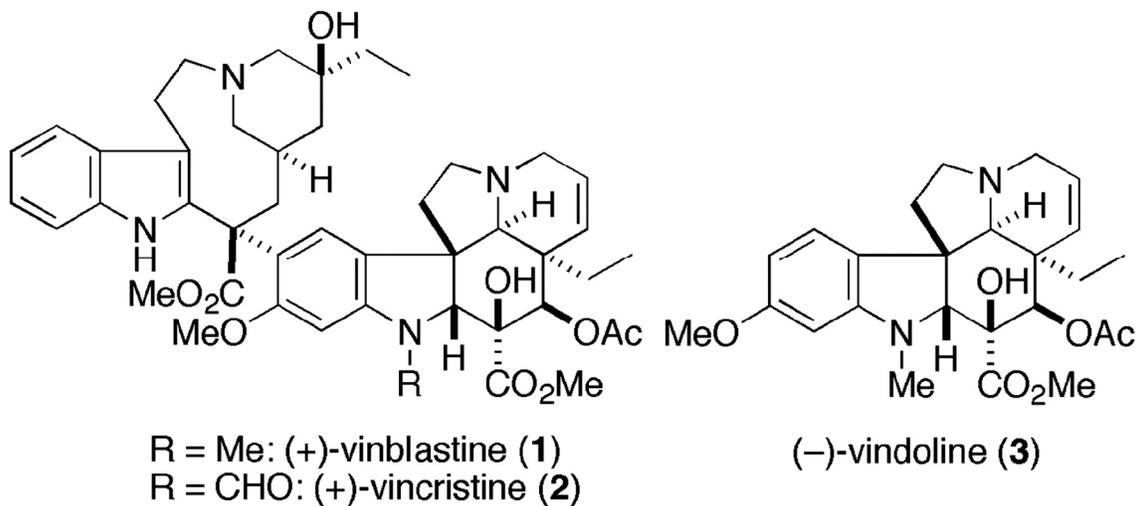
Anticancer activities (Lung Cancer) of Some specified medicinal plants

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Cantharanthus roseus (Vinca Rosea) : Cantharanthus roseus generally known as Periwinkle or Sadabahar. This plant is very commonly grown plant of India, is an evergreen shrub commonly grown worldwide and it is called wonderful herb due to its pharmacological importance in controlling a number of health problems and fighting a variety of cancer. About 130 alkaloids have been found in this plant of which vincristine and vinblastine are most notable for their medicinal benefits and used for the treatment of cancers while the alkaloid vincanine keep the blood thin and has memory enhancing property. Vinca rosea is used to treat a wide range of disease like diabetes, high blood pressure, cold, eye infection, loss of memory, Hypertension, cystitis, gastritis, diarrhea, malaria, asthma, stomach cramps, and Hodgkin disease. It control soar throat, nose bleed, bleeding gum, ulcer, muscular pain. Leaves and stems of vinca- rosea are the sources of alkaloids that are responsible for anti tumor and anti cancer properties and also used to control diabetes and high blood pressure. Vinca alkaloids inhibits the growth of lung cancer by binding to tubulin in the mitotic spindle. It also induce apoptosis and inhibit angiogenesis. Vinca leaf and roots decoction prescribe for cancer patient.

Precautions : [Vinca rosea is not recommended for pregnant woman as it may cause abortion](#)

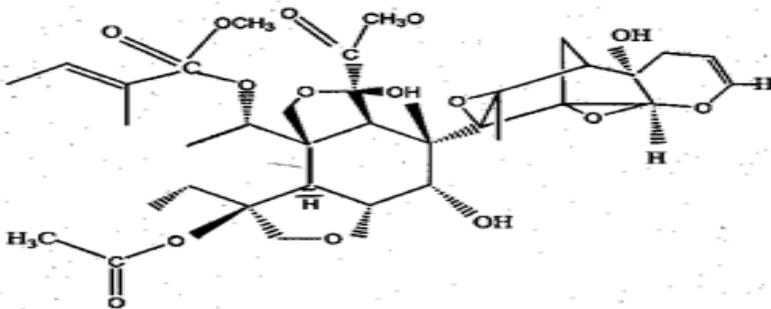
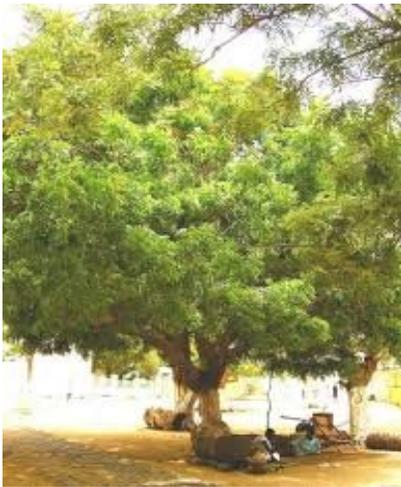


Azadiracta Indica : Azadiracta indica is generally known as Neem or Indian Lilac, native of India and Indian subcontinent and as to island in the southern part of Iran. It is also called "the wounder tree" and all parts of neem tree are used for medicinal purpose. It contains about 40 different alkaloids and liminoids, which exhibit antiseptic, anti inflammatory, antiviral, antipyretic, hepatoprotective, anti mutagenic, anti-ulcer, anti- malarial and anti microbial and anti cancerous properties. Liminoids retrogress the growth of lung cancer. Nimbolide, a natural triterpenoid present in the edible part of Azadiracta indica inhibit the growth inhibit of various cancers by inducing apoptosis and metastasis. Ethanolic extract of Azadiracta indica has anti androgenic effect and reduces side effect of chemotherapy and radiotherapy.

Detail of medicinal value of different part of plant ascertain Azadiracta indica (neem) :

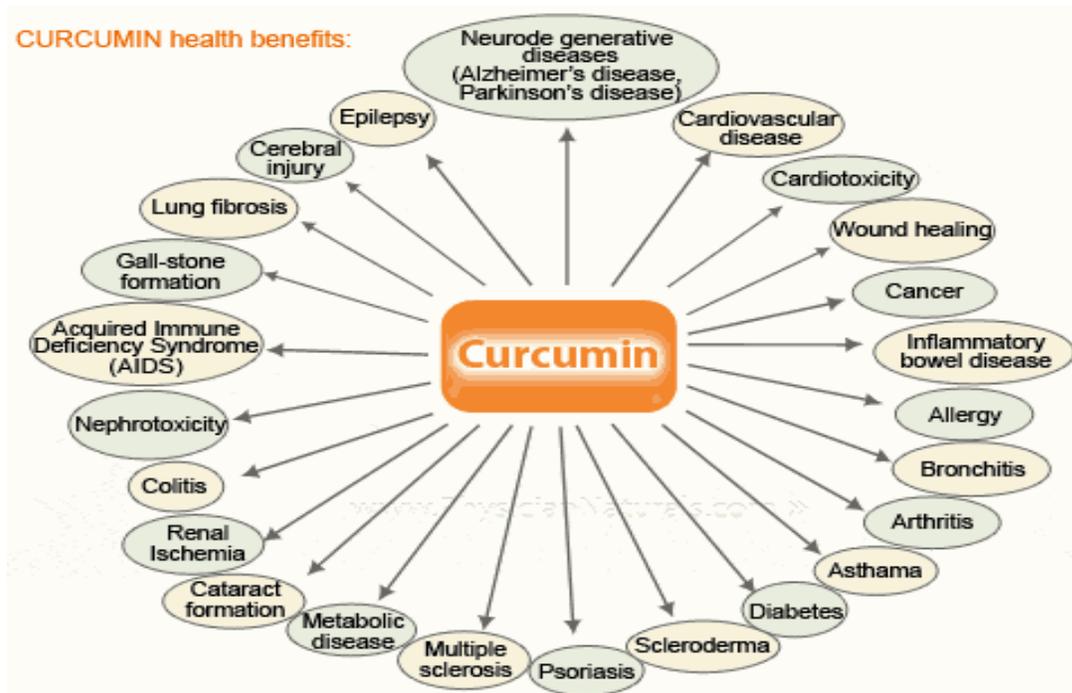
Leaf	Analgasic, alternative and curative fever.
Flower	Pile suppression, elimination of intestinal worms, phlegm,
Fruit	Intestinal worms, urinary disorder, Piles, Epistaxias, phlegm, eye problem, diabetes, wounds, leprosy.
Twing	Cough, asthma, piles, phantom tumor, intestinal worms, spermatorrhoea, obstinate urinary disorder, diabetes, Gum, Scabies, wounds, ulcer, skin diseases.
Seeds	Leprosy, intestinal worm.

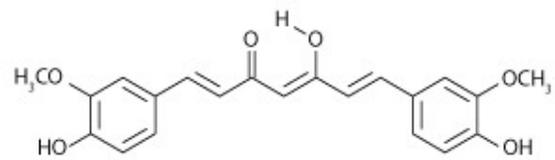
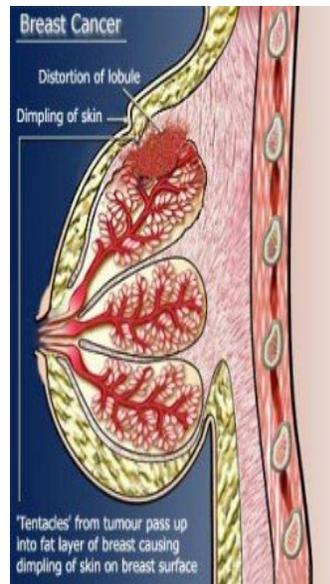
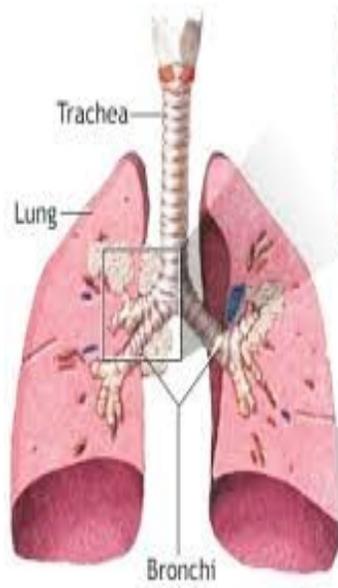
Neem with Vit C help in getting rid of skin problem like black heads, pigmentation, dullness and ageing.



Azadirachtin, a chemical isolated from *Azadirachta indica*

Curcuma longa : Curcuma longa is a very commonly grows plant of India, SriLanka, Bangladesh and Myamar.Turmeric shows antioxidant, antiviral, antibacterial, antifungal, anti-inflammatory, antimutagenic, anticarcinogenic properties and have many nutrients such as protein, diatery fiber, niacin, vit c, vit E, vit K, sodium, potassium, calcium, copper, Iron, magnesium and Zinc. Turmeric is used for the treatment of chronic hepatic disease, cirrohosis, jauindice, Alzheimer's disease, Rheumatitis arthritis. It inhibit the growth of melanoma and prevent the growth of prostrate, cervical, breast cancer to the lung, and reduce cholesterol level. Turmeric helps to regulate the female reproductive system, purifies the uterus, and reduce monthly cramps during mensuration cycle in female.It also use to remove mucus in the throat and watery discharges like leucorrhea. The active constituent of curcuma longa is flavonoids curcumin (diferuloyl methane) curcuminoid which are commonly use to prevent lung cancer in all the three stages . Curcumin arrest the cancer cells proliferation in G2/S phase. It induces apoptosis and inhibits angiogenesis.





Curcumin (diferulomethane)

Morinda Citrifolia : Morinda Citrifolia is commonly known as Noni or Indian Mulberry and commonly grown in south eastern Asia. It has been reported that noni plant has wide range of medicinal value and has anti-inflammatory, anti-histamine, anti-fungal, anti-biotic, anti-viral, anticancer. Which is due to the presence of secondary metabolites such as phenolic compounds, alkaloids, polysaccharides. The fruit juice is used against arthritis, diabetes, high blood pressure, muscle aches and pains, menstrual difficulties, headache, heart disease, AIDS, Cancer, gastric ulcers, mental depression. Anticancer activity of this plants is due to sulphates, polysaccharides which destabilize the interaction between glucosamineglycan and certain proteins. This help to skip metastasis.



Patent Application Publication Aug. 25, 2011 Sheet 4 of 6 US 2011/0206787 A1

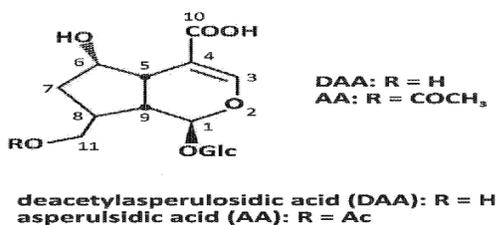
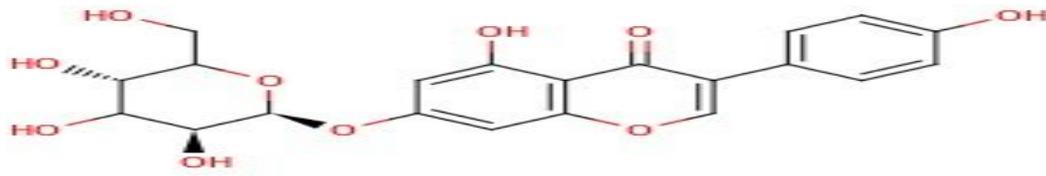


FIG. 4

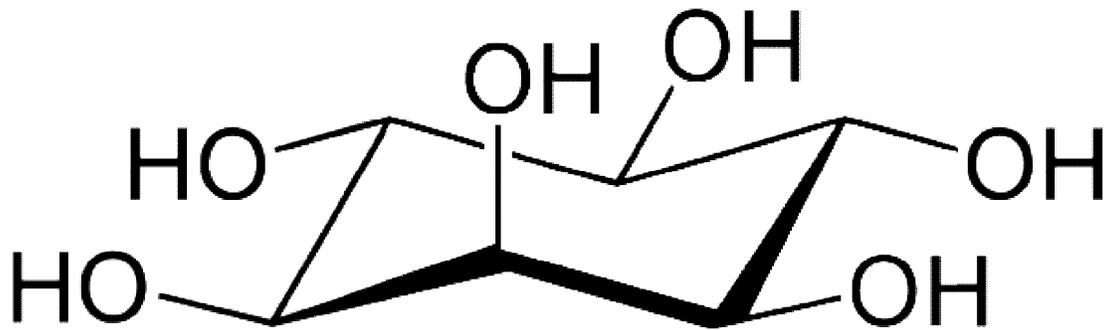
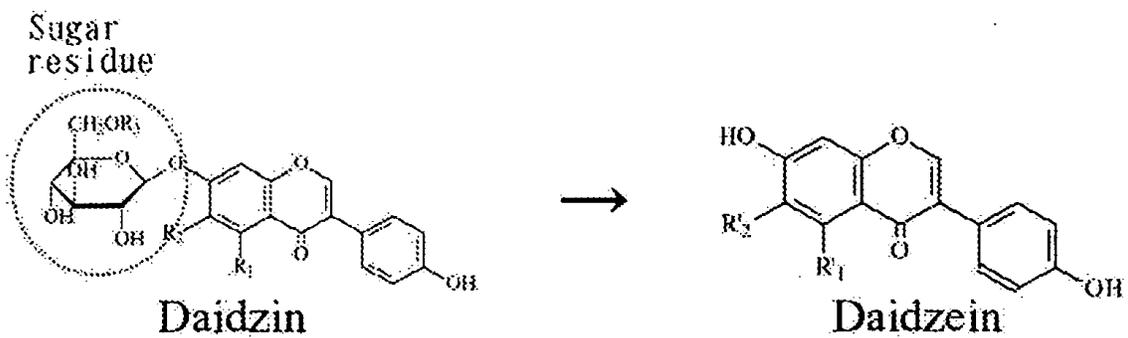
Glycin Max : Glycin Max plant commonly grown in south-east –Asia. Medicinal value of this plant is due to significant amount of phytic acid, linolic acid and isoflavones. Isoflavones (such as genistein and diadezein), saponins, protease inhibitors and inositol isolated from glycin max seeds inhibit growth and spread of lung cancer. Phytic acid isolated from glycin is used to reduce cancer, diabetes, inflammation and also act as antioxidant. Currently, it has been tested that serin protease inhibitors is used for the treatment of skin cancer. Genistein is an excellent intracellular antioxidant which block the supply of oxygen and neutrients to cancer cells. Thus killing them by starving.



Linolenic acid



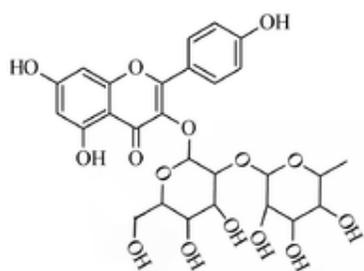
genistein



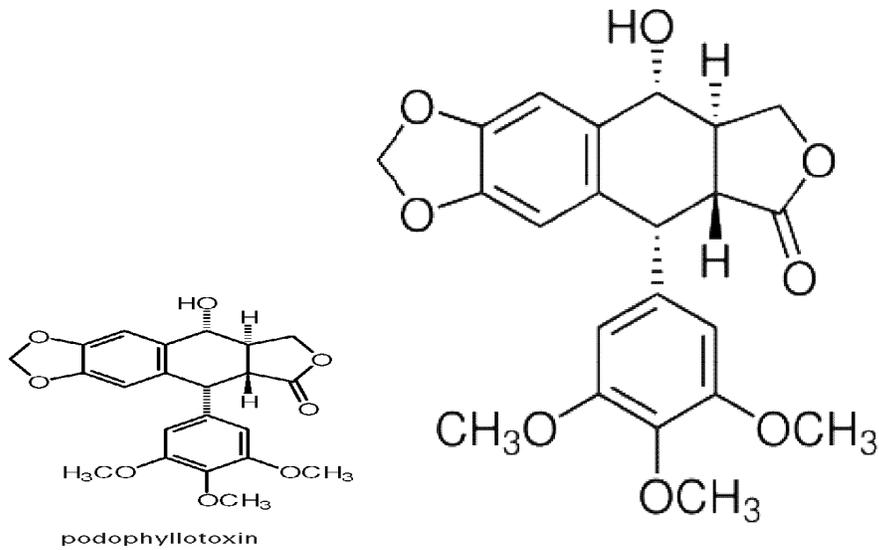
inositol

Bauhinia Variegata : Bauhinia Variegata commonly grown in south east Asia And had variety of medicinal values. Different type of flavonoids such as kaempferal-3-galactoside, Kaempferal-3-rhamnoglucoside, hentriocotane, octacosanal stig, flavanones glucosides, sitasteral, lupcal, flavanone glucosides, cyanidine glucoside, Malvidine glucoside, peonidine glucoside isolated from different part of the plant inhibit growth and

spread of lung cancer and also possess antidiabetic, anti-inflammatory, antibacterial, antiviral and hepato protective activity.



kaempferol-3-galactoside



Alfa Alfa : *Medicago sativa* commonly known as alfa alfa and also called “ Father of all foods” because it is so rich in essential nutrients. Alfa Alfa native to Asia, North America and Australia. Alfa alfa exhibit antifungal, antibacterial, and anti inflammatory properties that make it a great body cleanser and infection fighter. It increase the production of white blood cells. Alfa alfa contain minerals (Fe, Mg, K), vitamins (A, D, E, K, B), organic acid, free amino acids. Alfa Alfa is a great source of vit K so it helps improve baby’s vit K level at birth if mom drink during pregnancy. Alfa alfa leaves contain phytoestrogens beneficial in menopausal, the saponin in alfa alfa leaves lower LDL, the blood cholesterol level. Alfa alfa play a vital role in strengthening the immune system, arthesclerosis, heart disease, stock, cancer, diabetes, endometriosis, upset stomach and a bleeding disorder.

% Reduction in Alfalfa Nutrients by Glyphosate*

Nutrient	% reduction compared with Non-RR
Nitrogen	13 %
Phosphorus	15 %
Potassium	46 %
Calcium	17 %
Magnesium	26 %
Sulfur	52 %
Boron	18 %
Copper	20 %
Iron	49 %
Manganese	31 %
Zinc	18 %

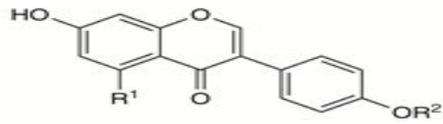
*Third year, second cutting analysis; Glyphosate applied one time in the previous year



Pterocarpans

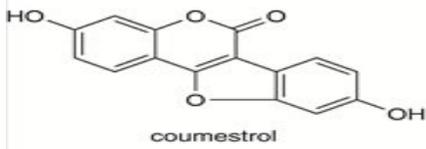


Isoflavonoids

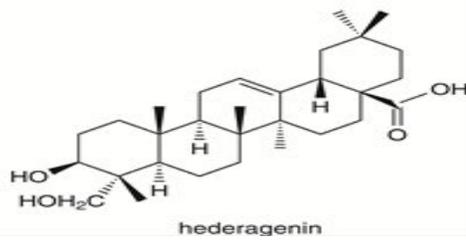
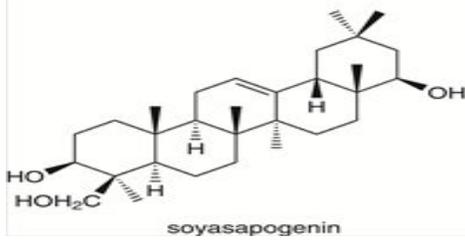


	R ¹	R ²
daidzein	H	H
formononetin	H	CH ₃
genistein	OH	H

Coumestans



Triterpenes



Alfalfa seeds, sprouted, raw	
Nutritional value per 100 g (3.5 oz)	
Energy	96 kJ (23 kcal)
Carbohydrates	2.1 g
Diatery Fibers	1.9 g
Fat	0.7 g
Protein	4 g
Vitamins	
Thiamine (B1)	(7%) 0.076 mg
Riboflavin (B2)	(11%) 0.126 mg
Niacin (B3)	(3%) 0.481 mg
Pantothenic acid (B5)	(11%) 0.563 mg
Vitamin B6	(3%) 0.034 mg
Folate (B9)	(9%) 36 µg
Vitamin C	(10%) 8.2 mg
Vitamin K	(29%) 30.5 µg
Trace metals	
Calcium	(3%) 32 mg
Iron	(7%) 0.96 mg
Magnesium	(8%) 27 mg
Manganese	(9%) 0.188 mg
Phosphorus	(10%) 70 mg
Potassium	(2%) 79 mg
Sodium	(0%) 6 mg
Zinc	(10%) 0.92 mg