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Biodiversity and Medicinal Properties of Plants in The Holy Qur'an and The Ahadith

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ABSTRACT

This study aimed to provide information about the plants mentioned in the Holy Qur'an and the Ahadith and the medicinal properties of these species. These plant species include *Brassica nigra, Carthamus tinctorius, Cuminum cyminum, Hordeum vulgare, Lens culinaris, Nigella sativa, Oryza sativa, Sesamum indicum, Triticum vulgare, Allium cepa, Allium porrum, Allium sativum, Cucumis melo, Cucurbita maxima, Citrullus vulgaris, Cucurbita pepo, Lagenaria vulgaris, Neurada procumbens, Beta vulgaris, Astragalus spinosus, Cymbopogon schoenanthus, Citrullus colocynthis, Euphorbia sp., Senna alexandrina, Euphorbia pithysa L., Acorus calamus, Costus speciosus, Crocus sativus, Typha domingensis, Zingiber officinale, Zingiber zerumbet, Aloe vera, Ocimum basilicum, Nitraria retusa, Salvadora persica, Buxus dioica, Lawsonia inermis, Acacia oerfota, Acacia raddiana, Acacia tortilis, Tamarix aphylla, Aquilaria agallocha, Dryobalanops camphora, Mallotus philippinensis, Musa paradisiaca L., Citrus medica, Ficus carica, Olea europaea, Phoenix dactylifera, Punica granatum, Vitis vinifera, and Ziziphus spina-christi.* The results were systematically arranged in alphabetical order by botanical name followed by family name, English name, Arabic name, flowering period, parts used, and medicinal uses.

Keywords: Ahadith, ethnomedicinal study, Holy Qur'an, medicinal plants

INTRODUCTION

Plants are an essential component of the universe. Humans have used plants as medicine from the beginning (1). In Islam, diseases are cured in two ways: the cure of the soul by prayers and the cure of ailments through medicines (2). The Holy Qur'an claims that it covers every aspect of life and is full of wisdom. Our Holy Prophet (Sallallaho Alayhi Wassallam) used certain herbs and recommended various medicinal plants for treating common diseases. His recommendations were noted by His Wives (Radiallaho Anhuma) and Companions (Radiallaho Anhum) and remain available to us today (3).

The Qur'an references the significance of plants in various Surahs, including Al-Mu'minun, Al-Rahman, Al-Baqarah, and Al-An'am. Our Holy Prophet (Sallallaho Alaihe Wasallam) used and recommended medicinal plants for numerous health and dietary purposes (4).

MATERIALS AND METHODS

Plants species were arranged systematically by botanical name, followed by family name, English name, Arabic name, habit and habitat, flowering period, parts used, medicinal uses, and aromatic properties.

RESULTS

Botanical name: *Brassica nigra*
Family: Brassicaceae
English name: Mustard
Arabic name: Khardal
Flowering period: June–September
Parts used: Seeds

Medicinal uses: Mustard seeds are used for pulmonary congestion, arthritis, and rheumatism and also serve as a diuretic, emetic, rubefacient, and stimulant. Seed decoctions and other liquid preparations are used for tumors of sinax, liver and spleen indurations, carcinomas, throat tumors, and impostures. Mustard flowers are used as an antiseptic (5).

Botanical name: *Carthamus tinctorius*
Family: Asteraceae
English name: Safflower
Arabic name: Osfor
Flowering period: Early summer
Parts used: Seeds and dried flowers

Medicinal uses: Safflower is used for treating

amenorrhea, dysmenorrhea, and wounds or sores with pain and swelling, besides preventing atherosclerosis. Traditional medicine describes it as an antipyretic, antidiarrheal, contraceptive, diaphoretic, emmenagogue, expectorant, laxative, sedative, and stimulant. It is also employed for bronchitis, boils, hemorrhoids, respiratory tract infections, ringworms, and scabies.

Many clinical and laboratory studies support the use of safflower for treating menstrual problems, cardiovascular disease, pain, and swelling associated with trauma (6).

Botanical name: *Cuminum cyminum*
Family: Apiaceae
English name: Cumin
Arabic name: Kamoon
Flowering period: June to July
Parts used: Seeds

Medicinal uses: Cumin is an aromatic, astringent herb that benefits the digestive system and acts as a stimulant to the sexual organs (7). It is used for treating minor digestive complaints, chest conditions, and coughs. It also serves as a painkiller and is used to treat rotten teeth. Cumin seeds are antispasmodic, carminative, galactagogue, stimulant, and stomachic (8).

Botanical name: *Hordeum vulgare*
Family: Poaceae
English name: Barley
Arabic name: Shaeer
Flowering period: Time to flower initiation varies among cultivars, but in general, barley flowers earlier than wheat.
Parts used: Grain and germinated seeds

Medicinal uses:

Abortion: Hot water extracts of fruit and dried seeds are taken orally by pregnant women to induce abortion in South Korea.

Ancylostomiasis: A hot water extract from a dried whole plant is taken orally for ancylostomiasis in Korea.

Anti-tussive: A decoction of H. vulgare seeds with apples, dried figs, and pears is used to treat cough.

Bladder inflammation: A decoction of dried seeds is used orally for bladder inflammation in Iran.

Blood glucose level: Seeds of H. vulgare (125 g) are roasted, mixed with 50 g each of *Cicer arietinum* and *Elettaria cardamomum,* and used half a teaspoon with water thrice a day to control blood glucose level.

Blood pressure: Barley is used for lowering blood pressure.

Blood sugar: Barley is used for lowering blood sugar levels.

Cataract: Leaf juice is useful against cataracts.

Cholera: Powdered flower of *Calotropis procera, fruits of Piper nigrum, seed ash of H. vulgare*, and rose water are taken orally to treat cholera in India.

Cholesterol: Barley is used for lowering cholesterol levels.

Common cold: Decoction of the fruit is taken orally to treat the common cold in Turkey.

Contraception: Flowers are taken orally by women against contraception in Afghanistan.

Contraceptive: Hot water extracts of fruits are taken orally by women as a contraceptive in South Korea.

Cough and influenza: A hot water extract from a dried whole plant is taken orally to treat cough and influenza in Korea.

Diabetes: A decoction of the dried fruit is taken orally to treat diabetes in China (9).

Botanical name: *Lens culinaris*
Family: Papilionaceae
English name: Lentil
Arabic name: Adas
Flowering period: Starts 6–7 weeks after sowing
Parts used: Seeds

Medicinal uses: Lentil seeds are mucilaginous and laxative (10). They are used to treat constipation and other intestinal affections (10). They are made into a paste and used as a cleansing application for foul and indolent ulcers (10).

Botanical name: *Nigella sativa*
Family: Ranunculaceae
English name: Black cumin
Arabic name: Habbat al-barakah
Flowering period: June
Parts used: Seeds

Medicinal uses: The seeds of *Nigella sativa* Linn. (Ranunculaceae), commonly known as black seed or black cumin, are used in folk (herbal) medicine worldwide for treating and preventing a number of diseases and conditions including asthma, diarrhea, and dyslipidemia. The seeds contain both fixed and essential oils, proteins, alkaloids, and saponins. Much of the biological activity of the seeds is due to thymoquinone, which is the major component of the essential oil. The pharmacological actions of the crude extracts of the seeds (and some of its active constituents, for example, volatile oil and thymoquinone) include protection against nephrotoxicity and hepatotoxicity induced by either disease or chemicals. The seeds/oil have anti-inflammatory, analgesic, antipyretic, antimicrobial, and antineoplastic activities. The oil decreases blood pressure and increases respiration (11).

Botanical name: *Oryza sativa*
Family: Poaceae
English name: Rice
Arabic name: Orz
Flowering period: July to October
Parts used: Seeds

Medicinal uses: The seeds are used in folk medicine to treat breast cancer, stomach indurations, other tumors, and warts. The plant has antidotal, aperitif, astringent, demulcent, diuretic, excipient, larvicidal, refrigerant, stomachic, tonic, and vermifuge properties. Rice is a folk remedy for abdominal ailments, beriberi, bowels, burns, diarrhea, dysentery, dyspepsia, epistaxis, fever, filariasis, flux, hematemesis, inflammations, jaundice, nausea, ophthalmia, paralysis, piles, psoriasis, skin ailments, sores, splenosis, stomach ailments, and swellings. According to Duke and Ayensu (12), dried flowers are used as cosmetic and dentifrice, whereas awns are used for jaundice in China. The stem is used for bilious conditions, ash for discharges, wounds, and sapremia in Malaya, and infusion of straw for dysentery, gout, and rheumatism. The husk is used for dysentery and is considered a tonic in China. The root is considered astringent and anhidrotic, and is decocted for anuria. Sprouts are used to treat poor appetite, dyspepsia, fullness of the abdomen and chest, and weak spleen and stomach in China. The lye of charred stems (merang) is used as a hair wash and used internally as an abortifacient in Indonesia.

Botanical name: *Sesamum indicum*
Family: Pedaliaceae
English name: Sesame
Arabic name: Semsem
Flowering period: April
Parts used: Seeds and leaves

Medicinal uses: The active components of sesame help cure various ailments. Extensive exploration of its phytochemical and pharmacological has highlighted its antioxidant, antifungal, hypolipidemic, and hypoglycemic actions. Flowers possess tumor-inhibiting properties and hence can be used as a powerful tool in controlling rapid cellular development.

Sesame seeds contain two unique substances, sesamin and sesamolin, which are converted into two phenolic antioxidants, sesamol and sesaminol, during refinement. Both these substances belong to a group of special fibers called lignans and have been shown to possess cholesterol-lowering effects in humans, prevent high blood pressure, and increase vitamin E levels in animals. Sesame seeds are a good source of copper and calcium. Just a quarter-cup of sesame seeds supplies 74.0% of the daily requirement of copper, 31.6% of magnesium, and 35.1% of calcium. It is also high in protein, phosphorous, iron, and magnesium. Copper is known for reducing pain and swelling in rheumatoid arthritis. Magnesium supports vascular and respiratory health. Calcium helps prevent colon cancer and osteoporosis. The seeds also have a good amount of manganese, iron, phosphorus, zinc, vitamin B1, tryptophan, and dietary fibers (13).

Botanical name: *Triticum vulgare*
Family: Poaceae
English name: Wheat
Arabic name: Kamh
Flowering period: August to October
Parts used: Stem, fruits, and seeds

Medicinal uses: Whole wheat, which includes bran and wheat germ, protects against diseases such as constipation, ischemia, heart disease, disease of the colon called diverticulum, appendicitis, obesity, and diabetes (14).

The young stems are used for treating biliousness and intoxication. The ash is used to remove skin blemishes. The fruit is antipyretic and sedative. The light grain is antihydrotic. It is used for treating night sweats and spontaneous sweating.

The seed contains sex hormones and is used in China to promote female fertility. The seed sprouts are antibilious, antivinous, and constructive. They are used for treating malaise, sore throat, thirst, and abdominal cold (15). They are also effective against autoimmune diseases such as rheumatoid arthritis, which may be more prevalent in patients with celiac disease and relatives. It is perhaps easier to envisage mechanisms for relationships between diseases with a common immunological basis (16) than to explain a well-established association between wheat, coeliac disease, and schizophrenia (17). Other reported associations include ones with sporadic idiopathic ataxia (gluten ataxia) (18), migraines (19), acute psychoses, and a range of neurological illnesses (20).

Botanical name: *Allium cepa*
Family: Amaryllidaceae
English name: Onion
Arabic name: Basl
Flowering period: June to August
Parts used: Bulb

Medicinal uses: Onions contain chemical compounds with potential anti-inflammatory, anticholesterol, anticancer, and antioxidant properties, such as quercetin (21) and glycosides including quercetin 3,4'-diglucoside or quercetin-4'-glucoside (22,23). Onion extract can reduce scars, although this has not been proven effective in people with light skin (24). Urban legends and folk remedies promote the use of cut onions to prevent influenza, although this practice is not actually effective.

Botanical name: *Allium porrum*
Family: Liliaceae
English name: Leek
Arabic name: Korat
Flowering period: July to August
Parts used: Bulb

Medicinal uses: Leek has the same properties as garlic but to a lesser degree. It also stimulates appetite and helps relieve congestion in the respiratory passages. Leek is a good, nonirritating diuretic. The crushed leaves can be used externally to ease the sting of insect bites. Leeks are good for keeping blood vessels elastic and preventing premature aging. Eating a large amount of *Allium* varieties, such as chives, garlic, leeks, and so forth, can result in the elimination of intestinal worms (25).

Botanical name: *Allium sativum*
Family: Liliaceae
English name: Garlic
Arabic name: Fum
Flowering period: June to July
Parts used: Bulb and compound

Medicinal uses: *Allium sativum* has antimicrobial, antithrombotic, hypolipidemic, antiarthritic, hypoglycemic, and antitumor activities (26). Garlic also helps regulate blood sugar levels. Regular and prolonged use of the therapeutic amounts of aged garlic extracts lowers blood homocysteine levels and has been shown to prevent some complications of diabetes mellitus. People taking insulin should not consume medicinal amounts of garlic without consulting a physician.

Garlic lowers blood pressure by relaxing the smooth muscle of the blood vessels, thus leading to their dilation. Both garlic and onion contain adenosine, which is responsible for relaxing the smooth muscles.

Botanical name: *Cucumis melo*
Family: Cucurbitaceae
English name: Muskmelon
Arabic name: Qithatha
Flowering period: June to August
Parts used: Fruits

Medicinal uses: Has medicinal properties such as liver tonic, cardioprotective, antidiabetic, antiobesity, and so forth (27).

Botanical name: *Cucurbita maxima*
Family: Cucurbitaceae
English name: Large gourd
Arabic name: Kara Aslali
Flowering period: July to September
Parts used: Flowers, fruits, leaves, oil, and seeds

Medicinal uses: The seeds are diuretic, tonic, and vermifuge (28). The oil from the seeds is used as a nerve tonic (28). The fruit pulp is used as a soothing poultice on burns, inflammations, and boils (28).

Botanical name: *Citrullus vulgaris*
Family: Cucurbitaceae
English name: Watermelon
Arabic name: Batikh
Flowering period: May to August
Parts used: Fruits and seeds

Medicinal uses: In Egypt, it is practically the only medicine used by the common people for fevers; when the fruits are ripe or almost putrid, the juice is collected and mixed with rosewater and a little sugar. The seeds are employed to a considerable extent as a domestic remedy in strangury and other infections of the urinary passages and are considered to have diuretic properties. The Russian peasants use them for dropsy and hepatic congestion, and also for intestinal catarrh (29).

Botanical name: *Cucurbita pepo*
Family: Cucurbitaceae
English name: Pumpkin
Arabic name: Kosa
Flowering period: July to September
Parts used: Flowers, fruits, leaves, oil, roots, and seeds

Medicinal uses: Pumpkin acts as an antirheumatic, demulcent, diuretic, nervine, and taenifuge. Traditionally, pumpkin was used to treat kidney problems and infections caused by intestinal parasites. Nowadays, it serves as a good laxative and diuretic. It helps in treating benign prostate hyperplasia. When used externally, pumpkin pulp is an excellent emollient that softens dry skin. It is useful in treating pimples, spots, freckles, and burns. The pumpkin plant also acts as a good immune booster; it contains large amounts of vitamins A and C and glycine (30).

Botanical name: *Lagenaria vulgaris*
Family: Cucurbitaceae English name: Bottle gourd Arabic name: Yaktin
Flowering period: July to September
Parts used: Fruits, roots, leaves, and seed oil

Medicinal uses: It is used for treating various ailments, including jaundice, diabetes, ulcers, piles, colitis, insanity, hypertension, congestive cardiac failure, and skin diseases. Its fruit pulp is used as both an emetic and purgative and for its cooling, diuretic, antibilious, and pectoral properties. When boiled in oil, the pulp of bottle gourd is used to treat rheumatism and insomnia. A wide range of chemical compounds, including sterols, terpenoids, flavonoids, and saponins, have been isolated from the species. Its extracts have been found to possess various pharmacological activities (31).

Botanical name: *Neurada procumbens*
Family: Nyctaginaceae
Arabic name: Saadane
Flowering period: Spring
Parts used: Fruits

Medicinal uses: The dried spiny fruit is crushed in water along with equal quantities of *Corchorus depressus,* poppy seeds *(Papaver somniferum L.)*, rose flower *(Rosa damascena Miller)*, almond *(Prunus amygdalis Batsch),* cardamom seed *[Elettaria cardamomum (L.)* Maton], and candy (Misri), which is locally known as "Thadal" and regarded as a cooling agent given in summer. This recipe is said to be an effective demulcent and strong tonic, especially for men. In the winter season, the powder made up of dried fruit of *Neurada procumbens,* along with equal quantities of dried fruits, is given daily: 1 teaspoon at night with milk in general and as a nerve tonic, especially for men. This is also reported as a strong stimulant for debility and impotence (32).

Botanical name: *Beta vulgaris*
Family: Amaranthaceae
English name: Beet
Arabic name: Silq
Flowering period: June to September
Parts used: Bulb

Medicinal uses: The decoction prepared from the seed is a folk remedy for tumors of the intestines. Seed, boiled in water, is said to cure genital tumors. The juice or other parts of the plant help treat tumors, leukemia, and other forms of cancer, for example, cancers of the breast, esophagus, glands, head, intestines, leg, lip, lung, prostate, rectum, spleen, stomach, and uterus. Betacyanin and anthocyanin are important in the exchange of substances of cancer cells. The absence of two main components of the amines, choline and its oxidation product, betaine, produces tumors in mice (33). A decoction is used as a purgative for those suffering from hemorrhoids in South Africa. The juice is applied to ulcers. Leaves and roots are used as an emmenagogue. In the old days, beet juice was recommended for anemia and yellow jaundice. It was put into the nostrils to purge the head, clear ringing ears, and alleviate toothache. Beet juice in vinegar was said to remove dandruff from the scalp as scurf and was recommended to prevent falling hair. Juice of the white

beet was said to clear obstructions of the liver and spleen. Culpepper (34) recommended it for headache and vertigo as well as for all "infections of the brain."

Botanical name: *Astragalus spinosus*
Family: Fabaceae
English name: Milk vetch
Arabic name: Katad
Flowering period: March to May
Parts used: Leaves and roots

Medicinal uses: A number of *Astragalus* species are used in Chinese traditional medicine for their antiperspirant, antihypertensive, antidiabetic, diuretic, and tonic properties (35). They also have hepatoprotective, antioxidative, immunostimulant, and antiviral properties, whereas others have shown toxic activity (36) and are used for treating leukemia and uterine cancer. *Astragalus* is a complex combination of polysaccharides, triterpene glycosides, flavonoids, amino acids, and trace minerals. *Astragalus* polysaccharides have been shown to stimulate pituitary–adrenal cortical activity and restore depleted red blood cells in the bone marrow. Astragalus has been shown to stimulate the natural production of interferon in the human body.

Botanical name: *Cymbopogon schoenanthus*
Family: Poaceae
English name: Camel hay
Arabic name: Edhkher
Flowering period: June to July
Parts used: Leaves and roots

Medicinal uses: Le Floc'h (37) reports its use for treating rheumatism and fever. It is also used as a diuretic, an insecticide, and a poultice to cure wounds in dromedary camels.

Botanical name: *Citrullus colocynthis*
Family: Cucurbitaceae
English name: Bitter gourd
Arabic name: Hanzal
Flowering period: May to August
Parts used: Fruits, root, dried pulp, and oil

Medicinal uses: The oil obtained from seeds is applied on the head for hair loss. The fresh juice of the leaves is externally applied daily for a month, which is claimed to be effective in baldness. Fresh juice of *Colocynth* is mixed with an equal quality of sodium chloride. It is warmed over fire till it dries up. Then, 1 g of this powder is given twice a day after the meal as a stomachic and appetizer for constipation. *Veterinary uses:* Half a piece (approx. 100 g) of the ripened fruit is given twice a day to cattle for treating indigestion, colic pain, cough, and intestinal worms (38).

Botanical name: *Euphorbia sp.*
Family: Euphorbiaceae
Arabic name: AlZaquom
Flowering period: Spring to summer
Parts used: Whole plant, leaves, and roots

Medicinal uses: Many members of the Euphorbiaceae family, including the genus *Euphorbia*, contain a poisonous milky latex. The toxin is a mixture of diterpene esters, and its contact with the skin may cause inflammation and a blistering rash. For years, people in Australia have used the milky sap of *E. peplus* to cure cancerous spots on their skin. The fresh sap from *E. peplus* is applied directly to the cancerous spot. After a few days, the area develops into an enlarged, swollen sore, followed by a scab that eventually dries and falls off. According to Peplin Biotech, the sap penetrates the skin and destroys the malignant tissue. This essentially happens when a dermatologist applies liquid nitrogen directly to a superficial cancerous growth on the skin. A patent has already been applied for this remarkable discovery (39).

Botanical name: *Senna alexandrina*
Family: Fabaceae
English name: True senna
Arabic name: Sana
Flowering period: March to December
Parts used: Dried leaflets and pods

Medicinal uses: The pods and leaves are considered as one of the most used laxatives. The laxative quality of senna is attributed to the presence of sennosides A and B in its leaves and pods, which are isolated in pure form.

Senna can have adverse effects on the heart because its regular consumption is reported to deplete the body of potassium, causing fatalities. Other adverse reactions include grand mal seizures, circulatory failure, hypertension, and anaphylactic reaction. Considering the widespread use of senna as a laxative,

experimental screening of the toxicity of this plant is crucial to ensure the safety and effectiveness of this natural source (40).

Botanical name: *Acorus calamus*
Family: Acoraceae
English name: Sweet flag
Arabic name: Kashab Al Zerarah
Flowering period: May to July
Parts used: Roots

Medicinal uses: It is widely employed in modern herbal medicine for its sedative, laxative, diuretic, and carminative properties. It is used to counter the side effects of all hallucinogens. Sweet fag is one of the most widely and frequently used herbal medicines among the Chipewyan people (41). Both roots and leaves of *A. calamus* have demonstrated antioxidant (42), antimicrobial, and insecticidal activities (43).

Botanical name: *Costus speciosus*
Family: Costaceae
English name: Spiral flag
Arabic name: Qust
Flowering period: October to December
Parts used: Rhizomes, roots, and leaves

Medicinal uses: The rhizomes and roots have bitter, astringent, acrid, cooling, aphrodisiac, purgative, anthelmintic, depurative, febrifuge, expectorant, and tonic properties (6, 8). They improve digestion and clear toxins. The juice of the rhizome is applied to the head for cooling and relief from headaches. An alkaloid from *Costus speciosus* rhizomes serves as a papaverine-like smooth muscle relaxant and has antispasmodic activities. Rhizomes are given in pneumonia, rheumatism, dropsy, urinary diseases, and jaundice, whereas leaves are given in mental disorders. Bruised leaves are applied to relieve fever; stem decoction is used for treating fever and dysentery.

Leaf infusion or decoction is used as a sudorific or in a bath for patients with high fever. Rhizome juice is given with sugar internally to treat leprosy and used as antivermin and for abortion. The plant has purgative, anti-inflammatory, antiarthritic, and antifungal activities and is used in gout rheumatism and bronchial asthma. The plant is used internally for treating eye and ear infections, diarrhea (using sap from leaves and young stems), colds, catarrhal fever, cough, dyspepsia, skin diseases (using the rhizome), and snake bites (44).

Botanical name: *Crocus sativus*
Family: Iridaceae
English name: Saffron
Arabic name: Zaafaran
Flowering period: Autumn, winter, and spring
Parts used: Flowers

Medicinal uses: Saffron is administered orally to treat neurodegenerative disorders and related memory impairment (45). Aqueous and ethanol extracts of saffron reduce blood pressure in a dose-dependent manner (46). Saffron stigma and petal extracts exhibited antinociceptive effects in the chemical pain test as well as acute and/or chronic anti-inflammatory activity. These effects might be due to the high contents of flavonoids, tannins, anthocyanins, alkaloids, and saponins (47). The oral administration of the saffron extract increased the life span of Swiss albino mice that were intraperitoneally transplanted with sarcoma-180 (S-180) cells, Ehrlich ascites carcinoma, and Dalton's lymphoma ascites tumors (48). Crocetin from saffron was effective in treating certain types of cancer in an animal model (frog embryos) (49).

Botanical name: *Typha domingensis*
Family: Typhaceae
English name: Narrow-leaved cattail
English name: Al Bardy
Flowering period: Summer
Parts used: Roots, seeds, shoots, and leaves

Medicinal uses: The leaves are diuretic (50). The pollen is astringent, desiccant, diuretic, hemostatic, and vulnerary (50, 51). It is used for treating nose bleeds, hematemesis, hematuria, uterine bleeding, dysmenorrhea, postpartum abdominal pain and gastralgia, scrofula, and abscesses (51). It is contraindicated for pregnant women (51). The seed is hemostatic (50). The rootstock is astringent and diuretic (52).

Botanical name: *Zingiber officinale*
Family: Zingiberaceae
English name: Ginger
Arabic name: Zanjibil
Flowering period: Spring
Parts used: Root

Medicinal uses: Ginger is a powerful anti-inflammatory herb, which has gained interest for its use in joint problems. It has also been indicated for arthritis,

fevers, headaches, toothaches, coughs, bronchitis, osteoarthritis, and rheumatoid arthritis. It relieves tendonitis, lowers cholesterol levels and blood pressure, and aids in preventing internal blood clots. Ginger is used for treating colds due to its ability to eliminate toxins and increase body heat (53; 54).

Botanical name: *Zingiber zerumbet*
Family: Zingiberaceae
English name: Wild Ginger
Arabic name: Zarnab
Flowering period: Spring
Parts used: Rhizome

Medicinal uses: Its rhizomes are used in local traditional medicine as a cure for swelling, sores, and loss of appetite. The juice of the boiled rhizomes is used as medicine for worm infestation in children. Z. zerumbet is known worldwide as the shampoo ginger.

The main component in the rhizomes zerumbone can be used for treating Alzheimer's disease. *Z. zerumbet* also has the potential to suppress tumor activity besides its anti-inflammatory properties. Recent progress in understanding the anticancer properties of zerumbone and the increasing public interest in health has led to the demand for large amounts of zerumbone in the future (55).

Botanical name: *Aloe vera*
Family: Xanthorrhoeaceae
English name: Aloe
Arabic name: Sabr
Flowering period: April to May
Parts used: Leaves

Medicinal uses: Aloe, a therapeutic healing plant, works both externally and internally. When used externally, *Aloe vera* exhibits astringent (causing a contraction of the skin, blood vessels, and other tissues, stopping the fluid discharge), emollient (helps soften and smooth the skin), antifungal (destroys fungi), and cell proliferant (quickly regrows new cells) properties to heal wounds and burns.

When we use *Aloe vera* internally, it helps lower cholesterol levels and improves circulation in the lower extremities of the body. It is a good tonic for skin conditions and digestive disorders. The enzymes in *Aloe vera* improve digestion and nutrient absorption. It helps attain an appropriate pH balance in the body while being beneficial to the whole gastrointestinal system. Aloe has been known to wash out harmful germs and retain beneficial flora (56).

Botanical name: *Ocimum basilicum*
Family: Lamiaceae
English name: Sweet basil
Arabic name: Al Rayhan
Flowering period: August to September
Parts used: Aerial parts

Medicinal uses: Basil has many uses. It has antibacterial, antifungal, antispasmodic, carminative, diaphoretic, digestive, emmenagogue, expectorant, stimulant, stomachic, and refrigerant properties. The plant is generally used for problems related to the gastrointestinal and nervous systems. Leaves are taken (fresh or dried) in cases of fevers, abdominal cramps, gastroenteritis, constipation, nausea, and poor digestion. Tea prepared from the leaves can obviate mild nervous tension, headaches, and nausea. Water boiled with basil leaves is taken in case of sore throat. Decoction of the leaves helps in treating respiratory disorders. The juice of basil leaves promotes the expulsion of kidney stones. Chewing basil leaves on a daily basis protects against stress, ulcers, and mouth infections. The plant is also useful in reducing blood cholesterol levels (57).

Botanical name: *Nitraria retusa*
Family: Zygophyllaceae
Arabic name: Gharkad
Flowering period: April to May
Parts used: Leaves and ashes and fruits

Medicinal uses: Its fleshy red fruits are eaten by humans and used to prepare drinks. The leaves serve as a supplement for tea and are used as poultice. The ashes of this species can remove fluids from infected wounds. A decoction of fresh leaves of Nitraria retusa is used in Morocco against poisoning, upset stomach, ulcers, gastritis, enteritis, heartburn, colitis, and abdominal pain.

Botanical name: *Salvadora persica*
Family: Salvadoraceae
English name: Toothbrush tree
Arabic name: Khamt-Arak
Flowering period: January to April
Parts used: Bark, leaves, shoots, and fruits

Medicinal uses: Root bark serves as a tonic, a stimulant, and an emmenagogue and is used to relieve splenalgia. The stem bark is good for gastropathy. Leaves are antiscorbutic, diuretic, anthelmintic, astringent, expectorant, and tonic. They are useful in asthma, bronchitis, cough, strangury, painful tumors, constipation, verminosis, and hemorrhoids. Shoots and leaves are bitter and used in all types of poisons, coughs, and bronchitis. Fruits are sweet, acrid, bitter, thermogenic, aphrodisiac, emollient, stomachic, purgative, and digestive. They are useful in constipation, flatulence, and seminal weakness. Tender twigs are used as toothbrushes. The extract of the root is said to relieve pain due to spleen-related problems. Seed oil is applied to the skin for rheumatism (58).

Botanical name: *Buxus dioica*
Family: Buxaceae
Arabic name: Al katam
Flowering period: Autumn
Parts used: Leaves

Medicinal uses: It has been used medicinally as a sedative and to treat syphilis. The leaves and the bark are antirheumatic, cathartic, cholagogue, diaphoretic, febrifuge, oxytocic, and vermifuge. The leaves are used as a quinine substitute in treating malaria. The leaves are harvested in the spring before flowering and dried for later use. The bark can be harvested at any time of the year and is dried for use in decoctions. A tincture of the wood is used as a bitter tonic and antiperiodic, and can be used to cure leprosy. A volatile oil distilled from the wood is prescribed in cases of epilepsy. An essential oil obtained from the plant is used in dentistry.

Botanical name: *Lawsonia inermis*
Family: Lythraceae
English name: Henna
Arabic name: Henna
Flowering period: April to May
Parts used: Leaves and roots

Medicinal uses: *Lawsonia inermis* is used as a popular skin and hair-coloring agent in many parts of the world. In addition, it is traditionally used as a medicinal plant by diverse groups of tribal/ethnic people. *L. inermis* is used as an antirheumatic and antineuralgic agent and also has potential as an antidiabetic drug. Further, the plant has wound-healing properties. Furthermore, the hydroalcoholic extract of *L. inermis (in vivo)* has been proved to increase the levels of cellular antioxidant enzymes such as glutathione reductase, superoxide dismutase, and catalase (59).

Botanical name: *Acacia oerfota*
Family: Fabaceae
English name: Acacia
Arabic name: Orfot
Flowering period: Spring
Parts used: Bark, root, and resin

Medicinal uses: It has astringent, anti-inflammatory, antibacterial, antifungal, and antioxidant activities. It is used for treating high blood pressure, leucorrhea, diarrhea, dysentery, leprosy, colitis, gastritis, bronchitis, and cough, and also gargled for gingivitis, toothache, sore throat, and mouth infections.

Botanical name: *Acacia raddiana*
Family: Mimosaceae
English name: Acacia
Arabic name: Talh
Flowering period: June to December

Botanical name: *Acacia tortilis*
Family: Fabaceae
English name: Umbrella thorn
Arabic name: Al samor
Flowering period: April to December
Parts used: Leaves, bark, seeds, and a red gum

Medicinal uses: Gum is used as a poor man's gum arabic. It is the tree most recommended for reclaiming dunes in India and Africa. The thorny branches are used to erect temporary cages and pens. Bark is a good source of tannins. Africans once strung the pods into necklaces. Senegalese use the roots for spear shafts. Lake Chad natives use the stems for fish spears. African nomads often use flexible roots for the frameworks of their temporary shelters.

Botanical name: *Tamarix aphylla*
Family: Tamaricaceae
English name: Tamarisk
Arabic name: Athl-Tarfa
Flowering period: March to September
Parts used: Leaves and roots

Medicinal uses: *T. aphylla* is used as a herbal medicine. It has diuretic, carminative, and anti-inflammatory properties and is also used for treating internal hematomas (60).

It is used also to treat tuberculosis, leprosy, smallpox, and all contagious diseases. In these cases, a decoction of the roots is renowned for its efficacy. In the Moroccan and Algerian Sahara, bark from large branches, boiled in water, and mixed with vinegar, is used as a lotion against lice.

Botanical name: *Aquilaria agallocha*
Family: Thymelaeaceae
English name: Eagle wood
Arabic name: Alood
Flowering period: May
Parts used: Bark and roots

Medicinal uses: Eagle wood exhibits remarkable anticancer activity. Its benzene-extractable compounds possess potent central nervous system antidepression activities. Therefore, Eagle wood is considered a promising central nervous system drug (61).

Botanical name: *Dryobalanops camphora*
Family: Dipterocarpaceae
English name: Camphor tree
Arabic name: Kafur
Flowering period: May to July
Parts used: Seeds, leaf, root, and essential oil

Medicinal uses: In large doses, camphor is a narcotic and irritant; in small doses, it has sedative, anodyne, antispasmodic, diaphoretic, and anthelmintic properties. Very small doses stimulate, whereas large doses suppress. Large doses cause esophageal and gastric pain, vomiting, slow, enfeebled, and intermittent pulse, dizziness, drowsiness, dimness of sight, pallidity, cold skin, muscular weakness, cyanosis, spasms, muscular rigidity, and convulsions (62).

Botanical name: *Mallotus philippinensis*
Family: Euphorbiaceae
English name: Kamala tree
Arabic name: Wars
Flowering period: March to April
Parts used: All parts

Medicinal uses: The crude powder of Kamala obtained as a glandular pubescence from the exterior of fruits is useful in the case of infections caused by hookworms, roundworms, and earthworms. Its anthelmintic activity is due to the presence of rottlerin and isoallorotterin. Rottlerin is toxic, but isoallorottlerin exhibits greater activity than rottlerin. Kamala was formerly used in India to dye silk and wool a bright orange color. It is still used for this purpose to a limited extent and for coloring soaps, oils, ice cream, and drinks.

The fruits of the plant are used for making dyes and insect repellents. The kernels are effective as anthelmintic and for treating rheumatism and snake bites. The red powder of fruits, when mixed with some oil, is a good remedy for ulcers. The leaves are bitter and cooling, increase appetite, and cause flatulence and constipation. The decoction of bark is used in abdominal pain (63).

Botanical name: *Musa paradisiaca L.*
Family: Musaceae
English name: Banana
Arabic name: Al Mawz
Flowering period: March and April
Parts used: Fruits, flowers, stem, roots, and leaves

Medicinal uses: It helps combat various types of ailments such as peptic ulcer, intestinal ulcer (64), acidity, constipation, diabetes, hypertension, and cardiac diseases. The ripe fruit is a rich source of carbohydrates and a minor source of minerals and vitamins, particularly B complex. The principal sugars present in ripe fruit are sucrose, glucose, fructose, and maltose.

Botanical name: *Citrus medica*
Family: Rutaceae
English name: Citron
Arabic name: Utrujj
Flowering period: January, September, and October
Parts used: Fruits, seeds, and leaves

Medicinal uses: Citrus fruits and juices have long been recognized to contain secondary metabolites, including antioxidants such as ascorbic acid, flavanones, phenolics, and pectin, important to human nutrition. Many researchers have detected antioxidants in juice and edible parts of oranges of different origins and varieties (65). The by-products of citrus processing represent

a rich source of naturally occurring flavonoids. The citrus peels represent roughly half of the fruit mass, and their extracts have a good antioxidative potential (66).

The peel of citrus fruits is a rich source of flavanones and many polymethoxylated flavones, which are extremely rare in other plants. These compounds not only play important physiological and ecological roles but are also of commercial interest because of their multitude of applications in the food and pharmaceutical industries. Naringin and hesperidin have many biological activities, such as antioxidant, antimutagenic, analgesic, anti-inflammatory, and so forth (67).

Botanical name: *Ficus carica*
Family: Moraceae
English name: Fig
Arabic name: Alteen
Flowering period: April to July
Parts used: Fruits

Medicinal uses: Its fruits, root, and leaves are used in the native system of medicine against various disorders such as gastrointestinal (colic, indigestion, loss of appetite, and diarrhea), respiratory (sore throats, coughs, and bronchial problems), inflammatory, and cardiovascular disorders. Fig has been traditionally used for its medicinal benefits. The root is tonic and used against leucoderma and ringworm. The fruit is sweet, antipyretic, tonic, and purgative and is useful in inflammation. The *Ficus carica* leaves have hypoglycemic and hepatoprotective properties, and latex has antihelmintic activity (68).

Botanical name: *Olea europaea*
Family: Oleaceae
English name: Olive
Arabic name: Zaytun
Flowering period: March to May
Parts used: Fruit oil and leaves

Medicinal uses: Olive has been used in traditional medicine for centuries. It was usually used for treating hemorrhages and fevers, and as a metabolism inducer and bile flow stimulator. It was considered to be an astringent, antiseptic, and a general tonic. It has antibacterial, antifungal, and anti-inflammatory properties. Olive leaf extract is usually used as a natural antibiotic. It can easily combat different viral infections, such as influenza, herpes, and Epstein–Barr virus.

Olive leave is beneficial against certain cardiovascular conditions. It reduces low-density lipoprotein cholesterol levels and blood pressure. It also increases blood flow and reduces blood sugar levels. The antioxidant properties of olive oil help the body defend against free radicals, explaining its effectiveness in treating certain tumors, including liver, prostate, and breast cancers. Some studies even suggest that olive oil can act as a chemopreventive agent against peptic ulcers or gastric cancer. Olive leaves have antioxidant properties that protect the body against free radicals (69,70,71,72).

Botanical name: *Phoenix dactylifera*
Family: Arecaceae
English name: Date palm Arabic name: Nakhil
Flowering period: April to May
Parts used: Fruits

Medicinal uses: The date pits are also an excellent source of dietary fiber and contain considerable amounts of minerals, lipids, and proteins. Besides their dietary value, dates have medicinal uses and are employed to treat various ailments in different traditional systems of medicine. Phytochemical investigations have revealed that the fruits contain anthocyanins, phenolics, sterols, carotenoids, procyanidins, and flavonoids, which are compounds known to possess multiple beneficial effects. Preclinical studies have shown that date fruits possess free radical scavenging, antioxidant, antimutagenic, antimicrobial, anti-inflammatory, gastroprotective, hepatoprotective, nephroprotective, anticancer, and immunostimulant activities (73).

Botanical name: *Punica granatum*
Family: Lythraceae
English name: Pomegranata
Arabic name: Rumman
Flowering period: April to June
Parts used: Seeds, fruits, and flowers

Medicinal uses: The fruit is effective against dysentery, diarrhea, and gastralgia. Hindoo physicians use the rind of the fruits and flowers, combined with aromatics, such as cloves, cinnamon, coriander, pepper, and so forth, as bowel astringent in diarrhea. Besides its ancient historical uses, pomegranate is used in several systems of medicine for various ailments. In Ayurvedic medicine, the pomegranate is considered

"a pharmacy unto itself" and is used as an antiparasitic agent, as a "blood tonic," and to heal aphthae, diarrhea, and ulcers. The fresh rind of the fruit contains the following: wax, 0.8%; resin,

4.5%; mannitol, 1.8%; noncrystallized sugars, 2.7%; gums, 3.2%; inulin,1.0%; mucilage, 0.6%; tannin, 10.4%; gallic acid, 4.0%; and calcium oxalate, 4.0%. The amount of pectin is 2%–4 %. Pomegranate peel combined with optimum levels of aromatics such as cloves is the most useful remedy in chronic dysentery as well as diarrhea. The rind serves as an antihelmintic and an astringent and is useful for treating diarrhea, dysentery, and gastralgia. It is commonly used as a febrifuge and part of the diet in convalescence after diarrhea. Wet and dry fruits are good for the heart and stomach and enhance hemoglobin production. It is a good diuretic agent and provides strength. Pulp is a good antidiarrheal agent. The extracts of different parts of the fruit exhibit antibacterial activity. The extracts of the whole fruit are highly active against *Micrococcus pyogens, Staphlococcus aureus, Escherichia coli,* and Pseu*domonas aeruginosa* (74).

Botanical name: *Vitis vinifera*
Family: Vitaceae
English name: Grape
Arabic name: Enab
Flowering period: April and May
Parts used: Leaves, fruits, and seeds

Medicinal uses: Its leaves are consumed in some traditional foods (Dolmathes) and are used for treating diarrhea, vomiting, and varicose veins. The pharmacological properties of grape seeds are well investigated, and it is believed that flavonoids (from polyphenols) are its most potent constituents. Grape seed extract reduces blood lipid levels in rabbits with no side effects after long-term consumption. The procyanidins in grape seeds induce endothelial-dependent vasorelaxation. This effect is mediated via nitric oxide (NO). Procyanidins of grape seed extract exert a protective effect against oxidative stress, cataracts, colon cancer, and the increase in plasma antioxidant activity. Recently, the vasorelaxatory effect of grape leaf extract on isolated rat aorta has been shown to be dependent on endothelium integrity and production of NO (75).

Botanical name: *Zizyphus spina-christi*
Family: Rhamnaceae
English name: Christ thorn Arabic name: Sidr
Flowering period: September to November
Parts used: Fruits

Medicinal uses: Sidr has been used in folk medicine as demulcent, depurative, anodyne, emollient, stomachic for toothaches, astringents, and a mouthwash. The decoction of bark and fresh fruits is used to promote the healing of fresh wounds and also as a body wash, whereas fruits are used in dysentery (76).

DISCUSSION

The use of medicinal plants for disease treatment has always been a salient feature of Islamic teachings and practices.

Citrullus lanatus (water melon—*bittikh*) is frequently mentioned in Ahadith. The seeds of *C. lanatus* are demulcent, diuretic, pectoral, and tonic. They are sometimes used for treating urinary tract disorders and bedwetting. They are a potent vermifuge, and their aqueous or alcoholic extracts can paralyze tapeworms and roundworms. The fruit, eaten when fully ripe or even when almost putrid, is used as a febrifuge. It is a diuretic and effective in treating dropsy and renal stones. It contains lycopene (which is also found in the skins of tomatoes). This substance has been shown to protect the body from heart attacks. The rind of the fruit is prescribed in cases of alcoholic poisoning and diabetes (77).

Cucumis sativus (cucumber—*qitta'*) is another plant with many references in the Holy Qur'an and Ahadith. The ripe cucumbers dispel heat and are diuretic. Eating dates with green cucumber can cause weight gain (77). Cucumber helps in reducing swelling around the eyes or the big dark circles under your eyes. This is a worldwide treatment used to its maximum extent.

Eating quince on an empty stomach is good for the soul. Cold and dry quince serves as an astringent. Olea europaea (olive—zaytun) is another plant used against excessive menstrual flow (77). The fruit has antivinous, astringent, carminative, digestive, diuretic, emollient, expectorant, pectoral, peptic, refrigerant, restorative, stimulating, and tonic properties. The unripe fruit is extremely astringent; the syrup made from it is used for treating diarrhea and is particularly safe for children. The fruit and its juice can be used as a mouthwash or gargle to treat mouth ulcers, gum problems, and sore throats. The leaves contain tannins and pectin. Tannins can be used as an astringent, whereas pectin has

a beneficial effect on the circulatory system and helps reduce blood pressure (77).

Ficus carica (fig—*teen*). The medicinal advantages of the fig are discussed in the first Qur'anic verses in Surah at-Tin. The fruits are mildly laxative, demulcent, digestive, and pectoral. The unripe green fruits are cooked with other foods as a galactagogue and tonic. The roasted fruits are emollient and used as a poultice for treating gumboils, dental abscesses, and so forth. The fruits are often dried for later use, and these dried fruits are a major commercial product. The fig syrup, made from the fruit, is a well-known and effective gentle laxative that is also suitable for young and extremely old people. The wood of figs is pliable but porous and of little value. It is used for hoops, garlands, ornaments, and so forth. When saturated with oil and covered with emery, it is used as a substitute for a hone (77).

Phoenix dactylifera (date—*nahal*). The date palm has played an important role in human history. Its importance and versatility are governed by the fact that this fruit and its blessed palm are mentioned in the Holy Qur'an more than 20 times.

This verse has tremendous scientific significance because dates are reported to yield three times more energy than cereals (78). Dates contain some stimulants that strengthen the muscles of the uterus in the last months of pregnancy. This helps in the dilation of the uterus at the time of delivery on one hand and reduces the bleeding after delivery on the other. Dieticians consider dates as the best food for women in confinement and those who are breast-feeding. This is because dates contain elements that assist in alleviating depression in mothers and enriching breast milk with all the elements needed to make the child healthy and resistant to disease.

Punica granatum (Pomegranate—*rumman*) is both a nutritious food and a medicinal remedy of great value. It is a tonic for heart patients, highly effective for stomach inflammation, and useful in relieving heart pain. The juice of the fruit is an excellent cooling beverage that relieves thirst. It is effective intreating both diarrhea and dysentery. Its juice is also beneficial for many ailments such as colitis, anemia, jaundice, high blood pressure, piles, and arthritis. When taken with honey, it reduces biliousness. Pomegranate fruit is also prescribed for many disorders under the homeopathic medicine system.

The rind of the pomegranate fruit is responsible for its long shelf life, and the fruit can be stored for up to 6 months (79). All parts of the plant contain unusual alkaloids, known as pelletierines, which paralyze tapeworms so that they are easily expelled from the body using a laxative.

The fruit serves as a mild astringent and refrigerant in some fevers and especially in biliousness. It is also cardiac and stomachic. The dried rind of the fruit is used for treating amoebic dysentery, diarrhea, and is particularly effective against tapeworm infestations.

Miswak (toothbrush) is one of the products derived from *Salvadora persica*, as mentioned in ethnobotanical texts. The use of *miswak* is a Sunnah of the Holy Prophet (Sallallahu Alayhi Wasallam). The Prophet (Sallallahu Alayhi Wasallam) himself used it frequently on various occasions. Research conducted in Cape Town, South Africa, shows that miswak contains a large amount of tannic acid (tannins).

Tannins prevent bacterial adherence to teeth. It is well-established that *Streptococcus viridans,* a bacterium responsible for damaging heart valves, originates from the mouth. Thereofre, the use of miswak is a preventive measure against various dental, gastrointestinal, and heart diseases (80). The research conducted recently by dentist Almas K. proved that 0.2% chlorhexidine gluconate (CHX) and 50% of *miswak* extract had a similar effect on dentin in the control group. Bacterial plaque is solely responsible for the initiation and progression of periodontal diseases. Different mechanical and chemical methods are used for maintaining oral health through plaque control. Toothbrushes and *miswak* (chewing sticks) are widely used for the mechanical removal of plaque. CHX is one the best proven antiplaque agents. *Miswak* extract removed more smear layers compared with CHX. Further *in vivo* research is needed to compare the effects of CHX and *miswak* extract on periodontally involved teeth and teeth with dentinal hypersensitivity (81).

The dried fruits of grapes *(Vitis vinifera)* are raisins, sultanas, and currants, which are commercially important. Different varieties of grapes produce different types of dried fruits. Grapes are a nourishing and slightly laxative fruit that can support the body through illness, especially diseases of the gastrointestinal tract and liver. The nutrient content of grapes

closely resembles that of blood plasma, making grape fasts a recommended method for detoxification.

The fresh fruit is antilithic, constructive, cooling, diuretic, and strengthening. A diet based entirely on fruit is especially recommended for treating sluggish biliary function.

The fruit can also be used to treat varicose veins, hemorrhoids, and capillary fragility. The dried fruit is demulcent, cooling, mildly expectorant, laxative, and stomachic. Dried grapes (raisins) were ranked second in scientific tests to identify the most antioxidant-rich fruits and vegetables. Hence, raisins are an excellent "protective-value-for-money" choice. Fresh red grapes rank sixth in terms of effectiveness against oxidative stress in cells (82). The fruit of the Indian lote tree *(Zizyphus mauritiana)* is extremely useful for human beings. It is eaten in fresh and dried forms in Pakistan. The folk medicinal uses of *Z. mauritiana* in Pakistan are as follows: the leaves are useful to treat scabies and other skin diseases. Fruits are mucilaginous and pectoral styptic, and are considered to purify blood and improve digestion. These are cooling, astringent, and useful in bilious affections.

Henna *(Lawsonia inermis)* is another aromatic plant mentioned in Ahadith. The actual henna plant is sometimes called the "magic plant" because it has great healing effects. Its ingredients possess antibacterial, antifungal, and antihemorrhagic properties. Henna is useful in healing athlete's foot, fungal skin infections, headaches, burning of the soles and palms, and local inflammation. The leaves and seeds act as cooling agents for the head and body (83).

Herbal medicines are used globally because of better cultural acceptance, minimal harm, and reduced side effects.

REFERENCES

1. Marwat, S.K., M.A., Khan, M.A. Khan, M. Ahmad, M. Zafar, F.U. Rehman and S. Sultana, 2009a. Vegetables Mentioned in the Holy Qura'n and Ahadith and Their Ethnomedicinal Studies in Dera Ismail Khan, N.W.F.P., Pakistan. Pak. J. Nutr., 8: 530.
2. Marwat, S.K., M.A., Khan, M.A. Khan, M. Ahmad, M. Zafar, F.U. Rehman and S. Sultana, 2009b. Salvadora persica, Tamarix aphylla and Zizyphus mauritiana- Three Woody Plant Species Mentioned in Holy Quran and Ahadith and Their Ethnobotanical Uses in North Western Part (D.I. Khan) of Pakistan. Pak. J. Nutr., 8: 545.
3. Dar-ul-Iman Healing. 2000. Food of the Prophet (Sallallaho Alayhi Wasallam). Available at: http://chishti.org/foods_of_the_prophet. Accessed March 13, 2009.
4. Nasr, S.H., 1976. Islamic Science-An illustrated study. Westerham press, Ltd., Westerham, Kent (England), pp: 15.
5. Anand P., Murali K Y., Tandon V., Chandra R., Murthy P.S. 2007. Preliminary studies on antihyperglycemic effect of aqueous extract of Brassica nigra Koch in streptozotocin induced diabetic rats. Indian Journal of Experimental Biology Vol 45, pp 696-701.
6. Punjanon, T., Arpornsuwan, T. and Klinkusoom, N. 2004. The pharmacological properties of safflower (Carthamus tinctorius L). Bulletin of Health Science & Technology. 7, 51-63.
7. Bown. D. Encyclopaedia of Herbs and their Uses.
8. Chevallier. A. The Encyclopedia of Medicinal Plants.
9. Marwat K. S., Hashimi M., Khan K. U., Khan M. A., Shoaib M., Rehman F. 2012. Barley (Hordeum vulgare L.) A Prophetic Food Mentioned in Ahadith and its Ethnobotanical Importance.
10. Chopra. R. N., Nayar. S. L. and Chopra. I. C. Glossary of Indian Medicinal Plants (Including the Supplement). Council of Scientific and Industrial Research, New Delhi.
11. Ali B.H., Blunden G. 2003. Pharmacological and toxicological properties of Nigella sativa. Phytother Res. 17(4):299-305.
12. Duke J.A. and Ayensu, E.S. 1985. Medicinal plants of China. Reference Publications, Inc. Algonac, MI.
13. Chakraborthy G.S., Sharma G., Kaushik K. N. 2008. SESAMUMINDICUM: AREVIEW Journal of Herbal Medicine and Toxicology 2 (2) 15-19.
14. Hadjivassiliou M., Grunewald R.A., Sharrack B., Sanders D., Lobo A., Williamson C., Woodroofe N., Wood N., Davies-Jones A., 2003. Gluten ataxia in perspective: epidemiology, genetic susceptibility and clinical characteristics. Brain, 126: 685-691.
15. Cartera JW, Madlb R, Padulac F, 2006. Wheat antioxidants suppress intestinal tumor activity in Min mice. Nutrition Research, 26 (1): 33-38.
16. He G.Y., Rooke L., Steele S., Bekes F., Gras P., Tatham A.S., Fido R., Barcelo P., Shewry P.R., Lazzeri P.A. 1999. Transformation of pasta wheat (Triticum durum L. var. durum) with high molecular weight glutenin subunit genes and modification of dough functionality. Molecular Breeding, 5: 377-396.
17. Jacobs D.R., Meyer K.A., Kushi L.H., Folsom A.R. 1998b. Whole-grain intake may reduce the risk of ischemic heart disease death in postmenopausal women: the Iowa women's health study. American Journal of Clinical Nutrition, 68: 248-257.
18. Hadjivassiliou M., Grunewald R.A., Davies-Jones G.A.B. 2002. Gluten sensitivity as a neurological illness. Journal of Neurology, Neurosurgery and Psychiatry, 72: 560-563.
19. Goldberg G. 2003. Plants: diet and health. Report of a British Nutrition Foundation Task Force, Oxford, UK: Blackwell Science.
20. Grant E.C. 1979. Food allergies and migraine. Lancet, 1: 66-69.
21. Slimestad R., Fossen T., Vågen I.M. 2007. "Onions: a source of unique dietary flavonoids". J Agric Food Chem 55 (25): 67-80.
22. Gary W., Geoff W. P., Yasushi U., Keith R., and Rhodes M. J.C. 1996. Dietary quercetin glycosides: antioxidant activity and induction of the anticarcinogenic phase II marker enzyme quinone reductase in Hepalclc7 cells. Carcinogenesis, volume 17, issue 11, pages 2385-2387
23. Olsson M.E., Gustavsson K.E., and Vågen I.M. 2010. Quercetin and isorhamnetin in sweet and red cultivars of onion (Allium cepa L.) at harvest, after field curing, heat treatment, and storage. J Agric Food Chem., volume 58, issue 4, pages 2323-2330

24. Chanprapaph, K.; Tanrattanakorn, S.; Wattanakrai, P.; Wongkitisophon, P.; Vachiramon, V. 2012. "Effectiveness of Onion Extract Gel on Surgical Scars in Asians". Dermatology Research and Practice 2012: 1.
25. Movahedian A, Sadeghi H, Ghannadi A, Gharavi M, Azarpajooh S. 2006. Hypolipidemic activity of Allium porrum L. in cholesterol-fed rabbits. J Med Food., 9(1): 98-101.
26. Thomson M, Ali M. 2003. Garlic Allium sativum: a review of its potential use as an anti-cancer agent. Curr Cancer Drug Targets., 3(1): 67-81.
27. Bidkar JS, Ghanwat DD, Bhujbal MD, Dama GY. 2012. Anti-hyperlipidemic activity of Cucumis melo fruit peel extracts in high cholesterol diet induced hyperlipidemia in rats. J Complement Integr Med., 24; 9.
28. Chopra. R. N., Nayar. S. L. and Chopra. I. C. Glossary of Indian Medicinal Plants (Including the Supplement).
29. Adesanya A. Olamide, Olaseinde O. Olayemi, Oguntayo O. Demetrius, Otulana J. Olatoye and Adefule A. Kehinde. 2011. Effects of Methanolic Extract of Citrullus lanatus Seed on Experimentally Induced Prostatic Hyperplasia. European Journal of Medicinal Plants 1(4): 171-179.
30. Shokrzadeh M., Azadbakht M., Ahangar N., Hashemi A., and Saeedi Saravi S.S. 2010. Cytotoxicity of hydro-alcoholic extracts of Cucurbita pepo and Solanum nigrum on HepG2 and CT26 cancer cell lines. Pharmacogn Mag. Jul-Sep; 6(23): 176- 179.
31. Rakesh P Prajapati, Manisha Kalariya, Sachin K Parmar, Navin R Sheth. 2010. Phytochemical and pharmacological review of Lagenaria sicereria. Volume 1, 4, 266- 272.
32. Rahmatullah Qureshi, G. Raza Bhatti and Rabia Asma Memo. 2010. Ethnomedicinal uses of herbs from Northern part of Nara desert, Pakistan Pak. J. Bot., 42(2): 839-851.
33. List, P.H. and Horhammer, L. Hager's handbuch der pharmazeutischen praxis. Springer-Verlag, Berlin. vols 2-6., 1969-1979
34. Culpepper, N. 1653. Culpepper's complete herbal. W. Foulsham & Co., Ltd., London.
35. Konoshima, T., 1996. Saponins Used in Traditional and Modern Medicine. Plenum Press, New York, pp: 87-10.
36. Hartwell, J.L., 1970. Plants used against cancer. Lloydia, 33: 97-97.
37. Le Floc'h, E. 1983. Contribution a` une étude ethnobotanique de la flore Tunisienne. Programme Flore et Vegetation tunisienne, Ministère de l'Enseignement supe´rieur et de la Recherche scientifique, Tunis.
38. Rahmatullah Qureshi, G. Raza Bhatti and Rabia Asma. 2010. Memo Ethnomedicinal uses of herbs from Northern part of Nara desert, Pakistan Pak. J. Bot., 42(2): 839-851.
39. The Euphorbia Family (Euphorbiaceae) A Large & Diverse Family Of Flowering Plants. Wayne. http://waynesword.palomar.edu/indxwayn.htm.
40. Ibrahim B. Elkhidir, Ahmed I. Yagi, Samia M.A. El Badawi and Sakina M. Yagi. 2012. Toxicity of Aqueous Extract of Senna alexandrina Miller Pods on Newzealand Rabbits. European Journal of Medicinal Plants 2(3): 252-261.
41. Derek J., Kershaw L., MacKinnon A., Pojar J. 1995. Plants of the Western Boreal Forest & Aspen Parkland. Lone Pine Publishing. ISBN 1-55105-058-7.
42. S. Asha D., Deepak G. 2011. "Antioxidant Activities of Methanolic Extracts of Sweet-Flag (Acorus calamus) Leaves and Rhizomes Journal of Herbs, Spices & Medicinal Plants Volume 17, Issue 1, Pages 1-11.
43. Balakumbahan R., Rajamani K., Kumanan K. 2010. Acorus calamus: An overview, Journal of Medicinal Plant Research, 4:25 (2740–2745).
44. Shruti Srivastava1, Pradeep Singh, Garima Mishra, K. K. Jha, R. L. Khosa. 2011. Costus speciosus (Keukand): A review. Pelagia Research Library. Der Pharmacia Sinica, 2 (1): 118-128.
45. Abe K and Saito, H. 2000. Effects of saffron extract and its constituent crocin on learning behaviour and long-term potentiation. Phytother. Res. 14:149-152.
46. Fatehi, M., Rashidabady, T., and Fatehi-Hassanabad, Z. 2003, J Ethnopharmacol., 84, 199.
47. Hosseinzadeh, H., and Younesi, H. 2002. Petal and stigma extracts of Crocus sativus L. have antinociceptive and anti-inflammatory effects in mice. BMC Pharmacol., 2, 7.
48. Nair, S.C. 1991. Antitumor activity of saffron (Crocus sativus). Cancer Lett. 57(2):109-114.
49. Martin, G. 2002. Evaluation of the developmental toxicity of crocetin on Xenopus Food Chem. Toxicol. 40(7):959-964.
50. Duke. J. A. and Ayensu. E. S. 1985. Medicinal Plants of China Reference Publications, Inc. ISBN 0-917256-20-4.
51. Yeung. Him-Che. 1985. Handbook of Chinese Herbs and Formulas. Institute of Chinese Medicine, Los Angeles.
52. Chopra. R. N., Nayar. S. L. and Chopra. I. C. 1986. Glossary of Indian Medicinal Plants (Including the Supplement). Council of Scientific and Industrial Research, New Delhi.
53. Weed, Susun. 2002. "New Menopausal Years, The Wise Woman Way", Ginger is one of the best anti-arthritis herbs because it boosts the anti-inflammatory and pain- relieving properties of other herbs like turmeric and inhibits the COX-2 enzyme. Because ginger stirs up circulation it mobilizes the body's own healing agents to ease the pain of fibromyalgia and arthritis.
54. Foster S., and Yue C. 1992. Herbal Emissaries Bringing Chinese Herbs to the West Healing Arts Press. In Chinese medicine Sheng-jiang (fresh ginger) is used for colds due to wind and cold, coughs, and vomiting. Ginger raises metabolism, induces sweating, and helps to dispel pathogens from the body.
55. Wahida B. A. Fadzil. Extraction of ZINGIBER ZERUMBET (L) Smith oil by using Soxhlet extraction method. Faculty of Chemical & Natural Resources Engineering Universiti Malaysia Pahang. December 2010.
56. Oryan, A., Naeini A. T., Nikahval B., Gorjian E. 2010. Effect of aqueous extract of Aloe vera on experimental cutaneous wound healing in rat. Vet. arhiv 80, 509-522.
57. Dev N., A. K. Das, M. A. Hossain, and Rahman S. M. M. 2011. Chemical Compositions of Different Extracts of Ocimum basilicum Leaves. J. Sci. Res. 3 (1), 197-206.
58. Halawany H. S. 2012. A review on miswak (Salvadora persica) and its effect on various aspects of oral health. The Saudi Dental Journal Volume 24, Issue 2, Pages 63-69.
59. Guha G., Rajkumar V., Ashok Kumar R., and Mathew L. 2011. Antioxidant Activity of Lawsonia inermis Extracts Inhibits Chromium(VI)-Induced Cellular and DNA Toxicity. Evidence-Based Complementary and Alternative Medicine, 9 pages.
60. Mohammedi Z., Atik F. 2011. Impact of solvent extraction type on total polyphenols content and biological activity from Tamarix aphylla. International Journal of Pharma and Bio Sciences. Vol 2, Issue 1. Pages 609-615.
61. Meng-ling He, Shu-yuan Qi, and Lan-juan Hu. Rapid in vitro propagation of medicinally important Aquilaria agallocha. J Zhejiang Univ Sci B. 2005 August; 6(8): 849–852.

62. http://botanical.com/botanical/mgmh/c/campho13.html.
63. Sharma J., Varma R. A Review on Endangered plant of Mallotus philippensis (Lam.) M.Arg. Pharmacologyonline 3: 1256-1265 (2011) Sharma and Varma 1256.
64. Mbagwu H., Jackson C., Ekpo M., Okopedi E., Anah V., and Ugwu C. 2011. Gastroprotective Effects of Ethanolic Leaf Extract of Musa Paradisiaca L.(Musaceae) in Rats J. Chem. Pharm. Res., 3(3):322-327.
65. Gorinstein, S., Martin-Belloso O., Park Y.S., Haruenkit R. and Lojek A. et al., 2001. Comparison of some biochemical characteristics of different citrus fruits. Food Chem., 74: 309-315.
66. Anagnostopoulou, M.A., P. Kefalas, V.P. Papageorgiou, A.N. Assimopoulou and D. Boskouc, 2006. Radical scavenging activity of various extracts and fractions of sweet orange peel (Citrus sinensis). Food Chem., 94: 19-25.
67. Kabra A.O., Bairagi G.B., Mahamuni A.S. and Wanare R.S. 2012. In vitro Antimicrobial Activity and Phytochemical Analysis of the Peels of Citrus medica L. International Journal of Research in Pharmaceutical and Biomedical Sciences. Vol. 3 (1).
68. Patil V. V., Shandavi C. Bhangale, Patil Vijay R. 2010. Studies on immunomodulatory activity of Ficus carica. International Journal of Pharmacy and Pharmaceutical Sciences. Vol 2, Issue 4.
69. Somova et al. Antihypertensive, antiatherosclerotic and antioxidant activity of triterpenoids isolated from Olea europaea, subspecies africana leaves, 2003.
70. Khayyal et al. Blood pressure lowering effect of an olive leaf extract (Olea europaea) in L-NAME induced hypertension in rats, 2002.
71. Zarzuelo et al. 1991.Vasodilator effect of olive leaf.
72. Stevenson L,. et al. 2005. Oxygen Radical Absorbance Capacity (ORAC) Report on Olive Leaf Australia's Olive Leaf Extracts, Southern Cross University.
73. Manjeshwar S., B., Bantwal R., V., B., Shaun M. K. H. B., Praveen K. V. 2011. A review of the chemistry and pharmacology of the date fruits (Phoenix dactylifera L.). Food Research International., Volume: 44, Issue: 7, Pages: 1812-1822.
74. Pradeep B.V., Manojbabu M.K. and Palaniswamy M.. 2008. Antibacterial Activity of Punica granatum L. against Gastro Intestinal Tract Infection Causing Organisms. Ethnobotanical Leaflets 12: 1085-89.
75. Naseri M. K. G. and Heidari A. 2006. Bronchodilatory Activity of Vitis vinifera Leaf Hydroalcoholic Extract in Rat. Iranian Biomedical Journal 10 (2): 79-83.
76. Abeer M. Waggas and Reem H. Al-Hasani. 2009. Effect of Sidr (Zizyphus spina- christi) Fruit Extract on the Central Nervous System in Male Albino Rats. American- Eurasian Journal of Scientific Research 4 (4): 263-267.
77. Plants For a Future, 2008. Edible, medicinal and useful plants for healthier world. Available at: http://www.pfaf.org/database/plants.php. Accessed November 16.
78. Masood, A., 2000. Dates In: Pakistan Pictorial. Directrate General of Films and Publication. Ministry Information and Media Development, Govt. of Pakistan, Islamabad, pp: 43-46.
79. Al-Qadr, 2007. Prophetic medicine.Available at: http://www.ummah.com/forum/showthread.php. Accessed March 20, 2009.
80. Khan, A.S, M.A. Khan, H.A. Din, H.U. Khan and M. Tayyab. 1994. Some Scientific Facets of Quran and Sunnah (of the Prophet Muhammad, Peace Be Upon Him) in the Field of Medicine. Pak. J. Health. 31(3-40): 7-10.
81. Almas, K., 2000. The Effect of Salvadora persica (Miswak) and Chlorhexidine Gluconate Human Dentin: A SEM Study. J. Ontemp Dent Pract., 3: 27-35.
82. Natural Food-Fruit, 2009. Fruit Western People Commonly or Occasionally Eat. Available at:http://www.naturalhub.com/natural_food_guide _fruit_common.htm Accessed January 23.
83. Mutmainaa, 2003. The Prince of Dyes-Henna. Available at: http://www.geocities.com/mutmainaa/food/ henna.html. Accessed March 29, 2009.