



## Traditional use Antifungal, Antibacterial of local Iraqi Medicinal Plants: in Review

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### ABSTRACT

The Present review was conducted to explain the role of Iraqi medicinal plants in traditional medicine. This review is an attempt to highlight the traditional uses of Iraqi medicinal plants. Plants produce chemical compounds as part of their normal metabolic activities. Plants are a valuable source of a wide range of secondary metabolites, which are used as pharmaceuticals, agrochemicals, flavours, fragrances, colours, biopesticides and food additives

Keywords:

Antifungal, Antibacterial , Medicinal Plants

### Introduction:

Medicinal plants are the Nature 's gift to human beings to help them pursue a disease-free healthy life. Herbal Medicine is the oldest form of medicine known to mankind. It was the mainstay of many early civilizations and still the most widely practiced form of medicine in the world today. The knowledge of

plant properties was acquired by ancient civilization that passed down from generation to generation. Recent estimates suggest that over 9,000 plants have known medicinal applications in various cultures and countries. Plants produce chemical compounds as part of their normal metabolic activities. Plants are a valuable source of a wide range of secondary metabolites, which are used as pharmaceuticals, agrochemicals, flavours, fragrances, colours, biopesticides and food additives [1, 2, 3]. Medicinal plants have been widely used in the management of infectious diseases and by now, many of the ancient remedies have proven their value through scientific methodologies. Although the mechanisms underlying most plant-derived remedies are not well understood, the success of herbal medicine in curing infectious diseases shows that many plants have beneficial effects in various bacterial, fungal, viral or parasitic infections. The modern methodologies in the isolation, purification and characterization of the active compounds, has been a great impact for advancing *in vitro* and *in vivo* research, this step being crucial for further application in clinical trials. Many plant-derived compounds, for example, quinine and artemisinin, have been already successfully used in healing life-threatening infectious disease. The main limitations of plant medicine healing are lack of standardization and reproducibility of plant-derived products. Despite the paucity of clinical trials evaluating their efficacy, Phytotherapy, adult plant uses and gemmotherapy, the use of embryonic stem cells should be reconsidered as valuable resources in finding new active compounds with sustained antimicrobial activity [4]. Several medicinal plants possessed a wide range of dermatological effects included antibacterial, antifungal, antiviral, antiparasitic, anticancer, hair growth-promoting activity, wound healing effects, for the treatment of burns, eczema, acne, vitiligo, and psoriasis, as skin lightening, as skin protection therapy and to slow down skin ageing. The current review will discuss the medicinal plants which showed dermatological effects and applications [5]. Medicinal plants possessed antibacterial activities via many mechanisms, such as disruption of cytoplasmic membrane, inhibition of cell wall synthesis, inhibition of cell membrane synthesis, inhibition of nucleic acid synthesis, inhibition of energy metabolism, as well as inhibition of bacterial virulence factors, including quorum-sensing signal receptors, enzymes and toxins. Evidence of these molecular effects at the cellular level include inhibition of biofilm formation, inhibition of bacterial attachment to host ligands, and neutralisation of bacterial toxins [6]. Medicinal plant possessed antifungal effects by many mechanisms, they caused membrane disturbance resulting in the loss of membrane integrity, inhibited DNA transcription and reduced the cell populations, inhibited the activity of fungal antioxidant enzymes and inhibited fungal biofilm formation [7,8]. Most herbal formulations with viral infection benefits are dedicated to respiratory diseases. Traditional Chinese herbal medicine (TCHM) formulas are by far the most used and play an important role in virus infectious diseases like respiratory syncytial virus infections [34]. TCHM formulas contain a long list of plants and its underlying mechanism is not yet elucidated. Do not forget that traditional Chinese medicine, due to its philosophical approach, is more profound and more sophisticated than the simple use of some curative formulations [9]. Echinacea angustifolia (narrow leaf echinacea), a versatile immunomodulator, is probably the best choice for common cold and prevention of influenza complications [10]. Essential oils, referred to bacterial infections, administered separately or in different mixtures, are also beneficial in preventing influenza complications. Infectious herpes simplex is other recurrent viral infections and the emergence of acyclovir-resistant clinical isolates 6 Bacterial Pathogenesis and Antibacterial Control has made the treatment more difficult. Birch bark efficacy has been shown to inhibit the acyclovir-sensitive and acyclovir-resistant clinical isolates of herpes simplex virus type 1 (HSV-1) in the early phase of infection [11]. This review is an attempt to highlight the traditional uses of Iraqi medicinal plants as following (Table 1):

Table 1: of Iraqi medicinal plants

| Plant                       | Traditional uses   |
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| <i>Adonis aestivalis</i>    | It has been reported to be useful in gallbladder disorders. Numerous other reported uses include use as a dye, flavoring, gargle for performers and speakers, antitumor agent, astringent, cardiogenic, coagulant, diuretic, sedative, antiasthmatic and for corns or warts. It is also used as Antiinflammatory, cholagogue, mild haemostatic, antibacterial, for irritations and infections of the intestinal tract, gallbladder diseases, hyperacidity, colic, urinary disorders (bedwetting, incontinence), sluggish liver, mucus membrane inflammations and externally for ulcerations. |
| <i>Allium cepa</i>          | <i>Allium cepa</i> was used traditionally as carminative, emmenagogue, contraceptive, expectorant, anthelmintic, aphrodisiac, and tonic. It was also used in the treatment of cholera, bronchitis, bruises, earache, colic, insect bites, tuberculosis, diabetes, dropsy, catarrh, scurvy, epileptic fits, hysterical fits, fevers, hypertension, jaundice, pimples, and sores.  |
| <i>Allium porrum</i>        | Leek may be eaten raw or cooked, in salads. The whole plant was used as expectorant. The juice of the plant was used as a moth and insects repellent   |
| <i>Allium sativum</i>       | Garlic used traditionally as expectorant, for the treatment of asthma, antipyretic, sedative, aphrodisiac, diuretic, emmenagogue, carminative, to promote hair growth, for the treatment of dyspepsia, urinary and respiratory tract infections and cardiac complains.   |
| <i>Allium schoenoprasum</i> | In traditional folk medicine chives were eaten to treat and purge intestinal parasites, enhance the immune system, stimulate digestion, and treat anemia.  |
| <i>Aloe vera</i>            | The plant has been used in cosmetic preparations for the treatment of pimples, acne, mouth ulcers, control bleeding, itching of piles, arthritic pains, mild laxative, wash for piles, abscesses and scabies, dysentery and renal colic. The plant also used as emmenagogue, treatment of burns, oedema, pain, swellings and wounds. The juice from the leaves was used to increase menstrual flow.  |
| <i>Althaea rosea</i>        | It was used as expectorant, cooling and diuretic, cough mixtures, and emmenagogue. Decoction of flowers is used as anti-inflammatory, febrifuge, demulcent and astringent  |

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|                                  | agent. As a demulcent and astringent, the roots were useful in the treatment of ulcers. Flowers as well as roots were used in the treatment of inflammation of the kidneys and the uterus. Seeds were thought to be diuretic and febrifuge.  |
| <b><i>Ammi majus</i></b>         | The fruits were used for the treatment of skin disorders, psoriasis and vitiligo. It was also used as an emmenagogue to regulate menstruation, as a diuretic, and for treatment of leprosy, kidney stones, and urinary tract infections.   |
| <b><i>Ammi visnaga</i></b>       | The fruits of <i>Ammi visnaga</i> were used in the treatment of mild anginal symptoms. As supportive treatment of mild obstruction of the respiratory tract in asthma, bronchial asthma or spastic bronchitis, and postoperative treatment of conditions associated with the presence of urinary calculi. Treatment of gastrointestinal cramps and painful menstruation. Internally as an emmenagogue to regulate menstruation, as a diuretic, and for treatment of vertigo, diabetes and kidney stones. |
| <b><i>Anagallis arvensis</i></b> | It was used for treatment of various ailments such as gout, dropsical affections, epileptic attacks, cerebral affections, leprosy, hydrophobia, mania and other complaints of the nervous system. In Europe, the plant was also used as diuretic, diaphoretic, expectorant and for the treatment of dropsy, rheumatism and hepatic and renal complaints. In Chinese medicine, the herb was used for snake bites, dog bites, in joint ailments and in edema.  |
| <b><i>Anagyris foetida</i></b>   | It was used as laxative, pectoral, purgative, and vermifuge. The seeds were used in the treatment of eczema; as purgative; emetic and for the treatment of renal disease.  |
| <b><i>Anchusa italic</i></b>     | It was used as stimulant, tonic, demulcent; used in bilious complaints, fever, cough, asthma; and as diuretic in bladder and kidney stones. It was also used as diaphoretic and antipyretic, narcotic, hypnotic, antiarthritis, anirheumatic and cathartic. The leaves of the plant were used as Decoction in cold, sore throat, and chest pain.   |
| <b><i>Anchusa strigosa</i></b>   | It was used as antiulcer, for wound healing, as a tonic and tranquilizer, as a diuretic and for abdominal pain. It was also used as diaphoretic antipyretic, narcotic, antipyretic, anirheumatic, cathartic, hypnotic and antiarthritis.   |
| <b><i>Andrachne aspera</i></b>   | <i>Andrachne aspera</i> Spreng was used to relieve pain and reduce fever. The roots are eaten as an anti-emetic. An extract of the aerial parts is drunk as a poison antidote, and   |

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|                                  | to treat headache and stomach-ache. The plant was used to improve eyesight and to treat eye sores.  |
| <b><i>Anethum graveolens</i></b> | Dill has been used as a popular aromatic herb and spice that has a very long history of use going back to more than 2,000 years. It was used as a remedy for indigestion and flatulence and as milk secretion stimulant. Moreover, it was used as an anticonvulsion, anti-emetic, anti-cramp (in children), as a wound healer and to increase the appetite and strengthen the stomach.  |
| <b><i>Anthemis nobilis</i></b>   | The cold infusion was used in gastric debility, with flatus; the hot infusion was used as diaphoretic, emetic, to relieve colds due to sudden cutaneous chilling, in dysmenorrhea to decrease pain and facilitate the flow, as antiemetic, antispasmodic, and sedative. The oil was used as carminative, and for intestinal cramps and colic due to flatulency.   |
| <b><i>Antirrhinum majus</i></b>  | The cultivated snapdragon, <i>Antirrhinum majus</i> was used as a model for biochemical and developmental genetics. It emerged as a model organism during early studies of inheritance and mutation because of its diploid inheritance, ease of cultivation, and variation in morphology and flower color. However, for medical purposes, it was used traditionally as a diuretic, for treatment of scurvy, liver disorders, tumors and as detergent and astringent. The leaves and flowers were used as antiphlogistic, resolvent and stimulant. They have been employed in poultices on tumours and ulcers. The plant was also used in the treatment of all kinds of inflammation and in haemorrhoids |
| <b><i>Apium graveolens</i></b>   | It has been used for arthritis, rheumatism, gout, urinary tract inflammation, and specifically for rheumatoidarthritis with mental depression. Celery is also used as a diuretic, for regulating the bowels, for glandular stimulation, gall and kidney stones, as a prophylactic for nervous agitation, for the loss of appetite and exhaustion and as antihelminthic.   |
| <b><i>Arachis hypogaea</i></b>   | Peanut oil was added to ointments and medicinal oils, and applied rectally in rectal constipation. It was also used in dermatology for crusting and scaling of the scalp (with hair), baby care and dry skin. Other applications including its use as a bath additive for subacute, chronic eczema, atrophic eczema and ichthyosis. The pharmaceutical and medical industries use peanut oil as a vehicle for medication in external, enteral or parenteral preparations; the cosmetics industry uses it in skin, sun and massage oil. Domestically, it was used as a salad or cooking oil that is  |

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|                                     | said to lower blood cholesterol levels. Peanut oil was also used for constipation, neuralgia and dislocated joints.   |
| <b><i>Arctium lappa</i></b>         | Preparations of Burdock Root were used for ailments and complaints of the gastrointestinal tract, as a diaphoretic and diuretic, and for blood purifying. Externally, it was used for ichthyosis, psoriasis and seborrhea of the scalp. It was also used in China for the treatment of carbuncles, ulcers and erythema of the skin as well as sore throats.   |
| <b><i>Aristolochia maurorum</i></b> | The root was used as an antiseptic and for wound healing.   |
| <b><i>Artemisia campestris</i></b>  | <i>Artemisia campestris</i> flowers were used as hypoglycemic, cholagogue, cholaretic, digestive, depurative, antilithiasic, and for the treatment of obesity and to decrease cholesterol. It was used as a decoction as antivenin, anti-inflammatory, antirheumatic and antimicrobial.   |
| <b><i>Arundo donax</i></b>          | Medicinally, the rhizome or rootstock was used for dropsy. Root or rhizome boiled in wine with honey and used for cancer. <i>Arundo donax</i> was also used for condylomata and indurations of the breast. The root infusion was used as antigalactagogue, depurative, diaphoretic, diuretic, emollient, hypertensive, and sudorific.   |
| <b><i>Asclepias curassavica</i></b> | The roots were used as a cheaper alternative to ipecacuanha as an emetic. It also used as purgative, haemostatic in bleeding wounds and haemorrhoids, for treatment of gonorrhoea, inflamed spleen, pneumonia, mastitis, warts, cancer, caries, fever and pyoderma. <i>Asclepias curassavica</i> is used in China to disperse fever (clears heat), improve blood circulation and to control bleeding. Entire plant is dried and decocted is used as a cardiac tonic, also for tonsillitis, pneumonia, bronchitis, urethritis and externally for wounds and other types of external and internal bleeding. |
| <b><i>Asparagus officinalis</i></b> | Traditionally, the roots were used for non-specific inflammatory diseases of the efferent urinary tract and for prevention of kidney and bladder stones (irrigation therapy), dropsy, rheumatic conditions, liver disease, bronchial asthma and gout. In Chinese medicine, the root was also used to treat irritable cough, coughing with blood, dry mouth and throat, and constipation.  |
| <b><i>Asperula arvensis</i></b>     | <i>Asperula arvensis</i> L. was useful for curing quincy. The whole herb decoction used for tonsillitis; it was also used as astringent.  |

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| <b><i>Asphodelus fistulosus</i></b>                 | The roots of <i>Asphodelus fistulosus</i> L. were used as a cutaneous disinfectant, against burns and to treat respiratory ailments. The Seeds were used as diuretic and applied externally to ulcer and inflamed parts. Ash of the roots was mixed with oil and used externally in baldness, mixed with vinegar and used on ringworm, and applied to skin blotches and pigmentation. Internally, ash was used as diuretic, anti-inflammatory and as emmenagogue.  |
| <b><i>Asplenium muraria</i></b> <b><i>ruta-</i></b> | The fronds were used as astringent, deobstruent, emmenagogue, expectorant and ophthalmic herbal remedy. The leaves being used for scalp problems, such as excess scurf.  |
| <b><i>Asplenium trichomanes</i></b>                 | <i>Asplenium trichomanes</i> was used for feverish complaints, hair tonic, cough cure known as (maidenhair), an ingredient boiled with honeysuckle and oatmeal into a concoction taken for dysentery. It also uses to stimulate menstruation and as astringent, diuretic, expectorant and sedative. <i>Asplenium trichomanes</i> L. is used as an expectorant, anti-cough remedy, laxative, abortifacient and for irregular menses. It is also used for parturition due to abortifacient effects. Decoction of fresh/dried plant (2-3 tsp./5 ml) used in abscess of uterus. 1 tsp. of dried fronds used orally for a week to promote menstruation. |
| <b><i>Astragalus hamosus</i></b>                    | The plant was used as demulcent, emollient, galactagogue and laxative. It was also used in treating irritation of the mucous membranes, nervous affections and catarrh. Young seedpods were used in salads. It is described to possess anti-inflammatory effect and is used as an anti-inflammatory agent by Unani physicians in various inflammatory disorders.   |
| <b><i>Astragalus tribuloides</i></b>                | The herb was used as emollient and demulcent. In the Chinese medical system, astragalus affects both the spleen and the lung meridians. It was indicated for spleen deficiency symptoms such as diarrhea, fatigue, spontaneous sweating, and lack of appetite. Astragalus tonifies the lungs and was used in cases of frequent colds and shortness of breath. Other traditional indications include wasting disorders and night sweats.  |
| <b><i>Atriplex hortensis</i></b>                    | The use of this plant as a remedy for an illness called <u>yellow jaundice</u> is said to account for the name Orache as it is believed to be a corruption of Latin <i>aurum</i> (gold) with reference to the illness. It was considered as diuretic, emetic, and emollient, orache has been suggested as a folk   |

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|                                  | remedy for plethora and lung ailments. Seeds mixed with wine are said to cure yellow jaundice. They also excite vomiting. Heated with vinegar, honey and salt, orache is used for gout. Fruits are purgative and emetic. Liniments and emollients prepared from the whole plant, like the juice of the plant, are said to be folk remedies for indurations and tumors, especially of the throat. It helps absorb nutrients from food, stimulates digestion and speeds up metabolism.   |
| <b><i>Avena sativa</i></b>       | It was used as cardiac and nerve tonic, for spermatorrhoea, palpitation, sleeplessness, antispasmodic, for diarrhoea, dysentery, and colitis. It was also used as thymoleptic, antidepressant and externally as emollient.   |
| <b><i>Bacopa monniera</i></b>    | It was used in traditional medicine to treat various nervous disorders, as a brain tonic to enhance memory development, learning, and concentration, and to provide relief to patients with anxiety; it was also used as a stomachic, a digestive, rejuvenate, for skin disorders, and as an antiepileptic, antipyretic, and analgesic.  |
| <b><i>Ballota nigra</i></b>      | Leaves of <i>Ballota nigra</i> were used as an antidote for the bite of a mad dog. It was used in European countries as sedative and tranquilizer. It is also used externally for wound-healing properties and internally for gastrointestinal disorders. However, internally, it is used as a sedative in cases of hysteria and hypochondria, as a spasmolytic for stomach cramps and complaints, for whooping cough and to increase bile flow. It is also used to treat nervous, upset stomach, nausea and vomiting. In France, it is traditionally used in the symptomatic treatment of nervous disorders in adults and children, especially for sleep disorders and for the symptomatic treatment of coughs. Furthermore, its enemas and suppositories are used against worm infestation. Externally, it is used for gout. |
| <b><i>Bauhinia variegata</i></b> | It is traditionally used in the treatment of bronchitis, leprosy, and tumors. The stem bark is used as astringent, tonic, anthelmintic and antidiabetic. Infusion of the leaves is used as laxative and for the treatment of piles. Dried buds are used in the treatment of worm infestations, tumors, diarrhea, and piles.  |
| <b><i>Bellis perennis</i></b>    | It was used traditionally as an expectorant, diuretic, anti-inflammatory, antipyretic, vulnerary, antispasmodic, astringent, ophthalmic, homeostatic and the flowers and young leaves are used as a vegetable. <i>Bellis perennis</i> was also used in the treatment of common cold, stomachache, eye diseases, eczema, skin boils, gastritis, enteritis, diarrhea, bleeding, rheumatism, inflammation, and infections of the upper respiratory tract in traditional medicine. In homeopathic therapy, it was said that the  |



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|                                  | <p>plant acts upon the muscular fibers of the blood-vessels. Much muscular soreness. Lameness, as if sprained. Venous congestion, due to mechanical causes. First remedy in injuries to the deeper tissues, after major surgical work. Results of injuries to nerves with intense soreness and intolerance of cold bathing. After gout, debility of limbs. Traumatism of the pelvic organs, auto-traumatism, for sprains and bruises. Complaints due to cold food or drink when the body is heated, and in affections due to cold wind. Externally, in naevi. Acne. Boils all over. sore, bruised feeling in the pelvic region.</p>  |
| <b><i>Brassica nigra</i></b>     | <p>The plant was used in the treatment of rheumatism, as an agent to reduce congestion in internal organs. In addition, it was applied in neuralgia and spasms, alopecia, epilepsy, snakebite, and toothache. It was also used to treat carcinoma and throat tumors. A liquid prepared from the seed, when gargled, is said to help tumors of the sinax. The seed was eaten as a tonic and appetite stimulant. Hot water poured onto bruised mustard seeds makes a stimulating foot bath and can also be used as an inhaler where it acts to throw off a cold or dispel a headache. Mustard oil is said to stimulate hair growth. Mustard is also recommended in hiccup. It was also considered antiseptic. <i>Brassica nigra</i> is also traditionally used as simple rubefacient, diuretic, emetic, pneumonia, bronchitis, nerve stimulant and vesicant.</p> |
| <b><i>Brassica rapa</i></b>      | <p><i>Brassica rapa</i> is one of the oldest cultivated vegetables. It is a very popular crop for its edible parts (swollen roots, leaves, and more recently sprouts), being consumed in enormous quantities throughout the world, due to its nutritional properties. In addition, it is also important for the production of edible/industrial oils. <i>Brassica rapa</i> is used traditionally to treat a variety of diseases, such as hepatitis, jaundice, furuncle sore throats, as antiscorbutic, antiarthritic, resolvent, stimulant, for the treatment of stomach complain and as laxative. It is known in the Unani and Arab traditional medicine for its use in chronic gastritis, constipation, cholecystitis, cholecystolithiasis and in liver diseases.</p>  |
| <b><i>Caesalpinia crista</i></b> | <p>Roots were used as diuretic and anticalculous. The powder was used for the treatment of diabetes in Nicobar Islands. Seeds were considered febrifugal, periodic, tonic, and vesicant. They are used to treat colic, convulsions, leprosy, and palsy. The oil from the seeds is said to soften the skin and remove pimples. The bark is rubefacient and used to counteract toothache. The different parts such as leaves, seed, root, bark were also used in colic fever, intermittent fever, malaria, menstrual complaints, pneumonia, skin diseases, swelling, tonic, pulmonary tuberculosis and as a uterine stimulant, to cleanse the</p>  |

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|                                     | uterus. It also alleviates the fever, edema and abdominal pain during this period.   |
| <b><i>Calamintha graveolens</i></b> | Its decoction soaked in water was used as stimulant and for the treatment of Impotence, acne, eczema, depression and as nerves tonic. The seeds were stimulant and aphrodisiac.  |
| <b><i>Calendula officinalis</i></b> | <i>C. officinalis</i> was used traditionally in the treatment of inflammations of internal organs, gastrointestinal ulcers and dysmenorrhea, as a diuretic and diaphoretic and for convulsions. It was also used for inflammations of the oral and pharyngeal mucosa, wounds and burns.<br><i>Calendula</i> tea was used as eyewashes, gargles, diaper rashes and other inflammatory conditions of the skin and mucous membranes.  |
| <b><i>Calotropis procera</i></b>    | Whole plant was used to treat common diseases such as fever, rheumatism, indigestion, cold, eczema, diarrhoea, for the treatment of boils, to remove thorn from body and for the treatment of jaundice. The root was used for the treatment of eczema, leprosy, elephantiasis, asthma, cough, rheumatism, diarrhoea and dysentery. In case of diarrhoea it changed the faecal matter into a semisolid mass within the first day of treatment. The stem was used for the treatment of skin diseases, enlargements of abdominal viscera, intestinal worms, leprosy and cure leucoderma. The plant was recommended in leprosy, hepatic and splenic enlargements, dropsy and worms. The latex is applied to painful joints and swelling, fresh leaves were also use for the same purpose. Oil of the leaves was applied to paralyzed part. The milky juice was used in India as purgative, while flowers were considered as digestive, stomachic, tonic and useful in cough, asthma catarrh and loss of appetite. The root bark was said to promote secretion and to be useful in treating skin disease, enlargement of abdominal viscera, intestinal worms, ascites and anasarca. |
| <b><i>Canna indica</i></b>          | <i>Canna indica</i> was used for the treatment of malaria, as a cure for diarrhoea and dysentery and in the treatment of bruises and cut. It was also used as diaphoretic, diuretic, and in treating fever and dropsy. The root decoction was used for the treatment of fever, dropsy, and dyspepsia. Seed juice is used to relieve earaches. The flowers were said to cure eye diseases. The large and much branched rootstocks were full of edible starch. The younger parts may be finely chopped and then boiled or pulverized into a meal. Mix in the young shoots of palm cabbage for flavoring. The powdered tubers were used to thicken sauces and improve the texture of some prepared foods.   |
| <b><i>Clerodendrum inerme</i></b>   | <i>Clerodendron inerme</i> was used as a febrifugal and uterine stimulant, a pest control agent and antiseptic, to arrest  |

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|                                 | bleeding, treatment of asthma, hepatitis, ringworm and stomach pains. The plant was also used in the treatment of scrofulous and venereal infections, and also as an antidote for poisoning from fish, crabs, and toadstools. The fresh leaf juice was used externally for treating skin diseases. The roots are boiled in oil and used in rheumatic affections.  |
| <i>Convolvulus arvensis</i>     | The plant was reported to have used in traditional medicine system from as early as 1730s. Aerial parts of <i>convolvulus arvensis</i> was used as laxative, wound healing, anti- spasmodic anti-haemorrhagic, anti-angiogenetic and for the treatment of parasites and jaundice. In addition, it was used as diuretic and in skin disorders such as anti-furunculosis, antidandruff and in spider bites. <i>Convolvulus arvensis</i> was also used traditionally as decoction in cough and flu, to treat the painful joints, inflammation and swelling.  |
| <i>Convolvulus scammonia</i>    | A drink was prepared by mixing scammony and sugar in some water. This remedy was used as purgative and to expell all depositions and poisons. Repeating the therapy after one month was used to keep off fevers, shivers and quartan fevers (malaria) for the rest of the year. However, although Dioscorides was well acquainted with the purgative effects of scammony and Paulus Aegineta applied the drug in numerous simple and compound remedies for this purpose, neither of them mentioned fever or malaria. Unlike these two, the physician Alexander of Tralles from Lydia in Asia Minor, in the 6th century, highlighted the usefulness of scammony in quartan and other fevers. |
| <i>Coronilla scorpioides</i>    | It was used as stimulant and applied externally to bites of venomous animals. <i>Coronilla scorpioides</i> was applied as a poultice for people who have been stung by a scorpion. The twigs and leaves were used as diuretic, cardiac, cathartic and laxative.   |
| <i>Coronilla varia</i>          | It was used traditionally as cardio-tonic, diuretic and in prostate diseases. However, it should be used with extreme caution because of toxicity. A decoction of the bark has been used as an emetic. The crushed plant has been rubbed on rheumatic joints and cramps.  |
| <i>Cotoneaster racemiflorus</i> | The plant was used traditionally as aperient, expectorant and stomachic. Using of extracts in breast-fed babies for reducing jaundice was popular in Iranian culture.   |
| <i>Cressa cretica</i>           | The plant was used traditionally as anthelmintic, stomachic, tonic, aphrodisiac, for constipation, leprosy, asthma and urinary discharges. In Senegal a maceration of the whole plant (together with the barks of <i>Vitex cuneata</i> Thonn and <i>Faidherbia albida</i> (Delile) A. Chev) was drunk against bronchitis. In Sudan a maceration of the aerial parts was drunk as a tonic. A decoction of the  |

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|  | stems (together with leaves of <i>Vitex doniana</i> Sweet) was applied topically against skin eruptions as in smallpox. In Sudan crushed dry leaves with sugar were taken as an emetic.   |
| <b><i>Dalbergia sissoo</i></b>                               | <i>Dalbergia sissoo</i> is broadly used in folk medicine for several diseases. The concentrated extract of heartwood in milk was prescribed in fevers, bark extract was used as anti-inflammatory in piles, sciatica, and as blood purifier. The oil was used externally in the skin diseases and infected ulcers. The wood was used as anthelmintic, antileprotic and cooling. Aerial parts were used as spasmolytic, aphrodisiac and expectorant. Leaves extract was used as anti-diabetic, antioxidant anticancer, analgesic, antipyretic and for jaundice. Flowers were used for Skin problems, as blood purifier and immunity Booster. |
| <b><i>Daphne mucronata</i></b>                               | Treatment of various diseases including cleaning eyes and for eye pain. Its liniment was used for treating infectious wounds. It also used for muscular pain relieving, weary muscles by direct exposure to the smoke of branches or steam of its water extract. Its decoction and cooked leaves were employed for curing women infertility, gynecological infections, menstruation disorders and constipation.   |
| <b><i>Datisca cannabina</i></b>                              | The leaves and flowering stems were bitter, diuretic, febrifuge and purgative. The root was used as a sedative in the treatment of rheumatism. It was also applied to carious teeth, as expectorant, for fevers, gastric and scrofulous ailments. The plant juice was given in fever and headache. Root was used as diuretic and for breaking of renal calculus. Hemp has been used to dye silk, wool and cotton in combination with an alum mordant. It produced a beautiful golden yellow with good fastness to washing but was not so fast to light.   |
| <b><i>Datura fastuosa</i><br/>(syn: <i>Datura metel</i>)</b> | The dried leaves, flowers and roots were used as narcotic, antispasmodic, antitussive, bronchodilator, anti-asthmatic and as hallucinogenic. The plant was also used in diarrhea, skin diseases, epilepsy, hysteria, rheumatic pains, hemorrhoids, painful menstruation, skin ulcers, wounds and burns. In ayurveda, the plant was considered bitter, acrid, astringent, germicide, anodyne, antiseptic, antiphlogistic, narcotic and sedative.   |
| <b><i>Datura stramonium</i></b>                              | <i>Datura stramonium</i> has long been known for its hallucinogenic and euphoric effects. The weed was dried and smoked for hallucinations and total relaxation. <i>Datura stramonium</i> was used traditionally to treat asthma, gastrointestinal problems, aches, abscesses, arthritis, boils, headaches, hemorrhoids, rattlesnake bites, sprains, swellings, and tumors. It was used for relieving   |

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|  | <p>the pains of rheumatism and sciatica as an ointment, and easing spasms of Parkinsons disease. The juice of the leaves is in warm milk was used to expel intestinal worms including cestodes, seeds with palm oils used externally for insect bites and stings, in Nigeria. In Ayurvedic medicine, the plant was used for the treatment of ulcers, wounds, inflammation, sciatica, bruises and swellings, rheumatism, gout, asthma bronchitis and toothache.</p>   |
| <b><i>Delphinium ajacis</i></b>                              | <p>It seems that the ancient Egyptians used larkspur about 3,000 years ago to decorate mummies. Medicinally, herbalists have recommended larkspur juice in the past, as a purgative and as a treatment for colic. The North American Cherokee Indians, despite being aware of its poisonous nature, they were used it as infusion for the treatment of some heart problems. Entire plant, including roots and seeds, was used topically, but not on abraded skin. It was used as parasiticide, a tincture was used to destroy lice in hair.</p>  |
| <b><i>Delphinium brunonianum</i></b>                         | <p>It was poisonous; The flowers were considered acrid, bitter and astringent; seeds are cathartic, anthelmintic, emetic and insecticidal. Aerial parts were used as oral infusion for pneumonia, headache and stomachache in Skardu Valley at high altitude of Karakoram-Himalayan Range, Pakistan. <i>Delphinium brunonianum</i> Royle was also used to cure baldness, diarrhoea stomach ache and fever, while its flower decoction was used for cough, chest problems, throat problems, piles and high blood pressure in Gilgit-Baltistan, Pakistan. The plant was used extensively by the community in Manang district, Nepal, for the treatment of fever, headache, stomachache and poison removal.</p> |
| <b><i>Dodonaea viscosa</i></b>                               | <p><i>Dodonaea viscosa</i> was used in the treatment of rheumatism, skin infections, diarrhoeas, stomachaches, pains of hepatic or splenic origin, uterine colic and other disorders involving smooth muscles, antipruritic in skin rashes, dermatitis, hemorrhoids and sore throat. The infusion of leaves was used to treat rheumatism, gout, hemorrhoids, fractures and snake bites.</p>  |
| <b><i>Dolichos lablab</i> (Syn: <i>Lablab purpureus</i>)</b> | <p>The plant was used as decoction in alcoholic intoxication, for the treatment of cholera, diarrhoea, globefish poisoning, gonorrhoea, leucorrhoea and nausea. Seeds were used to stimulate stomach, as antidote for poisoning, for menopause and spasms, and for the treatment of cholera, diarrhoea, colic, rheumatism and sunstroke. The juice from the fruit pods was used as astringent, digestive, stomachic, to expel worms and for the treatment of inflamed ears and throats. The flowers</p>  |

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|                                      | were used to treat inflammation of uterus and to increase menstrual flow.   |
| <b><i>Eryngium creticum</i></b>      | It was cultivated for the consumption as a leafy vegetable in salads. It was used medicinally as a diuretic and laxative. Roots and seeds were immersed in water are drunk by people to treat kidney stones, infections, skin diseases, and tumors as antidote for the treatment of the snakebite. It was also used for the treatment of liver diseases, poisoning, anemia and infertility.   |
| <b><i>Erysimum repandum</i></b>      | The plant was used in Spain as an antiscorbutic. The seeds were used in the treatment of fevers. In Iraq, the seeds were used in fever, scurvy and to relieve pain in stomach and as antiscorbutic. In Iran, smoke of burning fruits was considered to be beneficial for eye ailments.  |
| <b><i>Eucalyptus species</i></b>     | The oil was used traditionally for the treatment of cystitis, diabetes, gastritis, kidney disease, laryngitis, leukorrhoea, malaria, pimples, ringworm, wounds, ulcers of the skin, urethritis and vaginitis. It was also used as an expectorant for symptomatic treatment of mild inflammation of the respiratory tract, bronchitis, asthma, and inflammation of the throat. In south Europe, oil was used for fever, neuralgic pain, asthma, lung tuberculosis and as an antiseptic agent. It is used externally for wounds, acne, poorly healed ulcers, stomatitis, bleeding gums, rheumatism and neuralgia. However, there were three broad categories of uses for Eucalyptu oil (medicinal, industrial and perfumery/flavouring).  |
| <b><i>Ficus carica</i></b>           | <i>Ficus carica</i> was emollient, demulcent, cooling, laxative and nutritive. The edible fruits of <i>Ficus carica</i> were traditionally used for treatment of hemorrhoids, insect stings, gout, ulcers, and skin infections such as warts and viruses. Fruits were usually recommended for people suffering from constipation, nutrient for pregnant women and for mental and physical exhaustion. They were considered as antipyretic, tonic, purgative, alexiteric, aphrodisiac, lithontriptic, anti-inflammatory, expectorant, diuretic, and used for treatment of pharyngitis, gastritis, bronchitis, irritative cough, weakness, paralysis, thirst, diseases of the liver and spleen, pain in the chest, to cures piles, to stimulate growth of hair, and for leprosy and nose bleeding. The root was used as tonic, for leucoderma and ringworm. |
| <b><i>Fritillaria imperialis</i></b> | <i>Fritillaria imperialis</i> was used traditionally for the treatment of sore throat, cough, asthma, bronchitis, scrofula, gland tumor, dysuria and haemoptysis. The bulb was used as diuretic, emollient and resolvent. It was also used as an expectorant and to encourage increased breast milk production. The bulb was poisonous raw, it contained low concentrations of a toxic alkaloid.  |

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| <b><i>Geum urbanum</i></b>              | It was used as sedative, hemostatic, astringent and anti-inflammatory. It was also used internally in digestive problems such as loss of appetite and diarrhea. The root was used externally as a gargle for gum and mucous membrane inflammations and as a bath additive or poultice for frost bite, hemorrhoids and skin diseases. Homeopathic applications of the plant were included inflammations of the bladder and urinary tract.   |
| <b><i>Glaucium corniculatum</i></b>     | The plant was use in diabetes and a neurasthenia. Flowers and juice with honey were applied at purulent wounds. In Persian pharmaceutical manuscripts, <i>Glaucium corniculatum</i> flowers were used for epistaxis. In Turkey, the plant was used as tranquilizer, for coughing, as narcotic and to reduce heart palpitation. Oil extracted from the plant was used for eye diseases especially inflamed, wet and tearing eyes. The poultice of macerated roots was used to decrease cholesterol and for the treatment of acne. |
| <b><i>Hyoscyamus reticulatus</i></b>    | It was used in asthma, gastric ulcers, for motion sickness and in Parkinson 's disease. It was also used as mydriatic, spasmolytic, analgesic, sedative and as antidote for intoxications of many poisons.   |
| <b><i>Hypericum triquetrifolium</i></b> | <i>Hypericum triquetrifolium</i> was used in traditional Arab herbal medicine to treat various inflammatory diseases and as sedative, astringent, antispasmodic, for intestine and bile disorders and poisoning. It was used in Turkish folk medicine in the treatment of bile and intestinal ailments.  |

## CONCLUSION

This study highlighted the importance of Iraqi medicinal plants in the treatment and management of human diseases and ailments as known by traditional medicine.

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