

SOME HERBAL MEDICINE TRADITIONALLY USED IN SOUTH JORDAN "AL-KARAK REGION" BETWEEN ITS CLAIMED MEDICAL EFFECTS AND ITS DOCUMENTED EXPERIMENTAL FINDS.

Lidia Kamal Al-Halaseh

Pharmaceutical Science, Al-Balqaa Applied University, Jordan"

ABSTRACT

This study evaluates the traditional use of 16 sixteen wild medicinal plants and spices act as a complementary and alternative medicine used by patients in south Jordan "Al-Karak region".

These plants, which frequently prescribed by the Herbalist "Attarin" are:

Peganum harmala, *Portulaca oleracea* portulacaceae, *Ricinus communis*, *Matricaria aurea* compositae, *Pimpinella anisum* Umbelliferae, *Nigella sativa*, *cinnamomum zeylanicum* lauracea, *Foeniculum vulgare*, *Rosmarinus officinalis* labiatae, *Hibiscus sabdariffa*, *cuminum cyminum*, *Zingiber officinale*, *Artemisia vulgaris*, *Thymus vulgaris*, *Trigonella foenum-graecum*, *Crocus sativus*.

These plants are studied for their claimed properties in healing diseases in Gastrointestinal, immune, Respiratory, cardiovascular, dermal, genitourinary, memory difficulties, nervous systems and others

INTRODUCTION:

Utilizing the healing properties of plants is an ancient practice. People in all continents have long used hundreds, if not thousands, of endogenous plants for treatment of various ailments dating back to prehistory. Theses plants are still widely used in ethno medicine around the world.

Medicinal plants are known for decades as essential recourses to human healthy and wellbeing. The traditional culture use of plant prescriptions and their protective and therapeutic importance is most likely related to low cost, easy access, limited side effects and folk relation ship with it.

DISCUSSION:

The following plants are some of the most traditionally used by citizens in south Jordan "Al-Karak".

1. Peganum harmala

Peganum harmala L. is a medicinally important wild herbaceous plant of the family Zygophyllaceae, its common name "Harmala" and its one of the ethnobotanical plants of the Middle East and Mediterranean that is also widely used in the traditional and ethno-medicinal system of different cultures.

Medicinally it's widely used for psychoactive reaction purposes, that due to the high level of "Harmalin alkaloid" which found in the seeds and roots of *Peganum*.

"Harmalin" alkaloid is potent reversible and competitive inhibitors of human monoamine oxidase (MAO) which is responsible for its antidepressant effect (**Herraiz et al., 2010**).

Peganum harmala also have been used in traditional medicine for treatment of a various diseases and to relieve dolorous process. And its analgesic effect act partly through an opioid mediated mechanism, because the alkaloid extracted from *Peganum harmala* seems to have both central and peripheral antinociception activities, and its action is reversed by naloxone which indicated that it may be mediated by opioid receptors. (**Loubna et al., 2008**)

Although *Peganum harmala*; due to the presence of B-carboline alkaloid, which has been isolated from the seeds of *peganum harmala*, was tested for their antibacterial activity and the methanolic extract was found to be most effective against many microorganism. (**Prashanith et al., 1999**).

In another study done by F.lamchouri and his friends, *peganum harmala* alkaloids show an effect on cancerous cell-line lead to cell lyses then cell death after treatment of tumoral cell-lines in vitro with treatment of methanolic extract. (**Lamchouri et al., 2000**).

After experimental work, sarfaraz khan found that harmine was the most effective against *proteus vulgaris*, *Bacillus subtilis* and *candida albicanis*, and they recommended the use of such compounds as new antimicrobial biorational (**Gomah, 2010**).

2. *Portulaca oleracea* portulacaceae

This plant is widely used in south Jordan-Al-Karak region for its wound healing activity, which is work by accelerate the healing process by decreasing the surface area of the wound and increasing the tensile strength. For this purpose fresh homogenous crude aerial parts of *portulaca* were applied topically on the excision wound surface (**Rashied et al., 2003**).

An aqueous extract of the stem and leaves of *porulaca oleracae* observed a therapeutic effect as a skeletal muscle relaxant, this due to the action role of K⁺ ion content of the plant (**Olwen parry et al., 1993**).

In ancient various medical books, the therapeutic effects of *portulaca oleracea* also was investigated for respiratory diseases due to the relaxant effect of this plant on smooth muscle tension tissue, so *portulaca oleracea* has a relatively potent but transient bronchodilator effect on asthmatic airways (**Malek et al., 2004**).

Oleracea also exhibit antihypoxic activity which might be related to promoting the activity of the key enzymes in glycolysis and improve the level of ATP (**Cheng-jie et al., 2009**).

Portulaca possesses some of the claimed traditional uses of the wild species in the relief of pain and inflammation, after comparing its effect with diclofenac in vitro (**Chan et al., 2000**).

3. *Ricinus communis* L.

The castor bean plant (*Ricinus Communis* L.) or Wonder tree which is cultivated in many countries as an ornamental annual plant, is considered as one of the most toxic natural poisons due to the presence of the alkaloid "Ricin" (**Vera Coopmen et al., 2009**).

The laxative effect of ricinus oil is due to its conversion to ricinoilec acid which increases the peristalsis movement in human intestines.

Ricinus communis leaves extract show antinociceptive potential that may be due to saponin, steroids and alkaloids in it (**Daneshwar et al., 2011**).

Ricinus communis ethanolic root extract, contains mainly flavonoids and saponins, are reported by Dnyaneshwar and his friends to possess mast cell stabilizing and antianaphylactic activity, so it shows good antihistamine activity. (**Daneshwar et al., 2011**).

While Raju Ilavarsan and his friends study the methanolic extract of Ricinus communis euphorbiaceae, and its anti-inflammatory and free radical scavenging activity.

The result of their study indicates that the methanolic extract of Ricinus communis root possesses significant anti-inflammatory activity and they suggest that this pharmacological activity may be due to the presence of phytochemicals like flavonoids, alkaloids and tannins present in the plant extract (**Raju et al., 2006**).

Also the extract of the pericarp of castor bean (Ricinus Communis) shows some typical central nervous system stimulant effects.

The memory-improving effect and the seizure-electing properties of the extract, so its suggested by Anete C Ferraz, that the extract may be considered as a promising cognition enhancing drug that may be used for the treatment of human amnesias (**Anete et al., 1999**).

Also R.communis seems to have some hypoglycemic activity which is a promising value for the development of a potent phytomedicine for diabetics. (**Poonam et al., 2008**).

Traditionally, one castor seed swallowed as such prevent Pregnancy and work as contraceptive activities in women, used it as a contraceptive method.

This prescribed by "Attareen" Herbalist, for its effectiveness and safety method. And also there is a study done by **Okwuasaba F.K (1991)**, proved this and suggest that the estrogen-like activities exhibited by the methanolic extract of R.Communis seeds, exhibited dose-dependent contraceptive effect despite the fact that 5-8 seeds may kill a mature person (**Knight 1979; Salhab et al., 1996; Okwuasaba, 1991**).

4. Matricaria aurea compositae.

In traditional folk medicine, chamomile has been promoted as a treatment for a long list of ailments. Today, it is most commonly promoted as a sedative to induce sleep and to soothe gastrointestinal discomfort caused by spasms and inflammation. Some proponents also claim chamomile calms the mind, eases stress, helps menstrual disorders and migraines, and reduces pain from swollen joints and rheumatoid arthritis.

Topical chamomile is promoted to reduce inflammation caused by sunburn, rashes, eczema, hemorrhoids, mouth sores, diaper rash, nipple irritation, and eye problems. It is also touted to help speed wound healing.

The different classes of bioactive compounds in chamomile are used in medicinal preparation as well as cosmetics and these compounds include terpenoids and flavonoids. (Jan meijai K.Srivastava,2009).

Matricaria has some hypoglycemic effect according to in vitro tests done by Zohran and his friends. (**Zohran, et al., 1987**).

Oxatomide, the component of hot water extraction of chamomile flower, possesses anti-allergic properties (**Kobayashi et al., 2003**).

Another finding by Marziyeh Toluee et al, indicates the potential use of M.Chamomilla essential oil in preventing fungal contamination and subsequent deterioration of stored food and other susceptible materials (**Marziyeh Toluee et al., 2010**).

Drinking of chamomile tea is stated to boost the immune system and helps fight infections associated with cold and thus shows its health promoting benefits.

Other observation by zahro Amirghofran etl, revealed the capacity of Matricaria extracts to enhance immunosystem (**Zahra Amir et al., 2000**).

Another study showed a synergistic effect between essential oil of chamomile and antihistamine for purities which could not be perfectly resolved alone by conventional antihistamines (**Yoshinori Kobayashi et al., 2005**).

5. *Pimpinella anisum* Umbelliferae

Anise is an annual culinary herb which is a native of the Middle East, Anise oil is a colorless or pale-yellow liquid, with the characteristic odor and taste of the fruit, the oil has now replaced the fruits for medicinal and flavoring purposes. The chief constituent of anise oil is Anethole, which is present in large quantity and is mainly responsible for the characteristic flavor of the oil.

Antispasmodic: the relaxant action displayed by *pimpinella anisum* justifies its use in the folk medicine as antispasmodic agent, that probably due to its inhibition action on acetylcholine-induced contraction (**Carlos, et al., 2007**).

Antibacterial: the essential oils and methanol extracts revealed promising antibacterial activities against most pathogens, maximum activity of thymus vulgaris and piminella anisum essential oils and methanol extracts, against staphylococcus aureus, bacillus cereus and proteus vulgaris and combination of essential oils and methanol extracts showed an additive action against pseudomonas aeruginosa. (**Firas, 2008**).

Andallu & Rajeshwari study the traditional uses of aniseed for dyspeptic complaints, spasmodic gastrointestinal bloating and flatulence, catarrh of the upper respiratory tract also antispasmodic, antibacterial, antimutagenic and antipyretic activity, furthermore it shows anticonvulsant and used for the treatment of constipation (**Andallu & Rajeshwari, 2011**).

Also *pimpinella anisum* mixed with foeniculum, vulgare (fennel) have been used as estrogenic agents for millennia, specifically they have been reputed to increase milk secretion, promote menstruation, facilitate birth, alleviate the symptoms of the male climacteric and increase libido.

This estrogenic effect probably due to the active agents, anethole and dianethole and photoanethole (**Michael,1980**).

6. *Nigella sativa*

The seeds of *Nigella sativa* Linn. (Ranunculaceae), commonly known as black seed or black cumin, are used in folk (herbal) medicine all over the world for the treatment and prevention of a number of diseases and conditions.

The seeds of *nigella sativa* L, have been used in traditional medicine by many Asian, for the treatment of cough, abdominal pain, diarrhea, Asthma, rheumatism, the aqueous and oil extracts of the seed have been shown to possess antioxidant, anti-inflammatory, anticancer, analgesic and antimicrobial activities.

The most abundant constituent of black seed essential oil "thymoquinone" is responsible for many of the seeds beneficial effects (**Hala Gali-Mohtasib, 2006**).

Nigella sativa has a relatively potent antiasthmatic effect on asthmatic airways, however the effects of boiled extract of this plant is relatively compared to that of theophylline (**Mohesen 2010**).

Nigella sativa L. (Ranunculaceae) seeds also have been used traditionally for centuries, notably for treating diabetes. And the suggested mechanism observed by Bouchra Meddah and her friends is that *nigella sativa* directly inhibit the electrogenic intestinal absorption of glucose in vitro.

So these effects further validate the traditional use of *Nigella sativa* seeds against diabetes. (Bouchra Meddah *et al.*, 2009).

In another study done by M El-Dakh akhny etl. They conclude that *nigella sativa* oil imparted a protective action against ethanol induced ulcer (El-Dakh Akhny *et al.*, 2000).

Also diethyl ether extract of *nigella sativa* seeds caused concentration dependent inhibition of gram positive bacteria represented by *staphylococcus aureus*, gram negative bacteria represented by *pseudomonas aeruginosa* and *escherichia coli* and a pathogenic yeast *candida albicans* (Hanafy, 1991).

7. *cinnamomum zeylanicum lauracea*

Cinnamomum has long been prescribed in traditional medicine for the treatment of inflammation-related disease, such as rheumatism, sprains, bronchitis and muscular pains.

The anti-inflammatory action of *cinnamomum* may be due to the modulation of cytokine, and PGE2 production (Hye Ja Lee *et al.*, 2006).

Cinnamomum oil showed strong antimicrobial activity and anticarcinogenic properties and indicated the possibilities of its potential use in the formula of natural remedies for the topical treatment of infections and neoplasma (Mehet *et al.*, 2010).

Also the unconventional parts of cinnamon serve as a good source of antioxidant and antimutagenic due to its phenolic constituent (Jaya Prakasha *et al.*, 2007).

A study by Heping cao and his freinds, indicates that *cinnamoum* extract regulate the expression of multiple genes in dipocytes and this regulateion could contributed to the potential health benefits (Heping Cao *et al.*, 2010).

Cinnamomum Zeylanicum extracts among with *Mentha piperitta*, *Apium graveolens*, *Eucalyptus camaldulens* and *ruta graveolens*, posses antinociceptive and anti-inflammatory effects (AlKofahi, 1998).

8. *Foeniculum vulgare*

Fennel (*foeniculum vulgare* mill) is a widespread perennial umbeliferous herb, traditionally used for medicinal purposes and human consumption.

It is highly recommended for diabetes, bronchitis, and chronic coughs, and for the treatment of kidney stones (Lillian barros *et al.*, 2007).

Some of these chronic diseases are related to the production of radical species involved in the oxidative stress. Therefore, the antioxidant potential of this herb might explain some of their empirical uses in folk medicine.

Lillian barros and its friends, claimed its oxidant effect due to the presence of high percentage of phenolic compounds and ascorbic acid in higher concentration, tocopherol.

Foeniculum vulgare is a plant which has been used an estrogenic agent also has a great efficacy in controlling idiopathic Hirsutism (Javidnia *et al.*, 2003).

The antioxidant activity of water and ethanol extracts of fennel [*foeniculum vulgare*] seed was evaluated by Munir oktay and etl, and the result of their study indicated

that the fennel (*f. vulgare*) seed is a potential source of natural antioxidants (**Munir oktay et al., 2003**).

In other study, B.singh and R.K.Kale investigates the antioxidant activity of foeniculum and found that were indicative of chemopreventive potential of fennel against carcinogenesis (**Bingh et al., 2003**).

In another study a comparison between fennel and mefenamic acid for the treatment of primary dysmenorrhea, namavar and his friends concluded that the essences of fennel can be used as a safe and effective herbal drug for primary dysmenorrheal, and it may have a lower potency than mefanemic acid. (**Namavar, et al., 2003**).

Also, Anethol, the main component of foeniculum essential oil, shows antiplatelet properties due to its ability to destabilize the retraction of the coagulum and at the antithrombotic dosage they were free from prehemorrhagic side effect.

F. vulgare essential oil, and its main component anethole, is a safe antithrombotic activity that seems due to their broad spectrum antiplatelet activity, clot destabilizing effect and vasorelaxant action. (**Massimilians et al., 2007**).

Larvicidal activity also shown by foeniculum vulgare seed and this was proofed by a laboratory study done by **Safia et al., (2010)** who study the bioactivity of the essential oil of foenicum vulgare against culax pipiens mosquito.

The results represent a potential alternative to chemical insecticide. (**Safia et al., 2010**).

9. *Rosmarinus officinalis labiatae*

Rosemary (*Rosmarinus officinalis* Linn. Fam. Labiatae) is an evergreen branched bushy shrub, the plant is cultivated for its aromatic oil which is called "rosemary oil" and is obtained by steam distillation of the fresh leaves and flowering tops of the plant. Rosemary has several therapeutic applications in folk medicine in curing or managing a wide range of disease. The extract of *R. officinalis* produce antidepressant like effect, its antidepressant action is mediated by an interaction with the monoaminergic system. (**Daniele et al., 2009**).

Also *R. officinalis* is used for its properties to cure pain such as arthritis, abdominal pain and antispasmodic.

A study done by **Rosa et al. (2011)** aim to investigate the possible mechanism involve in and its demonstrate the involvement of calcium channels but not the participation of nicotinic receptors, prostaglandins or nitric oxide (**Rosa et al., 2011**).

Rosemary, used in traditional Arabic and Turkish folk medicine for the treatment of hyperglycemia and is widely accepted as one of the medicinal herbs with the highest antioxidant activity.

According to the study, during 1 week of treatment of diabetic rabbit with a dose of 200mg/kg of the ethanolic extract showed that the extract possessed a capability to inhibit the lipid peroxidation and activate the antioxidant enzymes. It was concluded that probably, due to its potent antioxidant properties. *Rosmarinus officinalis* extract exerts remarkable antidiabetogenic effect (**Tulay et al., 2008**).

Diuretic effect: mounsif haloui and his friends assessed diueritic effect of two medicinal plants: *Rosmarinus officinalis labiatae* and *centaurium erythrae gentianaceae*, both reported for the treatment of urinary ailments.

The results show a decrease in sodium and chloride concentration and a decrease in creatinine clearance.

The finding of the study demonstrate a diuretic effect of aqueous extracts of *R.officinalis* and *erythracea* with the most effective dose for water and electrolyte excretion being 8% for both plants. (Mounif *et al.*, 2000).

Anti-inflammatory: a study showed that cornosal, betulinic acid and ursolic acid compounds could be responsive for this anti-inflammatory effect (Jucelia *et al.*, 2011).

Hypoglycemic effect: The effects of the volatile oil extracted from the leaves of *Rosmarinus officinalis* on glucose and insulin levels were investigated in normal rabbit. Suggest that the volatile oil of *Rosmarinus officinalis* has hyperglycemic and insulin release inhibitory effect (Al-Hader *et al.*, 1994).

Antibacterial: a study to determine the antibacterial effect of *R.officinalis* extract by naser jarrar,. The antimicrobial activity of combination of ethanol effects against all MRSA's. (Methicillin-resistance *staphylococcus aureus*). So that work clearly demonstrates that rosemary has a key role in the elevation of susceptibility to B-Lactams (Naser *et al.*, 2010).

10. Hibiscus sabdariffa:

Hibiscus sabdariffa is a plant known in many countries and is consumed as hot and cold drinks, in addition to its use in folk medicine, it has been suggested as treatment as for many conditions including hypertension.

A study demonstrates that *H.sabdariffa* extract has a vasodilator effect in the isolated aortic rings of hypertensive rats. These effects are probably mediated through the endothelium -derived nitric oxide-cGMP-relaxant pathway and inhibition of calcium ion influx into vascular smooth muscle cells In vivo study, to observe the antihypertensive effect of *H.sabdariffa* methanolic extract (Ajay *et al.*, 2007; Wahbi *et al.*, 2010).

Other study done to compare weight gain and food consumption in pregnancy with and without extracts of *Hibiscus sabdariffa*. The study showed that consumption of aqueous extract of the calyx of HS during pregnancy decrease food consumption and weight gain through mechanisms that may depend on Na⁺ in HS content and elevating Na⁺ concentration (Eghosa *et al.*, 2010).

Antihyperlipidemia: to investigate the action of *Hibiscus sabdariffa* extract on reducing hyperlipidemia, Salvador *et al.* (2011) study the quantification of the polyphenolic fraction, on the cyanin and other polar compounds, the antioxidant capacity and anti-hyperlipidemic action of the aqueous extract of *hibiscus sabdariffa* had been achieved, the plant extract also exhibited the capacity to decrease serum triglyceride concentration on hyperlipidemic mouse model (Salvador *et al.*, 2011).

Another clinical study to investigate the cholesterol lowering potential of *H.sabdariffa* extract in human subjects, was conducted and the observation of lowered serum cholesterol make them suggests that H.S may be effective in Hypercholesterimic patients (Tzu-lilin *et al.*, 2007).

11. Cumin: *cuminum cyminum* L.,

Cumin (*Cuminum cyminum* L.) is an aromatic plant included in the Apiaceae family and is used to flavor foods, added to fragrances, and used in medical preparations.

Cumin possesses numerous medicinal properties. It is an aromatic herb and an astringent that benefits the digestive apparatus. It has been used in the treatment of mild digestive disorders as a carminative and eupeptic, and as astringent in broncopulmonary disorders, and as a cough remedy, as well as an analgesic (Safoura *et al.*, 2010).

A comparison between *C.cuminum* oil and *R.Officinalis* oil against *E.coli*, *S.aureus* and *L. monocytogenes* shows that *C.cuminum* oil exhibited stronger antimicrobial activity than did *R.officinalis* oil. Because both *R.officinalis* and *C.cuminum* essential oils show a powerful antioxidant activity, they may be considered as potent agents in food preservation (**Latif et al., 2007**).

In another study to evaluate the contraceptive efficacy of *cuminum* seeds, the observation shows that *C.cuminum* treatment resulted in the inhibition of spermatogenesis and fertility without producing apparent toxic effects (**Radhey et al., 2011**).

The effects of different cumin extracts, example: saline, hot aqueous, oleoresin and essential oil were studied for various enzymatic activities, results showed maximum increases in amylase protease, lipase and phytase activities in the presence of saline and hot aqueous extracts. Thus the cumin can find potential use in various health food formulations, showing improved digestibility and a good nutrient composition (**Muthamma et al., 2008**).

Cumin seed found to be remarkably beneficial in reduction hyperglycemia and glucosurea, this was accompanied by improvement in body weights, some metabolic alterations as revealed by lowered blood urea level and reduced excretion of urea and creatinine. (**Willatyamuwa et al., 1998**).

12. *Zingiber officinale*:

Zingiber officinale Rosacea Zingiberaceae is a medicinal plant that has been widely used herbal medicine, all over the world, for a wide array of unrelated ailments that include arthritis, rheumatism sprains, muscular aches, pains, sore throat, cramps, constipation, indigestion, vomiting, hypertension, dementia, fever, infectious disease and helminthiasis.

In a recent study take place in 2008, by Badreldin Ali, Further scientific investigations mentioned other pharmacological action such as immuno-modulatory, Anti-tumorigenic, Anti-inflammatory, anti-apoptotic, anti hyperglycemia, anti-lipidemic and anti-emetic actions. Its give considered a safe herbal medicine with only few and insignificant adverse effects (**Badreldin et al., 2008; Collen et al., 2012**).

Xiao-lan et al. (2011) tested a hypothesis that a steaming process affects the chemical profile and anticancer potential of ginger. Their study elucidated the relationship of the heating process with the constituents and anticancer activity and developed an optimized processed ginger extract for chemotherapy (**Xiao-lan et al., 2011**). Also the constituents of ginger (gingerol) showed larvicidal activities (**Rong-jyh et al., 2010**).

Ginger is known to posses hypolipidemic-antioxidant and hepatoprotective properties (**Gehan et al., 2010**).

In a unique study 2006, Ginger posses effectiveness as indomethacin in relieving symptoms of osteoarthritis with negligible side effect, therefore in patients with intolerance to indomethacin, ginger may be substituted (**Anousheh et al., 2006**). Ginger is now existing considerable interest for its potential to treat many aspects of cardiovascular disease. Also it shows considerable anti-inflammatory, anti-oxidant, anti-platelets, hypotensive and hypolipidemic effect (**Rachel et al., 2009**).

Zingiber has antioxidant, anti-inflammatory and anti-cancer properties which are attributed to the presence of certain pungent vallinoids, (6-gingerol, shagols) (**Yogeshwer et al., 2007**).

Ginger is a common traditional remedy taken by numerous women experiencing nausea and vomiting in pregnancy (NVP). There is considerable evidence to support its effectiveness as an anti-emetic, but we should be aware of the risk and benefit of ginger, appropriate duration of treatment, consequences of over-dosage and potential drug-herb interactions. in order to provide comprehensive and safe information to expectant mothers. (Denise, 2012; Mingshuang *et al.*, 2012).

The results of study, suggest that in uterus exposure to ginger tea results in increased early embryo loss with increased growth in surviving fetuses (Jenny, 2000).

The summary of 6-months clinical experience done proposed that a 5% solution of essential oil of ginger, *Zingiber officinale*, is an effective post-operative nausea and vomiting (PONV) prevention (James, 2005).

13. *Artemisia vulgaris*, *Artemisia herba alba*:

Artemisia is called "white wormwood" in English, "armoise blanche" in French and "sheeh" in Arabic, is a well known plant for its medicinal uses and widespread all over Asia and Europe.

Traditional use of *Artemisia vulgaris* in the treatment of asthma and hyperactive gut, is due to the presence of a specific competitive histamine receptors antagonist and smooth muscle relaxant activity in *Artemisia vulgaris* extracts on the smooth muscle in ileum and trachea (Gaudenico, *et al.*, 2011).

Essential oils from *Artemisia* (worm wood) are of botanical and pharmaceutical interest. They are used in traditional remedies in many parts of the world, impure from the oil is a poison, nearly all species are intensively bitter and strongly aromatic. Extracted substances from the plant have an antimicrobial action and some of these substances have potential use in mosquito control. Other properties include toxicity to nematodes.

Anti tuberculosis: in a clinical case study done, a 2-year old boy suffering from tuberculosis sclerosis is his salaam spasms had not been controlled by a combination of sodium valproate and nitrazepam but decreased and finally ceased after medication with *Artemisia* 30, despite nitarzepam having been discontinued during this treatment (Jack, 1987).

Artemisia vulgaris exhibits combination of anticholinergic and Ca^{++} antagonist mechanisms, which provides pharmacological basis for its folkloric use in the hyper active gut and airways disorders, such as abdominal colic, diarrhea and asthma (Arif-ullah *et al.*, 2009). *Artemisia herba alba* (sheeh) is widely used in Arabic folk medicine for the treatment of diabetes mellitus and its aqueous extract produce a significant reduction in blood glucose level according to the study (Shahba *et al.*, 1993).

14. *Thymus vulgaris*:

Thymus vulgaris L. (thyme) is an aromatic plant belonging to the Lamiaceae family, used for medicinal and spice purposes almost everywhere in the world.

Many in vitro experiments, carried out during the last decades, Revealed well defined pharmacological activities of both, the thyme essential oil and the plant extracts.

The non-medicinal use of thyme is worthy of attention, because thyme is used in the food and aroma industries; it is widely used as culinary ingredient and it serves as a preservative for foods especially because of its antioxidant effect.

Thyme essential oil constitutes is a raw material in perfumery and cosmetics due to a special and characteristic aroma. (Zarzuelo *et al.*, 2002).

The essential oil of *thymus vulgaris* has a potential antioxidant activity and properties effect against aflatoxins (**Aziza, 2011**).

In another study, a combination of essential oils show antibacterial activities were evaluated using an extract from aerial parts of *thymus vulgaris* and seed parts of *pimpinella anisum*, the extracts show good activities against gram-positive and gram-negative pathogenic bacteria: *staphylococcus aureus*, *Bacillus cereus*, *Escherichia coli*, *proteus vulgaris*, *proteus mirabilis*, *salmonella typhi*, *salmonella typhimurium*, *klebsiella pneumoniae* and *pseudomonas aeruginosa* (**Al-Bayati, 2008; Hazzit et al., 2009**).

Other important role of the water extracts of *thymus vulgaris* in combination with the water extract of ginger (*zingiber officinale* roscoe) is to detoxify the injuries of alcohol abuse on liver and brain. This result showed, recommended using the extracts to avoid Alcohol toxicity (**Ali et al., 2009**).

Also methanol extract of thyme (leaf of *thymus vulgaris labiatae*) has been used as an important stomachic, carminative, a component of prepared cough tea and a spice (**Junichi et al., 2004**).

15. *Trigonella foenum graecum*

Trigonella foenum graecum L also known as fenugreek, is one of the oldest medicinal plants and has a long history of medical use in traditional and modern literature.

Trigonella foenum-graecum (fenugreek) leguminosae is employed as a herbal medicine, its seed is known for their carminative, tonic and antidiabetic effects and anti-ulcer effects (**Tayyaba et al., 2001**).

Fenugreek is a self pollinating crop, which is a native plant of the Indian subcontinent and the eastern Mediterranean region. Fenugreek is used for a variety of purposes. Fenugreek seed extract is the principle flavoring, ingredient of stimulated maple syrup. It is also used as a tobacco-flavoring ingredient, hydrolysed vegetable protein flavor, perfume base and a source of steroid sapogenin in drug manufacturing industries. The leaves are commonly consumed as vegetables.

Fenugreek seeds have been known for a long time for their antidiabetic action. It also would be a significant contribution to the daily management and stabilization of blood glucose and lipid levels for non-insulin dependent diabetes. It is likely that fenugreek galactomannan (a constituent of fenugreek seeds, stimulates glycogenesis and/or inhibits glycogenolysis. (**Sirajudheen et al., 2011; Tapan et al., 2010**). Fenugreek also stimulates lactation in breast-feeding mothers (**Tapan et al., 2010**). *Trigonella foenum-graecum* extract possesses a hypoglycemic effect (**Jamal et al., 1997**).

Fenugreek (*Trigonella foenum-graecum*) has a wide variety of therapeutic properties for allergic and inflammatory diseases and is used as a traditional functional food. Its antiallergic effect is suggested to be due to its effect on T-Helper cells (**Min-Jung et al., 2012**).

All fenugreek plant parts showed anti-fungal potential and the magnitude of their inhibitory effect was species and plant parts dependent (**Haouala et al., 2008**).

Fenugreek seeds possess antiulcer potential and Gastroprotective effect (**Suja et al., 2002**).

A unique study published in 2012, showed that fenugreek extract possesses antidepressant like effects in animal models of depression by brain serotonin turnover enhancement (**Vaibhav, et al., 2012**).

16. Saffron /crocus sativus

Crocus sativus L. commonly known as saffron is the raw material for one of the most expensive spices in the world and it has been used in folk medicine for centuries.

Saffron can possess a potential application in cancer bio-therapy (**Jose-Antonio, 2006**).

Saffron (crocus sativus.L) is traditionally used as a coloring or flavoring agent, but recent research has shown its potential to promote health.

The constituents of interest include crocin, crocetin, picrocin and safranol, which all have health promoting properties.

Many studies have found that saffron constituents alleviate or prevent gastric disorders, cardiovascular disease, insulin resistance, depression, premenstrual syndrome, insomnia and anxiety.

Saffron also shows promise in the prevention of cancer due to its anti-oxidant properties (**John et al., 2010**).

In a study by **Hajime (2011)**, purposes to clarify the effects of saffron odor on symptoms unique to women. Their finding indicate that saffron odor exert some effects in the treatment of pre-menstrual syndrome (PMS), dysmenorrhea and irregular menstruation. This is due to significant decrease in cortisone level and increase in estradiol level.

Another study of the cognitive decline and memory defects that could be the result of oxidative stress and impaired cholinergic function due to brain aging.

The study shows a positive effect of saffron extract in enhancing memory (**Magdalini et al., 2011**).

Crocin, a major constituent in saffron, significantly decreases plasma level of corticosterone as a measure of stress, and also the observation of **Behshid et al. (2011)**, indicates that saffron and its active constituents crocin can prevent the impairment of learning and memory as well as the oxidative stress damage induced by chronic stress. Saffron (crocus sativus) is evaluated for its short-term safety and tolerability, and it has no significant effect on hematological parameter or blood pressure so it is considered as a safe herb. (Mohammad Hadi, et al., 2008).

Treatment of males suffering from erectile dysfunction with saffron from erectile dysfunction with saffron extracts for a short period up to 10-days shows significant improvement on sexual function (**Ali Shames et al., 2009**).

Saffron can possess anticancer, anti-inflammatory, anti-atherosclerotic, antitumor activities (**Changkeun et al., 2012; Nair et al., 1991**).

SUMMARY

| Botanical name | Common name | Documented Medical uses |
|----------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Peganum harmala | harmala | Anti psychotic, antidepressant analgesic, antibacterial, anticancer. |
| Portulaca oleracea portulacaceae | Jreyt elhamam | wound healing activity, skeletal muscle relaxant, antihypoxic, relief of pain and inflammation |
| Matricaria aurea compositae. | babonej | Stress, menstrual disorders, migraines, reduces pain from swollen joints and rheumatoid arthritis. Sedative, reduce inflammation caused by sunburn, rashes, eczema, hemorrhoids, mouth sores, diaper rash, nipple irritation, and eye problems. help speed wound healing. Hypoglycemic, anti-allergic gastrointestinal discomfort, cosmetics, Antifungal, food preservative, boost the immune system. |
| Pimpinella anisum Umbelliferae | yanson | Antispasmodic, Antibacterial dyspepsia, bloating and flatulence, catarrh of the upper respiratory tract antispasmodic, antibacterial, antimutagenic, anticonvulsant, antipyretic, Constipation, increase milk secretion, promotes menstruation, facilitate birth, increase libido. |
| Nigella sativa | Habet elbarakeh | cough, abdominal pain, diarrhea, Asthma, rheumatism, antioxidant, anti-inflammatory, anticancer, analgesic and antimicrobial activities. Antiasthmatic, antibacterial, hypoglycemic. |
| cinnamomum zeylanicum lauracea | gerfeh | Anti-inflammatory, rheumatism, sprains, bronchitis, muscular pains. Antimicrobial, anticancer, Antioxidant, antinociceptive. |
| Foeniculum vulgare | shomer | diabetes, bronchitis, antioxidant, coughs, kidney stones, Hirsutism, antioxidants, anticancer, dysmenorrhea, antithrombotic Larvicidal activity |
| Rosmarinus officinalis labiatae | hasalban | Antidepressant, arthritis, antispasmodic, hypoglycemic, antioxidant, hypolipidemic, Diuretic Anti-inflammatory, Antibacterial. |
| Hibiscus sabdariffa: | karkadeh | Hypertension, vasodilator, Antihyperlipidemia. |
| Cumin: cuminum cyminum | kammoun | Flavor foods. carminative. eupeptic, bronchopulmonary disorders, cough, analgesic, antimicrobial, antioxidant, food preservation, inhibition of spermatogenesis and fertility. hypoglycemic. |
| Zingiber officinale: | zengebel | Arthritis, rheumatism sprains, muscular aches, pains, sore throat, cramps, constipation, indigestion, vomiting, hypertension, dementia, fever, helminthiasis. immuno-modulatory, Anti-tumorigenic, Anti-inflammatory, anti-apoptotic, anti hyperglycemia, anti-lipidemic and anti-emetic actions larvicidal, hypolipidemic, antioxidant, hepatoprotective properties. anti-inflammatory, anti-oxidant, anti-platelets, hypotensive and hypolipidemic effect. |
| Artemisia vulgaris, Artemisia herba alba: | sheeh | Asthma, antimicrobial, toxicity to nematodes. abdominal colic, diarrhea and asthma, hypoglycemic. |
| Thymus vulgaris: | zaatar | preservative for foods antioxidant effect perfumery and cosmetics detoxify the injuries of alcohol abuse on liver and brain, stomachic, carminative, a component of prepared cough tea and a spice, antibacterial |
| Trigonella foenum graecum | helba | carminative, tonic, antidiabetic, anti-ulcer, flavoring, hypolipidic, hypoglycemic, allergic, anti-inflammatory, anti-fungal, anti-ulcer, Gastroprotective effect, anti-depressant. |
| crocus sativus | saafran | Coloring or flavoring agent, gastric disorders, cardiovascular disease, insulin resistance, depression, premenstrual syndrome, insomnia and anxiety. anti-oxidant properties. enhancing memory, improvement on sexual function, anti-inflammatory, antiatherosclerotic, antitumor activities. |

CONCLUSION:

Many of the investigated herbas that commonly used by patients in Al-Karak, posses a valuable treatment efficacy with relatively less side effect and low cost, despite that "Attareen" has a poor scientific knowledge about the medicinal plant; but the transformed news about the folkloric use of some herbal drugs meet the acceptance of the patient.

RECOMMENDATION:

Further in vitro and in vivo investigations of the herbal drugs may add a great value to the medicine today.

REFERENCES

- Ajay M., Chai H.J., Mustafa A.M., Gilani A.H., Mustafa M.R., (2007):** Mechanisms of the anti-hypertensive effect of Hibiscus sabdariffa L.calyces.Journal of ethnopharmacology volume 109, issue 3, 12 february, pages 388-399.
- Al-Bayati FA. (2008):** Synergistic antibacterial activities between thymus vulgaris and pimpinella anisum essential oils and methanol extracts.Ethnopharmacology, March 28:116(3):403-6.
- Ali A.shoti, Fahmy G.Elsaid, (2009):** Effects of water extracts of thyme (thymus vulgaris) and ginger (zingiber officinales roscoe) on alcohol abuse. Food and chemical toxicology, volume 47, issue 8, August, pages 1945-1949.
- Ali Shames, Hossein Hosseinzaideh, Mohamood Molaei, Mohammed Taghi Shakeri, Omid Rajabi, (2009):** Evaluation of crocus sativus L.(saffron) on male erectile dysfunction: a pilot study.Phytomedicine, volume 16, issue 8, August, pages 690-693.
- Alkofahi A.H., (1998):** Anti-nociceptive and anti-inflammatory effects of some Jordanian medicinal plant extracts.Journal of Ethnopharmacology, volume 60, issue 2, pages 117-124. 35.
- Andullu B., Rajeshwari C.U., (2011):** Aniseeds (pimpinella anisum l.) in health and disease, nuts seeds in health and disease prevention, pages 175-181.
- Anete c Ferraz, Miriam Elizabeth M angelucci,Mariana L Da Costa, iiza R Batista, Bras H (1999):** de oliveira, Claudio da cunha,Pharmacological Evaluation of Ricine, a central Nervous system stimylant isolated from Ricinus communis.Pharmacology Biochemistry and behavior, volume 63, issue 3, july, pages 367-375.
- Anousheh Haghighi, Nazfar Tavalaei, Mohammad Bagher owlia (2006):** Effects of ginger on primary knee osteoarthritis,Indian journal of Rheumatology, volume 1, issue 1, june, pages 3-7.
- Arif-ullah khan, Anwarul Hassan gilani, (2009):** Antispasmodic and bronchodilator activities of Artemisia vulgaris are mediated through dual blockade of muscarinic receptors and calcium reflux,Journal of ethnopharmacology, volume 126, issue 126, issue 3, 10 december, pages 480-486.
- Aziza A, El Nekeety, Sherif R.Mohamed, Amal S.Hathout, Nabila S.hassan, sohen E.Aly, mossad A.Abdel-wahhab, (2011):** Antioxidant properties of thymus vulgaris oil against aflatoxin-induce oxidative stress in male rats.Toxicon, volume 57, issue 7-8, june, pages 984-991.

- Badreldin H.Ali, Gerald Blunder, Musbah o. Tanira, Abderrahim Nemmar. (2008):** some phytochemical pharmacological and toxicological properties of ginger (zingiber officinale Roscoe), a review of recent research. Food and chemical toxicology, volume 46, Issue 2, February, pages 409-420.
- Boskabady, M.T borushaki, M.Tohidi, (2004):** bronchodilatory effect of portulaca oleracea in airways of asthmatic patients). Journal of ethnopharmacology, volume 93, issue 1, july, pages 57-62.
- Boskabady M.H., Mohesen Poor N., Takaloo L., (2010):** Antiasthmatic effect of nigella sativ in airways of asthmatic patients. Phytomedicine, volume 17, issue 10, August, pages 707-713.
- Bouchra Meddah, Robert Ducroc, Moulay El Abbas Faouzi, Bruno Eto, Lahcen Mahraoui, Ali Benhaddou Andaloussi, Louis charles Martineau, Yahia charrah Pierre selim haddad. (2009):** Nigella sativa inhibits intestinal glucose absorption and improve glucose tolerance in rats. Journal of ethnopharmacology, volume 121, assue 3, 30-january, pages 419-424.
- Chan. K, Islam M.W, Kamil M, Radhakiri R., Shnon.(2000):** The analgesic and anti-inflammatory effects of portulaca oleracea L.subsp.sativa. Journal of ethnopharmacology, volume 73, issue 3, December, pages 445-451.
- Changkeun kang, hynunk young lee, eun-sun jung, ramin seyedian, mina jo, jehein kim, jong-sho kim, euikyung kim, (2012):** Saffron (crocus sativus L) increase glucose uptake and insulin sensitivity in muscle cells via multiple pathway mechanisms. Food chemistry, volume 135, issue 4, 14-december 2012, pages 2350-2358.
- Cheng-jie chen, wan-yin wang, xiao-li wang, li-weiong, yi-tian yue, hai-liang xin, Chang-quan ling, min li. (2009):** Anti- hypoxic activity of the ethanol extract from portulaca oleracea in mice. Journal of ethnopharmacology, volume 124, issue 2, 15 july, pages 246-250
- Collen `N.A.Salmon, Yvonne a.Bailey-Shaw, Sheridan Hibbert, Cheryl Green, ann M.Smith. Lawrence A.D.Williams, (2012):** (Characterization of cultivars of Jamaican ginger (zingiber officinale Roscoe) by HPTLC and HPLC. Food chemistry, volume 131, issue 4, 15 April, pages 1517-1525.
- Daniele G. Machado, luis E.B bettio, Mauricio p, cunha, juliano C.capra, Juliana B. dalmarco, moacir, G. pizzolatti, Ana lucia s. Rodrigues. (2009):** Antidepressant like effect of the extract of rosmarinus officinalis in mice, involvement of the monoaminergic system progress in neuro-psychopharmacology and biological psychiatry, volume 33, issue 4, 15. June, pages 642-650.
- Denise Tiran, (2012):** Ginger to reduce nausea and vomiting during pregnancy: evidence of effectiveness is not the same as proof of safety. Complementary therapies in clinical practice, volume 18, issue 1, February, pages 22-25.
- Dnyaneshwar j tawar, Maruti G Waghmane, Rajendra S bandal, Ravindra y patil, (2011):** Antinociceptive activity of ricinus communis L. Leaves. Asian Pacific journal of tropical biomedicine, volume 1, issue 2, April, pages 139-141.
- Dnyaneshwar j yaur, Ravindre y patil. (2011):** Antiasthmatic activity of Ricinus communis L.roots. Asian pacific journal of tropical biomedicine, volume 1, issue1, supplement, septemper, pages s13-s16.
- Eghosa Elyare, Olufeyl A Adegoke, Uchenna / Nwagha. (2010):** Mechanisms of the decreased food consumption and weight gain in rats following consumption of aqueous extract of the calyx of hibiscus sabdariffa during pregnancy. Asian Pacific Journal of Tropical Medicine, volume 3, issue 3, March, pages 185-188.

- El-Dakhakhry M, Barrakat M, Abd-el halim M, Aly S.M, (2000):** Effect of *Nigella sativa* oil on gastric secretion and ethanol induced ulcer in rats. *Journal of ethnopharmacology*, volume 72, issues 1-2, 1-septemper, pages 299-304.
- Firas A.Al-Bayati, (2008):** Synergestic antibacterial activity between *thymus vulgaris* and *pimpinella anisum* essential oils and methanol extracts. *Journal of ethnopharmacology*, volume 116, issue 3. 28-march, pages 403-406.
- Gaudenico M. Natividad, Kenneth J. broadly, Benson Kariuki, Emma j.kidd, William R. ford, Claime Simons, (2011):** Action of *Artemisia vulgaris* extracts and isolated sesquiterpenes lactones against receptors mediating contraction of guinea pig ileum and trachea. *Journal of ethnopharmacology*, volume 137, issue 1, 1 september, pages 808-816.
- Gehan H. Heeba, Manal I Abd-Elghany, (2010):** Effect of combined administration of ginger (*Zingiber officinale* Rosocoe) and atrovastatin on the liver of the rats. *Phytomedicine*, volume 17, issue 14, 1 December 2010, pages 1076-1081.
- Gomah nenaah, (2010):** Antibacterial and antifungal activities of beta-carboline alkaloids of *peganum harmala* (L) seeds and their combination effects. *Fitoterpia*, volume 81, issue 7, October, pages 779-782.
- Hader A.A.Al, Hasan Z A, Aqel M.B., (1994):** Hyperglycemic and insulin release inhibitory effects of *Rosmarinus officinalis*, *Journal of ethnopharmacology*, volume 43, issue 3, 22, pages 217-221.
- Hajime fukui, kumiko toyoshima, royoichi komaki, (2011):** psychological and neuroendocrinological effects of odor of saffron (*crocus sativus*). *Phytomedicine*, volume 18, issue 8-9, 15 june, pages 726-730.
- Hala Gali-Mohtasib, Nahed El-najjar, Regine schnader-Stock, (2006):** The medicinal potential of black seed (*nigella sativa*" and its components. *Advances in phytomedicines*, volume 2, pages 133-153.
- Hanafy M.S.M., Hatem M.E., (1991):** Studies on the antimicrobial activity of *Nigella sativa* seed (black cumin) . *journal ethnopharmacology*, volume 34, issues 2-3, September, pages 275- 278.
- Haouala R., Hawala S., El-Ayeb A., Khanfir R., Boughanmi N., (2008):** Aqueous and organic extracts of *Trigonella-Foenum graecum* L. inhibit the mycelia growth of fungi. *Journal of environmental science*, volume 20, issue 12, pages 1453-1457
- Hazzit M., Baaliouqamer A.. Verissimo A.R., Falerio M.L., Miguel M.G., (2009):** Chemical composition and biological activities of Algerian *Thymus* oils
- Heping Cao, Donald j.Graven, Richard A. Anderson, (2010):** Cinnamon extract regulates glucose transporter and insulin-signalling gene expression in mouse adipocytes. *Phytomedicine*, volume 17, issue 13, November, pages 1027-1032.
- Herraiz T., gonzalez D., Ancin-Azpilicueta C., Aran V.d., Guiller H., (2010):** Food and chemical toxicology, volume 48, issue 3, march, pages 839-845. β -Carboline alkaloids in *Peganum harmala* and inhibition of human monoamine oxidase (MAO)
- Hye Ja lee, Eun-A Hyun, Weon jong yoon, Byung, Hum Kim, Man Hee Rhe, Hee Kyoung, Kang, Jae youl cho, Eun sook yoo, (2006):** in vitro anti-inflammatory and oxidative effects of *cinnamomum camphora* extracts. *Journal of ethnopharmacology*, volume 103, assue 2, 16 january, pages 208-216.
- Jack R.A.F., (1987):** Acase of tuberculosis sclerosis treated with *Artemisia vulgaris*. *British homoeopathic journal*, volume 76, issue 4, October 1987, pages 204-206

- Jamal Ahmed Abdel-Barry, Issa Abedel-Hassan, Mohammas H.H.Al-Hakiem, (1997):** Hypoglycemic and antihyperglycemic effects of *Trigonella foenum-graecum* leaf in normal and alloxan induced diabetic rats. *Journal of ethnopharmacology*, volume 58, issue 3, November, pages 149-155.
- Javidnia K., Dastgheib L., Mohammadi Samani S., NASIRI A., (2003):** Antihirsutism activity of fennel (fruit of *foeniculum vulgare*) extract, a double blind placebo controlled study. *Phytotherapy*, volume 10, issues 6-7, pages 455-458.
- Jaya Prakasha G.K., Negi P.S., Jena B.S., Jagan L, Mohan Rao. (2007):** Antioxidant and Antimutagenic activities of *cinnamomum Zeylanicum* fruit extracts. *Journal of food composition and Analysis*, Volume 20, issue 3-4, May, pages 330-336.
- Jenny M. Wilkinson, (2005):** Ref: Effect of ginger tea on the fetal development of Sprague-dawley rats. *Reproductive Toxicology*, volume 14, issue 6, November 2000, pages 507-512. James L. Geiger, the essential oil of ginger, *Zingiber officinale* and anesthesia. *International journal of Aromatherapy*, volume 15, issue 1, pages 7-14.
- John P. Melnyk, Suran Wang, Massimo F., (2010):** Marcone. chemical and biological properties of the world's most expensive spice: saffron. *Food research international*, volume 43, issue 8, October, pages 181-1989.
- Jose-Antonio Fernandez, (2006):** Anticancer properties of saffron, *crocus sativus* linn *Advances in phyto medicine*, volume 2, pages 313-330.
- Jucelia Pizzetti Beninca, Juliana Bastos Dalmarco, Moacir Geraldo Pizzdatti, Tonic Silvia Frode, (2011):** Analysis of the anti-inflammatory properties of *rosmerinus officinalis* in mice. *Food chemistry*, volume 124, issue 2, 15 january. Pages 468-475
- Junichi Kitajima, Toru Ishikawa, At. Shi, Urabe, Mitsuro Satoh, (2004):** monoterpenoids and their glycosides from the leaf of thyme, *Phytochemistry*, volume 56, issue 24, December, pages 7279-3287.
- Kobayashi Y., Nakano Y, Inayama K., Sakai A., Kamiya T. (2003):** Dietary intake of the flower extracts of german chamomile (*Matricaria recutita*) inhibited compound 48180-induced itch-scratch response in mice. *Phytotherapy*, volume 10, issue 8, pages 675-664.
- Lamchouri F., settaf A., cherrah Y., Zemzami M., Atif N., B.nadori-A.zaid E., lyoussi B. (2000):** In vitro cell – toxicity of *peganum harmala* alkaloids of cancerous cell-lines. *Fitoterapia*, volume 71, issue 1, 1 february, pages 50-54.
- Latif Gachkar, Dauood Yadegari, Mohammad Bagher Rezaei, Masood Taghizadeh, Shakiba Alipoor Astanol, Iraj Rasooli, (2007):** chemical and biological characteristics of *cuminum cyminum* and *rosmarinus officinalis* essential oils. *Food chemistry*, volume 102, issue 3, pages 898-904.
- Lillian Barros, Sandrina, Helleno A., Ana Maria Carvalho, Isabel Ferreira C.F.R., (2009):** Systemic evaluation of the antioxidant potential of different parts of *foeniculum vulgare* mill. From Portugal food and chemical toxicology, volume 47, issue 10, october, pages 2548-2464.
- Loubna Farouk, Amine Laroubi, Rachida Aboufatima, Ahmed Benharref, Abderrahman Chait, (2008):** Evaluation of the analgesic effect of alkaloid extract of *peganum harmala*. L, possible mechanism involved. *Journal of ethnopharmacology*, volume 115, issue 3, 12 february, pages 449-454.
- Magdalini A. Papandreou, Maria tsachaki, spiros E fthimiopoulos, paul cordopatis, fotini N. Lamari, Marig oula Margarity, (2011):** Memory enhancing effects of saffron in aged mice are correlated with antioxidant protection. *Behavioral brain research*, volume 219, issue 2, 1 june, pages 197-204.

- Marziyeh Toluee, Soheil Alinezhad, Reza Saberi, ali Eslamifar, Seyed Javad Zad, Kamkar jaimand, Jaleh taeb, Mohammad-Bagher Rezaee, Masanobu Kawachi, Masoomesh shams- Ghahfarokhi, Mehdi Razzaghi-Abyareh. (2010):** Effect of Matricaria Chamomilla L. Flower essential oil on the growth and ultrastructure of *Aspergillus niger* Vantieghem. International journal of food Microbiology, Volume 139, issue 2, 15 May, pages 127-133.
- Massimilians Tognolini, Vigitio Ballabeni, Simona Bertoni, Renato Fiuni, Mariannina Impicciatore, (2007):** Elisabetta barocelli. protective effect of *foeniculum vulgare* essential oil and anethole in an experiemental model of thrombosi. Pharmacological research, volume 56, issue 3, September, pages, pages 254-260.
- Mehet Unlu, Emel Ergene, Gulhan Vardat Unlu, Hulya Sivas Zeytinoglu, Niiufer Vural. (2010):** Composition, antimicrobial activity and in vitro cytotoxicity of essential oil from *cinnamomum zeylanicum* blume lauraceae. Food and chemical toxicology, volume 48, issue 11 november, pages 3274-3280.
- Michael Albert-Puleo, (1980):** fennel and anise as estrogenic agents. Journal of ethnopharmacology, volume 2, issue 4, 1980, pages 337-344
- Mingshuang Ding, Matthew Leach, Helen Bradley, (2012):** The effectiveness and safety of ginger for pregnancy-induced nausea and vomiting: A systemic Review. Women and birth, 28 August.
- Min-Jung Bae, Hee-Son Shin, Dae-Woon Choi, Dong-Hwa Shon. (2012):** Anti-Allergic effect of *Trigonella foenum-graecum* L. extracts on Allergic skin inflammation induced by trimellitic anhydride in BAL B/C mice, journal of Ethnopharmacology, 1 October.
- Mohammad Hadi Modaghegh, Masoud Shahabian, Habib-Allah Esmaceli, Omid Rajbai, Hossein Hossein Zadeh. Safety, (2008):** Evaluation of saffron (*crocus sativus*) tablets in healthy volunteers. Phytomedicine, volume 15, issue 12, December, pages 1032-1037.
- Mounif Haloui, Liliane Louedec, Jean-Baptiste Michel, Diao B. Lyoussi, (2000):** Experimental diuretic effects of *rosmerinus officinalis* and *centaurium erythraeae*. Journal of ethnopharmacology, volume 71, issue 3, August, pages 465-472.
- Munir Oktay, Ilhami Gulcine And O. Irfan Kufrevioglu, (2003):** Determination of in vitro antioxidant activity of fennel (*foeniculum vulgare*) seed extracts. L WT- food science and technology, volume 36, issue 2, March, pages 263-371.
- Muthamma Milan K.S., Hemang Dholakia, Purnima Kail Tiken, Parakash Vishvesh Waraiah, (2008):** Enhancement of digestive enzymetic activity by cumin (*cuminum cyminum* L) and role of spent cumin as a bionutrient. Food chemistry, volume 110, issue 3, 1 october, pages 678-683.
- Namavar jahromi B., Tartifizadeh A., Khabnadideh S., (2003):** Comparison of fennel and mefanamic acid for the treatment of primary dysmenorrheal. International journal of gynecology & obstetrics, volume 80, issue 2, February, pages 153-157.
- Naser Rushdi, Mahmoud Jarrar, Awni Abu-Hijleh, Kamel Adwan, (2010):** Anti-bacterial activity of *rosmarinus officinalis* L. alone and in combination with cefuroxime against methicillin-resistant staphylococcus aureus. Asian Pacific Journal of Tropical Medicine Volume 3, Issue 2, February, Pages 121-123.
- Okwuasaba F.K., osunkwo U.A., Ekwenchi M.M., (1991):** Journal of Ethnopharmacology, volume 34, issue, issue 2-3, September, pages 141-145.

- Olwen Parry, Marck J.A, Okwvasaba F.K., (1993):** Journal of ethnopharmacology, volume 40, issue 3, December, pages 187-199. The skeletal muscle relaxant action of *Portulaca oleracea*: role of potassium ions F. Malek, M.H
- Poonam Shokeen, Prachi Anand, Y.Krishna Murali, Vibha Tandon. (2008):** Anti-Diabetic activity of 50% ethanolic extract of *Ricinus Communis* and its Purified Fractions. Food and chemical Toxicology, volume 46, issue 11, November, pages 3458-3466.
- Prashanith D, john S., (1999):** Antibacterial activity of *peganum harmala*.Fitoterpia, volume 70, issue 4, 1 August, pages 438-439.
- Rachel Nioll, Michael Y henein.Ginger, (2009):** (*Zingiber officinale* Roscoe): A hot remedy for cardiovascular disease.International journal of cardiology, volume 131, issue 3, 24 january, pages 408-409.
- Radhey S.Cupta, Pooram Saxena, Rajinish Gupta, Jai B.S. Kachhawa, (2011):** Evaluation of reversible contraceptive activities of *cuminum cyminum* in male albino rats. Contraception, volume 84, issue 1, july, pages 98-107
- Raju Ilavarsav, Mani Mallika, (2006):** Subramanian Venkataraman.Anti-inflammatory and free radical scavenging activity of *Ricinus Communis* root extract.Journal of ethnopharmacology, volume 103, issue 3, 20 february, pages 478-480.
- Rashied A.N.,Afifi F.U, Disis A.M., (2003):** Simple evaluation of the wound healing activity of a crude extract of *potulaca oleracea* L. (growing in Jordan) in MVS muscules JVI-1.Journal of ethnopharmacology, volume 88, issues 2-3, pages 131-136
- Ref: food chemistry, (2009):** volume 116, issue 3, 1 october, pages 714-721.
- Rong-Jyh Lin, Chung-Yi Chen, Li – Yu Chung, Chuan-Min Yenln, (2010):** Larvicidal activities of ginger (*Zingiber officinale*) against *Angiostrongylus contonensis*.Acta Tropica, volume 115, issues 1-2, july-August, Pages 69-76.
- Rosa Ventura-Martinez, Oscar Rivero-Osorno, Claudio Gomez, Maria Eva Gonzalez-Trujano, (2011):** Spasmolytic activities of *rosmarinus officinalis* L. involves calcium channels in the the guinea pig ileum.Journal of ethnopharmacology, volume 137, issue 3, 11 October, pages 1528-1532.
- Safia Zoubiri, Aoumeur Baaliouamer, Nabila Seba, Nesrine Chamouni, (2010):** Chemical composition and larvicidal activity of Algerian *foeniculum vulgare* seed essential oil. Arabian journal of Chemistry, 17 november.
- Safoura Derakhshan, Morteza Sattari, Mohsen Biqdeli, (2010):** Effect of cumin (*Cuminum cyminum*) seed essential oil on biofilm formation and plasmid Integrity of *Klebsiella pneumonia* original article, volume 6, issue 21, pages 57-61.
- Salvador Fernandez-Arroyo, Inmaculada Rodriguez-Medina C., Raul Beltran-Debon, Federica Pasini, Jorge Joven, Vicente Micol, Antonio Egura- Carretero, Alberto Fernandez-Gutierrez. (2011):** Quantification of the polyphenolic fraction and in vitro antioxidant and in vivo anti-hyperlipemic activities of *hibiscus sabdariffa* aqueous extracts.Food Research international, volume 44, issue 5, June, pages 1490-1495.
- Shahba M. Al-Khazraji, Loui A. Al-Shamaony, Nosri A.A. Twaij, (1993):** hypoglycemic effect of *Artemisia herba alba*, Effect of different parts and influence of the solvent on hypoglycemic activit.Journal of ethnopharmacology, volume 40, issue 3, December, pages 163-166.
- Sherif A., Hall R.G., El-Amamy M. (1987):** Drugs, insecticide and other agents from *Artemisia*. Medicinal hypothesis, volume 23, issue 2, jne, pages 187-193.

- Singh B., Kale R.K., (2003):** Food and chemical toxicology, volume 46, issue 12, December, pages 3842-3850. chemomodulatory action of foeniculum vulgare (fennel) on skin and forestomach papillamagenesis enzymes associated with xenobiotic metabolism and antioxidant status in murine model system.
- Sirajudheen Anwar, Sandhya Desai, Maryam Eidi, Akram Eidi, (2011):** chapter 56- Antidiabetics activities of fenugreek (trigonella foenum-graecum) seeds. Uts and seeds in health and disease prevention, pages 469-478.
- Suja Pandian R., Anuradha C.V, Viswanathen P., (2002):** Journal of Ethnopharmacology, volume 81, issue 3, 1 August, pages 393-397. Gastroprotective effect of fenugreek seeds (*Trigonella foenum graecum*) on experimental gastric ulcer in rats
- Tahiliani P. & Kar A.,** Found that Trigonella extract may be a promising therapy in the regulation of hyperthyroidism.
- Tapan K. Basu, Anchalee Srichamroen, (2010):** Chapter 28-health benefits of fenugreek (trigonella foenum-graecum leguminosae). Bioactive foods in promoting health, pages 425-435.
- Tayyaba Zia, S. Nazrul Hasnain, S.K Hasan. (2001):** Evaluation of the oral hypoglycemic effect of trigonella foenum-graecum L. (methi) in normal mice. Journal of ethnopharmacology, volume 75, issues 2-3, May, pages 191-195.
- Tirapelli R., Claudia. R. De Andrade, Adriano O. Cassano, Fernando, A. De Souza, Sergio R. Ambrosio, Fernando B. Dacosta, Ana M. De Oliveira, (2007):** Antispasmodic and relaxant effects of the hydrochloric extract of pimpinella anisum (apiaceae) on rat anococcygeus smooth muscle. Journal of ethnopharmacology, volume 110, issue 1, March, pages 23-29.
- Tulay Bakirel, Utku Bakirel, Oya Ustuner Keles Sinem Gunes Ulgen, Hasret Yardibli, (2008):** in vivo assessment of antidiabetic and antioxidant activities of rosemary. (rosmarinus officinalis) in alloxan- diabetic rabbits. Journal of ethnopharmacology, volume 116, issue 1, 28 february, pages 64-73.
- TZU-Lilin, Hui-Hsuan Lin, Chang-Che Chen, Ming-Cheng Lin, Ming-Chih Chou-Chow Jong Wang. (2007):** Hibiscus sabdariffa extract reduces serum cholesterol in men and women. Nutrition Research, volume 27, issue 3, March, pages 140-145
- Vaibhav Gaur, Sbash L. Bodhankar, Vishwaraman Mohan, Prasad Thakurdesai, (2012):** Anti-depressant like effect of 4-hydroxy isoleucine from trigonella graecum L. seeds in mice. Biomedicine & Aging pathology, volume 2, issue 3, july-september, pages 121-125
- Vera Coopmen, Manic De Leeuw, Jan Cordonnier, Werner Jacobs, (2009):** Suicidal death after injection of castor oil bean extract (*Ricinus Communis L.*) Forensic science international, volume 189, issue 1-3, 10-August, pages e 13-e 20
- Wahbi H.A., Alanagry L.A., Al-sabban A.H., Glasziou P., (2010):** The effectiveness of hibiscus sabdariffa in the treatment of hypertension: A systemic review. Phytomedicine, volume 17, issue 2, February, pages 83-86.
- Willatyamuwa S.A., Kalpana Platel, Saraswath G., Srinivasan K., (1998):** Anti-diabetic influence of dietary cumin seeds (*cuminum cyminum*) in streptozotocin induced diabetic rats. Nutrition research, volume 18, issue 1, January, pages 131-142.
- Xiao-Lan Cheng, Qun Lio, Young-Bo Peng, Lian-Wen Qi, Ping Li. Steamed Ginger (2011):** (*zingiber officinale*) changed chemical profile and increased anticancer potential. Food chemistry, volume 129, issue 4, 15 December, pages 1785-1792.
- Yogeshwer shuklo, Madholika (2007):** singh. cancer preventive properties of ginger, a brief review. Food and chemical toxicology, volume 45, issue 5, May, pages 683-690.

- Yoshinori Kobayashi, Ria Takahashi, Fumiko ogino publisher. (2005):** Ref: Antipruritic effect of the single oral administration of German Chamomile flower extract and its combined effect with antiallergic agents in ddy mice. Journal of ethnopharmacology, volume 101, issues 1-3, 3-october, pages 308-312.
- Zahra Amir ghofran, Mohammad Azadbakht, Mohamad H Karimi. (2000):** Evaluation of immunomodulatory effects of five herbal plants. Journal of ethnopharmacology volume 72, issue 1-2, 1 september, pages 167-172.
- Zarzuelo A., Crespo E., (2002):** Medicinal and Aromatic Plants – Industrial Profiles, vol. 24-Thyme, E.Stahl-Biskup and F. Saez, eds. , Taylor&Francis, pp. 278
- Zohara Yaniv, Amotos Dafini, Jacobfriedman, Dan Palevitch (1987):** plants used for the treatment of diabetes in Israel. Journal of ethnopharmacology, volume 19, issue 2, March-April, pages 145-151.

بعض النباتات والعقاقير الطبية المستخدمة في جنوب الأردن "الكرك" بين استعمالها التقليدي من قبل سكان مدينة الكرك/ جنوب الأردن وبين نتائج التجارب العلمية المثبتة

ليديا كمال الهلسه

قسم المهن الطبية المساندة - جامعة البلقاء التطبيقية- المملكة الأردنية الهاشمية

تجري هذه الدراسة تقييماً لستة عشر نباتاً طبياً واستخدامها كبديل للأدوية الكيميائية من قبل السكان المحليين في منطقة جنوب الأردن "مدينة الكرك".

والدراسة تشمل النباتات التالية والتي غالباً ما توصف من قبل العطارين:

Peganum harmala, Portulaca oleracea portulacaceae, Ricinus communis, Matricaria aurea compositae, Pimpinella anisum Umbelliferae, Nigella sativa, cinnamomum zeylanicum lauracea, Foeniculum vulgare, Rosmarinus officinalis labiatae, Hibiscus sabdariffa, cuminum cyminum, Zingiber officinale, Artemisia vulgaris, Thymus vulgaris, Trigonella foenum-graecum, Crocus sativus.

وقد تمت دراسة هذه العقاقير الطبية لإثبات أو نفي صحة التأثير العلاجي المدعى ولتقييم قدرة هذه النباتات الطبية على علاج الأمراض المتعلقة بالجهاز المعوي، المناعي، التنفسي، القلبي الوعائي، الجلدي، التناسلي والبولي، تنشيط الذاكرة، والجهاز العصبي وغيرها.