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DESCRIPTION OF *APIUM GRAVEOLENS* (TUKHM KARAFS) IN UNANI SYSTEM OF MEDICINE AND WESTERN PERSPECTIVE -AN APPRAISAL

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ABSTRACT: *Apium graveolens* Linn. is an indigenous herb that belongs to the family of Apiaceae. In Unani System of Medicine, this plant is commonly known as Karafs, and it is used to treat numerous diseases (Sue mizaj Jigar, Zofe Isteha, Yarqan, Sudda Jigar, Wajaul mafasil, Simane mufrit, Sartan, Hisate Gurdah, Falij was Istirkha, Niqras, *etc.*). Various studies have revealed that Karafs plays a vital role in the prevention of cardiac problems, lowering serum glucose level and derangement occurs in the lipids, normalize the blood pressure and vigor the heart. There are some active chemical constituents documented such as apigenin, apiein, vitamins A and C which play antioxidant and immunomodulatory activity. The whole plant is used for medicinal purposes. This article demonstrates morphological features, Unani description, active chemical constituents, Unani formulations, scientific reports, and appraisal of the therapeutic properties of this precious medicinal herb.

INTRODUCTION: Karafs is a member of the Apiaceae family (Umbelliferae) and known as celery [1, 2]. There are four species which commonly used as medicinal purposes such as; *Apium graveolens, Apium rapaceum, Apium secalinum* and *Apium smallege* [3].

Celery is cultivated throughout the world since ancient times and many cultivars exist grown for the crisp leaf stalk, the fleshy root or the seeds [4]. Celery is widely cultivated on temperate zones and native medicinal plant to Europe [5].

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Taxonomical Classification:

Kingdom: Plantae

Order: Apiales

Family: Apiaceae

Genus: Apium

Species: graveolens [6, 7].

Synonymous of Karafs: Arabic- Phitra saleyaun, Karafs; Ayurveda- Ajmuda; Bengali- Ajmod; English- Celery; Gujarati- Bodiajmuda; Hindi- Ajmud and Karafs; Kanada -Selerina; Latin– Salahri; Marathi- Ajmuda; Persian- Tukhme Karafs, Karsab; Romi- Batarakhiyun Folk Ajmuda; Sanskrit- Mayauri; Seriyani-Karafsa; Sindhi- Diljan; Tamil Celery-keerai; Unani- Karafs; Urdu - Tukhme karafs, Ajmod [8].

Mizaj (Temperament): Haar 1^0 Yabis 1^0, Haar 1^0 Yabis 2^0, Haar 2^0 Yabis 20, Har [9, 10].

Afal (Actions): Muhallil, analgesic, emmenagogue, lithotripsic, diaphoretic, diauretic, abortificient [11-15].

Istemalat (Therapeutic Uses): Gout, rheumatism, amenorrhea, lba, inflammation, edema, renal stone, *Amraze Barid wa Amraze balghamin* [16, 17].

Muzarrat (Contraindicated): Epilepsy, pregnant mother, lactating mothers, peoples of hot temperament [18].

Musleh (Corrective): Mastaghi and anisoon [19].

Badal (Substitute): Ajwain, Ajwain Khurasani [20].

Miqdare Khoraak (Doses): Root of Karafs 5-7 masha, Tukhm [12, 21].

FIG. 1: PLANT

FIG. 2: FLOWERS

FIG. 3: SEEDS [7]

Chemical Constituents: *Apium graveolens* (celery) contained various chemical constituents such as; carbohydrates, flavonoids, alkaloids, steroids, glycosides, phenols, furocoumarins, volatile oils, sesquiterpene alcohols, fatty acids and a wide range of trace elements [22]. Isoimperatorin, isoquercitrin, linoleic acid, magnesium, p-cymene, phosphorus, guaiacol, silicon. Terpinene-4-ol, 3-N-butyl-phthalide, umbelliferone, Vitamin A, C, B. apiol, zinc. Volatile oil, containing dlimonene, with a-selinene, santalol, a and b eudesmol, dihydrocarvone. Phthalides, ligustilide, sedanolide, and sedanenolide. bergapten, isopimpinellin, apiumoside and celeroside, 3-butyl-4, 5-dihydrophthalide, coumarins (seselin, osthenol, apigravin, celerin). The essential oil contains deltalimonene, various sesquiterpene. Celery is rich in betacarotene and folic acid [5, 23-28].

Murakkabat (Unani Formulations): Jawarish Zarooni Sada, Majoon-e-Dabeed-ul-Ward, Majoon-e-Jograj Gugal, Majoon-e-Nankhwah, Majoon-e-Buqrat, Majoon-e-Rewand, Banadiq-ul- Buzoor, Sufoof-e- Mohazzil, sikanjabeen bazoori moatadil [29, 30].

Scientific Reports:

Hepatoprotective Activity: It is reported that *Karafs* (celery) leaves exhibit hepatoprotective effect on APAP induced toxicity in a freshwater fish, Pangasius sutchi [31]. Another study reported

that methanolic extracts of *A. graveolens* showed hepatoprotective activity when compared with standard drug silymarin [32]. It is also reported that methanolic extract of Tukhme Karafs showed hepatoprotective activity in rats against paracetamol-induced hepatotoxicity [33].

Hypolipidemic Activity: It is reported that ethanolic extract of *Apium graveolens* revealed hypolipidemic effects in adult male albino rats [34]. Leaves of *Karafs* showed a hypolipidemic effect in diabetic rats [35]. Another study revealed that ethanolic extract of *Apium graveolens* (celery seeds) showed antidyslipidemic activity against ritonavir induced dyslipidemia in mice [36]. Dianat *et al.*, reported that Celery leaf extract reduces systolic BP, cholesterol, triglyceride, LDL, and VLDL in an animal model of fructose-induced hypertension [37].

Antioxidant Activity: One study revealed that n-butanol extract of celery (*Apium graveolens*) seeds ameliorating the lipid peroxidation and antioxidant status in streptozotocin-induced diabetic rats [38]. Sameh *et al.*, reported that methanol and acetone extracts of *Apium graveolens* have shown antioxidant activity [39].

Anti-Depressant Activity: Desu *et al.*, reported that methanolic extract of *Apium graveolens* seeds possessed significant antidepressant activity in animal models at the dose of 200 mg /Kg when compared with standard drug Imipramine at the dose of 20 mg/kg [40].

Spermatogenesis Activity: It is reported that aqueous extract of celery (*Apium graveolens* L.) leaves showed spermatogenesis activity male rats at the dose of 100 and 200 mg/Kg body weight for 30 days [41].

Anti-hyperuricemic Activity: It is reported that Bekh Karafs (*Apium graveolens*) showed anti-hyperuricemic activity at the dose of 10 gm once a day for 45 days in human subjects when compared with standard drug allopurinol 100 mg thrice a day for 45 days. It was found that the test drug showed more significant [42].

CONCLUSION: *Apium graveolens* has an extensive range of medicinal uses and can be used either as mufrad or murakkab to treat a different disease. There are various chemical constituents have been reported currently. Their pharma-cological actions are still unknown today. Unani Scholars described its uses by their clinical knowledge. To explore the hidden benefits by research, this type of review will be advantageous for the correlation between Unani literature and western perspective.

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