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A Review on Pharmacognotic and Pharmaceutical Terms Originated from Islamic Sources

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ABSTRACT

Pharmacognosy and classical pharmacy have been deeply affected by the works of scholars in the Islamic period. Several words in currently used European languages and scientific nomenclature remember the golden age of oriental flourishing of the chemical and medicinal sciences, especially in the Islamic period. Of all scientists in the classical period, Persian, Arabic and Turkish scholars had major shares. In this paper, we have reviewed some of these words of oriental origin, including Arabic, Persian, Sanskrit, Hindi, Hebrew, Turkish and Syriac. Some words have been passed through from one language to another. These borrowings are mentioned as a history of the words. These descriptions may be useful for full comprehension of the current meanings and the exact original meanings of the scientific herbal and chemical names, especially for the students of related fields.
KEYWORDS: Scientific nomenclature, etymology, pharmacy, Persian, Arabic, classical Islamic medicine.

INTRODUCTION

The pharmacy, at least its classical form, has been remarkably developed in the Islamic period (Singer, 1927; Izzo, 2002; Jonas, 1999). Many famous Arabic and Persian scholars did great strives to pave the way. After that, the western scholars used for years the works of the Islamic scientists (Scarborough, 1978; Riddle, 1985; Collins, 2000). Different people of oriental origin have shares in this common human treasure, including Hindustani (from Sanskrit and Hindi sources), Persian (Farsi, Pahlavi and Avesta sources) (Mousavizadeh, 2005; Bekhradi, 2004), Arabic (Ahmad, 2006) and Hebrew sources. According to the best knowledge of us, there are no independent article in the literature merely dealt with these pharmacognotic and pharamaceutical terms of oriental origin (Pavord, 2005). We have tried in this column to evaluate the currently used pharmacognotic and pharmaceutical terms in modern medical sciences, which are derived from different oriental sources and languages, especially in the Islamic period.

METHODOLOGY

We reviewed several sources for collecting data about the terminology used for describing the pharmacognotic and pharmaceutical substances of the Islamic period origin in this study (El-Gammal, 1997; Cupp, 1999; Givens, 2006; Heilmeyer, 2007). Ultimately, we choose the valuable book of *The Names of Plants* (Gledhill, 2008); also, we reviewed some other sources mentioned in the bibliography of this book. All pharmacognotic and pharmaceutical substances mentioned in this book, of the Arabic and Islamic origin were selected. After preparation the material, all scientific names were etymologically analyzed. For etymology of scientific names, we tried to use some standard sources for scientific nomenclature. For etymology of words from oriental languages, we used some valuable etymological sources of different world language families, including Semitic and Indo-European. The compound names have been divided to their components and then were etymologically analyzed.

FINDINGS

We collected the terms after reviewing the selected sources, about 119 scientific terms of Islamic origin were etymologically studied. The abbreviation for referred languages alphabetically are: Ar. Arabic, Av. Avesta, Fr. French, Hebr. Hebrew, Hind. Hindi, L. Latin, Pers. Persian, Port. Portuguese, Skr. Sanskrit, Sp. Spanish, and Syr. Syriac. The references used, are mentioned immediately in the end of the etymological descriptions.

Abutilon: a genus of plants of the mallow family

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Abutilon—it is said directly from Ar. *aubūṭīlūn* a name coined by Avicenna (Klein, 1967). Avicenna in his book of *Al-Qānūn* mentions this word from a person called *Al-Khūz* (of Khūzestān region).

alcalinus: alkaline

alcalinus—L. *alcalinus* belonging to *alkali*. Suggestions: from Ar. *al-qalī*, plant of *Mycena alcalina* smells of ammonia (Gledhill, 2008). Also suggested: derived from Ar. *al-qilī* charred ashes of the saltwort, the roasted (Klein, 1967).

***Alchemilla*:** a genus of plants of the rose family, the lady's-mantle

Alchemilla—suggested etymologies: Modern L. *alchemilla*, from Medieval L. *alchymia*, from Ar. *al-kīmīyā* alchemy, from the belief that dew from its leaves could transmute base metals to gold (alchemy) or to the fringed leaves of some species (Gledhill, 2008); another suggestion: Medieval L. *alchymia*, from Port. *alchimelech*, from Ar. *iklīl-al-malik* the crown of the king (Klein, 1967).

***alfalfa*:** Lucerne, Medicago sativa

alfalfa—English word derived from Spanish *alfalfa* (originally *alfalfez*), and it comes from Arabic *al-faśfaśa*^{h} (Klein, 1967).

***alkanet*:** the bugloss

alkanet—Sp. *alcaneta*, diminutive of *alcana* the name given to the imported dye obtained from *Alkanna tinctoria*, from Ar. *al-ħinnā́* henna (Klein, 1967).

***Amomum*:** a genus of plants of ginger family

Amomum—L. *amōmum* a spice plant, from Gr. ámōmon, probably from Ar. *ħamā́mā* a spice plant, which probably derive from stem *ħ-m-m* to be warm (Klein, 1967).

amygdalus: the almond-tree

amygdalus—L. *amygdalus*, from Gr. ’αμυγδάλη, ultimately from Hebr. *méghedh-Ēl*, divine or sacred-fruit (Lewy, 1895).

Arnebia: a genus from family *Boraginaceae*

Arnebia—Ar. *arnabīya*^{h}, in classical Arabic lexicons it is mentioned as *arnabah* meaning a plant, cf. Ar. *arnab* a hare, but it is said to be a misprint of *arīnah* and also *arānīyah* a bitter and sour plant with long stems [compare أرنبة vs. أرينة], cf. Heb. אֲרֻנִי אֲנִי אֲרוֹנִי name of certain plants growing in marshes, probably pl. of ארונא meaning a chest, so called from closing and opening like chests (Jastraw, 1971; Klein, 1983).

***Artemisia*:** a genus of plants of thistle family

Artemisia—L. *artemisia* mugwort, from Gr. *artemisíā*, from *Ártemis* the Greek goddess of hunting (Klein, 1967); Dioscorides’ name for *Artemis* (Diana), wife of Mausolus, of Caria, Asia Minor; *Artemisia dracunculus* is tarragon, Ar. *tarkhūn*, probably from Pers. *tarkhūn*.

assyriacus—L. *assyriacus*, a second form of *assyricus* Assyrian, from northern Iraq (*Assyria*) (Gledhill, 2008).

azureus: sky-blue

azureus—Modern L. *azureus*, from Medieval L. *azura*, from Ar. *al-lāzaward* lapis-lazuli, from Pers. *lājvard*, so called from *Lājward*, a place in Turkestan, mentioned in Marco Polo's Travels. The initial “l” was mistaken for the definite article and consequently dropped in the Romanic languages (Klein, 1967).

banana—Sp. and Port. word from a W African vernacular name (Congolese) *banam* (Klein, 1967), from Ar. *banana* for a finger (Gledhill, 2008).

***behen*:** the plant *Centaurea behen*

behen—there are two suggested descriptions: (1) also as *ben* (e.g. in ben oil) the seed of any tree of genus Moringa, from Ar. *bān* (Webster’s, 2003); (2) the plant *Centaurea*, from Ar. *báhman*, in vulgar pronunciation *behmen*, from Pers. *bahman* a kind of root resembling a large radish (Klein, 1967).

Benzoin: a balsamic resin

Benzoin—from Sp. *benjui,* which is shortened fro *lo-benjui* (the first syllable having been mistaken for the definite article), from Ar. *lubā́n jawī́* frankincense of Java, Java is the former name of Sumatra (Klein, 1967).

Berberis: a genus of plants, the barberry

Berberis—Middle L. *berberis, barharis* barberry, from Ar. *barbārī́s,* in vulgar pronunciation *berberī́s* barberry (*Berberidaceae*) (Klein, 1967).

***bonduc*:** a rifle, bundook

bonduc—Hind., from Ar. *búnduq* missile, originally weapon made in Venice, from *Bunduqī́yd*^{h} the Arabic name of Venice, the city once so famous for its manufacture of crossbows and small arms. This etymology is corroborated by the circumstance that *Bunduqī́yd*^{h} means also musket, rifle. Compare also *Al-Banduqānī* 'the man of the crossbow', a surname of the caliph Harun-al-Rashid.

Cadia—from the Arabic vernacular name, *kadi* (Gledhill, 2008).

caffer—*caffrorum* from South Africa, of the unbelievers, from Ar. *kāfir* kafir (Gledhill, 2008).

***Cakile*:** a genus of plants of the mustard family

Cakile— from Ar. *qāqúllā*, also qāqúlla^{h} name of a plant (Klein, 1967).

Calamus: calamari, squid

Calamus—L. *calamārius* pertaining to a pen, from *calamus* reed, pen, from Gr. *kálamos*, perhaps related to L. *culmus* stock, stem, hence compare *culm* stem of grasses (Klein, 1967). Ultimately from Ar. *qalam* for the reed-like stems of rattan palms (Gledhill, 2008).

camphorus: camphor

camphorus—from Middle L. *camphora*, from Ar. *kāfūr*. from Skr. *kappūraћ*, assimilated from earlier *karpūraћ* (Klein, 1967).

Capparis: a genus of plants of caper family

Capparis—L. *Capparis*, from Gr. *kápparis*, from Ar. *kabar* for capers (*Capparidaceae*) (Gledhill, 2008).

***carmesinus*:** carmine-like, reddish-purple

carmesinus—Medieval L. *carmesinus*, formed from Ar. *kirmiz* or *qirmiz* worm (see *kermesinus*) + L. *minium* cinnabar, red lead, vermilion (Klein, 1967).

***carmineus*:** carmine

carmineus— Medieval L. *carmineus*, formed from Ar. *kirmiz* or *qirmiz* worm (see *kermesinus*) + L. *minium* cinnabar, red lead, vermilion (Klein, 1967).

***Carthamus*:** a genus of plants of thistle family

Carthamus—L. *carthamus*, painted-one, from Hebr. *qarţami* an orange-red dye, false saffron from Ar. *safrā*, is made from safflower, *Carthamus tinctorius* (Gledhill, 2008). Another suggestion: L. *carthamus*, from Ar. *qírţim*, *qúrţum* safflower, from Aram. *qurţ^{ē}má*, literally that which is lopped, from Hebr. *qirţém* he lopped, so called because the flowers are plucked off as soon as they begin to wither (Klein, 1967).

carvi: or carui, caraway

carvi—from Ar. *karwiya* caraway; Pliny derives it from an origin in *Caria*, Asia Minor (Gledhill, 2008).

caryophyllaceus: resembling a stitchwort, clove-pink colored

caryophyllaceus—from Ar. *qaranful*, for cloves or clove pinks (Gledhill, 2008).

Caryophyllus: a genus from pink family Nut-leaved

Caryophyllus—L. *caryophyllus*, from Gr. *karuofullon* (a former generic name for clove tree, Arabic *karanful*, *Eugenia caryophyllata*); clove-fragrance or color in other genera has transferred this meaning to the epithet, and given such cognate names as gillyflower (*Dianthus caryophyllus*, *Orobanche caryphyllacea*, *Cyperus caryophyllea*) (Gledhill, 2008).

***Cassia*:** a genus of plants of senna family

Cassia—derived from the genus name *Cassia* (herbs, shrubs, trees), a name, Gr. *kasia*, used by Dioscorides ultimately from Hebr. *qētzī'iá^{h}* cassia (Klein, 1967). Used by Linnaeus for *C. fistula* medicinal senna.

Catha—from an Arabic vernacular name, *khat*, for *Catha edulis* (the leaves are eaten and used to brew a beverage) (Gledhill, 2008).

Cedrus: cedar

Cedrus—L. *cedrus*, the ancient Greek name *kédros*, for a resinous trees with fragrant wood, compare Ar. *kedri*, from Hebr. *qāţár* it exhaled odor, smoked (Klein, 1967).

Ceterach—etymology dubious, from Ar. *chetrak* or indeed *shitarakh* a fern, or from the German, *Krätze* an itch (referring to the scurfy epidermis) (Genaust, 1996).

***chalepensis*:** from Aleppo

chalepensis—L. *chalepensis*, from Hebr. or Aram. *chālep*, related to Arabic name *Ћalab* Aleppo. See *halepens*.

Cheiranthus: cheiranthos Red-flower

Cheiranthus—it is not formed from Gr. cheir- hand + anthos flower; the first part is from (Maghreb) Ar. *khayrī* red, from Pers. *khīrī* wallflower (Genaust, 1996).

Cichorium: chicory

Cichorium—Theophrastus' name, *kichórion*, from Ar. *kesher* (cognate with cicoree, chicory, and succory) (Gledhill, 2008); The Greek word may be derived from Old Egypt. keћsher (Klein, 1967).

Cinnamomum: cinnamon

Cinnamomum—L. *cinnamomum*, derived from Gr. *kinnamwmon*, used by Theophrastus, ultimately from Hebr. *qinnāmṓn* cinnamon (Klein, 1967).

***Coffea*:** coffee plant

Coffea—L. *coffea*, ultimately derived from Ar. *qahwa* coffee, from *Kaffa* or *Kāfa* a district in southwestern part of Ethiopia (Klein, 1967).

Colocasia: Egyptian bean

Colocasia—Gr. *kolokasia*, from Ar. *kulkas* (for taro, the root of *Colocasia antiquorum*); L. *colocasia* is Egyptian bean, *Caladium* (Genaust, 1996).

***copticus*:** Coptic

copticus—L. *copticus*, from Gr. *Coptos*, near Thebes, Egypt; of the Copts (Lewis, 1969).

Costus—a name, costum, used in Pliny: Gr. *kostos*, for an Indian plant with scented roots, possibly from the Ar. *koost* (cognate with cost, as in costmary and alecost) (Gledhill, 2008).

coum:—from a Hebrew name for *Cyclamen coum* (coumarin, from Tupi, kumaru, relates to the Tonka Bean's use as a flavouring) (Gledhill, 2008).

***cous*:** Coan

cous—from the island of *Cos*, *Cous*, *Coi*, Aegean Turkey; pearl millet, couscous, derives from Ar. *kuskus* that which has to be pounded (Gledhill, 2008).

Crocus: a genus of plants of the iris family

Crocus—L. *crocus*, from Gk, *krókos* saffron, a world of Sem. origin. Compare Hebr. *karkṓm*, Ar. *kúrkum* saffron, Akkad. *kurkānū* saffron. Skr. *kuńkumam* saffron is prabably a Sem. loan word (Klein, 1967). Also:

Thread, *krókos*, from the Chaldean name, *krokh* a thread (for the stigmas of *Crocus sativus*, from which is produced true saffron, Ar. *za'farān*) (Gledhill, 2008).

cubeba: cubeb, a small aromatic berry used in medicine

cubeba—Middle L. *cubeba*, from Vernacular Ar. *kubā́ba*, corresponding to Ar. *kabābah*, for the unripe fruits of Piper cubeba (used medicinally and to flavor cigarettes) (Klein, 1967).

Culcas: *Colocasia antiquorum*

Culcas—L. *culcas*, from Gr. *kolokasía*, from Ar. *qolqas, kulkas* "Taro", for *Colocasia antiquorum* (Genaust, 1996).

Culcasia: *Colocasia antiquorum*

Culcasia— L. *culcas*, from Gr. *kolokasía*, from Ar. *qolqas, kulkas* "Taro", for *Colocasia antiquorum* (Genaust, 1996).

***Curcuma*:** a genus of plants of the ginger family

Curcuma—Modern L. *curcuma*, from Ar. *kúrkum* saffron, curcuma, for turmeric and its saffron-like colour (Klein, 1967).

Cuscuta: a genus of parasitic plants, the dodder (*Cuscutaceae*)

Cuscuta—Modern L. *cuscuta*, from Ar. *kushū́th*, *kashūthā́*, from Pers. *kushū́th* dodder, whence also Mishnaic Hebr. *kāshū́th*, dodder; fine hair the name used by Rufinus (thirteenth-century botanist) for dodder (Klein, 1967).

cyminum: cumin, the aromatic seed

cyminum—an old generic name, derived from the specific epithet of the species name *Cuminum cyminum* cumin, from Gr. *kūmínon* cumin, ultimately from Hebr. *kammṓn* cumin (Klein, 1967).

***Cynara*:** the involucral spines of cardoon, cardus, or artichoke

Cynara—L. *cynara*, from *kunos* dog, Ar. *al-kharsuf* (Gledhill, 2008).

Datura—from an Indian vernacular name, *dhatura*, Skt. *dhustura*, compare Ar. *tatorali*, thorn apple (Gledhill, 2008).

Dineba—a more faithful representation of the Arabic; See *Dinebra.*

Dinebra—Ar. *đunayba* a little tail. The apices of the glumes are prolonged (Gledhill, 2008).

dochna—Latinized version of Ar. *dochn* the vernacular name of the species (Gledhill, 2008).

***Doronicum*:** a genus of plants

Doronicum—Modern L. *doronicum*, from an Arabic name darā́naj, darū́naj (Klein, 1967), from Pers. dārūnak literally a drug piece, hence leopard's bane.

durra—Vernacular name of the species in Arabic Language (Gledhill, 2008).

Ebenus—L. *ebenus* Ebony-black, from Gr. *hebenus*, *ebenos*; compare Ar. *hebni*, cognate with ebony) (Gledhill, 2008). Ultimately from Egypt. and from Nubian word.

Ficus: a genus of trees, the fig

Ficus—L. *ficus*, the ancient Latin name for the fig (and for haemorrhoids), from the Hebr. *fag, pagh* half-ripe fig (Gledhill, 2008).

***Gossypium*:** a genus of plants of the mallow family

Gossypium—from Modern L. *gossypion* the cotton tree, hence soft; botanical Latin from an Arabic name *goz* for a soft substance (Gledhill, 2008; Klein, 1983).

halepens: belonging to Aleppo

halepens—L. *-ense* denoting origin or residing in + *Halab*, Arabic for Aleppo, Syria.

***harmalus*:** the wild rue

harmalus—Modern L. *harmalus*, from Gr. *armalá*, from an Arabic vernacular name *ħármal* rue, for its medicinal use (Klein, 1967).

hebraicus: Hebrew

hebraicus—L. *hebraicus* and *hebriacus*, belonging to *Hebrus*, *Hebri*.

Jasminum—Latinized from the Persian name, yasemin, Arabic, yasamin, for perfumed plants (Gledhill, 2008).

jujuba—from an Arabic name, jujube, for *Zizyphus jujuba* (both Latin words are cognates of the Gr. *zizufon*) (Gledhill, 2008).

julibrissin—silken, from the Persian name for *Acacia julibrissin* (Gledhill, 2008).

kali—either from the Persian for a carpet, or a reference to the ashes of saltworts being alkaline (*al-kalī*); cognate with *kalium* (*Potassium*) (Gledhill, 2008).

***karadaghensis*:** belonging to *Karadagh* region

karadaghensis—from *Karadagh* region (literally: black mountains), northeast of Tabriz, Iran (Gledhill, 2008).

lablab—the Turkish name for hyacinth bean, *Dolichos lablab*, from Arabic, *lubia*; others attribute it to a Hindu plant name (Gledhill, 2008).

***limon*:** the lemon and other Citrus fruits

limon—L. *limon*, from Ar. *līmūn*, from Pers. *līmūn* (Gledhill, 2008).

Luffa: a genus of plants of the family *Cucurbitaceae*

Luffa—modern L. luffa, from Ar. *Lūfa*^{h}, for Luffa cylindrical (Klein, 1967).

Maerua—from an Arabic vernacular name *meru* (Gledhill, 2008).

mahaleb: a kind of European cherry (*Prunus mahaleb*)

mahaleb—L. *mahaleb*, from Ar. *máħlab*, in vernacular Arabic pronunciation as *máħleb* (Klein, 1967).

***manna*:** the food of the Israelites in the wilderness

manna—Late L. *manna*, from Gr. *mánna*, from Aram. *mannā́*, from Hebr. *mān* having a sweet exudate (Klein, 1967).

manniferus: manna-bearing for the exudates from *Tamarix mannifera*

manniferus—L. *manniferus* manna-bearing, manna-ferw; compare Aram. *mannā́*, (Gledhill, 2008).

Marrubium—the name in Pliny, either from the Hebr. *marrob*, for the bitter-juice, or from the town of *Marrubium* in Latium (Gledhill, 2008).

***mascaratus*:** relating to mascara, a cosmetic preparation for coloring the eyelashes

mascaratus—L. *mascaratus*, from suffix *-at-* having + Sp. *máscara* mask, hence masked, darkened, from Ar. *máskhara*^{h} mockery; buffoon (Klein, 1967).

Medicago: alfalfa, lucerne

Medicago—Median-grass, Dioscorides' name, *mēdik*, from a Persian name for lucerne, or medick (*medica* with feminine suffix *-ago*) of relating to Median (Gledhill, 2008).

metel: garden thorn apple

metel— Modern L. *metel*, an Arabic vernacular name for *Datura metel*, from metel nut, from Ar. *jouz mathal* metel nut, and suffix *-idin(e)* (Senning, 2007).

Mezereum: mezereon

Mezereum—from Ar. *māzaryūn*, a name used by Avicenna (Ibn Sina) (980–1037), from the Pers. *māzaryūn* meaning unclear (Genaust, 1996).

negevensis—from the *Negev* (Ha-Negev, Hebr. ngb) desert area (Gledhill, 2008).

***nil*:** indigo

nil—Modern L. *nil*, from Ar. *nīl* indigo, from Pers. *nīl*, from Skt. *nīlaћ*, for *Pharbitis hederacea* (Genaust, 1996).

***Nuphar*:** the water lily

Nuphar—the Persian name nīnūfar (also nīlūfar), for a water lily (ancient Latin *nenufar*, *ninufer*) or from Mosul (Nineveh) (Gledhill, 2008).

***olibanum*:** frankincense

olibanum—Modern L. *olibanum*, from L. *libanus* (Vulgate), from Gr. *líbanos*, from Heb, *l*^{ĕ}*bhōnā́*^{h} frankincense, literally the white one, from *lābhā́n* white (Klein, 1967); Also compare: from the Ar. *al-lubān* for the resinous secretion, frankincense, of *Boswellia* (Gledhill, 2008).

Oncoba—from the Arabic vernacular name '*unkūb*, for *Oncoba spinosa* (Gledhill, 2008).

***Oryza*:** a genus of plants of cereal grasses

Oryza—L. *oryza*, from Gr. *óruza*, from the Ar. *eruz* rice (Gledhill, 2008).

***pagoda*:** a temple in India or China

pagoda—Port. *pagoda,* from Tamil *pagavadi*, propably means "house belonging to a deity", from Skt. *bhágavatī*, feminine of *bhágavat* blessed, adorable, sublime, divine, from *Bhágaћ* a god of wealth (Klein, 1967); also *pagoda* with the habit of a pagoda, from Pers. *butkada* idle temple.

***Parrotia*:** Persian ironwood tree

Parrotia—for F. W. Parrot (1792–1841), German naturalist and traveller (Gledhill, 2008).

***Persica*:** Persian

Persica—L. *Persica*, feminine of L. *Persicus*, Persian, belonging to Persia, as in *Prunus*.

***persicus*:** Persian

persicus—L. *Persicus*, Persian, belonging to Persia, as in *Prunus*.

Pistacia: pistachio nut

Pistacia—the Greek name *pistake* used by Nicander in 200 B.C., from Ar. *fūstaq* pistakion was the Greek name for the pistachio nut (Gledhill, 2008).

Quercus: a genus of trees, the oaks

Quercus—the old Latin name *quercus*, *quercus* for an oak (cognate with Arabic *alqurq*, and cork) (Gledhill, 2008); Also compare: from an Indo-European origin (Klein, 1967).

***Rheum*:** discharge from a mucous membrane

Rheum—Greek name *rhon* in Galen, *ra* in Dioscorides, from a Pers. *rēwend*, for the medicinal roots (rhubarb derives from *ra* and *barbaros*) (Gledhill, 2008).

sumach: the sumac tree for the red dye from *Rhus coriaria*

sumach—Medieval L. *sumach*, from Ar.*summā́q* the sumac tree, from Syr. ܣܘܡܩ *summā́q* red (Klein, 1967).

***Ribes*:** a genus of shrubs, the currant

Ribes—Modern L. *ribes*, from Ar. *rībā́s*, from the Pers. *rēvās*, for the acid-tasting *Rheum ribes* (Klein, 1967).

Saccharum: saccharum Sugar, for the extract from the solid stem

Saccharum—derived from L. *saccharum* sugar, Ar. *sukkar* (Gledhill, 2008), ultimately from Skr. *śárkarā* sugar (Partridge, 1966).

saffroliferus: smelling of true saffron

saffroliferus—botanical Latin from Arabic, *za'faran*, +L. *oleo* olive oil + and L. *fero* to carry, hence bearing saffron fragrance (Gledhill, 2008).

sambac—from Ar. *zambac*, for *Jasminum sambac* (Gledhill, 2008). See *zambac*.

Santalum: sandal-wood tree, of family *Santalaceae*

Santalum—derived from the genus name *Santalum* sandalwood, from Medieval L. *sandalum, santalum* sandalwood, ultimately from Ar. *śandal* sandalwood, and suffix *-ol* (Senning, 2007), From Pers. *chandal*, from Skr. *chandan*.

Satureia: savory

Satureia—L. *Saturēia*, *satureiorum* in Pliny for a culinary herb, from Ar. *sattūr* savory (Gledhill, 2008).

Schima—etymology unclear; some derive as *sxisma* a division, some consider an Arabic origin (*sxhma* means outward appearance) (Gledhill, 2008).

Sehima—Arabic *saehim*. The vernacular name in Egypt of the type species (Gledhill, 2008).

***Senna*:** senna

Senna—from the Arabic name *sana*, for the laxative leaves and pods (Gledhill, 2008).

Sesbania: a genus of plants of the pea family

Sesbania—Modern L. *sesbania*, from Ar. *saysabān*, from Pers. *sīsabān*, for *Sesbania sesban* (Klein, 1967).

seyal: timber**,** shittim wood

seyal—Modern L. *seyal*, from Ar. *sayyāl* flowing, fluent, for *Acacia seyal* timber (Genaust, 1996).

soda: alkaline, the calcined ash of *Salsola kali*

soda—derived from Medieval L. *soda* barilla, ultimately maybe from Ar. *suwwad* barilla (Senning, 2007).

Sophora: a genus of plants of the pea family

Sophora—from an Arabic name *sophera*, for a pea-flowered tree (Gledhill, 2008).

***Spinacia*:** Prickly-one

Spinacia—from the Arabic, *isbanākh* the fruit walls of spinach, *Spinacia oleracea* (Gledhill, 2008).

Suaeda—from the Arabic, *suwed-mullah*, for *Suaeda baccata* (Gledhill, 2008).

***Suddia*:** floating vegetable matter that obstructs navigation on the While Nile

Suddia—from Ar. sudd. A major component of the floating islands which obstruct navigation on the White Nile. Ar. *sudd* obstruction, from *sáddu* he stopped, shut, blocked up, obstructed (Klein, 1967).

Tamarindus: Indian-date

Tamarindus—from Ar. *tamr-hindi* Hindustan-date (Gledhill, 2008).

Tamarix: tamarisk, from family *Tamaricaceae*

Tamarix—Late L. *tamariscus*, for the Spanish area of the River Tambo (*Tamaris*) (Gledhill, 2008); others derive it from the Hebr. *tāmār* a palm tree, or Ar. *tamr* a date (Klein, 1967).

Taraxacum: a genus of plants of the chicory family

Taraxacum—L. *taraxacum*, from Ar. *ţarakhshaqūn*, or *ţarakhshaqūq*, ultimately from Pers. *talkh-chakōk* bitter herb (Klein, 1967).

Tarchonanthus: Tarragon-flowered-one

Tarchonanthus—botanical L. *tarchonanthus*, from Ar. *tarkhūn*, and *anqūj* (Gledhill, 2008).

tef: the Arabic name for *Eragrostis abyssinica* (tef grass)

tef—Amharic. Origin of the name is uncertain but may derive from the Arabic *tahf* (good), a name applied by the Semites of South Arabia to a similar wild grass, the grain of which is collected at times of food scarcity.

Themeda—from Ar. *thamada* depression filled with water after rain. Transliterated by the author as *thaemed*. The reason for the choice of name not given by author (Gledhill, 2008).

truchmenorum—Ar. *tourdjouman* interpreter. A Latinized form of the Arabic, possibly in honor of the interpreters associated with the collector (Gledhill, 2008).

Tulipa: tulip

Tulipa—Fr. *tulipe*; original seed sent by Ogier Gheselin de Busbecq (1522–92), Viennese Ambassador to Suliman the Magnificent, described as tulipan, compare Turk. *tūlbend*, from the Pers. *dulbend* or *thoulyban* a turban (Gledhill, 2008; Klein, 1983)

Veronica—Fuchs' name, for Saint Veronica who wiped the sweat from Christ's face, may be cognate with Betonica and Vettonica; various derivations have been suggested, Ar. *viru-niku*; and, as patron saint of photography, L. *vere-icon*, true image (Gledhill, 2008).

zambac—also known as *sambac*, from an Arabic vernacular name (Gledhill, 2008). See *sambac*.

Zizyphus: the jujube tree

Zizyphus—L. *zizyphus* the jujube tree, from Gr. *zízufos*, compare *Zizyphus jujube*; the fruit is called L. *ziziphum* or *zizyphum* the jujube, from Gr. *zízufon* (Lewis, 1969); For "jujube" see *jujuba*; all are derived from the Ar. zizouf or zizafun, also compare *Z. lotus* (Gledhill, 2008).

Conclusion

Reviewing the results of this study reveals that a great deal of important pharmacognotic and pharmaceutical terms are of oriental, especially Arabic, Persian and Hindi sources. Of these terms 119 references directly or indirectly made to Arabic and Persian languages. The authors believe that the exact amount of scientific terms of oriental origin, especially in the Islamic period, are far many from the terms mentioned here as a small sample (Klepser, 1999). The diversity of terms show that Islamic period sources have an important role in enrichment of human sciences, especially herbal medicine and classical pharmacy.

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