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MEDICINAL EFFECT OF *KAMEELA* AND *AMRAZE JILDIYA* (SKIN DISEASES) DESCRIBED IN UNANI SYSTEM OF MEDICINE AND CURRENT RESEARCH - AN OVERVIEW

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ABSTRACT: *Kameela* or *Kamala* is a well known Unani drug which is being used as medicament from centuries for the treatment of *Amraze Jildiya* (skin disease) by Unani Physicians and also mentioned their medicinal efficacy in Unani Classical text. It is widely scattered perennial shrub or small tree in tropical and subtropical region regions with an altitude below the 1,000 m and is a description to have a broad range of pharmacological activities. There are many chemical constituents documented such as phenols, steroids diterpenoids, triterpenoids, flavonoids, coumarins, isocoumarins, cardenolides and mainly phenols; that is, bergenin, malloto philippinens, rottlerin, and iso rottlerin have been isolated, identified, and reported different biological activities such as antimicrobial, cytotoxicity, antifungal, antiviral, antioxidant, anti-inflammatory. *Roghan Kameela* and *Zimad Jarb* is well established compound drug of Unani system for the treatment of *Jarb* (Scabies) and *Kharish* (itching) which is time tested and safe. The present review reveals that *Mallotus philippinensis* is a precious source of natural medicament and provides persuasive support for its potential use in a modern medicament.

INTRODUCTION: *Mallotus philipiensis* L. commonly known as *Kameela*/*Kamala* which is a large woody multipurpose medicinal tree belongs to the family of Euphorbiaceae consisting of herbs, shrubs, and trees. It is up to 10-12 meters in height and is widely distributed throughout tropical India along with the Himalaya from Kashmir eastwards up to 5000 feet. The plants are a rich source of biologically active compounds and are used as a common dye yielding plant various parts of the *Kameela* are used for the healing of skin problem, antifungal tapeworm, eye-disease, bronchitis, diarrhea, urinogenital infection, cancer, diabetes, jaundice, malaria, etc.^{1,2}

Fruits of *Mallotus philippinensis* have been reported being used since a long time in Ayurvedic (Indian), Arabic, Unani and Chinese traditional Medicine systems as anti-helminthics, antifungal, antibacterial and immunoregulatory properties, anti-filarial, anti-parasitic, anti-ulcers and as aphrodisiac activities³.

Botanical Classification:

Kingdom: Plantae
Order: Malpighiales
Family: Euphorbiaceae
Genus: Mallotus
Species: *M. Philippensis*⁴.

Chemical Constituents: *Kamala* oil has been found to contain about 60% of kamlolenic acid as the only major component with minor proportions of common linoleic, oleic, and saturated acids and probably some conjugated diethenoid acid.

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The saturated components consist mostly of myristic and palmitic acids⁶. Other active constituents are phenols, steroids diterpenoids, triterpenoids, flavonoids, coumarins, isocoumarins,

cardenolides and particularly phenols; that is, bergenin, mallotophilippinens, rottlerin, and isorottlerin^{7,8}.



FIG. 1: *MALLOTUS PHILIPPIENSIS* L.⁵

Pharmacological Actions of Kameela:

Antifungal, antibacterial, antiviral, anti-diabetic, anticancer, antileukemic activity, antioxidant, immunomodulator, hepatoprotective⁹⁻¹⁴.

Uses of Kameela: *Jarb* (Scabies), *Daad* (Ring Worm), *Qooba* (Pityriasis) *Naar Farsi* (Eczema), *Shara* (Urticaria), *Taqassure Jild* (Psoriasis), *Bars* (Vitiligo), *Sartan* (Cancer), *Suzuka* (Gonorrhoea), *Aateshak* (Syphilis) etc.¹⁵⁻¹⁶

Compound Unani Formulations: There are some compound formulations which active constitutes is *Kameela* such as; *Roghan Kameela*, *Zimad Jarb*¹⁷⁻²⁰.

Scientific Report:

Wound Healing Activity: Gangwar M *et al.* reported that ethanolic extract of *Kameela* at the dose of 200 mg/kg body wt. exhibits wound healing activity in rat models when administered orally for 10 days, and histopathological evaluation revealed more density of collagen formation with minimal inflammatory cells in deeper tissues when compared to control group²¹.

Antimicrobial Activity: Sheikh *et al.* reported that methanolic extract of hairs and glands covering fruits of *Mallotus philippinensis* (Kamala powder) showed antimicrobial activity in a different culture (Gram positive and Gram-negative bacteria and fungi)²². Velanganni J *et al.*, also documented that, ethanol extract showed antimicrobial activity against the fungi *A. flavus* and *C. Albicans*⁹.

Hepatoprotective Activity: Ramakrishna S *et al.*, reported that ethanolic extract of *Kameela* leaves exhibit hepatoprotective activity against CCl₄ induced hepatotoxicity in rats when compared to Silymarin which was standard control, which may be attributed to its antioxidant property²³.

Anti-leukemic Activity: Khan M *et al.*, reported that hexane fraction of *M. philippensis* root extract possesses anti-leukemic activity in HL-60 cells and also confirmed that polyphenols were the main compounds of the hexane extract that inhibited proliferation and induced apoptosis¹².

CONCLUSION: There is a large number of western medicine available for the treatment of skin diseases but it has some drawback as high cost-effective and their side effects, and the chance of recurrence is high when the drug is stopped because most of the cosmetic drugs are steroid based. The medicament which derived from natural sources has lesser side effects and easily available our natives.

Kameela contain various active chemical constituents *viz*; flavonoids, phenolic, glycosides compound, and tannins which have been reported as antimicrobial activity against various skin disorders. Further elaborative research is needed hidden benefits of *Kameela* and other active constituents. This review will be helpful as new vistas for the research scholars for various skin diseases.

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