

Bridging Tradition and Science: Pharmacological Perspectives on the Unani Formulation Jawarish Kamooni for Gastrointestinal Health

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ABSTRACT:

Gastrointestinal disorders, including functional dyspepsia, gastritis, and irritable bowel syndrome, affect millions globally, posing significant clinical and socioeconomic challenges. In Unani medicine, these conditions are attributed to imbalances in gastric temperament and humors, particularly cold and moist states. Jawarish Kamooni, a classical Unani polyherbal electuary, is traditionally prescribed to alleviate bloating, indigestion, and gastric ulcers. Comprising Carumcarvi, Rutagraveolens, Piper nigrum, Zingiber officinale, aluminium silicate, and honey, it exhibits carminative, prokinetic, anti-inflammatory, and antimicrobial properties. This narrative review synthesizes classical Unani literature with modern pharmacological evidence to elucidate its historical foundations, formulation rationale, and therapeutic relevance for gastrointestinal health. While individual ingredients are supported by preclinical studies demonstrating bioactivity, no randomized controlled trials have evaluated the complete formulation, underscoring a critical research gap. This review advocates for standardized preparation protocols and clinical validation to integrate Jawarish Kamooni into evidence-based digestive care, offering a holistic alternative to conventional therapies. Future research should prioritize rigorous clinical trials and quality control to enhance its global acceptance.

Keywords: Jawarish Kamooni, Unani medicine, functional dyspepsia, gastritis, herbal medicine, Carumcarvi, pharmacological validation

1. INTRODUCTION

Gastrointestinal (GI) disorders, ranging from functional conditions such as dyspepsia, flatulence, and irritable bowel syndrome (IBS) to chronic ailments like gastritis and peptic ulcers, represent a significant global health burden.

Affecting millions worldwide, these conditions contribute to substantial healthcare costs, reduced productivity, and diminished quality of life^[1]. Conventional treatments, including proton pump inhibitors (PPIs), H₂ receptor blockers, prokinetics, and antibiotics, often provide symptomatic relief but are limited by side effects, antimicrobial resistance, and incomplete symptom resolution^[1]. These challenges have spurred interest in complementary and alternative medicine (CAM), particularly the Unani system, which adopts a holistic approach rooted in humoral balance and temperament theory^[2,5]. Jawarish Kamooni, a classical Unani polyherbal electuary documented in authoritative texts like Qarābādīn-e-Azam, Bayaz-e-Kabir, and Makhzanul Mufradat, is widely used for managing GI complaints^[2,3,4].

In Unani medicine, digestion (Hazm (digestion)) is fundamental to health, driven by innate heat (Hararat Ghariziya (innate heat)) and the equilibrium of four humors: blood (Dam (blood)), phlegm (Balgham (phlegm)), yellow bile (Safra (yellow bile)), and black bile (Sauda (black bile)) [2]. The stomach (Meda (stomach)) transforms food into chyle and chyme, supporting systemic vitality. Imbalances, particularly cold and moist temperaments (Barid Ratab Mizaj (cold and moist temperament)), lead to conditions like flatulence (Nafakh (flatulence)), indigestion (Su-e-Hazm (indigestion)), and gastric ulcers (Qarha-e-Meda (gastric ulcer)). Jawarish Kamooni, a semisolid formulation blended with honey, leverages ingredients with hot and dry temperaments (Haar Yabis (hot and dry temperament))—such as Carumcarvi, Rutagraveolens, Piper nigrum, and Zingiber officinale—to restore digestive strength (Quwwat-e-Hazimah (digestive strength)), enhance gastric motility, and alleviate symptoms like bloating and spasms [6,7,8,9]. Despite its historical use and pharmacological validation of individual

ingredients, rigorous clinical trials on the complete formulation are lacking [10,11,12,13,14,15].

S. No.	Unani Name	Botanical Name	Parts used	Major chemical compounds	Pharmacological Properties	Mechanisms of Synergy
1	Zeera Siyah	Carum carvi	Seed	Carvone, limonene, carveol, dihydrocarveol, p-cymene, thymol	Anti-inflammatory, antioxidant, antifungal, antimicrobial [6]	Piperine enhances bioavailability of quercetin, gingerols, and carvone, amplifying inhibition of inflammatory pathways (e.g., TNF- α , COX-2). Flavonoids reduce ROS-driven inflammation.
2	Berg-e-Sudab	Ruta graveolens	leaf	Rutin, furanocoumarins (psoralen, bergapten), quercetin	Anti-inflammatory, antioxidant, antimicrobial, anticancer, cardioprotective, neuroprotective	Quercetin and gingerols induce apoptosis, inhibit tumor proliferation. Piperine enhances delivery to tumor sites, flavonoids reduce cancer-related inflammation.
3	Filfil Siyah	Piper nigrum	Fruit	Piperine, chavicine, piperidine, piperettine, sabinene	Anti-inflammatory, antioxidant, antimicrobial, enhances nutrient absorption	Improves gut motility, piperine enhances nutrient uptake, Honey protects mucosa, Bura-e-Armani reduces irritation.
4	Zanjabeel	Zingiber officinale	Rhizome	Gingerols, shogaols, zingerone, paradol, zingiberene	Anti-inflammatory, antimicrobial, anticancer, prokinetic [7]	Improves gut motility, piperine enhances nutrient uptake, Honey protects mucosa, Bura-e-Armani reduces irritation.
5	Bura-e-Armani	Aluminium silicate		Kaolinite, montmorillonite	Absorbent, astringent	Improves gut motility, piperine enhances nutrient uptake, Honey protects mucosa, Bura-e-Armani

			Mineral			reduces irritation
6	Honey	Apis mellifera		Flavonoids, phenolic acids, terpenes, alkaloids	Anti-inflammatory, antioxidant, antimicrobial	Improves gut motility, piperine enhances nutrient uptake, Honey protects mucosa, Bura-e-Armani reduces irritation

This narrative review synthesizes the traditional Unani rationale, pharmacological properties, and modern scientific insights of JawarishKamooni, aiming to bridge classical wisdom with evidence-based medicine. By critically examining its composition, therapeutic mechanisms, and clinical relevance, this study advocates for standardized research to integrate JawarishKamooni into contemporary GI care, addressing the growing need for holistic, multi-targeted therapies.

Composition and Unani Rationale

In Unani medicine, compound formulations (Murakkabāt (compound formulations)) are meticulously designed based on temperament theory (Mizāj (temperament)) and humoral pathology (Ilm-e-Akhlāt (humoral pathology)), aiming to restore physiological balance through synergistic ingredient combinations. JawarishKamooni, a classical semisolid polyherbal electuary, exemplifies this approach, targeting gastrointestinal disorders such as flatulence (Nafakh), indigestion (Su'-e-Hazm), and gastric ulcers (Qarha-e-Mi'da). Documented in authoritative Unani texts, including Qarābādīn-e-Azam, Bayaz-e-Kabir, and MakhzanulMufradat [2,3,4], it is prescribed to correct cold and moist temperamental imbalances (BaridRatabMizaj) that lead to digestive sluggishness, gas retention, and mucosal inflammation.

The formulation comprises Carumcarvi (Zeera Siyah), Rutagraveolens (Berg-e-Sudab), Piper nigrum (FilfilSiyah), Zingiberofficinale (Zanjabeel), aluminium silicate (Bura Armani), and honey (Shahad). Each ingredient is selected for its specific therapeutic role, guided by its hot and dry temperament (HārYābis), which counteracts the excess moisture and coldness associated with gastrointestinal dysfunction. For instance, Carumcarvi stimulates gastric secretions and relieves spasms, while Piper nigrum and Zingiberofficinale enhance motility and nutrient

absorption. Rutagraveolens provides anti-inflammatory and antimicrobial effects, Bura Armani acts as an absorbent and mucosal protector, and honey serves as a demulcent base that enhances bioavailability and palatability [6,7,8,9].

The Unani principle of synergism (Tarkīb) underpins JawarishKamooni's efficacy, where each ingredient complements the others to restore gastric temperament (Mizāj-e-Mi'da (gastric temperament)) and digestive strength (Quwwat-e-Hazimah). This holistic approach addresses multiple facets of gastrointestinal health, including motility, microbial balance, and humoral equilibrium (I'tidāl-e-Mizāj (humoral equilibrium)), making it a versatile remedy for functional and inflammatory digestive disorders.

Pharmacological and Chemical Profile

The therapeutic efficacy of JawarishKamooni, rooted in centuries of Unani clinical practice, is increasingly supported by modern pharmacological research, which validates the bioactivity of its individual components. Each ingredient contains a spectrum of phytochemicals with pharmacodynamic actions that align with its traditional use in managing gastrointestinal disorders. Below is a detailed overview of the chemical compounds and pharmacological

Properties of JawarishKamooni's ingredients, as supported by contemporary studies

The term "Jawarish" is derived from the Persian word "Gowarish" which means digestion. It is a semisolid traditional pharmaceutical dosage form similar to Majoon (confection or electuary) in appearance. It is distinguished from Majoon by its superior taste and odor of the ingredients. The consistency of Jawarish is thicker than Majoon so when it is dried it can be split into pieces by hand. The ingredients of these formulations should be powdered in coarse particle size to ensure a longer stay

Preparation Method of JawarishKamooni

The preparation of JawarishKamooni, as described in classical Unani texts such as Qarābādīn-e-Azam and Bayaz-e-Kabir, involves a series of pharmaceutically precise steps to preserve the efficacy, temperament (Mizāj), and synergistic properties of its ingredients. The method adheres to the traditional Unani standards of **Murakkabāt** (compound formulations), where each component is processed to retain its active constituents and therapeutic quality.

Pulverization and Sieving of Ingredients

All herbal ingredients, namely Zeera Siyah (Carumcarvi), FilfilSiyah (Piper nigrum), Zanjabeel (Zingiberofficinale), and Berg-e-Sudab (Rutagraveolens), are first coarsely ground using a pestle and mortar. The resulting powders are then sieved through **mesh number 80** to ensure uniform particle size, which enhances bioavailability and homogeneity in the final product.

Special Handling of Mineral Ingredient

Bura Armani (aluminium silicate), being a mineral component, is subjected to **fine grinding separately** and passed through the same mesh. It must be free from impurities and well-incorporated to avoid sedimentation and ensure safe dosing.

Method of Preparation of JawarishKamooni (As per the Unani Pharmacopoeia of India)

The preparation of JawarishKamooni follows a standardized procedure outlined in the Unani Pharmacopoeia of India, Part 2, Volume 3, to ensure consistency, safety, and therapeutic efficacy. The formulation process is based on traditional Unani pharmaceuticals, involving meticulous drug handling, specific temperature control, and a scientifically measured consistency of the base (Qiwam (base consistency)).

Dosage

7–10 grams, taken **before or after meals** with **lukewarm water**, or as directed by a qualified Unani physician

Pharmacological Actions

Muqawwi-i-meda (stomachic agent) Acts as a stomachic agent, strengthening and tonifying the stomach to improve its functional capacity.

Kasir--riyah (carminative): Exhibits carminative properties, effectively relieving flatulence and expelling gastrointestinal gas.

Hazim (digestive stimulant) Functions as a digestive stimulant, enhancing enzymatic activity and promoting efficient digestion.

Muqawwi-jigar (liver tonic), serves as a liver tonic, supporting hepatic function and contributing to overall detoxification processes.

Muqawwi-i-am (general tonic) Acts as a general tonic, improving systemic vitality and overall health status.

Mushtahi (appetizer): Functions as an appetizer, stimulating appetite and promoting food intake.

Muqawwi-ī-Bāh (aphrodisiac): Acts as an aphrodisiac, enhancing sexual desire and vigor

THERAPEUTIC APPLICATIONS AND CLINICAL RELEVANCE:

JawarishKamooni is traditionally used to manage conditions such as Su'e-Hazm (indigestion), Nafakh (flatulence), Qarha-e-Mi'da (gastric ulcer), and Zo'f-e-Ishtihā (loss of appetite) (loss of appetite). Its carminative herbs relieve bloating and gas, while prokinetics stimulate gastric motility.

The formulation is especially useful in non-ulcer dyspepsia, gastritis, and early satiety, offering an alternative or adjunct to synthetic drugs. However, controlled clinical studies evaluating its full formulation in humans remain lacking. Pilot studies have validated individual herbs but not the compound as a whole.

Thus, while clinical relevance remains strong based on traditional usage and herbal validation, formal studies are needed to integrate JawarishKamooni into evidence-based gastrointestinal therapeutics.

Challenges, Research Needs, and Conclusion:

Despite its long-standing use and reported effectiveness, JawarishKamooni remains scientifically underexplored. Standardization, safety profiling, and clinical efficacy trials are urgently needed. The integration of traditional wisdom with modern validation could offer new pathways in managing chronic GI disorders through safe and multi-targeted Unani formulations like JawarishKamooni.

This narrative review underscores the value of JawarishKamooni in holistic digestive care and calls for bridging traditional knowledge with modern research for enhanced global acceptance.

II. DISCUSSION AND CONCLUSION

Gastrointestinal disorders are among the most common clinical presentations worldwide, with many individuals experiencing symptoms without any identifiable organic pathology. These cases are typically classified as **Functional Gastrointestinal Disorders (FGIDs)**, such as irritable bowel syndrome (IBS), functional dyspepsia, and functional constipation. FGIDs affect nearly **40% of the population** at any given time, and the majority suffer from **chronic and fluctuating symptom**.

The underlying pathophysiology of FGIDs is complex and multifactorial. Contributing mechanisms include **intestinal dysbiosis, low-grade mucosal inflammation, eosinophilic infiltration, immune dysregulation, increased intestinal permeability, bile acid malabsorption, and neurohormonal imbalances** such as altered serotonin metabolism. Environmental factors, particularly **diet**, significantly influence symptom severity and progression.

Despite the availability of multiple pharmacological classes—such as prokinetics, proton pump inhibitors, laxatives, and antibiotics—conventional treatment often falls short in delivering sustained remission. This has led to growing interest in **traditional polyherbal formulations** with multimodal actions.

In this context, JawarishKamooni, a classical Unani compound electuary, presents a promising complementary approach. The formulation's ingredients possess **gastroprotective, antioxidant, anti-inflammatory, antimicrobial, and motility-regulating** properties, many of which have been confirmed by preclinical pharmacological studies.

These findings validate many of the therapeutic actions attributed to JawarishKamooni in Unani texts. However, **pharmacological investigations of the compound formulation as a whole** remain limited. Most studies have examined individual ingredients, which, although helpful, do not fully represent the **synergistic effects** emphasized in Unani philosophy.

Thus, the present narrative review highlights JawarishKamooni as a **multi-potent Unani formulation** primarily used for gastrointestinal disorders, with secondary applications in **cardiovascular, renal, metabolic, and general health**. Its **safety profile and standard operating procedures (SOPs)** have been reported in earlier pharmacognostic studies (Meena et al., 2013; Husain et al., 2017).

In conclusion, the vast therapeutic potential of **Murakkabāt (compound formulations)** like JawarishKamooni underscores the need for further **interdisciplinary research**. Collaboration between **Unani scholars, modern clinicians, and pharmacological scientists** can help validate these traditional medicines and integrate them into evidence-based healthcare systems.

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