

**TIRYAQ-I-AFAYEE (A POLYHERBAL FORMULATION) OF UNANI MEDICINE USED IN THE PREVENTION OF WABĀI AMRĀD (EPIDEMIC/ PANDEMIC DISEASES) – AN APPRAISAL**

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**ABSTRACT**

**BACKGROUND AND OBJECTIVE:** Tiryaq-i-Afayee, a polyherbal formulation of Unani medicine used in the prevention and treatment of various wabāi amrād (epidemic/pandemic diseases) since olden days. This review study has been carried out to explore the therapeutic efficacy of this formulation in the light of scientific studies.

**MATERIALS & METHODS:** A total of 74 literature comprising classical Unani texts from the period of 9th – 20th century AD, and published research articles in various reputed journals from 1999 – 2020 AD were reviewed regarding immunomodulatory, antiviral, antinfluenza, antioxidant, antitussive, antimicrobial effects of Tiryaq-i-Afayee, as a whole preparation and its individual ingredients.

**RESULTS:** Tiryaq-i-Afayee contains Sibr Zard (Aloe vera) (2 parts), Murr Makki (Commiphora myrrha) (1 part) and Zafran (Crocus sativus) (1 part). It is prepared in the form of pill, and 2 g is used in alternate day for prevention and management of epidemic diseases. All the three ingredients of this compound formulation belong to plants and individually used for various medicinal purposes.

**DISCUSSION:** A study revealed that Tiryaq-i-Afayee possesses significant immunomodulatory effect in a small group of immuno compromised persons. An ethanol extract of Aloe vera exhibited antiinfluenza effect against influenza A virus due to presence of aloe-emodine (anthraquinone glycoside). Certain studies have reported that Commiphora myrrha possesses significant antioxidant and antimicrobial effects against Staphylococcus aureus and Pseudomonas aeruginosa. Another study has revealed that Saffron extract exhibited promising antiviral activity due to presence of crocin and picrocrocin.

**CONCLUSION:** The aforementioned classical and modern conventional materials have given plentiful information regarding use of Tiryaq-i-Afayee in the prevention of epidemic/pandemic diseases.

**INTRODUCTION**

The Unani system of medicine is one of the ancient and time tested medicine practicing since 2500 years. This medicine was established in Greece and consequently developed in Rome, Arabia, Iran and Indian subcontinent. In Unani medicine, the wabā is referred as epidemic and defined as contaminated or putrefied changes in the air. The vegetables, collected water at one place, putrid fruit, dead animals etc causes such contamination. Certain communicable diseases viz. hasba (measles), judariyya (small pox), nazlā va zukām-i-wabā (epidemic influenza), humma-i-wabā
(epidemic fever)⁵,⁶,10,12, tā‘ūn (plague)⁵,⁶,14 etc have been discussed in Unani literature. The history is suggested that the word ‘epidemic’ was initially described by Homer in the Odyssey (Book I versus 194 and 230), about two centuries before Hippocrates.¹ In modern science, the epidemic is explained as an outbreak that influences a number of people at same time and able to reach in one or several places or countries. One more word pandemic is referred as worldwide spread of any disease.¹⁶ So far, the world has observed several epidemic/pandemic of various infectious diseases such as plague of Athens (430–426 BC), antonine plague (165–180 AD), Black Death (1331–1353 AD), small pox (18th century, 1950s, 1967 AD)¹⁹, syphilis (1495 AD)¹⁷, cholera (1817–182 AD; 1826–1837 AD; 1846–1860 AD; 1863–1875 AD; 1881–1896 AD; 1899–1923 AD; 1961–1975 AD), influenza (1889–1919 AD; 1918–1919 AD; 1957–1958 AD; 1968–1969 AD; 2009–2010 AD) etc.¹⁷

In Unani medicine, four modes of treatment such as ‘ilāj bi’l-tadībīr (regimenal therapy), ‘ilāj bi’l ghizā (dietotherapy), ‘ilāj bi’l-daw‘ā’ (pharmacotherapeutics) and ‘ilāj bi’l-yad (surgery) are chosen for treatment purposes.¹²,¹⁴,¹⁵ The pharmacotherapeutic is an important mode of treatment in which single and polyherbo-mineral preparations are used. The Unani principle of treatment is based on detoxification theory in which the morbid humours eliminate through applying the above mentioned modes of treatment.¹ Many single drugs viz. Karanjwa (Caesalpinia bonducella), Sapistan (Cordia myxa), Behi dana (Cydonia oblonga), Unnab (Ziziphus jujuba) etc, and compound preparations viz. Tiryaq-i-Afayee, Qurs-i-Kafoor, Sharbat-i-Khaksi, Sharbat-i-Banafsha, Sharbat-i-Neelofar, Khameera Marwareed etc are prescribed in the prevention and management of various epidemic diseases. Some eminent Unani physicians have claimed that Galen (129–200 AD) used Tiryaq-i-Afayee regularly during the prevalence of epidemic diseases.³

MATERIALS & METHODS

This review was done after surveying various classical Unani literature particularly Urdu translations, from the period of 9th–20th century AD viz. Kitab al-Mansuri (Liber ad Almansorem) and Kitab al-Hawi (Liber Continens) of Abu Bakar Muhammad Ibn Zakaria Razi (Rhazes) (865–925 AD), Kamil al-Sanā (The Complete Book of the Medical Art) of ‘Ali Ibn al’-Abbas al-Majusi (Haly Abbas) (10th century AD), Al-Qanānī’l Tib (The Canon of Medicine) of Ibn Sina (Avicenna) (980–1037 AD), Zakhirā Khawārizam Shahi of Ismail Ibn Husayn Gorgani (1040–1136 AD), Kitab al-Mukhtarāt fi’l Tib of Ibn Hubal Baghdadi (1121–1213 AD), Kitab al-Ta’seer of Ibn Zohar (Avenzoar) (1126–1198 AD), ‘Ilāj al-Amraz of Hakim Muhammad Shareef Khan (1722–1807 AD), Qarabadeen Azam va Akmal of Hakim Azam Khan (1815–1902 AD), Haziq of Hakim Ajmal Khan (1868–1927 AD), Qarabadeen Najmul Ghani of Hakim Najmul Ghani (b. 1859 AD), Al-Qarabadeen and Sharah Asbab of Muhammad Kabeeruddin (1889–1976 AD). Many published original and review research articles during the period of 1999 to 2020 AD pertaining to epidemic, pandemic, SARS, COVID-19, antiviral, antipyretic, antiinvasive, immunomodulatory activities of individual ingredients of Tiryaq-i-Afayee were also reviewed through various search engines like PubMed, Science Direct, Elsevier, Google Scholar, Scopus, Research Gate etc. A total of 140 literatures were reviewed, of them 74 were selected for compilation of this manuscript.

RESULTS

Brief introduction of Unani medicine

The theories of Unani system of medicine are mainly based on teachings of Hippocrates (460–370 BC) who is also considered as father of medicine.² The World Health Organization (WHO) has recognized this system and is practicing in various countries such as India, Pakistan, Bangladesh, Sri Lanka etc. In India, the Unani medicine is practicing under the patronage of Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), Govt. of India. According to Unani theory, the human body is poised with seven basic components viz. arkān (elements), mizāj (temperament), akhlāt (humour), a’dā’ (organs), arwāh (pneuma), quwā (faculties) and af’āl (functions). Moreover, the humoural theory is also put forwarded with four humours viz. dam (sanguine), balgham (phlegm), safra (yellow bile) and sawdā (black bile) with their temperament natural such as hot-moist, cold-moist, hot-dry and cold-dry, respectively. An imbalance in any one of the above mentioned seven components and humours are responsible for the development of diseases.⁴,⁶,2¹

This traditional system of medicine is also discussed about prevention of diseases through asbāb-i-sittā zarāārīā (six essential factors) that includes havā-i-muheet (atmospheric air), makoolāt va mashroobāt (food and drink), harakat-o-sukūn badnī (physical activity and repose), harakat-o-sukūn nafsanī (mental activity and repose), nawm-o-yaqza (sleep and wakefulness) and ehtibās-o-istīfrāgh (retention and elimination). These factors are essential for life of anybody, and also for prevention of diseases. Certain other factors such as changes in the environment and
geography can also influence the health of people and these are considered as secondary essential factors (asbab-i-ghair-zarūriā).

In Unani system, tabī‘at (physis) is referred as an individual power of people and becomes part of the body in fighting with diseases. Thus, the essential aspect of Unani treatment is to return the balance of the body mainly through assisting bodily faculties i.e. tabī‘at mudabbir-i-badan (medicatrix naturae). It is an inborn power of the body which gives self-defence or modification and refurbishing any disturbance in the anatomical and physiological state of the body.  

Concept of wabāi amrād (Epidemic/ Pandemic diseases) in Unani medicine

As per Standard Unani Medical Terminology book published by the Central Council for Research in Unani Medicine, New Delhi, the equivalent term for wabāi is epidemic. Ibn Sina stated that a large population could suffer from fever at a time due to contamination of water and air withajsām khābita (pathogenic organisms). He further affirmed that the contamination of air is caused when the bodies died during epidemic are not disposed properly. The environmental air may also gets contaminated due to decomposed vegetables, fruit, putrefied dead bodies of animals and collected water as one place for long time. Moreover, the infected human body is manifested with many clinical presentations viz. body pain, excessive sweating, foul smell of mouth, bilious vomiting, diarrhoea, changes in urine etc. The history is evident that several contagious diseases such as tuberculosis, small pustules, leprosy, meningitis, rabies etc were common in ancient days. Hippocrates, has also mentioned the signs and symptoms of various contagious diseases which are now classified as diphtheria, mumps, influenza, malaria, tuberculosis etc. Another eminent Unani physician, Galen (129–200 AD) had projected miasma theory of spreading of contagious diseases. He affirmed that certain communicable diseases such as cholera, plague, chlamydia etc are transmitted due to contaminated and unpleasant air, and the harmful and noxious substances enters in the human body through respiratory tract or pores of the skin. Moreover, first time, Razi has elaborated the symptomatology of small pustules and measles in the history of medicine in his manuscript Kitab fi al-Jadariva al-Hasbah (De Variolis et Morbilis/ Book on Small Pox and Measles). He had also given the idea of quarantine. He admitted that “an infected person should keep away from visiting to the houses of others since the droplets infection is more prone to become contagious”. Furthermore, he acknowledges that “an individual must keep away in direct contact with animals especially during epidemic of zoonotic diseases”. He also stated that the communicable diseases widely spread when the people are moving from non-contaminated to contaminated zone. Razi has affirmed that the rain during the hot weather is more prone to develop epidemic diseases. He has mentioned in the 15th volume of Kitab al-Hawi (The Comprehensive Book of Medicine) that respiratory infections are more prone when the temperature in the environment gets change, and certain factors are very common in patients during epidemics such as travel history, place, diets or beverages. The most influential Unani scholar, Ibn Sina has depicted that the secretion of body gets contaminated with foreign bodies before getting an infection. He further asserted that during epidemics certain qualitative changes occur in the atmospheric air. He also proclaimed that excessive hotness and humidity in the environment may increase multiplication of microbial organisms that further causes the spread of epidemics. He stated that the epidemics which occur during spring season are terrible in nature. Ibn Zuhr mentioned in his manuscript ’Kitab al-Taisir’ that he experienced that some patients who died even due to mild fever and concurrently few got complete cure when their place of stay and diets were modified. He further asserted that during epidemic due to inhalation of contaminated air, the normal function of the heart may be disturbed and the patient is died because of cardiac arrest. According to Unani theory, the epidemic diseases are manifested by respiratory distress, foul smell of breath, redness in eye, hotness in chest, loss of appetite, ulcers around the mouth, polyuria, increased viscosity of urine etc. In Unani literature, another disease is described by the name of humma-i-wabai that is stand for epidemic fever caused by contaminated air. After inhalation of contaminated air, septicaemia is produced which may cause fever, breathlessness and death. Ibn Khatima (1369 AD) described that all times the minute bodies are found around the human body which when entered in the body may produce diseases. It can be concluded that the ancient Unani scholars fully knew about the presence of microbes in the environment. However, the germ theory was completely understood after the discovery of the microscope in 1683 AD.  

Nazla-i-Wabāi (Influenza) and COVID-19

Two conditions such as zukām and nazlā are being discussed in Unani texts. The clinical features of these two conditions are very much similar to the signs and symptoms of influenza. Razi has elaborated that the cardinal features of zukām appears when the bare head is exposed to the cold air coming from north direction. These conditions may also be allied with irritation and
Inflammation of throat and conjunctiva, headache, hoarseness of voice, cough, fever, pain in stomach, diarrhoea etc. The causes of this disease are sudden changes of weather, noxious matters, extreme hot or cold climatic temperature, frequent bathing with cold or chilled water, excessive physical activity, stress, abnormal temperament of the body etc. A renowned Indian Unani physician, Hakim Ajmal Khan depicts that many deaths at a time occur due to epidemic nature of certain diseases such as plague and cholera. He mentions that sometimes zukām and nazlā also spreads in several people epidemic in nature. He articulated these conditions as nazlā va zukām-i-wabābī and correlated it with influenza. Another eminent Unani physician, Najeebuddin Samargandi (d. 1222 AD) has given a detail description of this disease in ‘Al-asbab wa-Alamat’ (The Book of Causes and Symptoms). In Urdu translation of this text, Hakim Kabiruddin has described the clinical manifestations of epidemic influenza viz. irritation in the nose, sneezing, irritation in the throat, fever, tiredness etc. Such patients may also have cough, diarrhoea, mental confusion, and when the condition is deteriorated, pneumonia and pleurisy may be developed. Certain patients may also complain about pain in throat, hoarseness of voice, breathlessness, anorexia, nausea and vomiting, headache etc which closely resembles with Influenza like illness. According to Unani texts, the cardinal feature of nazlā-i-wabābī is sudden onset of fever in a large population at a time. The recovery is also quick even within a week in most of the patients, if the complications are not worsening. 

In December 2019 AD, an inexplicable pneumonia was developed in the form of an outbreak in the Wuhan city of China. Later, on Jan 7, 2020 AD, it becomes clear that this pneumonia is caused by a new type of virus, called Severe Acute Respiratory Syndrome Corona virus 2 (SARS-CoV-2). Further, on February 11, 2020 AD, the World Health Organization (WHO) named this disease as Corona virus Disease-2019 (COVID-19). The World Health Organization (WHO) has declared the outbreak of COVID-19 as Public Health Emergency of International Concern (PHEIC) on Jan 30, 2020 AD and a pandemic on March 11, 2020 AD. It is supposed that naturally both avian and mammals such as bat, camels, dogs, masked palm civets etc are hosts of this virus. First time, the severe acute respiratory syndrome was produced due to corona viruses in 2002 AD. Subsequently, in 2012 AD, the same virus produced Middle-East Respiratory Syndrome (MERS-CoV). The SARS CoV-2 is an enveloped single stranded RNA beta corona virus which genome sequence shared 79.5% sequence identity to severe acute respiratory syndrome related corona viruses. The transmission and infectivity rate of this virus are high but the death rate is low in comparison to other corona viruses such as severe acute respiratory syndrome corona virus (SARS-CoV) and Middle-East respiratory syndrome coronavirus (MERS-CoV). According to the Weekly Operational Update on COVID-19 published by the WHO, as of November 01, 2020 AD, 4,59,68,799 COVID-19 cases have been diagnosed and 11,92,911 deaths have been reported due to this disease worldwide. It has also been reported that as on October 03, 2020 AD, more than 227 countries and territories, and 26 cruise and naval ships have been affected from this disease. In India, till September 11, 2020, total 44,86,143 cases have been confirmed and 76,271 patients have been died because of COVID-19. The commonest clinical features of COVID-19 are fever and cough, and less common findings are breathlessness, headache, myalgia, chest pain, haemoptysis, diarrhoea, nasal discharge, irritation of throat, nausea and vomiting, anorexia etc.

Concept of Tabī’at Mudabbira-i-Badan (Medicatrix naturea) in Unani medicine

In Unani medicine, tabī’at (physis-nature) or tabī’at al-insaniyah (human nature) or tabī’at mudabbira-i-badan (medicatrix naturea) is considered as supreme planner of the body. This is a natural power (a prime mover) which when exists in the body, responsible for direct or indirect for its active motion or repose. This natural faculty is developed after mizāj intermixture of elements. The equilibrium in the internal environment of the body, responsible for normal functions of the cells, tissues and organs, is developed due to mizāj especially in physiological conditions. Whereas in pathological states, this prime mover fights against the disease and whenever the condition is favourable, the homeostasis is back and the disease is cured. Ibn Sina stated that “tabī’at would aim at reasons for health and illness far deeper than those given by the microbic and cognate theories”. The homeoeostasis of each cell, tissue, organ and system is maintained by the tabī’at through various mechanisms mainly quwat-i-tabī’yah (natural faculties), quwat-i-haywaniyah (vital faculties) and quwat-i-nafsaniyah (mental faculties). These faculties control, regulate and restore the normal functions of each organ and system, and also assists in modulating the immune system of the body and produces resistance against diseases. When such powers are suppressed due to any cause, the disease condition is produced. Hence, the core aim of Unani principle of treatment is to restore the homeoeostasis of the body mainly through aiding bodily faculties and the job of a physician is to apply such methods or treatment modules which can motivate the natural healing process of the body mainly through stimulation of vital forces of the body.
Several single Unani drugs viz. Lavandula staechos, Emblica officinalis, Pistacia lentiscus, Doronicum hokeri, Crocus sativus, Musk, Cinnamomum zeylanicum, Melissa officinalis, Bombex mori, Borago officinalis, Salvia haemotodes, Santalum album, Pterocarpus santalinus, Rosa damascena etc; and compound preparations viz. Mufarrīh Yaquti, Mufarrīh Mo’tādil, Majun Jalinus, Majun Seer Alwi Khan, Khamirā Abresham Sadā, Khamirā Abresham Arshad wala, Khamirā Gaozaban Sada, Khamirā Gaozaban Ambari Jawahir wala, Khamirā Marwarid, Dawā al-Misk Mo’tadil Sada, Dawā al-Misk Mo’tadil Jawahir Wala, Majun Dabeedul Ward, Majun Khabsl Hadeed, Majun Falasifa etc are used as tonics for brain, heart, liver and stomach. Certain scientific studies have reported immune stimulating effects of some Unani drugs. For instance, Zarnigar et al., 2013 has revealed the significant immunomodulator effect of Tiryaq-i-Wabai in a small group of immunocompromised subjects. This study exhibited that the total leucocyte count (TLC), lymphocyte percentage, absolute lymphocyte count (ALC) and CD count were significantly increased in comparison to the control group. Another study has reported that Khamirā Marwareed possesses significant immune stimulating effect in animals.

**Tiryaq-i-Afayee**

Razi (854–925 AD), Ibn Hubal Baghdadi (1155–1213 AD), Hakim Muhammad Sharif Khan (1722–1807 AD), Hakim Mohammad Azam Khan (1815–1902 AD) and Hakim Najmul Ghani Khan (1859–1899 AD) have mentioned that the eminent Unani physician, Jalinus has recommended to use Tiryaq-i-Afayee for prevention of infection during epidemics. This compound formulation is mentioned in many classical Unani texts and pharmacopoeias such as Kitab al-Mansuri of Razi, Kitab al-Mukhtarat fi al-Tib of Ibn Hubal Baghdadi, Qarabadeen Azam va Akmal of Hakim Azam Khan, Elaj al-Amraz of Hakim Mohammad Shareef Khan, Qarabadeen Najm al-Ghani of Hakim Najmul Ghani Khan and National Formulary of Unani Medicine, Part I. This formula is also mentioned by the name of ‘Tiryaq-i-Wabaī.’ This is an experimented and tested preparation particularly to prevent epidemic fever. The ingredients of this compound drug are Sibr Zard (Aloe vera), Murr Makki (Commiphora myrrha) and Zafran (Crocus sativus) belongs to plant origin. The Unani physicians recommend that this formulation can be given in powder or pill forms.

**Method of preparation of pill**

All the crude drugs are to be powdered using suitable grinder. After powdering, it is to be sieved using 80 No.

### Composition of Tiryaq-i-Afayee

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Ingredients</th>
<th>Parts used</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sibr Zard (Aloe vera Linn.)</td>
<td>Resin</td>
<td>10 g</td>
</tr>
<tr>
<td>2.</td>
<td>Murr Makki (Commiphora myrrha (Nees) Engl.</td>
<td>Oleo-gum-resin</td>
<td>5 g</td>
</tr>
<tr>
<td>3.</td>
<td>Zafran (Crocus sativus Linn.)</td>
<td>Stigma</td>
<td>5 g</td>
</tr>
</tbody>
</table>
sieve. The fine powder is to be uniformly mixed together and the pill of 500 mg weight is to be prepared with admixture of Arq-i-Gulab and in last silver coating is to be done.\textsuperscript{51}

\textbf{Dosage:} 2 g\textsuperscript{46}

\textbf{Individual ingredients}

\textit{Sibr Zard (Aloe vera Linn.)/ Aloe barbadensis Miller.}\textsuperscript{53} Aloe vera belongs to \textit{Liliaceae} family.\textsuperscript{54} Aloe is derived from an Arabic word, \textit{Alloeh} means ‘bitter and shiny substances’ and vera is derived from the Latin word for ‘truth’. This is a perennial, succulent or xerophyte and stemless or short-stemmed herb with elongated leaves. The length of its leaves is from few centimetres to 2-3 meters, and has three peculiar layers.\textsuperscript{55} The leaves contain brown or yellow colour milky juice which possesses several biological active compounds. The flesh of Aloe is generally obtained through peeling, washing and squeezing of leaves. The colour of flesh is usually light green with jelly-like consistency. The flower shoot is built with several, pendulous bell-shaped pink and orange flowers.\textsuperscript{56} This plant generally grows in hot and dry weather conditions but nowadays because of its demand, is cultivated on large scale.\textsuperscript{57} It is indigenous to Mediterranean region, the Arabian Peninsula, India, China, Eastern Africa, Cyprus, Malta, Sicily, the Canary Islands, India etc.\textsuperscript{58} According to Unani medicine, the temperament of this drug is Hot 1 & Dry 3. It is prescribed to restore the health and to evacuate the morbid matters particularly in cases of joint and liver diseases. It is also used for the treatment of infectious and inflammatory diseases.\textsuperscript{59} Aloe vera contains anthraquinone glycosides such as aloin, barbaloin, isobarbaloin, anthranol, aloetic acid, ester of cinnamic acid, aloe-emodin, emodin, chrysophanic acid, resistannol etc.\textsuperscript{60}

\textit{Murr Makki (Commiphora myrrha/ Balsamodendron myrrha)}

\textit{Commiphora myrrha} is a tree which belongs to \textit{Burseraceae} family. The species name ‘myrrha’ is derived from an Arabic word ‘murr’ which refers ‘bitter’. This plant drug is indigenous to India, Mediterranean region, East Africa etc.\textsuperscript{61} The history is evident that the Greek warriors did not go to the war field without using a poultice of \textit{Murr} on their wounds. In Unani medicine, the oleo-gum-resin, an exudate obtained from the bark of the tree known by the name of ‘Murr Makki’ is used medicinally. Ethnobotanically, \textit{Commiphora myrrha} is described as a small tree or a large shrub which height is not more than 9 feet, thick trunk, knotted branches and smooth bark. The leaves are approximately half-inch long, unequal, trifoliate, sessile leaflets, terminal more or less toothed. The inner layer of bark yields schizogenous ducts and lysigenous cavities that are packed with yellow coloured granular resinous material. The temperament of this drug is described as Hot 3& Dry 2.\textsuperscript{62} It is therapeutically used for the treatment of chronic cough, bronchial asthma, treachiatris, diarrhoea, intestinal ulcers, septicaemia etc.\textsuperscript{63} It is also used as an analgesic, anti-inflammatory, anti-spasmodic, astringent, antifungal, antibacterial, diuretic, emmenagogue, blood purifier, carminative, anthelmintic etc.\textsuperscript{59} It has also been reported that this drug possesses anti-cancerous properties which produces apoptosis in various types of cell lines such as breast, pancreas, prostate, lung etc.\textsuperscript{59} \textit{Commiphora myrrha} yields acidic polysaccharides, volatile oil, heer-abolone, eugenol, furanosesquiterpenes, monoterpenes etc.\textsuperscript{54} It also contains alkaloids, glycosides, flavonoids, tannins, steroids, saponins, terpenoids etc.\textsuperscript{59}

\textbf{Zafran (Crocus sativus Linn.)}

\textit{Crocus sativus} is a perennial herb belongs to \textit{Iridaceae} family and is mainly cultivated in Iran, Greece, Spain, India, Azerbaijan, China, France, Greece, Egypt, Israel, Italy, Mexico, Morocco, Turkey etc.\textsuperscript{65} It grows up to 20-30 cm height with 5-11 true leaves which are covered with 5-11 non-photosynthetic and white leaves.\textsuperscript{51} It is a well-known spice which is also called Saffron. The stigma of Saffron is used as spice and medicine which has a distinct colour, essence and smell.\textsuperscript{52} The flowers are lily-like shape possesses two bracts at the base. The calyx has pale-violet coloured veins with yellow anthers and white filaments. The style is a thread like structure and approximately 10 mm long. This plant does not bear fruit but has erect, narrow and ciliate margin leaves. The history is evident that this plant is used for medicinal purposes since more than 3,600 years.\textsuperscript{51} In Unani literature, the temperament of this drug is described as Hot in 2\textsuperscript{46} & Dry in 1\textsuperscript{st} degree. It is therapeutically used for the treatment of several ailments of stomach, liver and urinary bladder. Specifically, it is used as carminative, analgesic in case of colicky renal pain, diuretic, emmenegogue, deobstruent in case of cerebral infarction and hepato-biliary cholestasis etc.\textsuperscript{64} The stigma of \textit{Crocus sativus} contains carotenoids, o-crocinetin, crocin, picrocrocin, aglyconesafranal, carotenoids lycopene, zeaxanthin and vitamin B2.\textsuperscript{65}

\textbf{DISCUSSION}

The Unani medicine has an extensive and delightful medical record for moderating pain and encouraging good health care. This system of medicine is principally based on Hippocratic doctrine of humoural theory namely \textit{dam} (blood), \textit{balgham} (phlegm), \textit{safra} (yellow bile) and \textit{sawdā} (black bile). The qualitative and quantitative disproportion in these humours may cause
pseudomonas aeruginosa. These two organisms are cytotoxic activities against staphylococcus aureus and Essential Oil (MEO) showed promising bactericidal and cells. Khalil anticarcinogenic activity against human liver cancer important essential oil of Myrrha showed Another study has revealed that furanodiene, an peroxidation, phototoxicity and DNA degradation. singlet oxygen is playing a crucial role in lipid singlet oxygen greater than that of (±)-α-tocopherol. The myrrha volatile oil obtained from Somalian thioredoxin as well as down-regulating nucleoside potential antiviral effect against influenza A virus in extract. Another study has revealed that a key compound preparation of Unani medicine can be useful of control group. Such result has suggested that this study showed that the total leucocyte count (TLC) (p<0.001), lymphocyte percentage (p<0.001), absolute lymphocyte count (ALC) (p<0.001) and CD4 count (p<0.001) were increased significantly compare to that of control group. Such result has suggested that this compound preparation of Unani medicine can be useful where the immune system is suppressed due to any cause. Moreover, some other studies have reported that the individual ingredients of Tiryaq-i-Afayee possess significant antiviral and antiinfluenza effects. A study has shown that the Aloe vera ethanol extract (AVE) considerably reduces the viral multiplication of green fluorescent protein labelled influenza A virus in MadinDarby Canine Kidney (MDCK) cells. This study has further showed that the antiviral activity of ethanol extract of Aloe vera is probably because of existence of quercetin, catechin hydrate and kaempferol in the extract. Another study has revealed that a key anthraquinone glycoside i.e. aloe-emodin produces potential antiviral effect against influenza A virus in MDCK cells via up-regulating galectin-3 and thioredoxin as well as down-regulating nucleoside diphosphate kinase A. A study has reported that the volatile oil obtained from Somalian Commiphora myrrha exhibited significant antioxidant effect against singlet oxygen greater than that of (±)-α-tocopherol. The singlet oxygen is playing a crucial role in lipid peroxidation, phototoxicity and DNA degradation. Another study has revealed that furanodiene, an important essential oil of Myrrha showed in vitro anticarcinogenic activity against human liver cancer cells. Khalil et al., 2020 has revealed that the Myrrh Essential Oil (MEO) showed promising bactericidal and cytotoxic activities against staphylococcus aureus and pseudomonas aeruginosa. These two organisms are considered as key microbes for the infectious diseases of respiratory system. It is also evident that Myrrh can be recommended for the treatment of common cold and flu to give strength to the immune system of the body and to reduce nasal congestion. Soleymani S et al., 2018 has reported that crocin and picrocrocin isolated from Iranian Saffron extract showed potential antiviral effect against HSV-1 and HIV-1. Ghazavi et al., 2009 has reported that the ethanol extract of Crocus sativus showed promising outcome for the prevention of symptomatic experimental autoimmune encephalomyelitis through inhibition of oxidative stress and leukocyte infiltration to the central nervous system, and may be helpful for the treatment of multiple sclerosis.

CONCLUSION
The classical Unani and contemporary materials surveyed has given remarkable information regarding use of Tiryaq-i-Afayee for the prevention of epidemic/ pandemic diseases. In this regard, Unani physicians prescribe this preparation since ancient time. Many scientific studies have suggested that this formulation as a whole possesses potential immuno-stimulating effect in immuno compromised patients, and individual ingredients exhibited significant antiviral, anti influenza, antimicrobial, antioxidant effects etc. Thus, in the light of scientific studies and classical evidences, it is suggested that Tiryaq-i-Afayee may be used to prevent epidemic/ pandemic diseases under the supervision of Unani physicians. Furthermore, studies are required to explore its effect in the particular epidemic/ pandemic diseases like COVID-19.

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