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Role of Quranic plants and the plants used in Punjabi Folk Tales in development of Islamic History of Medicinal Science

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Abstract

Quranic plants and plants mentioned in folk tales were played a vital role in the development of history of medicinal sciences. The wide geographical spread of Islam and extensive travel within its territories, adding information from Middle Eastern, Indian, and North African sources, there emerged a rich botanical literature. In Indo Pak, these travelers also played a significant role in spreads of Punjabi Urdu Sanskrit Sindhi folk and modern medicinal science history in which Muslim authors and Punjabi classical Poets sought to determine the true significance of these plants. History of Islamic medicine started from 2nd century of Hijri Era, when Abdual Malik bin Habib Undluis compiled his first book "Tibb-e-Nabavi". These books provide lot of information about the medicine, their properties, their uses, dire use and the direction by Prophet Muhammad (PBUH) for cure through these plants. The climax of Islamic medicine were started by when many Muslim scientists (Al-Asma'i, Al-Shaybani, Ibn Al-Arabi, Ibn as-Sikkit, Abu Hanifa, etc.) worked on these plant, they classify, identify, named, extract the medicine and check their dose. The World Health Organization estimates that 80 percent of the population of some Asian and African countries presently uses herbal medicine for some aspect of primary health care. Almost 80 plants are mentioned in Punjabi classical tales which are serving humanity for their medicinal properties. The overall key is no side effects of these herbal plant and effective remedies were reputed. These plants can be used in future for the drug development by the pharmaceutical industries.

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Introduction

Plants have been used for health purposes for several thousands of years. The number of higher plant species on earth is about 250, 000. It is estimated that 35, 000 to 70, 000 species have been used for medicinal purposes. A majority of the world's population in developing countries still relies on herbal medicines to meet its primary health needs. Herbal medicines are often used to provide first-line and basic health service, both to people living in remote areas where it is the only available for health service, and to people living in poor areas where it offers the only affordable remedy. Even in areas where modern medicine is available, the interest on herbal medicines and their utilization have been increasing rapidly due to no side effect. Medicinal plants are important sources for pharmaceutical manufacturing. Medicinal plants and herbal medicines account for a significant percentage of the pharmaceutical market (WHO, 2015).

Holy Quran involves all requirements to guide and educate human in social, individual, moral, legal, worldly and hereafter life. Life and diseases go together. Dependency and sustainability of man and animal life has been revolving around plants through their uses as food, fibers and shelter, Plants have been used to control and treat different diseases. The use of plants as medicines is an ancient and reliable practice (Ebeling, 2009; Ahmad *et al.*, 2009). Ancient and religious literatures include natural medicinal notes that useful for mankind. In this regard, holey Quran is a unique literature for social and life science research (Farooqi, 2010; Fakhri *et al.*, 2012).

Islamic medicine initiated from Hazrat Adam (Alaihe Salaam) and was completed at Hazrat Muhammad (Sallallahu Alaihe Wasallaam) but explore and compiling of these medicine is still continued throughout the world (Ahmad *et al.*, 2009; Yari *et al.*, 2011). Quran is one of the best reference books describing the importance of plants in different Surah's as in Al-Momeenoon, Al-Rehman, Al-Bakra and Al-Inaam. Our Holy Prophet Hazrat Muhammad (PBUH) used and recommended medicinal plants for various diseases and food (Ghaznavi, 1987).

The history of Islamic medicine started form second century of Hijri; Abdul Malik Bin Habib Undlasi compiled his first book "Tib-e-Nabvi". In third century of Hijri Muhammad Bin Abu Bakar Ibne Ulsani and Abu Naeem Isphani compiled their books on Tib-e-Nabvi. In the same era other Muslim scholars like Ali bin Mossa Raza and Imam Kazim Bin Jaffar also worked on the Islamic medicines. In the fourth century of Hijri Muslims Scholars like Abi Jaffar Almustaghfiri, Zia uddin Almukadasi, Shams uddin Albali, Kahal Ibne Tarkhan, Muhammad bin Ahmed Zahabi, Muhammad Abu Baker Alkaim, Jalal uddin Alseuoti and Abdul Razzaq Bin Mustafa Altanki did a great work in this field of medicinal plants. The books written in this era "Alnabvi fee Mannafal Makalat" by Abdul Razzaq Altanki "Kanzulamal Fee Sanan Walakwal" also provide us much more information about Quranic plants (Al- Hilali *et al.*, 2008).

These medicinal plants continue to be extensively used as major source of drugs for the treatment of many ailments. Present investigation reviewed all plants which are described in Holy Quran and in folk tales and role of these Plants in Development of Islamic History of Medicinal Science. These ethno-medicinal plants were used in Indo-Pak for the treatment of various diseases. Punjabi classical poets specially Waaris Shah, Mian Muhammad Bakhsh and Mola Shah Majethwi mentioned the plants because of their medicinal value and proved that they were not only poets but also hakeems and botanists. Punjabi classical folk tales (Qissas) are not simply love stories but are legends replete with their scholarly vision wisdom about life (Rasool, 2000; Anwer, 2005; Shah, 2008; Shah, 2014; Afzal, 2014).

The present study was designed to check the different angles of importance of the medicinal plants which play an important role in the society and the poets reflects their importance in the poetry and tales also. In these classical tales poets not only discuss Punjabi culture but also highlight the importance of various plants in human life. The aim of the present study was to prove that these plants will play a vital role in the drug development and very helpful for the pharmaceutical industry.

Materials and methods

There are many plants with medicinal applications that have been mentioned in the Holy Book of Muslims, the "Quran" (Ede *et al.*, 2012). The objective of this research is to investigate the role of these Plants in Development of Islamic History of Medicinal Science. A search of the Holy Quran for any enumeration of medicinal plants was conducted.

Collection of data from Quran and the Punjabi Classical Tales (Qissas)

The data was collected from the Quran, Punjabi classical tales and medical science texts. The research work was conducted by reviewing the most acceptable literature given in Islamic, medicinal books Punjabi classical tales (Qissas) and biography of Muslim scientists. Comprehensive and detailed information about medicinal plants were collected and search from data base of different websites of Google i.e. Ministry of health and different libraries of Lahore i.e. Quaid-i-Azam Government College University Libraries, Punjab Public Libraries, Lahore College for Women University Libraries, Punjab University Libraries.

Analysis of data

All the data which is collected thoroughly analyzed and compared the plants mentioned in the Quran and Punjabi Classical Folk Tales. Enlisted all the plants mentioned in the Quran and Punjabi Classical Folk Tales. The role of plants in development of medicinal history was evaluated.

Compilation of data

All the data was compiled in a systematic way.

Results and discussion

Plants are an essential component of the universe. Human beings have used plants as medicines from

the very beginning of time. Plants have always been an exemplary source of drugs and many of the currently available drugs have been derived directly or indirectly from them (Al-Hilali *et al.*, 2008). The Holy Quran is a great book of knowledge and wisdom that constitutes the main source of guidance for Muslims. Since the first revelation, the Holy Quran remains among the most influential books that exist. Thirty five medicinal plants/vegetables/fruits have been mentioned in the Quran as well as in Punjabi classical folk tales like Heer Waaris Shah, Pooran Bhagat, Buga Mal Bishnu, Zohra Mushtary, Ehsan-ul-Qisa, Saifulmaluk and Mirza Sahiban etc. They include: Camphor, Date palm, Fig, Ginger, Grape, Garlic, Lentil, Olive, Onion, Pomegranate, Summer squash, Sweet basil, Athel tamarisk, Tooth-Brush Tree, Arak, Mustard, Acacia, Cucumber, leek, Khumbii and many more.

These plants were used for medicinal and nutritive purpose. These plants are used in case of hypertension, hypotension, cancer-preventive, cardiovascular problems, Nausea, Vomiting, Hypoglycemia, hypercholesterolemia, antiviral, antimicrobial, skin disease and act as immunostimulant agents.

It was reported by world health organization that 80% of the world population used herbal medicines, mainly developing and under developing countries for primary health care because of better cultural acceptability, better compatibility with human body and lesser side effects. From the present data it was concluded that the plants which are mentioned within the Quran were being utilized by human beings.

The present research work include the enlisted of plant mentioned in the Holy Quran.

Table 1. List of plants mentioned in the Holy Quran.

Sr. No.	Name of plants	Sr. No.	Name of plants
1	<i>Acorus calamus</i>	19	<i>Ficus carica</i>
2	<i>Agaricus campestris</i>	20	<i>Flemingia grahamiana</i>
3	<i>Alhagi maurorum</i>	21	<i>Hordeum vulgare</i>
4	<i>Allium cepa</i>	22	<i>Lens culinaris</i>
5	<i>Allium sativum</i>	23	<i>Musa sapientum</i>
6	<i>Beta vulgaris</i>	24	<i>Ocimum basilicum</i>
7	<i>Boswellia carterii</i>	25	<i>Olea europaea</i>

Sr. No.	Name of plants	Sr. No.	Name of plants
8	<i>Brassica nigra</i>	26	<i>Phoenix dactylifera</i>
9	<i>Cassia senna</i>	27	<i>Punica garnatum</i>
10	<i>Cichorium intybus</i>	28	<i>Salvadora persica</i>
11	<i>Cinamoumon Camphor</i>	29	<i>Tamarix aphylla</i>
12	<i>Citrulus lanatus</i>	30	<i>Vitis vinifera</i>
13	<i>Citrus aurantifolia</i>	31	<i>Zingiber officinal</i>
14	<i>Commiphora molmol</i>	32	<i>Ziziphus spina</i>
15	<i>Cucumis sativus</i>	33	<i>Lagenaria siceraria</i>
16	<i>Cucurbita pepo</i>	34	<i>Lawsonia inermis</i>
17	<i>Cydonia oblonga</i>	35	<i>Lens culinaris</i>
18	<i>Ficus carica</i>		

Rather than these Quranic plants there are some other plants which are mentioned in Punjabi classical Folk tales (Berkhurdar, 1965; Hashim, 2008).

Table 2. List of plants mentioned in Punjabi classical folk tales.

Sr. No.	Name of Plants	Sr. No.	Name of Plants
1	<i>Albizia lebbek</i>	22	<i>Cocos nucifera</i>
2	<i>Azadirachta indic</i>	23	<i>Datura metel</i>
3	<i>Acacia modesta</i>	24	<i>Eucalyptus camaldu</i>
4	<i>Areca catechu</i>	25	<i>Eriobotrya japonica</i>
5	<i>Brassica nigra</i>	26	<i>Ferula assafoetida</i>
6	<i>Bombax ceiba</i>	27	<i>Ficus benghalensis</i>
7	<i>Capparis decidue</i>	28	<i>Ficus religiosa</i>
8	<i>Cordia myxa</i>	29	<i>Gossypium</i>
9	<i>Citrus limon</i>	30	<i>Hordeum vulgare</i>
10	<i>Curuma longa</i>	31	<i>Lens culinaris</i>
11	<i>Cicer arietinum</i>	32	<i>Morus abla</i>
12	<i>Cannabis sativa</i>	33	<i>Mangifera.indica</i>
13	<i>Citrullus vulgaris</i>	34	<i>Malus pyrus</i>
14	<i>Citrullus colocynthis</i>	35	<i>Nicotian tabacum</i>
15	<i>Cucumis melo</i>	36	<i>Oryza sativa</i>
16	<i>Coriandrum satirum</i>	37	<i>Ocimum santum</i>
17	<i>Crocus sativus</i>	38	<i>Pennistum glaucum1.Prosopis cineraria</i>
18	<i>Cuminum eyminum</i>	39	<i>Papaver somniferum</i>
19	<i>Casuarina equisetifolia</i>	40	<i>Pistacia vera</i>
20	<i>Citrus reticulate</i>	41	<i>Pyrus communis</i>
21	<i>Cynodon dactyl</i>	42	<i>Santahum album</i>

These Quranic plants played a vital role in developing the history of medicinal science. These plants provide the base line guide line for the physicians, scientists, botanist and pharmacist in developing the medicinal science.

The Islamic Golden Age, spanning the 8th to the 15th Centuries, saw many great advances in science, as Islamic Scholars, Physicians, Scientists, Botanist and Pharmacist (Ede *et al.*, 2012). (Muhammad Ibn Abdallah Ibn Idris (Died 1130), Ibn Al-Baitar (1219), Al-Razi (864-930 C.E.), Abul Waleed Muhammad Ibn Rushd (1128-1198), Abu Ali Hasan Ibn Al-Haitham (965-1040 C.E.), Abu Raihan Al Biruni (973-1048 C.E.), Ibn Cina (980-1037 C.E.), Jabir Ibn Haiyan (Jebber) (Born 1190.A.D.), Ibn Abbas Zahrawi (936-1013), Abu Al Nasr Al Farabi (870-950), Ibn Al Baitar (Died 1248 A.D.), Abu Abdullah Al Batani (858-929 A.D.), Naseer Al Din Al Tusi (1201-1274 A.D.). Abu al-Qasim al-Zahrawi, 'Ali Ibn Al-'Abbas Al-Majusi, Alhazen: Al-Khalil Ibn Ahmad Al-Farahidi, Al-

Khawarizmi, Al-Kindi, Averroes (1126-1198):, Ibn Hazm:, Ibn Khaldun, Muhammad al-Shaybani, Ali Ibn Mousa al-Ridha, (765-818), 'Ali Ibn al-'Abbas al-Majusi (died 982-994), Muhammad Ibn Zakariya Al-Razi and many more) gathered knowledge from across the known world and added their own findings (Meri, 2006).

One of these important fields was Islamic medicine, which saw medical practice begin to resemble our modern systems. Certainly, this period of the history of medicine was centuries ahead of Europe, still embedded in the Dark Ages. Studying history, we can see that medicine within the Islamic civilization passed through three main stages.

Punjabi classical tales have been brought under consideration through several ways. At times these were employed for the Prophetic hymns (Praise of the Holy Prophet) and at the other times Physiological insights of the characters have been discussed. Simultaneously their scholastic status has been along with research upon them of the age in which these were written. Sometimes Quranic metaphores were used to express the feelings in these tales, plants are used as symbols to cure human diseases and this effort will serve as a milestone in the world of Punjabi literature. It is true that many famous personalities like Gorj bernord shah Aristotle Plato used vegetables and plants for their health (Aslam, 1999; Shah; 2007; Shah, 2008).

The first stage started in the early 7th century by collecting and translating the medical knowledge of the Greeks, Persians, Assyrian Syrians, Indians and Byzantines (Nagamia, 1998).

Muslim physicians started to elaborate on the collected body of knowledge and largely expanded it through experience, exploration, experimentations, testing and practice. This was during the Golden Age of the Islamic civilization that brought the original contributions of Muslim physicians in the medical, pharmaceutical, herbal, nutritional and botanical fields.

Second stage extended during the ninth through thirteenth centuries. During the last stage, however, decline occurred which reflected the stagnation and gradual deterioration of the whole Islamic nation.

During the second stage, many physicians, Arabs as well as non-Arabs, contributed to the flourishing of the medicine. Physicians like Al-Razi, or Razes (841–926 AD), and Ibn-Sina, known as Avicenna (980–1037 AD) were pioneers in the medical fields. Their books and teachings were used as bases for medical study in Europe for centuries to come.

Al-Razi's fame started with the establishment of a hospital in Baghdad in the 9th century which included a special ward for mental illness. He also pioneered in holistic and spiritual medicine, advocating healing and caring for the whole patient.

This idea was well reflected in his book 'Al-Tibb al-Rawhani (Spiritual Medicine) where he emphasized the importance of heart purification and ethical and virtuous conducts in achieving total healing.

In his famous book, Al-Qanun fi al-Tibb (The Law in Medicine), Ibn-Sina laid the foundation of medical practice, compiled a complete *Materia Medica*, described diseases and malfunctions and gave a full formulary of remedies, suggestions and recipes for treatment.

As early as the 10th century, Muslim physicians were treating eye diseases and even performing cataract surgery. Al-Mawsili, an Iraqi ophthalmologist and physician, designed a special needle to remove cataract by suction. And, an amazingly complete text book on eye disease 'Notebook of the Oculist' was written by Ali Ibn Isa also in the 10th century Baghdad. On Ibn Isa's valuable reference was based the European knowledge of modern ophthalmology (Al-Hassani, 2006).

Ibn al-Nafis, the Syrian Muslim scholar, described in a treatise written in 1210 AC the role of the heart and lung in blood purification and elaborated on Ibn-Sina's description of the pulmonary circulation. Ibn al-Nafis accurately described the anatomical structure of heart chambers and the fine structure of the circulatory system hundreds of years before Western discoveries.

Early Muslims also laid the foundation of modern day pharmacology through the early work of Sabur ibn Sahl, Al-Razi and Ibn-Sina in the early 9th century. Later on, in the 11th century, Al-Biruni wrote his famous master piece 'The Book of Pharmacology' compiling an amazing work on drugs and remedies. Al-Zahrawi's writings 'Al-Tasrif (Dispensing) further taught methods of drug preparations and formulation starting from simple remedies all the way to complex compounding.

The principal concepts embodying medicine as practiced during this period were based on the essential meaning of balance.

They presented the physician's role as one of in balancing and harmonizing overall bodily functions while restoring health and healing on the physical, emotional, mental and spiritual planes.

Physical ailments were thought to arise mainly as a result of accumulation of excess waste substance in the body. Overeating, improper food choice and other unhealthy habits were regarded as the source of the accumulated morbid matter, and a disease's symptoms appears when the digestive process becomes overwhelmed (Al. Jauziyah, 2003).

More importantly, however, it was the fundamental belief of a Muslim physician that the physical body should never be the sole interest of the physician. It is the soul which gives this body its vitality and true essence (Nagamia, 1998). It was thus essential for a Muslim physician to be well aware of the diseases of the heart and soul and how to treat them along with managing physical symptoms.

During the third stage of this thriving medical history within the Islamic world, and around the fourteenth century, a new type of medical writing emerged. The authors were religious scholars, rather than physicians. Their aim was to preserve the wealth of knowledge and heritage compiled and practiced by Muslims over the years from fading away before the rapidly rising Western society (National Library of Medicine, 2007).

Al-Tibb Al-Nabawi (Prophetic Medicine) (Mentioned in Quran) was intended as an alternative to the Greek-based medical science. Most famous among them were the writings of Al-Jauziyah, As-Suyuti, and Az-Zahabi which are considered as the base for what is today referred to as 'Islamic Medicine' (Al-Hassani, 2006; Ayad, 2008).

The six primary channels that should be balanced to avoid contacting diseases, as stated by As-Suyuti, further reflected the wisdom of early Muslim knowledge and Quranic ethics. He emphasized the importance of the quality of air we breathe, food and

drink we consume, physical exercise and movements, our emotional state and feelings, our sleep and waking cycles, and our body's ability to excrete toxins, get rid of accumulated morbid matter and retain valuable nutrients. "Whenever it is possible to use gentle remedy, do not use something powerful instead," he wrote, advising a physician to be "gentle in his speech, kind in his words and close to God" (As-Suyuti *et al.*, 2009).

Az-Zahabi, on his side, recommended using only medicines that are similar or related to regular food and that contained no noxious or harmful substances (Az-Zahabi, 2004). Starting from the beginnings of the seventeenth century, Islamic Medicine was challenged by rapidly spreading science of conventional modern medicine, which eventually replaced the core of the health care systems in most of the Islamic countries (Nagamia, 1998).

Contemporary practice of Islamic Medicine is restricted to India, Pakistan and Bangladesh where one can find established medical schools teaching this type of medicine, certified and supervised by the Indian Medical Council (Nagamia, 1998). And while these schools do teach such medical approach while being highly influenced by the teachings of the old Greek practice, it is also common to find conventional physicians in Middle Eastern countries and Malaysia giving medical advice and some treatment while making use of the Islamic approach. Some believe that this mixing of the old and the new, the eastern and the western, makes their patients benefit from 'the best of both worlds.'

Quran is a guidance book for all the peoples who related with human health care; either doctors, local practitioners, importers and exporters of medicinal plants. Any people of the era had taken guidance from the Quran. Although the poets who are not related with any health care issues, also mentioned these plants in their folk tales. These poets played an important role in the development of the history of medicinal plants.

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