

**Research Article**

## Observational and Critical Assessment of Unani Pharmacopoeias and Formularies

Parweej Ahmad<sup>1</sup>, Mohd Monis<sup>1</sup>, G. Sofi<sup>2</sup>, Najeeb Jahan<sup>2</sup>, Zareen Baig<sup>3</sup>, Shamim Irshad Azmi<sup>4</sup>

<sup>1</sup>Department of Ilmul Advia, Jamia Tibbiya, Deoband, Saharanpur, Uttar Pradesh, India

<sup>2</sup>Department of Ilmul Advia, National Institute of Unani Medicine, Bengaluru, Karnataka, India

<sup>3</sup>Department of Tahaffuzi wa Samaji Tib, AKTC, AMU, Aligarh, Uttar Pradesh, India

<sup>4</sup>Department of Ilmul Advia, GUMC, Allahabad, Uttar Pradesh, India

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**Abstract** Pharmacopoeia is a book published by authority of a government or a medical or pharmaceutical society containing direction for the identification, enlisting, methods of preparation, safety, quality and efficacy, methods of collection and storage, methods of purification or detoxification, and dose of the drugs. Beside this entertaining of new drugs, addition or deletion in old drugs formulations and toxic effects of the drugs. Every country has pharmacopoeia like British pharmacopoeia, U.S. pharmacopoeia, Indian pharmacopoeia and National Pharmacopoeia of Unani Medicine, etc. According to W.H.O, One forty independent countries are at present employing some thirty national pharmacopoeias along with the African, European and International Pharmacopoeia. Various Unani Pharmacopoeias have been written since ancient time in different era. These Pharmacopoeias may not be referred as standard Pharmacopoeias due to unsuitability with modern guidelines. In this paper it was tried to explore some well known Pharmacopoeias thoroughly with relevant observations and critical assessment.

**Keywords:** *Formulation; Pharmacopoeia; Purification; Qarabadeen; Unani medicine*

### 1. Introduction

The word 'Qarabadeen' (Pharmacopoeia) is derived from ancient Greek word φαρμακοποιία (pharmakopiia) from φαρμακο-(pharmako) "drug", followed by the verb-stem ποι- (poi-) "make" and finally the abstract noun ending -ία (-ia). These three basic words together can be rendered as "drug-mak-ing" or "to make a drug". Literally the meaning of Qarabadeen is Tarkeeb-e-advia (Formulating a drug), in Arabic it means Tarkeeb-e-advia Mufrida and in modern sense it is known as pharmacopoeia (Review of World Pharmacopoeias, 2012; Kumar, 2015).

Unani medicine is a traditional medicine, which like other traditional medicine e.g. Ayurvedic Medicine and Traditional Chinese Medicine, has a specific and unique set of principles and methods that are used in diagnosis and treatment of health conditions. Since diseases are caused by several factors such as dietetic irregularities, psychic factors and seasonal variations, several drugs are often combined together and used in the form of a recipe. Prior to administration, these drugs are processed in the form of juice, powder, decoction, infusion, pills, tablet, syrup, Majun and aqua, medicated oils and alcoholic preparations. While preparing and processing medicinal recipes, it is

always kept in the mind that, as far as possible, the medicine should be useful in the treatment of several ailments, therapeutically very potent, taste delicious, and have a long shelf-life. Thousands of such recipes and their particular experience are described in Unani text (Akbarabadi, 1998; Saad and Said, 2011). In the Unani systems of medicine drugs are enumerated in several pharmacopoeias currently being used among the professionals. Some of these, e.g. the Kabir Pharmacopoeia, the Azam Pharmacopoeia, the Qadri Pharmacopoeia, the Ilaj-ul-Amraj (Treatment of diseases) are detailed. Other like the Pharmacopoeia Ehsani, the Pharmacopoeia Zakai etc., is concise. All of them were compiled more than a century earlier, and are derived from the original Arabic Pharmacopoeia, although most of them enshrine certain observations based on original work. On the basis of their original observations these pharmacopoeias are definitely regarded as authentic (Akbarabadi, 1998).

## 2. Methodology

The review was taken up with scanning of the literature found in Unani medicine. It was thoroughly studied for the portions related to Qarabadeen. The observations were noted and analyzed keeping in view the present status of Pharmacopoeias.

### 2.1. History and Evolution of Unani Pharmacopoeia

In Greece Chiron is said to be the earliest pharmacist. Then emerged Aesculapius in around first century A.D., he is said to be Chiron's disciple but Aesculapius is much more famous than his teacher. He is regarded as an authority on pharmacopoeia. A few decades later appeared Hippocrates (460 B.C.). On account of his tremendous contributions to medicine and pharmacy he is accredited as the father of medical science. In his Pharmacopoeia contributions he has described 400 simples Drugs (Akbarabadi, 1998). Succeeding Greece produced various other Pharmacopoeias.

Most outstanding among them were Dioscorides and Galen of the first and the second century AD., respectively. According to Roman, Dioscorides was by his time the most prominent Pharmacopian. Similar is the view held by the authors of a dictionary of Scientific Biography. They have noted that his most remarkable contribution "De Materia Medica" (Arabic: Kitab-ul Hashaish) bears an account of 600 medicinal herbs, 35 animals and 90 minerals (Saad and Said, 2011; Steinhagen, 2011). A century later, Dioscorides was followed by another outstanding medical practitioner, Galen (130-200 A.D). He authored altogether 129 books, which bear Pharmacopoeic material also. An exclusive book on pharmacopoeia is named as the book on simple drugs named in Latin as "De Simplicium Medicamentorum" (Arabic: Kitabul Adwiyat-ul Mufradah). After Galen, progress of Greek medicine got blurred in its homeland. The pharmacopoeic contribution of Oribasius (325-405 A.D.) was the only exemption to this static situation (Saad and Said, 2011). After a lapse of over five centuries, when the Islamic world turned towards medicine they learnt it primarily from the Greek sources and secondarily through the Persian and Indian sources.

Through their devotion and enthusiastic activity they made exemplary headway in this field and produced hundreds of eminent physicians. They made immense original contributions in the medical discipline. Many of them compiled pharmacopoeias, which are to date, applauded. The earliest medical book that contains Pharmacopoeic materials, besides medical information are respectively, Masarjuwaih's Kunnash, Theadhoq's Kitabul Abdalul Adwiya, Hubaish A'sam's Kitabul Adwiya Mufradah, Ibn Rabban Tabari's Firdausal Hikmah, Zakaria Razi's Qarabadin and Kitab Saidnah. Next in chronological order is the "Materia Medica" and Kitabul Adwiya of Yaqoob Al Kindi (b.850 AD., Kufa). The Materia Medica (Arabic: Aqrabadhin) has recently been discovered. Lewi has edited the book. It contains an account of several hundred simples and compounds. Subsequent to Al-Kindi, numerous Pharmacopians emerged in the Islamic world. Prominent among them were Zakarya Razi,

Ali Ibn Abbas al-Majusi, Ibn Sina, Ibn Rushd, Ibn al-Jazzar, Ibn Zohr, Al-Biruni etc. Majusi's Kitabul Mulki, Ibn Sina's Risala Adwiyatul Oalabia and Canon (5<sup>th</sup> Vol.), Ibn Rushd's Kulliyat, Ibn al-Jazzar's Zaadul Musafir, Al-Itimad and Kitabul Fuqrah, Ibn Zohr's Al-Taysir and Al-Biruni's Kitabus Saidna are exclusively or partially pharmacopoeic. Although Al-Biruni had never been a medical practitioner, The Kitabus Saidna is a marvelous Pharmacopoeic compilation. Most eminent among, them was Ibn al-Baitar. His contributions, Kitabul Jami Al-Adwiya and Kitabul Mughni got long lasting fame. The contributions of Ibn Juljul's Tafsir Asmaul Adwiya AL-Mufradah Min Kitabe Dioscorides, Ibn Wafid's Kitabul Adwiya Mufradah and Mujarrabatfi Tibb and AL-Ghafiqi's Al- Adwiyah Mufradah are no less admirable (Saad and Said, 2011; Steinhagen, 2011).

In Irani period an Iranian Pharmacopeia Abu Mansur Muwaffiq of Herat composed a pharmacopeia. In this formulary he described as many as 585 drugs. Another eminent Pharmacopian was named Haji Zainuddin Al-Attar. He was born in 1329 A.D in Shiraz. One of his, notable preparations was an electuary made of newts (Reg Mahi) that happened to be aphrodisiac. Muzaffar bin Mohammad Al-Hussaini Al-Shifai composed a pharmacopeia in 1556 under the title Tibb-e-Shifai.

In India the Greek medicine was introduced with the advent of Muslim rule over this sub-continent and flourished largely during the Mughal period (1526-1857A.D). Among the earliest 'Indian' Pharmacopeia's was Bahaud Daula of Iranian origin. Among other eminent Pharmacopians of the Muslim Indian period were Hakim Abut Fateh Gilani, Hakim Akbar Shah Arzani and Mirza Hashim Alavi Khan. Another Iranian immigrant, Hakim Ainul Mulk Shirazi compiled a pharmacopoeia entitled 'Alfaz ul-Advia. Numerous pharmacopoeias were also compiled. Most outstanding among them are Qarabadhin Azam by Hakim Azam Khan, Khazanatul Adwiya by Hakim Najmul Ghani Khan, Qarabadhin Baqai by Hakim Baqauddin, Qarabadhin Zakai by Hakim Zaka, Qarabadhin Shifai by Hakim Shifa Khan, Qarabadhin Akbari and Qarabadhin Oadri by Hakim Akbar Arzani, Qarabadhin Haziq by Hakim Muhammad Hasan Merathi, Qarabadhin Kaukabi by Hakim Niaz Muhammad Khan, Qarabadhin Latifi by Hakim Abdul Latif, Bayaz-e-Kabir by Hakim Muhammad Kabir-ud-deen, Tibbi Pharmacopoeia Hakim Muhammad Hasan Qarshi, Hamdard Tibbi Pharmacopoeia and numerous others Pharmacopoeia (Akbarabadi, 1998; Preckel, 2015).

### 3. Observations and Results

The pharmacopoeia in Traditional Unani system of medicine can broadly be categorized into three categories; the official pharmacopoeia, unofficial pharmacopoeia and non-official pharmacopoeia. The official pharmacopoeia is issued and regulated by Government of the respective countries usually contains separately the simples and compounds drugs of either herbal, or animal or mineral origin or in the combined form as well. The unofficial pharmacopoeias also follow the pattern as of official pharmacopoeia in text and presentation but these are published by organization in private capacity and have retained the word pharmacopoeia; such as Hamdard pharmacopoeia and Qarshi pharmacopoeia can be cited as the examples. However non-official pharmacopoeia are those books in which simples and compound drugs of herbal, animal and mineral origin are organized systematically but as such have not utilized the name or the word pharmacopoeia. But individually and in private capacity have presented the text in medicine and in their contents, design and presentation of manuscript directly and indirectly followed the pattern of unofficial pharmacopoeia and presented the drug to be referred and utilized clinically in its manifestation which is useful as pharmacopoeia is broader perspective.

However, a note of clarification seems to be necessary that many books on Moalijat (Medicine) contain pharmacopoeial descriptions and enumeration of drugs based either on Mufradat (simples) or murakkabat (compound). The examples of these books are: Haziq by Hakim Ajmal Khan, Kanz-ul-Ilaj

by Hakim Mohammad Rafiq Hijazi, Makhzanul Hikmat by Ghulam Jilani and Tazkirah-e-Jalil by Hakim Jalil Ahmed.

### 3.1. Non-Official Pharmacopoeia

#### **Asal Bayaz Nooruddin by Hakim Nooruddin Printed in Wazeer Hind Press, Amritsar in 1928:**

This is a typical pharmacopoeia which did not contain either the contents or index. This book is basically classified on the basis of diseases and there in compound and simple preparations has been recommended. In addition sometimes allopathic drugs (herbal, chemical and mineral origin) have also been written (Nooruddin and Abdusalam, 1928).

**Bayaze Hakim Ajmal Khan:** Translated by Hakim Khawaja Rizwan Ahmad. This book is written in a style of pharmacopoeia but has the features of other Murakkabat's books. This is one of the classical examples of Murakkabat pharmacopoeia which is quite unique in Unani Tibb. In this pharmacopoeia the drugs are classified under the heading of diseases in alphabetical order but detail mentioned is quite different from Murakkabat formulations. This is one of the authentic works which requires an English translation of its own for wider circulation of compound pharmacopoeial preparation (Khan).

**Bayaz-e-Kabeer by Hakim Kabeeruddin:** This book comprise of three volumes. Volume I indicate the diseases from clinical and therapeutic perspective, but at the end of each chapter on diseases, some formulations are recommended in a brief manner for curative purpose. However, volume II is actually the basic document on pharmacopoeia of Murakkabat, which is quite extensive. The different compendial preparations are given in an alphabetical manner. The different formulations presented contain the quantity and process to prepare the compound formulations. Volume III consists on manufacturing of Unani medicine, different methods and techniques applied are given to prepare different formulation described in earlier volumes I-II. The volume III is rather on Unani pharmacy only (Kabeeruddin, 1929).

**Bayaz-e-Waheedi by Hakim Syed Rahman:** Published by Shifa-ul-Mulk Memorial committee, Aligarh in 1974. This book contains the contents whereas index is missing. However, this is basically a very good effort to enumerate the latest single ingredient simple formulation according to the diseases. The different chapters are classified according to the diseases of the organ (Rehman, 1974).

**Murakkabat Hakim Khuwaja Rizwan Ahmad:** This book seems to have been adopted from the words of Bayaze Kabir Dehli kay Murakkabat by Hakim Mohammad Kabiruddin, a little bit in a refined form but in way is a replica. However, the Murakkabat are given as the account of uses and formulations and purely based on the manufacturing aspect of Murrakab dosage form design (Ahmed, 1982).

**Firdous al-Hikmat, Abul Hassan Ali-bin-Sahal-bin-al-Raban Tabri:** Translated by Hakim Ashraf Nadvi wrote this book which contains two parts comprising of part - I with 12 chapters and part - II with 13 chapters. This book is on clinical medicine and therapeutics. Besides that it has enumerated different drugs for use in different disease (Tabri, 2010).

**Qarabadeen Lutfi, Hakim Abdul Sattar Lutfi:** This book is written from the point of view of Mujarrabat, which literally means experimental medicine. However, being written in traditional pharmacopoeial style, it was further designated as Qarabadeen. In this way nothing has been concealed as for the uses and dosage of these different types of medicinal formulation, which are quite authentic in usage and medicinal utilization for preventive and curative purpose. Another salient

feature of this book is the temperament determination, which has been suggested both for Mufradat and Murakkabat. All the different formulations in different dose design are arranged alphabetically (Lutfi and Qurabadeen, 1924).

**Kanz-ul-Murakkabat, Hakim Muhammad Abdullah:** This book is on Murakkabat based on formulations derived from different Qarabadeen. The dosages are mentioned according to modern scale however, the timing of medication is missing. A special attention has been paid to include those simples in Murakkabat, which are available in the market. The texts are in alphabetical index and moreover the dosage forms of Murakkabat are also given in alphabetical indexing for quick and easy reference (Abdullah).

**Kitab Mustajab Urf Akseer Mardan Masihaay Sadiq, Hakim Karim Baksh:** This is typical pharmacopoeia on sexual disorders of man. After evaluating the formulations, it appears that guidance is provided to practitioners. In the introductory part the text contains the information of human reproductive system and organs; there effects on different body function for example heart and brain etc are noted. In continuity the details of different sexual functions are described. In this pharmacopeia formulations for the diseases of other systems are missing (Baksh).

**Kitab-ul-Murakkabat-wa-Ilaj-ul-Amraz, Hakim Muzaffar Hussain Aawan:** It is claimed that the Murakkabat presented in this book are as old as one thousand years. This book is alphabetically arranged and contains Murakkabat in all types of dosage form design like syrups, Majun, Sanoon, tablets etc. It has been claimed that there are lot books on Murakkabat which indicated lot of preparations which are not in current use or have been declared obsolete for want of evidence for the particular treatment. Therefore, in this book only selected types of Murakkabat are enlisted which have their utility in the treatment and are beneficial (Awan, 1957).

**Makhzan-ul-Murakkabat by Dr. Ghulam Jilani:** In this book along with different formulations, the procedures for making these Murakkabat are also cited. The different Murakkabat are given in alphabetical indexing. According to chemical point of view such as decomposition, lixiviation, desiccation, sublimation and other type of terminology used in pharmaceutics are presented with examples. At the end Murakkabat are categorized according to pharmacological action are given in a comprehensive manner (Jilani, 1945).

**Qarabadeen Qadri, Hakim M. Akbar Arzani:** Qarabadeen Qadri literally meaning the pharmacopoeia of Qadri containing Murakkabat which are generally utilizes for the treatment of different diseases. The book contains different types of treatment in lay man's language. The chapters on different diseases are then classified in each chapter's alphabetically. This book is quite famous from clinical therapeutics perspective and at the end the manufacturing of Murakkabat is also reported. The toxic medium and their implications have also been mentioned in the last chapter where in animal and mineral toxic medicinal agents show their adverse effect for the substances; antidotes have also been suggested (Arzani, 1907).

**Qarabadeen Shifai written by Hakim Muzzaffar Bin Mohammad Al-Hussaini Al Shifiai:** The different chapters are indexed alphabetically and there in only compound (Murakkabat) formulation are given in quite detail. This appears one of the old texts where typical nomenclature and complex in its citation are given which is characteristic in its style and represent the excellence of selection of higher order of words. Both contents and index are not provided (Shifiai).



**Tartib-ul-Adviah by Hakim Kabiruddeen:** Classification of drugs according to pharmacological action and diseases are mentioned. This book is one of the foundation books which have classified the different simples and a compound drug used in Unani Medicine and provides a glossary of materia medica in concise form. This can be compared to as Pharma-guide in style of presentation, except that the drugs used in this book are generic in nature (simples) as well as compound formulations (Kabiruddeen).

**Tazkara-e-Jalil, Hakim Hafiz Jalil Ahmad:** Basically this book is written from the diseases point of view and represents the different formulations for the different body system. Though many of the formulation extracted from the authors of well known books of the eminent authors; however, it is very difficult to verify that different formulations and prescriptions present in this book (Ahmad, 2008).

**Tibbi Pharmacopoeia, Hakim M. Hassan Qarshi:** In this pharmacopoeia, drugs of herbal, animal and mineral origin are cited. The salient features of this book are further compounded by the fact that the part of traditional drugs utilized in Unani system of medicine have been presented and these are indexed in alphabetical order more from compound preparation point of view. The third part gives the latest allopathic listing. As a further expansion of the pharmacopoeia; contents of some drugs Ayurvedic pharmacopoeias are given. Then the drugs of animal origin and lastly the extraction of different herbal drugs containing essential oils, syrups, kushta, liniments and collyrium are given. If this pharmacopoeia is to be reviewed then it can be said that from the presentation and style of contents, it rather has followed an integrated approach to mix up the traditional and allopathic medium together for the treatment of different ailments (Tibbi Pharmacopoeia, 1975).

### 3.2. Un-Official Pharmacopoeia

**Kitabul-Mujarreat (Muntakhab Mujarreat Atibba-e-Pakistan):** Authentic unofficial Pharmacopoeias, was prepared by different Hakims of Punjab, Sindh, Baluchistan and NWFP and Azad Kashmir. This book first of all provides the detail of diseases in alphabetical order, thereafter drugs utilized again in alphabetical indexing. The context of this publication is exactly like that of traditional pharmacopoeia. But again this pharmacopoeial compilation is on Murakkabat only (Mujaebat, 1976).

**Qarabadeen-e-Najm-ul-Ghani, Hakim Mohammad Najm-ul-Ghani:** In this book, the author has listed alphabetically the different dosage form and there in cited the compound preparation. All the formulation ingredients are repeated and some of them are based on the clinical practice. This book has been referred as a standard text of pharmacopoeia of Murakkabat in many of the recent citation of the pharmacopoeia being published by different authors. It contains innumerable preparation almost on every type of disease. Although this Qarabadeen was published in 1919 but till to date this rated quite high and famous among the Hakims and physician of Unani medicine and is supposed to be an authentic work (Ghani, 1945).

**Hamdard Pharmacopoeia of Eastern Medicine, Ed: "Hakim Muhammad Said":** Hamdard Pharmacopoeia of Eastern Medicine is one of the latest pharmacopoeia where in exhaustive list of drugs introduce by Arabs in their materia medica, indigenous drugs used in Unani system of medicine, indigenous medicine of drugs of Indian origin, animal and mineral drugs, common drugs utilized both in Ayurvedic and Unani medicine, list of simples as mentioned by Ibne Sina in his book Cannon, drugs used only either in Unani or Ayurvedic medicine, drugs of vegetable origin, list of drugs according to their geographical distribution both India and Pakistan and classification of drugs

according to their pharmacological and medicinal utilization are enumerated. After these listings, then pharmacopoeias as standardized by Hamdard starts, where in drugs are classified (Said, 1969).

### 3.3. Official Pharmacopeia

**Monograph of Unani Medicine:** This document brings together valuable scientific material providing a systematic characterization of a large number of herbs with a summary on their active constituents, functions and properties, pharmacological activities and side effects. This scientific information will promote the safety, efficacy and quality of traditional medicine practices in the country. It will also assist in setting objective regulatory and quality assurance standards necessary for the rational use of these herbs. This technical document will also substantiate the relevance of the ongoing national efforts aiming at the development of a national policy on traditional medicine. WHO supports to the development of this monograph with the aim to save lives and improve health by closing the huge gap between the potential that essential drugs have to offer and the reality that for millions of people, particularly the poor, medicines are unavailable, unaffordable, unsafe or improperly used (Monograph of Unani Medicine).

#### Tibbi Pharmacopoeia

Approved from Board of Unani and Ayurvedic System of Medicine, Pakistan Act II-1965 has Alphabetical indexing of Mufradat, medical terms, pharmaceutical manufacturing terms, measures of weight, stability of drugs, expiry of drugs, identification of drugs, Murakkabat antidote stabilization, Dosage form, drugs acting on biological system (pharmacology). In Tibbi Pharmacopoeia altogether 1285 Mufradat and 630 Murakkabat are described (Tibbi Pharmacopoeia, 1965).

#### British Herbal Pharmacopoeia 1996

The British Herbal Pharmacopoeia 1996 provides monographs of quality standards for 169 herbs commonly used in the United Kingdom for the preparation of botanical drugs. To avoid duplication of work, some of the monographs in this volume have been abbreviated, making reference to the official monograph where appropriate. Particular attention has been paid to developing thin-layer chromatographic techniques for comparative identification of the new botanical drugs. Quantitative analysis for active principles has not been included in the monographs because, in most cases, it is not possible to determine individually active components within an herb. Herbs are composed of a complex and synergistic mixture of active compounds which rarely have the same potency when isolated (British Herbal Pharmacopoeia, 1996).

#### British Herbal Compendium, Vol. I

The British Herbal Compendium is a handbook of technical information on the plant drugs for which quality standards are defined in the revised British Herbal Pharmacopoeia (BHP). With its depth of content and unique combination of features, the Compendium should prove useful in many areas of herbal medicine. Monograph titles and definitions of plant drugs in the Compendium are in accordance with the revised BHP apart from minor changes, notably inclusion of the botanical family name within each definition. Thereafter, with an occasional introductory passage, each monograph comprises sections on Constituents, Therapeutics, Regulatory Status and References. In many cases, the actions and uses described in the literature are largely based on unpublished observations or common experience, often valid but requiring a cautious approach (British Herbal Compendium, 1990).

## British Herbal Compendium Vol. II

The British Herbal Compendium Volume 2 serves as a companion volume to the BHP 1996, covering those herbs not included in Compendium Volume 1, but also complete in itself. Volume 2 will use the same format as Volume 1, but includes expanded sections on pharmacology and therapeutics thoroughly referenced with the most up to date research available (British Herbal Compendium, 1990).

### 4. Discussion

In spite of the availability of these pharmacopoeias the preparations of prescriptions and medicines are still fraught with practical difficulties in the field of dawasazi as well as in clinical prospective; some of which are enumerated below:

- These pharmacopoeias give the names of the Greco-Arab medicines in Arabic. The pharmacist has to search for the vernacular equivalent in tibbi dictionaries and glossaries.
- The weights of the individual medicines to be incorporated in a medicinal mixture were given in measures a few centuries ago, and the dispenser, in converting these measures to those in usage, was faced by the prospect of considerable-and rather unnecessary drudgery.
- The pharmacopoeias available do not give a full and comprehensive account of the preparation of medicinal mixtures, and therefore the dispenser did not receive full guidance in this regard. For example proper duration and temperature for preparing Arq, Zimad, Sharbat and Roghan is not mentioned in any Qarabadeen.
- Drugs bearing synonymous names were vigorously described as to preparations, with the result that it became increasingly difficult to determine the correct drug to be included in the preparation.
- Shelf-life and adverse effects are mentioned in only few pharmacopoeias for only some compound drugs.
- Different pharmacopoeias are followed for drug formulation in different region. So there are no similarity between the same compound drugs in terms of effects and side effects due to variability of ingredients.
- From clinical prospective proper dose and dosing pattern is not mentioned in satisfactory manner. So these pharmacopoeias cannot be referred in general practice.
- All that one could safely state is that the compilers of these pharmacopoeias did not adopt a practical approach. These pharmacopoeias failed to grasp the significance of many of the medicinal components and could scarcely be expected to offer full guidance to the dispenser as well as practitioner.

These problems have been resolved through compromise, but compromise can never be a solution.

To solve these problems, fifty years ago a few concise pharmacopoeias were compiled. But these pharmacopoeias succeeded in resolving at least a few problems only out of the many, and these still



persist Therefore, it became essential both for Unani practitioner and Tibbi institutions/associations to come and grips with these all-important problems.

## 5. Conclusion

With extensive research work on different official and unofficial pharmacopoeias it may be concluded that Hamdard Pharmacopoeia of Eastern Medicine is the most latest and standard text. However it appears that quality control assurance techniques standards should also be incorporated in the text so as to prove its worth from advanced and scientific point of view.

## References

Review of World Pharmacopoeias. 2012. WHO, Geneva (Switzerland). Available from: [http://www.who.int/medicines/areas/quality\\_safety/quality\\_assurance/resources/InternationalMeetingWorldPharmacopoeias\\_QAS13-512Rev1\\_25032013.pdf](http://www.who.int/medicines/areas/quality_safety/quality_assurance/resources/InternationalMeetingWorldPharmacopoeias_QAS13-512Rev1_25032013.pdf).

Kumar, S.K.N. 2015. Herbal pharmacopeia- an overview of International and Indian representation. *Journal of Ayurvedic and Herbal Medicine*, 1(3), pp.39-60.

Akbarabadi, H.M.M. 1998. *Fahrist Qarabadeen M'adane Tajurbat. Khuda Bakhsh Oriental Public Library, Patna*, pp.2-3, 7, 9, 12, 15.

Saad, B. and Said, O. 2011. Greco-Arab and Islamic Herbal Medicine. *John Wiley and Sons, New Jersey*, 2011, pp.8, 22, 25, 36, 88, 138.

Preckel C. 2015. Cinnabar, calomel and the art of Kushta Saazi: Mercuriel preparations in Unani Medicine. *Asia*, 69(4), pp.901- 932.

Steinhagen, H. 2011. Evolution of Drug Discovery: From Traditional Medicines to Modern Drugs. *Wiley-VCH, Weinheim*, 496 pages.

Nooruddin and Abdusalam, Asal Bayaz Nooruddin, Qadiyan. 1928. Wazir Hind Press, Amritsar.

Khan, H.A. Badi Bayaz (Urdu Trans: Hakim Khawaja Rizwan): YNM.

Kabeeruddin, H.M. 1929. Bayaz-e-Kabeer. Mahboob Press, Delhi.

Rehman, H.S. 1974. Bayaze Waheedi. Shifa-ul-Mulk Memorial Committee, Aligarh.

Ahmed, K.H. 1982. Dehli Kay Sahee Murakkabat. Muktab Darrul Talifat, Karachi.

Tabri, A.H.A. 2010. Firdous-ul-Hikmat (Urdu Trans: Hakim Ashraf Nadvi). Idara Kitabus Shifa, New Delhi.

Lutfi, S.A. and Qurabadeen, L. 1924. Mutbua Ghulam Nizamuddin, Delhi, pp.3-342.

Abdullah, H.M. Kanza-ul-Murakkabat; YNM.

Baksh, H.K. Kitab Mustajab Urf Akseere Mardan Masihaay Sadiq; YNM.

Awan, M.H. 1957. Kitabu I Murakkaba t mah Ilajul Amra.z Lahore: Shaikh Ghulam and Sons, Lahore, Pakistan.

Jilani, H.J. 1945. Makhzan-ul-Murakkabatt. Shaukat Book Depot, Gujarat.

Arzani, M.A. 1907. Qarabadeen-e-Qadri. Nowal Kishor, Kanpur.

Shifiai, H.M.H. Qarabadeen Shifai (Urdu Trans: Muradabadi HMM). Munshi Nowal Kishor Press, Kanpur.

Kabiruddeen H. Tartib-ul-Adviah; YNM.

Ahmad, H.H.J. 2008. Tazkara-e-Jalil. CCRUM, New Delhi.

Tibbi Pharmacopoeia. 1975. Qarshi, Mohammad Hassan, Maktaba Mishirul Attibba, Lahore, 1, p.397, 2, p.322.

Mujaebat, K. (Muntakhib-Mujarreat-Attibba-e-Pakistan). 1976. Board of Unani and Ayurvedic System of Medicine, Lahore, Pakistan.

Ghani, N. 1945. Qarabadhin-e-Najmul Ghani, Urdu.

Said, H.M. 1969. Hamdard Pharmacopeia of Eastern Medicine. Institute of Health and Tibbi Research, Pakistan.

Monograph of Unani Medicine Vol I.

Tibbi Pharmacopoeia. 1965. The Board of Unani and Ayurvedic System of Medicine, Pakistan.

British Herbal Pharmacopoeia. 1996. British Herbal Medicine Association, Bournemouth, London.

British Herbal Compendium. 1990. Vol. 1 & 2. British Herbal Medicine Association, Bournemouth, London.