



A COMPARATIVE EVALUATION OF THE USAGE OF SOME OF THE MEDICAL PLANTS DEPENDING ON THE IBN BAITAR'S WORKS AND THE PLANTS WHICH ARE FLOURISHED IN TURKEY

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SUMMARY

Abu Muhammad Abdullah bin Ibn Baitar Diya al-din-Maliqi, called Ibn Baitar was a Hispano-Muslim pharmacist and botanist. He was born near Malaga in 1190. During his education he was a pupil of Abd al-Abbas al-Nabati of Sevilla. He began to collect plant specimens, even he was a young boy, and he went to Northern African countries and the Middle East in order to collect new specimens. Among the places where he traveled were also found Anatolia and Syria.

He collected of the plants from the countries where he visited and he also added them to the classical collection of the plants which were given in the Works of Dioscorides, Galen, Rhazes, and Avicenna. He gave information about them in his work, named *Kitab al-Jam' fi Adwiya al-Mufrada*. His work was written in Arabic. It was translated into Turkish by an unknown person in the name of Aydınoğlu Umur Bey (d.1348). It contains knowledge about more than 1400 drugs. Arabic and Greek names, features, usage areas and effects of every drug and other writers' thoughts on these drugs were given in this work.

It consists of 4 volumes. It was translated into Turkish during the Aydinoglu Dynasty in 1291 (1874-75) in Cairo. It was translated into German by J.V. Sontheim in 1840. It was also translated into French by L. Leclerc in 1871.

Ibn Baitar had traveled to Turkey. For that reason, his work is a very important source for Turkish medical plants. In this paper, some of the plants which are found in Turkey flora will be evaluated and also will be compared with the present use of them.

INTRODUCTION

In general, when we talk about medicine in Islam we recall Ibn Sina, as we also remember Zahravi when surgery is mentioned; in pharmacology, the name is Ibn Baitar.

Abu Muhammad Abdullah bin Ibn Baitar Diya al-din-Maliqi, called Ibn Baitar was a Hispano-Muslim pharmacist and botanist. He was born near Malaga in 1190. During his education he was a pupil of Abd al-Abbas al-Nabati of Sevilla. He began to collect plant specimens, even he was a young boy, and he went to Northern African countries and the Middle East in order to collect new specimens. Among the places where he traveled were also found Anatolia and Syria.

After his travel all through the Eastern country, he wrote his two important works, using the material he collected during his travels. After 1224 he began to work as a chief



herbalist in Cairo during the reign of al-Kamil, the Ayyubi Sultan. When he became sultan of Damascus, Ibn Baitar also went to Damascus with him. Although after sultan death in 1238 he returned to Cairo, but he did not lived in there and came back to Damascus. He passed away in this city in 1248.

As a pharmacist, Ibn Baitar knew well the works on this subject and used them during his studies. One of them was Dioscorides who was the famous Greek pharmacist (I. century). Galen (120-200) had also great influence on Ibn Baitar. He used several other books and cited their writers' name in this works.

One of the Ibn Baitar's work is *Kitab al-Jam' fi Adwiya al-Mufrada* (The Book on Collected Simple Drugs). As is above mentioned in this work is about simple drugs. It consists of 4 volumes.

This book is the most famous work on this subject in Islam, and it is also the most well-known book after Dioscorides' work, *Materia Medica*, the most famous work written in Greek. In this book Ibn Baitar gives not only information which he quoted from the other books on this subject, but also looks at them critically. Although he also uses Ibn Sina's and Rhazes' works and frequently makes quotations from them, he also adds his observations and experiences in this work.

In this book he gives drugs which are prepared using only one item, as a plant and animal production or metallic, and he classifies drugs alphabetically and very methodically. He not only gives explanation on drugs, but also various foods. Here he describes 1400 medicaments and 300 of them are Ibn Baitar's own contributions, and 200 of them are plants. Ibn Baitar gives the name of medicaments, not only in Arabic but also in Latin and Berber (1).

This work was written in Arabic. It was translated into Turkish by an unknown person in the name of Aydınoğlu Umur Bey (died in 1348). It gives knowledge about more than 1400 drugs. Arabic and Greek names, features, usage areas and effects of every drug and other writers' thoughts about these drugs were given in this work. It was translated into German by J.V. Sontheim in 1840. It was also translated into French by L. Leclerc in 1871.

His second book is named *Kitab al-Mughni Fi-l-Adwiya al-Mufrada* (*Enriched Book on Simple Drugs*). Although, here he gives diseases alphabetically and gives drugs depending on the diseases on which they have effects, that can be accepted the reverse the first book.

This book was not published. However, some researchers who were interested in this subject wrote some critics about this work. *Al-Mughni* consists of twenty chapters as in the first work, *al-Jami*. As is mentioned above, *Kitab al-Mughni* has therapeutically order, like simple drugs for the head diseases, the ear diseases, the eye diseases etc (2).

MATERIAL and METHOT

In this study, we use the manuscript registered in Ayasofya section (No:3748) in Süleymaniye Library (3). Using this copy we defined the scientific names of the certain plants. Then we also determined usage of these plants by Ibn Baitar and effects of plants. Findings were compared with the information in today's pharmacological botanic and pharmacognosy books whether they really possess same effects or not (4,5,6,7,8,9,10,11,12).

FINDINGS (3,4,5,6,7,8,9,10,11,12)

Turkish name : Ardıç
Ibn Baitar's name : Ebhel,
Latin name : Juniperus communis
Family : Cupressaceae
Drug name : Fructus Juniperi
Effective elements of drugs : Tannins, sugar, volatile oil, bitter principle, organic acids
Effects given in the literature: Diuretic, diaphoretic, stomach, antiseptic, used for rheumatism diseases
Used according to Ibn Baitar : Antienflumatur, antiulcer and malign tumors

Turkish name : Sütleğenotu
Ibn Baitar's name : Laiye
Latin name : Euphorbia
Family : Euphorbiaceae
Drug name : Herba Euphorbia
Effective elements of drugs : Resin, latex, mucilage, fixed oil
Effects given in the literature : Purgative, skin diseases
Used according to Ibn Baitar : Purgative, antiepileptic, antineuralgic

Turkish name : Demirhindi
Ibn Baitar's name : Cevz-i Tafra
Latin name : Tamarindus indica
Family : Leguminoceae
Drug name : Pulpa Tamarindorum
Effective elements of drugs : Organic acids, pectin, sugar, aromatic substances
Effects given in the literature : Purgative
Used according to Ibn Baitar : Used for gingival diseases hemostatic, emetic

Turkish name : Azaron
Ibn Baitar's name : Asarum
Latin name : Asarum europaeum
Family : Aristolochiaceae
Drug name : Rhizoma Asari
Effective elements of drugs : Resin, tannin, organic acids, volatile oil
Effects given in the literature: Expectorant, emetic, diuretic, antipyretic, purgative, emmanagogue, antitussive
Used according to Ibn Baitar : Diuretic, analgesic, antispasmodic, liver disorders

Turkish name : Pelinotu
Ibn Baitar's name : Afsantin
Latin name : Artemisia absinthium
Family : Compositae
Drug name : Herba Absinthii
Effective elements of drugs : Volatile oil, bitter principle, flavonoid
Effects given in the literature : Stomach, tonic, apereint, antihelmintic, antidiabetic
Used according to Ibn Baitar : Apereint, analgesic, good for ear disease

Turkish name : Havuç
Ibn Baitar's name : Cezeriye
Latin name : Daucus carota
Family : Umbelliferae
Drug name : Fructus Dauci carotae
Effective elements of drugs : Volatile oil, fixed oil, resin, sugar
Effects given in the literature : Diuretic, carminative, stomach, antihelmintic, vermifuge, antimicrobial
Used according to Ibn Baitar: Diuretic, stomach, digestive, laxative, antihelmintic, emmanagogue, aphrodisiac

Turkish name : Ebucehil karpuzu
Ibn Baitar's name : Hanzal
Latin name : Citrullus colocynthis
Family : Cucurbitaceae
Drug name : Fructus Colocynthis
Effective elements of drugs : Mucilage, resin, bitter principle, glycoside
Effects given in the literature : Diuretic, purgative
Used according to Ibn Baitar : Antiepileptic, antisiphylitic, melancholy

Turkish name : Acıbadem Tohumu
Ibn Baitar's name : Levz
Latin name : Amygdalus communis L. var. amara DC
Family : Rosaceae
Drug name : Semen Amygdali amarum
Effective elements of drugs : Fixed oil, glycoside
Effects given in the literature : Expectorant, diuretic, antihelmintic, laxative
Used according to Ibn Baitar : Laxative, hemostatic, carminative, sedative

Turkish name : Banotu
Ibn Baitar's name : Benc
Latin name : Hyoscyamus niger
Family : Solanaceae

Drug name : Folium Hyoscyami nigri
Effective elements of drugs : Alcaloid
Effects given in the literature : Stimulant, analgesic, antiastmatic
Used according to Ibn Baitar : Analgesic, antipyretic, digestive

Turkish name : Hindiba
Ibn Baitar's name : Hindiba
Latin name : Cichorium intybus
Family : Compositae
Drug name : Radix Cichorii intybi, Herba Cichorii
Effective elements of drugs : Bitter principle, volatile oil, glycoside
Effects given in the literature : Carminative, diuretic, purgative, diaphoretic, stomach, aperient, tonic, cholagogue
Used according to Ibn Baitar : Stomach, antipyretic, aperient,

CONCLUSION

As conclusion, we should say that although the physicians in the Islamic World in the Middle Ages extensively used the classical pharmacological knowledge, they also made certain contribution about drugs and their usage depending on their own experiments, as is seen in Ibn Baitar's works. Ibn Baitar traveled all through the Middle East countries and evaluated their flora as a pharmacologist.

In addition to then, we define that the acknowledgment in Ibn Baitar's works resemble to nowadays' pharmacological knowledge as well.

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