

New Studies on Drug Discovery for Cardiovascular Diseases from “Beautiful Wondrous Eye Ornament” by Jambaldorj

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ABSTRACT

This research is to clear the information of the ancient medical books written by toin Jambaldorj, who wrote about some herbal medicines used to treat cardiovascular diseases, and their taste, potency, and quality. Toin Jambaldorj. Gso byed bdud rtsi'i 'khrul med ngos 'dzin bzo rig me long du rnam par shar ba mdzes mtshar mig rgyan zhes bya ba bzhugs so. Wooden printing block with Tibetan script. Methods of textual analysis for ancient books and checklist methods were used in the study. A prominent representative of traditional Mongolian medicine, Toin Jambaldorj, wrote his book “Beautiful Wondrous Eye Ornament” between 1817 and 1823. He used dozens of Indian Ayurvedic, Chinese, and Tibetan medical works of that time to write this book. He also extensively used the Mongolians’ medical heritage. Therefore, this book is considered the most reliable book on pharmacognosy. Toin Jambaldorj’s book “Beautiful Wondrous Eye Ornament” lists 9 herbal medicines used for cardiovascular diseases. The names of some herbal medicines are written in Mongolian, Chinese, Tibetan, Manchu, and Sanskrit, further evidence that the book was written in many languages and from many different sources.

Key words: Jambaldorj, Ancient medical books, Traditional medicine, Cardiovascular diseases.

INTRODUCTION

Over the last 20 years, traditional medical researchers and scientists in Mongolia have made significant strides in preserving and researching ancient medical books, manuscripts, and artifacts related to Mongolian medicine. Their successful efforts have revealed hundreds of ancient books and manuscripts that hold the key to traditional medical knowledge in Mongolia.

These books are not only authored by ancient Mongolian doctors and scientists but also include scriptures and books translated into Mongolian from early Indian, Chinese, Tibetan, Arabian, and European medical writings. On the other hand, the books and manuscripts of ancient Mongolian doctors and scientists are still used by foreign scholars for research, translation, and training.

One notable example is 2 medicinal books: “Beautiful Wondrous Eye Ornament”¹ and “Beautiful Wondrous Eye Ornament Derived from Stainless Crystal Garland,”² written in Tibetan by Toin Jambaldorj, a well-known noble lama of traditional Mongolian medicine.

Traditional Mongolian medicine doctors and researchers call the book “Beautiful Wondrous Eye Ornament” in Mongolian as “Ikh üzesgelent nüden chimeg,” while “Beautiful Wondrous Eye Ornament derives from Stainless Crystal Garland” and is called “Baga üzesgelent nüden chimeg.” “Ikh üzesgelent nüden chimeg” or “Beautiful Wondrous Eye Ornament” refers to the 347-page book, which contains full content such as illustrations, text, terminology, explanations, etc.³

The book “Baga üzesgelent nüden chimeg” is a small book with 34 pages containing only illustrations and some terminology.⁴

Historian of Tibetan medicine Olaf Czaja noted in his article, the *Beautifully Wondrous Eye Ornament* (Mdzes mtshar mig rgyan), Jampel Dorjé (‘Jam dpal rdo rje), alias Yeshé Döndrup Tenpé Gyemtsen (Ye shes don grub bstan pa'i rgyal mtshan, 1792-1855), includes illustrations that mostly derive from the *Bencao gangmu*, originally written by Li Shizhen and later printed in numerous editions. In addition to Tibetan names for materia medica, he also includes Manchu, Mongolian, and Chinese names, and the latter with a rough pronunciation in Tibetan.

It was never of great significance for the Tibetan medical tradition, but it became important for Mongolian medicine. Partially deviating from the precedents set by the Four Tantras, Jampel Dorjé chose some new criteria for the classification of materia medica, which becomes most obvious with regard to animals.⁵

Purpose of research work

Clearing the information of the ancient medical books written by toin Jambaldorj, who wrote about some herbal medicines used to treat cardiovascular diseases, and their taste, potency, and quality.

MATERIALS AND METHODS

Research material

Toin Jambaldorj. Gso byed bdud rtsi'i 'khrul med ngos 'dzin bzo rig me long du rnam par shar ba mdzes mtshar mig rgyan zhes bya ba bzhugs so. Wooden printing block with Tibetan script.

Research methods

Methods of textual analysis for ancient books and checklist methods were used in the study.

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RESULTS

As noted in the biographical book of Toin Jambaldorj which is titled: “Lha gcig rdorje 'chang ye shes don grub bstan pa'i rgyal mtshan dpal bzang po'i rang gi spyod tshul gyi rnam bshad tshe 'di'i snang gnyid sangs byed yid bzhi nor bu zhes bya ba bzhugs so” written in Tibetan (In English, it is abbreviated as Biography of Ochirdari Ishdondovdambijantsan) by Gevsh Jamyangperenlei who lived in Tümed Left Banner or Mongoljin Banner,¹ Jambaldorj was born in 1792 as the second son of his father Balchog, the ninth governor of Naiman Khosüü, and a descendant of Chinggis Khaan and his mother Balmo. His parents gave him the name Jambaldorj. From age seven, he learned Mongolian, Tibetan, Manchu, and Chinese languages.⁶

Medical works of Naiman Toin Jambaldorj

There are reports that Jambaldorj was comprehensive in the five wisdoms of Buddhism, was fluent in Mongolian, Manchu, Chinese, and Tibetan languages, and composed many works on the discipline of the temples, regulation of the dharma meeting, the religious ritual for a sacrifice to the Buddha, religious teaching, and medicine. His most renowned medicinal book is titled “Accurate Recognition of Healing Ambrosia Essence and Beautiful Wondrous Eye Ornament Emerging in the Model of Medicinal Illustrations” (Gso byed bdud rts'i 'khrul med ngos 'dzin bzo rig me long du rnam par shar ba mdzes mtshar mig rgyan zhes bya ba bzhugs so) in short, “Beautiful Wondrous Eye Ornament” in English and “Mdzes mtshar mig rgyan” in Tibetan. He printed the pictures from blocks or plates in this book separately. The title is “Dri med shel phreng nas bshad pa'i sman gyi 'khrungs dpe mdzas mtshar mig rgyan,” abbreviated as “Sman gyi 'khrungs dpe mdzas mtshar mig rgyan” (The illustrations of Materia medica in the Beautiful Wondrous Eye Ornament Derived from Stainless Crystal Garland). The first book was written between 1817 and 1823, and the second was printed between 1851 and 1911. Foreign and domestic scholars have studied these books since the middle of the last century. The “Beautiful Wondrous Eye Ornament” and the “The illustrations of Materia medica in the Beautiful Wondrous Eye Ornament derived from Stainless Crystal Garland” were translated and studied by researchers of the Inner Mongolia Autonomous Region of China⁷, and Professor Lokesh Chandra, in New Delhi, India, explored the text in depth and published a photo book of the woodblock print with a foreword by Professor E. Gene Smith in 1971.⁸

At the end of Jambaldorj's book, he highlighted that many doctors give different names to the following medicinal crude drugs according to their understanding, which is not found in the explanatory books of the “Four Medical Tantras.”

Some herbal medicines are used to treat cardiovascular diseases

Jambaldorj's book “Beautiful Wondrous Eye Ornament” contains several herbal medicines used to treat cardiovascular diseases. It also lists crude drugs used for cardiovascular diseases of animal origin. However, this time we have only identified herbal medicines. Jambaldorj wrote the names of herbal medicines in Mongolian, Tibetan, Chinese, and Manchu languages, as well as in Sanskrit. However, the names of some herbal medicines were written only in Mongolian, Tibetan, and Chinese.⁹ During our research, we found and added the Latin names of the herbal medicines used to treat cardiovascular diseases. When we wrote the names of herbal medicines, we first wrote them in Mongolian, then Tibetan, Chinese, Manchu, Latin, and as well as some of them in Sanskrit.

1. Zadi in Mongolian

Tibetan: dza-ti

Chinese: ròu dòu kòu

Sanskrit: jātiphala

Latin: *Myristica fragrans* (Houtt.)

In Sanskrit, it is called jātiphala, and in Tibetan, it is called dza-ti seed (Nutmeg). There are two types, large and small. The large one is slightly oily, while the small one is round and has a pleasant aroma when burned. Nutmeg is oily and heavy, so it is used for heart fever and cures cardiovascular diseases, and after being absorbed into the stomach, it has a cooling effect, so it is not used for kidney disease.

2. Zürkhen shosh in Mongolian

Tibetan: snying zho sha

Chinese: xiǎo guǒ shí liǔ

Latin: *Choerospondias axillaris* (Roxb.) B.L.Burt & A.W.Hill

It grows in the tropics and its surrounding forests. The tree is large and has thick leaves, very beautiful white flowers, black seeds, the core is heart-shaped and has five holes. The outer flesh is very good if it is flat, and the bones are also used. The *Choerospondias axillaris* (Roxb.) has warm and balanced qualities, so it removes heart fever or is included in the prescription for the treatment of acute heart inflammation.

3. Khuajuu in Mongolian

Tibetan: gyer ma

Chinese: téngjiǎo

Manchu: fuseri

Latin: *Zanthoxylum armatum*

The dark-colored ones are poisonous. The branches of the tree have small leaves, tiny yellow flowers, and the surface of the seeds is like Coriander. Inside, there are black seeds and a pungency taste. *Zanthoxylum armatum* treats vata dosha in the fever or treats mild heart pain. It also opens the mouth of the blood vessels, kills worms, is useful for mouth diseases, body itching, and treats alcoholism (Figure 1).

4. Tsagaan zandan in Mongolian

Tibetan: tsandan dkarpo

Chinese: bas than

Manchu: šangyan čaqûri hiya

Sanskrit: chandana

Latin: *Santalum album* L.

It is called the essence of the five potent essences (red-leaved til mar tree in Tibetan). There are four types of sandalwood: white, yellow, red, and brown. The one from India is light white, hard, oily, and has a pleasant smell. When burned, it gives off a resin-like smell. The sweeter the smell, the better the quality. Yellow sandalwood is grown in China and is very yellow, like the yellow tree. The less fragrant it is, the less effective it is. White sandalwood has cool, soft, light, and dry qualities, so it removes the fever from the lungs and heart. In other words, it is included in prescriptions for the treatment of acute heart and lung diseases.

5. Khar agar in Mongolian

Tibetan: a ka ru

Manchu: niyusu hiyan

Sanskrit: agaru

Latin: *Aquilaria agallocha* Roxb

¹ One of the 49 banners of Inner Zasag (later known as Inner Mongolia) in the Qing Dynasty (1644-1911).

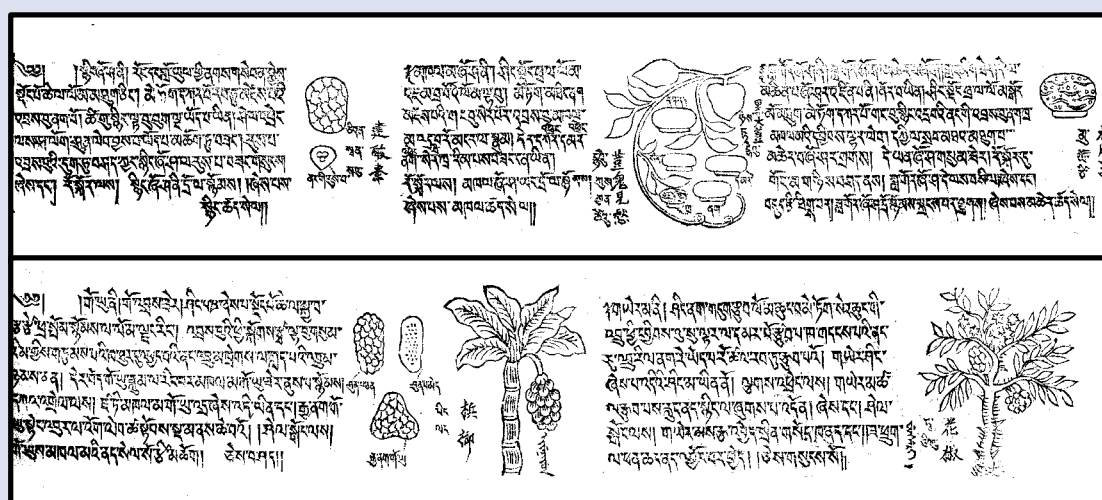


Figure 1. Two pages from the book "Beautiful Wondrous Eye Ornament" noted about the medicinal plants *Choerospondias axillaris* (Roxb.) and *Zanthoxylum armatum*.

Agaru (Agarwood in English) is a Sanskrit word. Although the ingredients are not listed, black agar or khar agar is often used. It has leaves like *Artemisia absinthium*, green stems, and blue flowers. The one that grows in China is bluish in color and hard like antlers. It has a very pleasant aroma and is the best. The leaves and flowers are yellow, and the tree turns brown when it gets old. The bark is used to make paper. Khar agar has oily, cool, and heavy qualities. Black agar is used to treat the arterial blood vessels and the heart, suppressing the fever and vata dosha.

6. Dangün in Mongolian

Tibetan: tang ku/ tang kun

Latin: *Angelica sinensis* (Oliv.)

It is small, yellowish in color, has a long stem, and small, yellow flowers on its branches. The one with white flowers is called white or male. The root is very fragrant. If it tastes warm, it is black or female. Dangün removes heart heat and poison. Root used for the inflammation of the heart and fever

7. Ulaan sorool in Mongolian

Tibetan: tshan/sro lo dmar po

Latin: *Rhodiola algida* (Ledeb.) Fisch

There are seven species according to their habitat, and three according to the color of their flowers and roots. The one that grows on the grass between the rocks has red roots. The root is shaped like a human lung, has thick, black bark, has a fragrant smell, is sweet, bitter, and has a cooling quality. If it has thick thorns and dark brown leaves, it is called black, and if it has roots like a mouse's tail, has fine thorns, green leaves, and white flowers, it is called white sorool. If it has slightly prickly leaves, triangular tips, and yellow flowers, it is called yellow. *Rhodiola algida* (Ledeb.) Fisch is used to treat heat, and especially white sorool is used for the inflammation of the heart and fever.

8. Luuli in Mongolian

Tibetan: sne'u

Chinese: har'I ti'I tshas

Manchu: ule sugi

Latin: *Chenopodium*

There are two types. Tibetan blue *Chenopodium* or wild *Chenopodium* grows in farmland. It has a turquoise color, thick, round leaves, a thin stem, and light seeds. It is sweet and hot in taste, so it is used to treat constipation. It is also called red *Chenopodium*. Red *Chenopodium* has thick leaves, and when ripe, the leaves and stems turn red. It is used for the inflammation of the heart and fever. Also, two types of *Chenopodium* are used to induce sweating and treat many diseases.

9. Banzdoo in Mongolian

Tibetan: spang rtsi do bo

Latin: *Servatula centauroides* L.

It grows in the sandy Gobi, has long stems, large leaves, pale flowers like an old man's head, and a bitter taste. It removes the poison of infectious diseases, used for the inflammation of the heart and fever, especially acute inflammation.

We selected a total of 9 herbal medicines for the treatment of cardiovascular diseases from Jambaldorj's book "Beautiful Wondrous Eye Ornament" and included them in the study. Five of these herbs do not grow in Mongolia. They are usually herbs that grow in India and China. However, 4 herbal medicines grow in Mongolia. Although chemical studies of these herbs have been conducted in the past, it was not clear how they were used in practice in ancient medical books. Therefore, considering the prevalence of cardiovascular disease in the world's population, we conducted this study to open up the possibility of developing new drugs to treat cardiovascular disease from the famous ancient medical scriptures.

CONCLUSION

1. A prominent representative of traditional Mongolian medicine, Toin Jambaldorj, wrote his book "Beautiful Wondrous Eye Ornament" between 1817 and 1823. He used dozens of Indian Ayurvedic, Chinese, and Tibetan medical works of that time to write this book. He also extensively used the Mongolians' medical heritage. Therefore, this book is considered the most reliable book on pharmacognosy.

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