

A Literature Study on 18 Tree-Derived Drugs in the Wuti Qingwen Jian

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Abstract: The Wuti Qingwen Jian (Pentaglot Dictionary) is a classified dictionary compiled in five major languages at the end of the 18th century. It is rich in content and detailed in classification, possessing high academic research value. Tree-derived drugs are traditional medicines originating from woody plants and hold unique value in the medical field. Many Mongolian medicines used by Mongolian medicine practitioners for disease prevention and treatment are derived from woody plants. These tree-derived drugs used in Mongolian medicine play an important role in the prevention and treatment of diseases. In "Research on Tree-Derived Drugs in the Wuti Qingwen Jian," 37 types of Mongolian medicinal trees were identified, and Mongolian medicine compound preparations containing some of these drugs as components were listed. Building on this foundation, this paper further consults Mongolian materia medica works such as Mongolian Materia Medica Canon (Mengyao Zhengdian), Chinese Materia Medica - Mongolian Medicine Volume (Zhonghua Bencao - Mengyao Juan), Mongolian Materia Medica Records (Mengyao Zhi), and Practical Mongolian Materia Medica (Shiyong Mengyaoxue) to collate another 18 drugs, including their Mongolian and Chinese names for medicinal materials and original plants, sources of medicinal materials, properties and flavors, efficacy, and main indications. Furthermore, the original plants of the aforementioned drugs were botanically classified using the "China Species Database" website. Additionally, referencing the Inner Mongolia Mongolian Medicine Preparation Standards 2021 Edition (Volume III), 8 drugs commonly used in Mongolian medicine compound preparations were identified from the aforementioned 18 drugs. The Mongolian medicine compound

preparations containing these drugs as components, along with their efficacy and main indications, were collated to provide assistance for subsequent research

Keywords: Wuti Qingwen Jian; Tree-Derived Drugs; Mongolian Medicine; Medicinal Properties and Efficacy; Formulas

1. Introduction

The Wuti Qingwen Jian is the abbreviated title for the Yuzhi Wuti Qingwen Jian (Imperial Commissioned Pentaglot Dictionary), a classified dictionary written in five languages that was completed at the end of the 18th century^[1]. "Wenjian" refers to a dictionary, a form of textual organization. The Wuti Qingwen Jian is a classified dictionary, equivalent to a thesaurus. "Wuti" (Pentaglot) refers to the languages used in its compilation, specifically the five major written languages of the Qing Dynasty: Manchu, Xizang, Mongolian, Uyghur, and Chinese. "Yuzhi" (Imperial Commissioned) signifies that Emperor Qianlong himself studied the languages of other ethnic groups during the compilation period and offered suggestions for the work.

In terms of content, the Wuti Qingwen Jian is hierarchically divided into sections, categories, subcategories, and entries. It is broadly divided into a main part and a supplement. The main part contains 35 sections, 292 categories, 556 subcategories, and 17,062 entries. The supplement contains 4 sections, 26 categories, 71 subcategories, and 1,609 entries. In total, there are 18,771 entries, making its content remarkably rich. Among these, there are 1,003 entries related to plants, which are further divided into 15 categories. Within the plant category, tree-related entries are the most numerous, accounting for about 26% of all plant entries. This provides valuable material for research in Mongolian medicine, literature,

and other fields. Although the officially compiled *Wuti Qingwen Jian* undoubtedly served the purpose of consolidating imperial rule, its content covers various aspects including humanities, social sciences, and physical geography, and is extremely rich. This provides an important documentary basis for research in many contemporary disciplines, ensuring that this monumental work still holds significant academic value.

2. Tree-Derived Drugs

Tree-derived drugs is a collective term for numerous medicines derived from various woody plants, used for treating and preventing diseases. Woody plants and herbaceous plants are distinguished by the characteristics of their stems. Woody plants are perennial plants with well-developed xylem in their stems, and their cell walls are mostly lignified and firm. Woody plants are often classified into trees, shrubs, and subshrubs.

Tree-derived drugs are a commonly used category of medicines in Mongolian medicine, playing an indispensable role in treating diseases. For example, *Chebolic Myrobalan*, known as the "King of Mongolian Medicine" and possessing all five flavors, is the dried fruit of *Terminalia chebula* Retz., *Terminalia chebula* Retz. var. *tomentella* Kurt, or *Terminalia gangetica* Roxb., large trees of the Combretaceae family. According to relevant statistics, *Chebolic Myrobalan* is one of the most frequently used drugs with the broadest efficacy in various Mongolian medicine compound preparations^[2]. In addition to *Chebolic Myrobalan*, other tree-derived drugs such as *Agarwood*, *Fructus Choerospondiatis*, and *Nutmeg* can be used to suppress "Heyi" (a Mongolian medical term for a pathogenic factor) and treat various Mongolian medicine heart diseases. *Borneol*, *Tabasheer*, and *Storax* can be used for clearing heat. Modern medical research on traditional Chinese medicine also indicates that active ingredients from some tree-derived drugs may offer assistance in treating certain modern medical complex diseases. For instance, the mulberry tree is considered a treasure trove, as its twigs, fruits, root bark, and leaves can all be used medicinally. Moreover, some studies show that active substances extracted from medicinal parts of the mulberry tree have significant effects on the prevention and treatment of

diabetes^[3].

Tree-derived drugs also represent an important classification within Mongolian medicine. Historically, various Mongolian medical texts have adopted different classification methods, including classification by efficacy and properties, by main indications, or by drug source. Tree-derived drugs fall under the category classified by drug source. The *Mengyao Zhengdian* (Mongolian *Materia Medica Canon*), one of the three major texts of Mongolian medicine, divides its recorded drugs into precious drugs, stone drugs, earth drugs, essence-juice drugs, tree drugs, decoction drugs, herb drugs, animal drugs, and fire drugs. In the 1988 edition of *Wuwu Mengyao Jian* (Infallible Mongolian *Materia Medica*, another name for *Mengyao Zhengdian*), considering only the drugs listed in the table of contents and not those subdivided within the main text, tree drugs account for approximately 17% of all listed drugs. This book further subdivides tree drugs into fruit drugs, tree flower drugs, tree leaf drugs, tree branch drugs, tree trunk drugs, twig drugs, tree root drugs, tree rhizome drugs, tree bark drugs, and tree resin drugs. The content on tree-derived drugs in *Mengyao Zhengdian* is rich and comprehensively classified. *Mengyao Zhengdian* is one of the three classic works of Mongolian medicine, written by the Mongolian medical scholar *Jambaldorj* in the first half of the 19th century. It is acclaimed as a systematic and complete classic of Mongolian *materia medica*^[4]. Therefore, this paper will use *Mengyao Zhengdian* as an important reference. Building upon the "Research on Tree-Derived Drugs in the *Wuti Qingwen Jian*," and by consulting one of the classic Mongolian *materia medica* texts, *Mengyao Zhengdian* (Mongolian *Materia Medica Canon*)^[5,6], as well as some modern Mongolian *materia medica* works such as *Zhonghua Bencao - Mengyao Juan* (Chinese *Materia Medica - Mongolian Medicine Volume*)^[7], *Mengyao Zhi* (Mongolian *Materia Medica Records*)^[8], and *Shiyong Mengyaoxue* (Practical Mongolian *Materia Medica*)^[9], it was found that in addition to the 37 medicinal materials identified in the aforementioned research, there are 18 other tree-derived Mongolian medicines. The following is a brief summary of the Mongolian and Chinese names of the original plants and drugs, the medicinal parts, properties and

flavors, sources, efficacy, main indications, and botanical classification of the original plants for these Mongolian medicines, serving as a supplement. Details are as follows: among these, Xiangjiapi (Cortex Periplocae) is an accessory medicinal material to Shuibaizhi (Flos Myricariae); Chuiliu (Weeping Willow) can be substituted with Huashupi (Birch Bark); Jisang (Fructus Mori Macrouae) is an accessory medicinal material to Sangshen (Mulberry Fruit); and Dongqingye (Folium Ilicis Chinensis) is an accessory medicinal material to Zhaoshanbai (Folium Rhododendri Daurici). Therefore, their properties and flavors, efficacy, and main indications refer to the aforementioned primary medicinal materials. The medicinal material Fuling (Poria) is also recorded under tree root and stem drugs in Mengyao Zhengdian and in Zhonghua

Bencao - Mengyao Juan.

See Table 1: Summary Table of Tree-Derived Drugs and Table 2: Botanical Classification of Tree-Derived Drugs. Among these, Xiangjiapi (Cortex Periplocae) is an accessory medicinal material to Shuibaizhi (Flos Myricariae); Chuiliu (Weeping Willow) can be substituted with Huashupi (Birch Bark); Jisang (Fructus Mori Macrouae) is an accessory medicinal material to Sangshen (Mulberry Fruit); and Dongqingye (Folium Ilicis Chinensis) is an accessory medicinal material to Zhaoshanbai (Folium Rhododendri Daurici). Therefore, their properties and flavors, efficacy, and main indications refer to the aforementioned primary medicinal materials. The medicinal material Fuling (Poria) is also recorded under tree root and stem drugs in Mengyao Zhengdian and in Zhonghua Bencao - Mengyao Juan.

Table 1. Summary Table of Tree-Derived Drugs

Mongolian Tree Name	Chinese Tree Name	Chinese Name of Medicinal Material	Mongolian Name of Medicinal Material	Medicinal Part	Property, Flavor	Source	Efficacy	Main Indications
hulusu	Bamboo	Tabasheer	hulusun zugang	Dried concretions of traumatic exudate collected between bamboo nodes	Cool in property, sweet in flavor	Poaceae plants Bambusa textilis McClure, Bambusa chungii McClure	Clears heat, relieves cough, promotes healing, resolves jaundice	Lung heat, latent heat, chronic bronchitis, pulmonary abscess, jaundice, fractures, reduces fever
hulusu	Bamboo	Bamboo Sap	hulusun sim-e	Sap exuded from the stem	Cold in property, sweet in flavor	Poaceae plant Phyllostachys nigra (Lodd. ex Lindl.) Munro var. henonis (Mitford) Stapf ex Rendle	Clears heat	Treats chest cavity sores and heat, gynecological diseases, and chronic heat
zandan modu	Sandalwood Tree	Sandalwood	cagan zandan	Heartwood	Cold in property, astringent in flavor	Santalaceae plant Santalum album L.	Clears turbulent heat, tonifies	Turbulent heat, lung heat, heart fire, aggravated heat, epidemic turbulent disease, palpitations
balu modu	Holly	Dongqing Leaf	alatan harabur	Leaves	Warm in property, sweet, bitter, and astringent in flavor	Ericaceae plants Rhododendron micranthum Turcz., Rhododendron dauricum L.	Regulates stomach fire, improves appetite, dispels Badagan, reduces edema, regulates body elements	Indigestion, stomach pain, poor appetite, Heyi-type pulmonary asthma and cough, edema
umehei hobulu(bugun buldui)	Elderberry	Elder Twig	bugun buldui	Stems and branches	Neutral in property, sweet and slightly bitter in flavor	Caprifoliaceae plants Sambucus williamsii Hance, Sambucus adnata Wall. ex DC.	Refines heat, regulates primordial qi, relieves cough	Immature heat, turbulent heat, Heyi heat, plague, common cold, lung heat, cough, asthma
toibang	Chaste Tree	Chaste Tree Fruit	toibang-in ur-e	Fruit	Neutral in property, bitter and pungent in	Verbenaceae plant Vitex rotundifolia L.f.	Expels parasites, aids digestion, reduces	Skin parasitic diseases, gastrointestinal parasitic diseases,

					flavor		swelling	edema, indigestion
batu cagan	Sweetgum Tree	Sweetgum Fruit	sobatu zimis	Fruit	Neutral in property, slightly bitter in flavor	Hamamelidaceae plant Liquidambar formosana Hance	Unblocks collaterals, promotes diuresis, removes damp-heat impediment pain	Joint pain, contracture of hands and feet, difficult urination, edema and fullness, insufficient lactation
batu cagan	Sweetgum Tree	Sweetgum Resin	cagan gugul	Resin	Cool in property, bitter and pungent in flavor	Hamamelidaceae plant Liquidambar formosana Hance	Dries Xieri Usu, reduces swelling, promotes healing, relieves pain, detoxifies	Xieri Usu diseases, Taolai, Heruhu, turbid heat, Bamu disease, anthrax, skin itching, scabies, tinea capitis, incised wounds
honggurgu agtu modu	Pagoda Tree	Pagoda Tree Fruit	honggurgu agtu	Fruit	Cold in property, bitter in flavor	Fabaceae (Leguminosae) plant Sophora japonica L.	Clears heat, cools blood, stops bleeding	Intestinal heat with bloody stool, hemorrhoidal bleeding, bloody dysentery, metrorrhagia
cinua- in elige	Old Crane's Eye; Stinking Plum (Buckthorn))	Stinking Plum (Buckthorn) Fruit	yasil	Fruit	Neutral in property, sweet and slightly bitter in flavor	Rhamnaceae plants Rhamnus davurica Pall., Rhamnus ussuriensis J.J.Vassil.	Expels phlegm, relieves cough.	Bronchitis, emphysema, dental caries pain, carbuncles and furuncles.
usutu torgan-a	Paper Mulberry Tree	Paper Mulberry Fruit	usutu torgan-a	Fruit	Cold in property, sweet in flavor	Moraceae plant Broussonetia papyrifera (L.) L'Hér. ex Vent.	Tonifies the kidney, strengthens muscles and bones, promotes diuresis	Soreness and weakness of loins and knees, edema and abdominal distension, blood deficiency with dizziness
luutu huzin modu	Borneol Tree	Borneol	silgabor	Crystalline compound precipitated from resin	Cold in property, bitter, pungent, and astringent in flavor	Dipterocarpaceae plant Dryobalanops aromatica C.F.Gaertn.	Clears heat, reduces swelling, relieves pain	Blazing heat, turbulent heat, toxic heat. Toothache, red eyes, swollen and sore throat, mouth and tongue sores, erysipelas.
Har-a modu	Java Plum	Java Plum Fruit	cihiragur-e	Fruit	Warm in property, sweet and astringent in flavor	Myrtaceae plant Syzygium cumini (L.) Skeels	Strengthens the kidney, dries Xieri Usu, stops diarrhea	Cold-type kidney diseases, soreness in the lower back, difficult urination
imagan eber	Willowleaf Swallowwort	Willowleaf Swallowwort Root Bark	imagan eber undusun durusu	Root bark	Cool in property, astringent and sweet in flavor	Asclepiadaceae plant Periploca sepium Bunge	Clears heat, dries Xieri Usu, promotes eruption of rashes, astringes toxins	Toxic heat, chronic heat, latent heat, spreading heat syndrome, meat toxin heat, Xieri Usu, blood heat, measles
yabagan torgan-a	Cockscomb Mulberry	Large-fruited Mulberry Fruit-spike	ilam-a	Fruit-spike	Cool in property, sweet and sour in flavor	Moraceae plant Morus macroura Miq.	Clears bone heat, tonifies	Women's bone heat, heat from bone injuries
narasun modu	Pine Tree	Poria	narasun sim-e	Sclerotium	Neutral in property, astringent in flavor	Dried sclerotium of Poria cocos (Schw.) Wolf (Polyporaceae), parasitic on Pinaceae plants Pinus densiflora or Pinus massoniana	Stops diarrhea, promotes diuresis, aids digestion	Cold and heat type diarrhea, detoxifies

uher -in nidu	Entada	Entada Seed	eligen šusa	Seed	Neutral in property, bitter and astringent in flavor	Fabaceae (Leguminosae) plant Entada phaseoloides (L.) Merr.	Clears liver heat, detoxifies, relieves spasms	Liver heat, pain in the liver area, edema, white pulse disease, abdominal pain, vomiting and diarrhea
unzigar uda	Weeping Willow	Weeping Willow Seed	burugsin g	Seed	Neutral in property, bitter in flavor	Salicaceae plant Salix babylonica L.	Clears heat and detoxifies, relieves cough, promotes diuresis, relaxes ligaments, promotes blood circulation	Arthritic yellow water disease, asthma, cough, acute mastitis, dysentery, burns and scalds, epidemic heat

Table 2. Botanical Classification of Tree-Derived Drugs

Phylum	Class	Family	Species
Angiospermae	Monocotyledoneae	Poaceae	Bambusa textilis, Bambusa chungii
	Dicotyledoneae	Santalaceae	Santalum album
		Ericaceae	Rhododendron dauricum
		Caprifoliaceae	Sambucus williamsii
		Verbenaceae	Vitex rotundifolia
		Hamamelidaceae	Liquidambar formosana
		Fabaceae	Sophora japonica
		Fabaceae	Entada phaseoloides
		Rhamnaceae	Rhamnus davurica
		Moraceae	Broussonetia papyrifera
		Moraceae	Morus macroura
		Dipterocarpaceae	Dryobalanops aromatica
		Myrtaceae	Syzygium cumini
		Asclepiadaceae	Periploca sepium
		Salicaceae	Salix babylonica
Gymnospermae	Coniferopsida	Pinaceae	Pinus densiflora, Pinus massoniana

3. Compound Preparations of Tree-Derived Drugs

Mongolian medicine rarely uses single drugs for disease prevention and treatment; generally, three or more single medicinal materials are combined to form a Mongolian medicine compound preparation, abbreviated as Mongolian medicine formula. Therefore, the summary of the characteristics of individual medicinal materials mentioned above cannot fully reflect the true efficacy and main indications of each medicinal material in actual Mongolian medical clinical practice. However, this does not negate the characteristics of single medicinal materials. Because compound preparations are formed based on individual

medicinal materials. Therefore, the characteristics of single medicinal materials provide an important foundation for studying the characteristics of compound preparations that contain them as components. The following identifies 8 medicinal materials from the aforementioned 18 that are used to form Mongolian medicine formulas, and collates the formula names, efficacy, and main indications of Mongolian medicine formulas containing these materials as components. The following formulas are all sourced from the Inner Mongolia Mongolian Medicine Preparation Standards 2021 Edition (Volume III)^[10]; see Table 3: Compound Preparations of Tree-Derived Drugs.

Table 3. Compound Preparations of Tree-Derived Drugs

Drug Name	Formula Name	Efficacy	Main Indications	Drug Name
Fengxiangzhi (Resina Liquidambaris)	sir-a uril	Clears heat, kills adhesion, detoxifies, breaks stasis, relieves pain, disperses nodules	For malignant sores, esophageal and pharyngeal masses, unnamed masses, gastralgia, blood diseases, liver diseases, diphtheria	Fengxiangzhi (Resina Liquidambaris)
	umuhei		Calms Heyi	For internal and external Heyi syndromes

	dabarhai-25		
	rasiyan gugul	Unblocks white meridians, dispels Huyendo, dries Xieri Usu	For limb and joint stiffness and movement disorders caused by white meridian damage
	gugul—15	Dries Xieri Usu, kills adhesion, reduces swelling	For Taolai, Heruhu, arthritic Xieri Usu diseases, scabies, papules, and other skin Xieri Usu diseases
	yungwa—14	Clears heat, kills adhesion, detoxifies, reduces swelling, breaks stasis, relieves pain	For sore throat, oral and esophageal masses, diphtheria, liver heat syndrome
	ziruhēn šuša—6	Dispels heart Heyi, strengthens the heart, sedates	For heart and life meridian Heyi syndromes, heart agitation syndrome
	ziruhēn šuša—7	Calms heart Heyi, tranquilizes the mind, strengthens the heart	For heart Heyi syndrome and Heyi-type mania
	buigar—10	Dries Xieri Usu, clears heat	For Taolai, arthritic Xieri Usu diseases
	usun sa uril	Dispels Badagan Heyi, promotes blood circulation	For Wosen Sa disease, Badagan Heyi-type headache, dizziness
	amin—11	Calms Heyi, relieves stabbing pain	For stabbing pain in the chest and axilla, heart stabbing pain syndrome, mania
	mōngun usu—18	Dries Xieri Usu, kills adhesion, heals wounds	For Taolai, Heruhu, joint pain and other Xieri Usu diseases, herpes, scabies and carbuncles, skin itching and other skin Xieri Usu diseases
	cagdur	Kills adhesion, clears heat, dries Xieri Usu, relieves pain	For headache and stabbing pain caused by blood Xiri, various types of Yama syndrome
	saran·garudi	Dries Xieri Usu, reduces swelling, kills adhesion, heals white meridian damage	For various joint and skin Xieri Usu syndromes and white meridian diseases
	guncel—13	Calms Heyi, clears blood heat	For Heyi-type chest stabbing pain, chest tightness, and shortness of breath caused by Heyi-blood imbalance syndrome
	sin-e·sa·uril	Heals white meridian disease, clears heat, detoxifies, dries Xieri Usu	For the initial stage of Sa disease with significant heat syndrome
	gal·sa·uril	Clears heat, reduces swelling, relieves pain	For impaired body movement, fever, restlessness, joint and muscle stabbing pain caused by Gala Sa disease
	elezigen·cisu-25	Dries Xieri Usu, reduces swelling	For various skin and joint Xieri Usu syndromes
	sir-a·ga-7	Kills adhesion, clears Badagan heat	For kidney and bladder heat, hematuria, nocturnal emission
	ziruhēn·agaru-8	Clears heart Heyi heat	For Heyi, turbulent, and traumatic heat, especially heart Heyi heat
Tanxiang (Lignum Santali Albi)	balcirgan-a- 29	Astringes and clears adhesion, heat, and Heyi fighting each other	For epidemic diseases, intestinal stabbing pain, influenza
	bag-a·erdeni	Heals white meridian damage, clears chronic heat, dries Xieri Usu	For treating white and blood meridian damage, kidney heat, Xieri Usu syndrome
	ziruhēn sim-e	Regulates Heyi, promotes blood circulation, unblocks meridians and relieves pain	For coronary heart disease angina pectoris, myocardial infarction, post-coronary stent implantation restenosis
	ziruhēn—7	Promotes blood circulation, strengthens the heart, relieves pain	For palpitations, heart agitation, chest and rib pain
	zes·in unesu—25	Clears lung heat, detoxifies, benefits the lungs, relieves cough, resolves phlegm	For lung swelling and pain, pulmonary tuberculosis
	yehe·erdeni	Heals white meridian damage, clears chronic heat, dries Xieri Usu	For white and blood meridian damage, hemiplegia, Taolai, Heruhu, joint pain and other Xieri Usu diseases. Kidney blood heat, kidney traumatic heat, epidemic heat and other febrile diseases.
	ami·barigci—18	Regulates adhesion, Heyi, and heat fighting each other, relieves stabbing pain	For mountain and river Heyi heat, Heyi heat, immature heat, mania, syncope, restlessness, palpitations and shortness of breath, and other Siming Heyi diseases. Heyi stabbing pain syndrome, white meridian disease, Badagan Xiri latent syndrome
	honggulzuur—12	Kills adhesion, clears heat	For adhesion heat, epidemic turbulent heat, severe Xiri heat
	ubadis in serigun nairalg-a-25	Clears pestilence, detoxifies	For epidemic, toxic, Baori heat and other exuberant heat or heat-type complications such as Badagan heat
	agushin halagun—18	Clears adhesion heat, relieves cough	For mountain and river Heyi heat, Heyi heat, chronic lung heat
	Sun·orhudai—18	Clears heat, detoxifies, dries Xieri Usu, kills adhesion	For rheumatism, rheumatoid arthritis, and psoriasis, pemphigus, eczema and other skin Xieri Usu syndromes
	zulgen·cimeg—15	Clears Badagan, reduces swelling, relieves cough, calms asthma	
	manglai—8	Clears heat and detoxifies	For blazing heat of the Zang-fu organs, lung and liver heat, blood and Xiri heat
	cagan·zandan—8	Clears heat, moistens the lungs, relieves cough, resolves phlegm	For lung heat cough, phlegm with pus
	har-a·agaru—35	Regulates Heyi heat, blood, and adhesion	For mountain and river heat, Heyi heat, chronic cough, dry

		fighting each other, relieves cough, calms asthma	cough with little phlegm
	agushin agaru-8	Calms Heyi, calms asthma	For cough and coughing white foamy phlegm caused by Heyi-type qi, Heyi-type cardiac agitation syndrome, chest stabbing pain syndrome
uling (Poria)	ziruha mandul	Regulates Heyi, dispels Badagan, opens orifices	For sinus bradycardia, arrhythmia, atrioventricular block
Dongqingye (Folium Ilicis Chinensis)	ziruha tamirzil	Nourishes the heart, unblocks meridians, promotes diuresis, calms asthma, aids stomach fire	For chronic heart failure and its resulting edema, asthma, and vascular embolism
Tianzhuhuang (Concretio Silicea Bambusae)	sobud·uril	Heals white meridian damage, dries Xieri Usu, clears heat	For white meridian damage and chronic heat, turbid heat
	biriyangu—15	Clears Xiri	For liver heat, gallbladder heat
	tusimel—8	Clears heat, relieves cough	For lung heat, cough, fever, common cold, influenza
	hulusun·zugang—4	Clears heat, relieves cough	For pediatric lung heat, high fever convulsions, liver heat jaundice
	agushin—5	Clears heat, relieves cough	For lung heat, cough, cough caused by smallpox and measles
	degedu—7	Clears liver heat	For liver damage, liver blood heat, jaundice, liver heat syndrome
	eligen—25	Clears blood heat, clears Xiri heat	For various liver diseases caused by blood heat, chronic liver heat
	sir-a in —12	Clears Xiri, clears heat, aids digestion	For stomach Xiri, liver heat, various stabbing pain syndromes, food stagnation
	cagan·uzum—7	Relieves cough, calms asthma	For chronic asthma, chronic lung disease, whooping cough, cough
	galu—10	Clears blood heat, improves vision	For liver and lung blood heat, Baori heat, eye diseases caused by blood Xiri
Manjingzi (Fructus Viticis)	ruda—10	Calms Heyi-blood imbalance, suppresses Sha, kills parasites	For Baori cold-type mixed stage, adhesion Sha, parasite Sha disease
Putao (Fructus Syzygii Jambos)	wanglag—15	Dispels cold, strengthens the body, tonifies the kidney, tonifies qi, dries Xieri Usu	For kidney cold and kidney Heyi, edema, tinnitus, soreness in the loins and legs, nocturnal emission
	bθgeren—11	Dispels Badagan, tonifies, promotes diuresis	For various types of edema, kidney cold, difficult urination, soreness in the lower back
	arur-a—18	Dispels kidney heat, kills adhesion, promotes diuresis	For kidney heat, kidney meridian contusion, difficult and frequent urination, soreness in the loins and legs, kidney blood stasis, testicular swelling and pain, nocturnal emission
	henggerge·ebesu—13	Clears kidney heat, reduces swelling	For kidney contusion, hematuria, Heyi heat
Jiegumu (Ramulus Sambuci Williamsii)	yehe·ulagan tang	Clears blood heat	For mature and immature heat, white meridian disease, blood heat, lung heat, common cold
	cagan tang	Promotes maturation of febrile diseases and epidemic heat, calms Heyi-blood imbalance	For immature heat, Heyi-blood imbalance, epidemic heat
	erdeni—7 tang	Promotes maturation of febrile diseases, astringes and clears heat	For immature heat, mild febrile diseases

Table 4. Formulas with Single Drugs as "Jun" Drugs

Medicinal Material	Formula	Efficacy
Fengxiangzhi (Resina Liquidambaris)	gugul—15	Dries Xieri Usu, kills adhesion, reduces swelling
Fengxiangzhi (Resina Liquidambaris)	buigar—10	Dries Xieri Usu, clears heat
Tianzhuhuang (Concretio Silicea Bambusae)	tusimel—8	Clears heat, relieves cough
Tianzhuhuang (Concretio Silicea Bambusae)	hulusun·zugang—7	Clears heat, relieves cough
Tanxiang (Lignum Santali Albi)	cagan·zandan—8	Clears heat, moistens the lungs, relieves cough, resolves phlegm
Jiegumu (Ramulus Sambuci Williamsii)	yehe ulagan tang	Clears blood heat

In Mongolian medicine formulas, the single drug among the components that plays the primary role is called the "Jun" (sovereign) drug^[11]. The characteristics of a Mongolian medicine formula largely depend on the characteristics of its "Jun" drug. Therefore, to more accurately reflect the efficacy of the

aforementioned drugs in actual clinical practice, 6 formulas were selected from 55 formulas, in which the aforementioned single drugs serve as the "Jun" drug. See Table 4: Formulas with Single Drugs as "Jun" Drugs.

4. Result

Regarding the overall classification of medicinal materials: among the 18 collated tree-derived drugs, 8 use fruits, 2 use resins, and 1 each uses seeds, tree roots, stems/branches, leaves, heartwood, stem sap, traumatic exudate, and sclerotium. Regarding properties: 4 are cold, 5 are cool, 7 are neutral, and 2 are warm. Among the fruits, which constitute the most used medicinal part, 7 are neutral in property, accounting for approximately 39%, and among these, 6 have a bitter or slightly bitter taste. In Mongolian medical theory, an excess of "water qi" corresponds to a bitter taste^[11], and bitterness primarily treats Shila diseases. Mongolian medicine believes that the internal causes of febrile diseases are "blood" and Shila; blood is hot in nature. After blood undergoes metabolic separation of clear and turbid, the turbid substance is bile. After bile undergoes metabolic separation of clear and turbid, the clear substance is Xieri Usu. Therefore, bitter medicinal materials have good efficacy in febrile diseases such as liver heat, lung heat, and toxic heat, as well as Xieri Usu diseases such as Taolai, Heruhu, and arthritic yellow water disease. Regarding the efficacy and main indications of the 18 summarized drugs, apart from the two warm-natured drugs, Dongqingye (*Folium Ilicis Chinensis*) and Putao (*Fructus Syzygii Jambos*), which regulate stomach fire; Manjingzi (*Fructus Viticis*), which mainly expels parasites and aids digestion; Chushi (*Fructus Broussonetiae*), which tonifies the kidney and promotes diuresis; and Fuling (*Poria*), which stops diarrhea and aids digestion, the remaining 13 drugs share commonalities, primarily having effects such as clearing heat, refining heat (Lianre), and dispelling Xieri Usu. The main indications are hot-natured febrile diseases such as immature heat, Hongre heat (turbulent heat), blazing heat, toxic heat, and epidemic heat, as well as Xieri Usu diseases such as Taolai, Heruhu, arthritic yellow water disease, Bamu disease, and joint pain. The tastes of these 13 medicinal materials are mainly bitter, sweet, and astringent, and their properties are mainly cold, cool, and neutral. Therefore, the bitter taste of these 13 drugs substantiates the aforementioned explanation regarding bitterness. As for sweet, Mongolian medical theory states that an excess of "earth and water" corresponds to a sweet taste^[11]. Badagan belongs to earth and water in the five

elements classification. Badagan is cold in nature and corresponds to the hot-natured Shira. Therefore, sweet medicinal materials elevate Badagan and dispel Shira. An excess of "earth qi" corresponds to an astringent taste. Heyi belongs to "qi". Heyi and "earth" make the drug's efficacy cool and dull, corresponding to the hot and sharp nature of Shira, thus dispelling Shira.

Regarding botanical classification: Among the 16 original plants of the 18 medicinal materials, 15 belong to Angiospermae and 1 belongs to Gymnospermae. Under Angiospermae, there are 14 in Dicotyledoneae and 1 in Monocotyledoneae. Under Gymnospermae, there is Coniferopsida. Dicotyledoneae includes: Santalaceae, Ericaceae, Caprifoliaceae, Verbenaceae, Hamamelidaceae, Fabaceae (Leguminosae), Rhamnaceae, Moraceae, Dipterocarpaceae, Myrtaceae, Asclepiadaceae, Salicaceae. Monocotyledoneae includes: Poaceae (Gramineae). Coniferopsida includes: Pinaceae.

Regarding formula classification: Among the 55 formulas, 19 contain Fengxiangzhi (*Resina Liquidambaris*), 16 contain Tanxiang (*Lignum Santali Albi*), 10 contain Tianzhuhuang (*Concretio Silicea Bambusae*), 4 contain Putao (*Fructus Syzygii Jambos*), 3 contain Jiegumu (*Ramulus Sambuci Williamsii*), 1 contains Manjingzi (*Fructus Viticis*), 1 contains Dongqingye (*Folium Ilicis Chinensis*), and 1 contains Fuling (*Poria*). This indicates to a certain extent that among the aforementioned 8 medicinal materials, Fengxiangzhi, Tanxiang, and Tianzhuhuang are used more frequently in Mongolian medicine formulas compared to other materials. Regarding the efficacy of these 55 compound preparations: 24 are for clearing heat, 10 for drying Xieri Usu, 8 for tranquilizing Heyi, 7 for regulating Heyi-Blood imbalance (Xianghong), 4 for clearing Badagan, 1 for nourishing the heart and unblocking meridians, and 1 for relieving cough and asthma. This fully demonstrates the wide range of uses of tree-derived Mongolian medicines in treating various diseases in clinical applications.

Regarding formulas with single medicinal materials as the "Jun" drug: their efficacies include 4 for clearing heat and 2 for dispelling Xieri Usu. Therefore, these medicinal materials mainly exert effects of clearing heat and

dispelling Xieri Usu, as well as resolving phlegm (Sha Nian), relieving cough, and reducing swelling. However, because among the 6 summarized formulas, only 4 medicinal materials serve as the "Jun" drug, this cannot accurately reflect the actual clinical application of the aforementioned 18 medicinal materials.

5. Conclusion

Building on the 37 Mongolian medicinal materials found in the "Research on Tree-Derived Drugs in the Wuti Qingwen Jian," an additional 18 Mongolian medicinal materials were identified. These were organized under four main aspects: the comprehensive characteristics of single medicinal materials, the botanical classification of original plants, Mongolian medicine formulas with single medicinal materials as components, and Mongolian medicine formulas with single medicinal materials as the "Jun" (sovereign) drug. The data were then summarized in various tables. Subsequently, a brief summary of the collated data was conducted. Studying the medicinal tree species in the Wuti Qingwen Jian from a Mongolian medical perspective provides certain assistance for interdisciplinary research on this book. This is conducive to studying this monumental work of the 17th century from multiple disciplines and perspectives, thereby more profoundly excavating the treasures within ancient literature, enabling the value of these ancient documents to contribute to the development of contemporary society, and allowing these ancient documents to burst forth with new vitality. For Mongolian medicine, researching such ancient literature and conducting multilingual comprehensive textual research on some professional terms is conducive to the standardization and unification of professional terminology. Searching and excavating medicinal materials used in Mongolian medicine from ancient literature contributes to the development of new drugs and the innovation of some therapies, thereby providing some theoretical guidance and assistance for Mongolian medical clinical practice. All of these contribute to the innovation of Mongolian medicine, and in turn, innovation promotes the development of Mongolian medicine.

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