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## XIE'S CHINESE VETERINARY HERBOLOGY

兽医中草药及方剂学

EDITED BY Huisheng Xie, DVM, PhD, MS Vanessa Preast, DVM, CVA

ILLUSTRATED by Barbara Jean Beckford



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#### **NOTICE**

This book is intended to be a reference for veterinarians trained to practice Traditional Chinese Veterinary Medicine (TCVM). This text is **not** a substitute for a sound medical education. Veterinarians are strongly advised to seek a comprehensive TCVM training program before using herbal medicine. Several certification programs in the United States and other countries are available to veterinarians. Nonveterinarians should not practice medicine on animals, unless permitted by law. Individuals who are untrained or inadequately trained in TCVM are unable to accurately assess a patient's health status or make appropriate therapeutic recommendations.

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Dr. Xie is an associate professor at the University of Florida (UF), director of the Veterinary Acupuncture Program at the UF Veterinary Medical Center, and president and head instructor of the Chi Institute. He has been teaching and practicing Traditional Chinese Veterinary Medicine (TCVM) since 1983.

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Dr. Xie received his Doctor of Veterinary Medicine at the Sichuan College of Animal Science and Veterinary Medicine in Sichuan, China, in 1983. He worked as a faculty member in TCVM at the Beijing Agricultural University College of Veterinary Medicine from 1983 to 1987. After receiving his Master of Veterinary Science in Veterinary Acupuncture in 1988, he served as an associate professor in the college until 1994. During this time, he continued his advanced training in human acupuncture at the Beijing College of Traditional Chinese Medicine and the National Academy of Traditional Chinese Medicine. He completed his advanced training in 1992.

To explore different approaches for studying and advancing TCVM, he moved to the United States in 1994 and began his doctoral training at the University of Florida.

He investigated using acupuncture as pain control mechanisms in horses and received his PhD in 1999. Believing that TCVM should be available to more veterinarians, Dr. Xie founded the Chi Institute of Chinese Medicine in 1998. The Chi Institute trains veterinarians in the various branches of TCVM, including acupuncture, herbal medicine, Tui-na, and food therapy.

Dr. Xie's academic accomplishments are extensive. He has received Achievement Awards from several Chinese institutions including the Ministry of Agriculture, the National Science and Technology Committee, and the Beijing Agricultural University. As an invited speaker in the United States, Japan, Thailand, Mexico, Brazil, and Europe, he has lectured about veterinary acupuncture and herbal medicine around the world. He has authored 10 books and 100 scientific papers. His textbooks, including *Xie's Veterinary Acupuncture* and *Traditional Chinese Veterinary Medicine—Fundamental Principles*, have been used for TCVM training programs in China, Japan, Europe, South America, and the United States.

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She has applied her instructional design skills to a wide range of topics, including teaching classes on Servant Leadership to ISU honors students and developing a hands-on workshop teaching community members how to make effective sandbag levees. Along with three other graduate students, she cofounded an instructional design service center, Learning Design Solutions. This student-led center provides services such as evaluation, assessment, usability, and instructional design and development.

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#### **Preface**

Traditional Chinese Veterinary Medicine (TCVM) has been practiced routinely in China for more than 2,000 years. This medical system incorporates both acupuncture and Chinese Herbal Medicine (CHM). Although many people associate Chinese therapies with acu-puncture only, most patients in China (about 70%) are actually treated with Chinese herbs or a combination of herbs and acupuncture. Only about 30% of all traditional Chinese medicine patients receive acupuncture alone.

As early as 4,000 years ago, the Chinese recorded their knowledge of herbal medicines on bones and tortoise shells. Because archeologists excavated ancient bones from the Shang Dynasty (16th to 11th century BCE) containing inscriptions for "herbal wine," they believe herbal wine was one of the earliest ways to use Chinese herbal medicine. Today's modern preparation methods, which are still guided by the historical wisdom underlying CHM, effectively release the healing powers stored within the herbs. Many clinical studies have indicated that CHM is extremely effective for treating medical disorders in a wide variety of areas including cardiology, dermatology, endocrinology, gastroenterology, reproduction. oncology, behavior. respiratory problems, and sports medicine. For example, new evidence supports using herbal remedies to treat and even prevent gastric ulcers in horses. Herbal medicine has helped increase the quality of life in geriatric patients, especially those diagnosed with terminal cancer, because CHM can help shrink the tumor when chemo-therapy is not an option.

As more veterinarians learn about TCVM and use acupuncture, they are seeking Chinese Herbal Medicine texts to increase their TCVM knowledge and to expand their

treatment options with herbal medicine. Unfortunately, the literature about veterinary Chinese herbal medicine is primarily written in Chinese. Furthermore, the few English-language CHM books that are available focus on human rather than veterinary patients. Thus, we created this text to provide Western veterinarians with a clear, practical guide to the theory and application of CHM in veterinary hospitals.

This book is intended to serve as a quick reference for practicing veterinarians and as a textbook for continuing education courses in TCVM. To assist the readers, the book is presented in three parts: Part 1, Chinese Veterinary Materia Medica; Part 2, Chinese Veterinary Herbal Formulation; and Part 3, Clinical Application of Chinese Veterinary Herbology.

Chinese Veterinary Materia Medica: Part 1 discusses 381 herbs and divides them into chapters by herbal categories. The actions, properties, and applications of the herbs are compared at the end of each chapter. This section original reference. lists the part used. Wade-Giles. (pharmaceutical. common. translation). energy/taste, channel-organ, actions, form and preparation, dosage, cautions and contraindications, and side effects for every herb. Additional details and illustrations are provided for the 133 most commonly used herbs. The illustrations help readers visually identify the herbs. These herbs include information about their clinical applications, history, related research, and pharmaceutical ingredients.

Chinese Veterinary Herbal Formulation: Detailed information is provided in Part 2 for 222 herbal formulas including nomenclature, source, ingredients, preparation, actions, indications, dosage and usage, formula analysis, and cautions and contraindications. Additionally, Dr. Xie provides commentary on most of the formulas. Some of the herbal formulas also list recent clinical and pharmacological studies related to those formulas.

Some classical formulas contain ingredients that were used historically but are not available for use in modern times. For example, the ingredients Xi Jiao (Rhinoceros) and Hu Gu (Tiger bone) come from endangered species, so their use is prohibited. In these cases, the classical formulas are included in the text for educational purposes, but acceptable substitutes for the unavailable ingredients are also listed with the formula.

Clinical Application of Chinese Veterinary Herbology: The three chapters within Part 3 present detailed information on how to apply Chinese herbal medicine in veterinary practice, especially for the most common diseases in dogs, cats, and horses. This section also teaches how to select an herbal formula based on the TCVM Pattern diagnosis.

#### **Acknowledgments**

This book was born from a superb team's work. We greatly appreciate the efforts of all who helped make this book possible. First, we recognize the chapter contributors: Drs. Michael Bartholomew, Kelly Chandler, Cheryl Chrisman, Xiaolin Deng, Constance DiNatale, Bruce Ferguson, Elizabeth Fernandez, Songhua Hu, Min Su Kim, Lin Li, Hanru Liu, Chaoying Luo, Tiffany Rimar, Dayou Shi, Justin Shmalberg, Sara-Jane Skiwski, Dalu Song, Lisa Trevisanello, Xiujun Wang, Yasu Xie, and Xuguang Yang. They wrote about their subjects with exceptional skill. We also thank Drs. Cheryl Kelly Chandler. Linda Chrisman. Boggie, Elizabeth Fernandez, Chester Wheeler, Anita Weiss, Maria Gore, and Dazhi Xie for intensively proofreading and editing all the chapters. Thank you to Drs. Wen Liu and Dayou Shi, Allen Dong, and Wei Zhang for translating the historical stories for each herb. We acknowledge Dr. Minsu Kim for adding the pharmaceutical ingredients for each herb. We sincerely appreciate the patience of Wiley-Blackwell as we have slowly brought this text together. Finally, special thanks go to Barbara Beckford and Zhen Zhao for their wonderful illustrations.

#### Part 1

# Chinese Veterinary Materia Medica

兽医中草药

#### Introduction to Chinese Herbal Medicine 引言

Huisheng Xie, Vanessa Preast

#### HOW TO UNDERSTAND CHINESE HERBS

By understanding the properties of Chinese herbal medicines, a practitioner can predict their actions and prescribe the appropriate herbal formula for a particular clinical condition. A variety of characteristics is used to describe Chinese herbal medicines. These include an herb's temperature/energy, taste, direction of energy, and Channels entered.

#### **Temperature/Energy of Herbs**

Chinese herbal medicines are placed into five temperature or energy categories: 1) Cold, 2) Hot, 3) Warm, 4) Cool, and 5) Neutral (<u>Table I.1</u>). These herbal energy categories are based on *Yin/Yang* theory. Warm and hot herbs are associated with *Yang* and are used to treat Cold conditions (*Yin* diseases). Meanwhile, cold and cool herbs are associated with *Yin* and are used to treat Hot conditions (*Yang* diseases). An herbal medicine's ability to warm or cool also falls along an energy level continuum so that hot herbs are stronger than warm herbs and cold herbs have greater cooling energy than cool herbs.

Traditional Chinese Medicine (TCM) classifies diseases into temperature categories such as Heat or Cold. Treatment generally attempts to balance the disease "temperature" by using herbs with the opposite temperature properties. Thus, herbs with "cold" energy are used to treat conditions where Heat is present. For example, the *Yin* herbal medicine Coptis *Huang Lian* is very cold and is commonly used for Large Intestine Heat conditions (bloody diarrhea or inflammatory bowel disease). Likewise, herbs with "hot" energy are typically used to remedy Cold conditions. For example, the *Yang* herbal medicine dry Zingiberis *Gan Jiang* is commonly used for Stomach Cold (abdominal pain, vomiting, and abdominal discomfort). In cases where a disease is neither hot nor cold, herbs with neutral energy are usually recommended.

The choice of herbal treatment will also depend on the depth of the disease condition. Although opposite temperature herbs are appropriate for deeper diseases, superficial conditions may require a different approach. If a patient has an Internal Heat condition (Yang), cool or cold herbs are recommended and warm or hot herbs are avoided. However, if the Heat condition is in the Exterior (Superficial Heat), using warm herbs can actually relieve fever and Heat on the body surface through diaphoresis, which opens the pores and releases the pathogenic Heat from the body. Similarly, a patient with an Internal Cold condition (Yin) should be treated with warm or hot herbs, and cool or cold herbs are avoided.

The energetic properties of the component herbs are also considered when creating herbal formulas (<u>Table I.1</u>). Herbs with different temperatures may be combined to produce a formulation with a more balanced temperature. For example, a formula predominately consisting of warm herbs often contains some cool herbs, or a few warm herbs may be found in a predominately cool-herb formulation. This is because the patient's system may not be able to accept an herbal formula that is too cold or too hot. For example, the

administration of herbs that are too cold may induce discomfort such as nausea or vomiting.

#### **Five Tastes of Herbs**

Chinese herbal medicines are divided into five taste categories: 1) Sour, 2) Bitter, 3) Sweet, 4) Pungent and 5) Salty (Table I.2). The taste is determined by the herb's clinical effect along with the sensation that it produced long ago on an ancient Chinese healer's tongue. The taste is influenced by the blend of phytochemicals present in any given herbal specimen. For example, Crataegus Shan Zha tastes sour because it contains a high percentage of acids including flavanoids. Coptis *Huang Lian* tastes because it contains berberine, an isoquinilone alkaloid. High sodium chloride, potassium, concentrations of magnesium salts in Sargassum Hai Zao make this herb taste salty. Pungent or acrid herbs, such as Cinnamomum Rou *Gui*, usually contain high percentages of terpenoid volatile oil or complex aromatic compounds from which essential oils can be distilled. Glycyrrhiza Gan Cao and Ginseng Ren Shen, which are rich in saponin glycosides, have a sweet taste.

**Table I.1.** Five types of energy and their actions.

5 Energies	TCM Actions	Physiological Effects	Examples
Cold	Purge Heat and Fire, cool Blood	Antiinflammatory, antispasmodic,	Coptis Huang Lian
		sedative	Scutellaria Huang Qin
Cool	Relieve Heat, resolve toxin, nourish Yin	Reduces fevers, detoxifies, lowers blood	Bupleurum <i>Chai Hu</i>
		pressure, soothes nerves	Morus Sang Ye
			Glehnia Bei Sha Shen
Neutral	Mediate Cold, Cool, Hot and Warm herbs	Gentle effects, regulations	Glycyrrhiza Gan Cao
	,	, 0	Jujube Da Zao
Warm	Warm the Interior, disperse Cold, tonify	Promotes circulation, alleviates chills	Ledebouriella Fang Feng
	Qi-Yang	,,	Ginseng Ren Shen
Hot	Tonify Yang Qi, activate the Channels	Improves organ functions, stimulates and	Zingiberis Gan Jiang
	, , ,	strengthens	Cinnamomum Rou Gui

**Table I.2.** Five tastes and their actions.

5 Tastes	TCM Actions	Physiological Effects	Examples	Others
Sour	Astringent effect	Contract flaccid tissues; stop abnormal secretions or discharges; promote digestion, enzyme secretion, and liver function; alter blood conditions	Schisandra <i>Wu Wei Zi,</i> Mume <i>Wu Mei,</i> Apricot, grape, mango, peach, pineapple, plum, vinegar, tomato	Green, yellowish-green Liver Wood
Bitter	Eliminate Heat-Damp, purge the intestines	Antiinflammatory; antipyretic; detoxifying; antiviral; antiparasitic; enhances secretion of bile through the liver; promotes the secretion of hydrochloric acid by the stomach; anticholesterolemic action	Coptis <i>Huang Lian</i> , Rheum <i>Da Huang</i> , Asparagus, celery, coffee, pork and sheep gallbladder	Red Heart Fire
Sweet	Tonify <i>Qi</i> or <i>Yang</i> , nourish Blood or <i>Yin</i> , Soothe the Liver, Regulate <i>Qi</i> and Blood	Soothe acute diseases; regulate internal organ functions	Ginseng <i>Ren Shen,</i> Glycyrrhiza <i>Gan Cao,</i> Apple, banana, corn, egg, carrot, yam, sugar, wine	Yellow, brown Spleen Earth
Pungent	Diaphoresis, activate <i>Qi</i> and Blood	Stimulate blood circulation; distribute energy from the interior to the surface	Cinnamomum <i>Rou Gui</i> , Saussurea <i>Mu Xiang</i> , Cloves, chives, fennel, garlic, ginger, nutmeg, radish, pepper, wine	White, pale Lung Metal
Salty	Soften hardness, purge the intestines	Diuretic; soften hard masses and resolve bumps; relieve constipation through purgation; help maintain fluid balance	Mirabilitum <i>Mang Xiao</i> Abalone, barley, clam, crab, duck, ham, kelp, pork kidney, oyster, mussel, human milk	Black, dark Kidney Water

Tastes can also be described as 1) Light and 2) Bland. Herbs with a light taste, such as Poria *Fu Ling* and Polyporus *Zhu Ling*, will excrete Damp and cause diuresis. Herbs with a bland taste, such as mushrooms, have calming, soothing, and diuretic actions.

## Four Directions of Herbal Energy: Ascending, Descending, Floating, and Sinking

Herbs send their energy in a specific direction in the body. Chinese herbal medicines are described by four directions of herbal energy: 1) Ascending (up) or toward the head in animals, 2) Descending (down) or toward the tail in animals, 3) Floating (toward the Exterior of the body) or 4) Sinking (toward the Interior of the body. These energy directions affect the herb's activity and how it can treat disease.

Generally speaking, herbs with a warm/hot temperature and pungent/sweet taste possess ascending/floating tendencies, and herbs with a cold/cool temperature and sour, bitter, or salty taste possess descend-ing/sinking tendencies. The herbs with ascending and floating tendencies have upward and outward effects and are

categorized as Yang. These herbs are effective for elevating Yang Qi, causing diaphoresis, dispersing Wind or Cold, warming the body's Exterior, and inducing vomiting. On the other hand, herbs with descending and sinking tendencies have downward and inward effects, which relate to Yin. These inhibitory herbs will have an astringent effect, stop coughing and asthma, eliminate Heat, excrete Damp, and purge accumulations from the intestines. In some cases, ascending/floating both may have descending/sinking tendencies. For instance, Ephedra Ma Huang is able to disperse Wind-Cold (diaphoresis, ascending) and is able to stop asthma and excrete water (descending).

The herbal energy direction is also related to which parts of the plant, animal or mineral are used for the herbal medicine. The light parts of a plant, such as flowers (Chrysanthemum *Ju Hua*) and leaves (Perilla leaf *Zi Su Ye*), have ascending/floating energy. The herbs with ascending/floating energy can elevate *Yang Qi* to warm the Exterior, and have a diaphoretic effect to disperse Wind or Cold. On the other hand, the heavy parts of a plant, such as the fruit (Immature bitter orange Aurantium *Zhi Shi*) and seed (Perilla seed *Zi Su Zi*), have descending/sinking energy.

Minerals have descending energy. The Chinese herbal medicines with descending/sinking energy have an astringent effect, which can stop cough/asthma, eliminate Heat, excrete Damp, and purge the intestines.

The processing technique used while manufacturing the herbal medication can alter the herbal energetic properties. Cooking an herb in wine or with ginger will cause its energy to become ascending and floating. On the other hand, herbal energy becomes descending and sinking when herbs are cooked in a salt or vinegar solution.

When treating specific conditions, a practitioner may select medications based on the herbal energy direction. A