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# Foreword

*Biomedicine*, by Dr. Bruce Robinson, has been written at a perfect time for practitioners of acupuncture and Oriental medicine. I anticipate it will have far-reaching beneficial effects for our profession. This comprehensive textbook gives us the tools to join Western medicine concepts to Chinese medicine's own deep understanding of the physiological principles of body function, going back to our historic roots.

The term Biomedicine (medicine of life) refers to the incredible body of knowledge gained over the past 300–400 years on how the human body functions in health and disease. The single most pivotal Western discovery was William Harvey's 1628 experimental confirmation of continuous blood circulation by the cardiovascular system. After Harvey's work gained acceptance it was obvious that the ancient Greek idea that air and blood reciprocated back and forth respectively in the arteries and veins was clearly in error. Now the ancient Greek medical texts are considered an idle curiosity.

Key discoveries were achieved during the 19<sup>th</sup> Century, but it was the latter half of the 20<sup>th</sup> Century that saw the greatest expansion of knowledge, due to improved technology and new demanding challenges in addressing the public's health care needs. The 21<sup>st</sup> Century hopefully will see an integration of the most effective medical modalities to best serve the public's interest. Medicine will no longer be classified as American, Western, Eastern, or Oriental but just simply World Medicine. Each practitioner group will have a specified scope of training and practice, using treatment modalities unique

to their particular medical specialty. However, all practitioners need to have a common understanding of biomedicine and diagnostic techniques to ensure that patients receive the best consultations and treatment indicated for their medical condition.

The challenge of being a participant in World medicine may be problematic for many acupuncturists and Oriental medicine practitioners, since they tend to shy away from having a comprehensive understanding of physiology and pathology. In addition, most are not aware of the valid historic physiological evidence of Chinese medicine or how their treatment modalities actually work. While Western medicine considers Harvey's work the single most important discovery, the Chinese described the blood circulation some 2000 years earlier. This first account is found in the *Guanzi* (ca. 450–100 BCE) in the essay on "Water and Earth." A correlation is noted between water flowing on earth to blood circulation in body (ca. 375 BCE): "Water is the blood and air of earth functioning similar to circulation of blood and oxygen in the vessels and muscles." This essay also provides details on fetal development of bones, organs, and flesh. A great many additional discoveries by the ancient Chinese uncovered the anatomical and physiological basis of how the human body functions in health and sickness, rivaling Western medicine's discoveries in the past 375 years.

The earliest first-hand account on this anatomical and physiological basis of Chinese medicine by a Western physician was provided by Willem ten Rhijne in 1683. He spent two years working

for the Dutch East India Company in Japan. Ten Rhijne obtained four charts from local Chinese practitioners showing critical junctures (neurovascular nodes/acupoints) on the superficial body used for needling therapy. The Chinese had a constructed a hydraulic device that illustrated how blood continually circulates inhaled air and nutrients throughout the body by means of the blood vascular system. The Chinese explained that related nerves were involved as well and that a key part of the Chinese theory was the continued branching of larger vessels into smaller vessel to distribute blood throughout the body. Apparently, progressive branching of blood vessels was not known in Europe at this time which led Ten Rhijne to conduct his own dissection studies to confirm this idea.

Ten Rhijne's dissertation on Chinese medicine was used by physicians in France, Italy, and the United States in the 1820's to experiment with Chinese needling therapy (acupuncture). They even applied the first known use of percutaneous and transcutaneous electrostimulation. One of the interesting discoveries was that some muscles would twitch in response to electrostimulation of certain superficial nodes (acupoints). This observation eventually led to Hugo Zeimssen (1826–1902) and Wilhelm Erb (1840–1921) to discover neuromuscular attachments to skeletal muscles.

However, by 1900 the analgesic effect of electrostimulation was no longer in vogue. Then in 1901 a young man named George Soulie de Morant went to China initially employed by a French bank and stayed for some 16 years. During that time he was involved in many pursuits, one of them being Chinese medicine. He developed significant skills in the practice of acupuncture and spent the rest of his life practicing,

teaching, researching, and writing about it after his return to France. In his translations, however, he replaced the Chinese blood circulation discovery with his energy (qi)-meridian (jing) notion, which basically discredited 2,000 years of valid Chinese medical history. This single event has obviously hindered acceptance and understanding of Chinese medicine by the medical community during recent times.

It can now be pointed out from the verified history of Chinese medicine that the acupuncture and Oriental medicine profession has a valid claim to most of the important anatomical and physiological discoveries for which the West has always taken credit. *We can no longer ignore studying biomedicine because it is thought of as Western medicine, when in fact it is also Chinese medicine!*

It is time for the Oriental medicine profession to explore and understand the significance of present day biomedicine in order to enhance their own clinical outcomes, help more patients, become better teachers, be able to conduct research, and improve communication skills with patients and the rest of the medical profession.

To this end Dr. Bruce Robinson, retired vascular surgeon and long-time associate of the Oriental medicine profession, has written within these pages an incredible text that presents biomedicine in a way that all practitioners can understand and can relate to the original Chinese medical discoveries. This text also provides a better understanding in how the body works in a very integrated manner, very typical of basic Chinese theories.

**Donald E. (Deke) Kendall**, OMD, Ph.D, L.Ac.  
Author, *Dao of Chinese Medicine: Understanding an Ancient Healing Art*.

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# Preface

This textbook is a milestone along my own journey of helping to bring Chinese and Western medicine closer together. During my 30 years of Western medical and surgical practice (caring for 85,000 patients) I maintained a deep respect for the different yet intriguing ways of Chinese medicine, and I felt an ever-increasing desire to see the two differing paradigms cooperate more closely.

My interest in medicine began when I was a child, often reading stories about medicine in other lands. Early in my life I realized that many systems of medicine might work differently and yet still result in healing. While in medical school (in the 1960s) I wrote my senior thesis about Chinese medicine, which I named, *The Other Healers*. I explained to the reader that this totally different approach to the practice of medicine here in America is also very effective. My professors and fellow students, although somewhat skeptical, found the information I presented to be intriguing.

During my surgical practice in the early 1970s, I began referring patients to Chinese medicine practitioners when I had run out of options for being able to help them. I was impressed with the success of these Chinese medical treatments, and I continued making these referrals throughout my years practicing medicine and surgery.

After a successful career in Western medicine, I began a second one as a medical teacher and an educational administrator. This has enabled me to pursue my dream of bringing the two medical systems closer together. I served as an

instructor and then the academic director for a large college of Chinese medicine, and eventually established my own training center, Meridian Institute of Integrated Chinese Medicine in Monterey, California (active in the 1990s).

I have visited China on several occasions and observed Chinese and Western medical practice in clinics and hospitals throughout many parts of the country, also lecturing at medical conventions there.

Several years ago I developed a training program for acupuncturists leading to board certification in Western Internal Medicine, consisting of 300 hours of lectures, case study homework, and clinical observation, spread over a one-year period. Teaching these classes to Chinese medical practitioners has been a source of great satisfaction. I've been impressed with the level of professionalism and dedication of those that attend these classes. For more information on this training program please visit the website: [www.integratedmedicalsolutions.com](http://www.integratedmedicalsolutions.com).

The certification program lectures have formed the foundation for this textbook. In bringing together all the materials from widely divergent sources that have gone into its creation, I've been deeply grateful for the cooperative support of my publishers, the wonderful people who work at Blue Poppy Enterprises in Boulder, Colorado. Bruce Staff, Bob Flaws, Honora Wolfe, Rick Brearton, JoAnn Pepperell, and Deborah Topping, as well as others at Blue Poppy, have provided invaluable guidance, editing and formatting skills, wisdom, and encouragement.

Without the backing of these great people this project could never have come to fruition. Honora deserves special thanks for her untiring work in helping me by editing these pages so thoughtfully. I'm also very grateful for the help provided by my wife Jayne. She has done more than any other single person to help with the process of putting this material together, providing loving support and a vast amount of good advice on a daily basis.

*Biomedicine: A Textbook for Practitioners of Acupuncture and Oriental Medicine* is intended to serve as a resource for teachers and students alike who are studying or teaching advanced Western medicine in colleges of acupuncture and Chinese medicine. It's also designed for the busy practitioner who wishes to understand more about the Western medical system and desires to interface better with medical doctors. I believe this is a key to a more successful practice.

The 12 sections of the textbook cover the broad field of Western medical endeavor, providing up-to-date information about several hundred specific diseases, descriptions of diagnostic techniques and imaging studies, plus detailed instruction on how to perform a Western physical examination. There is an addendum which lists laboratory values, along with a description of their meaning and interpretation.

The textbook contains several unique features designed to make the information more vivid

and memorable. Comments, set aside in separate boxes, give the reader a personal look at the topic being discussed, based on my own experiences. *Medicine in Everyday Life* are true medical stories, illustrating the material being discussed in a realistic true-to-life manner. Although about real people, the names have been changed in these dramatic stories. Clinical scenarios present a case study of a patient and how it should be dealt with. These scenarios recreate what you as a practitioner experience in real-life clinical situations.

All of the medical information I write about in these pages is based on general medical principles. It is for teaching purposes only, and is not intended to be used for diagnosing or treating any specific person. I present it to the reader with the hope it will enrich the depth of your understanding of Western medicine.

It is also my hope that you, the reader will benefit from my own enthusiasm about providing medical care for those who are sick, as well as my compassion for those I have treated, flowing from the countless rich experiences I have lived through in my practice. These were experiences that worked their way into my heart. In these pages I have endeavored to achieve these goals.

**Bruce H. Robinson, MD**

Boise, Idaho  
October 2006