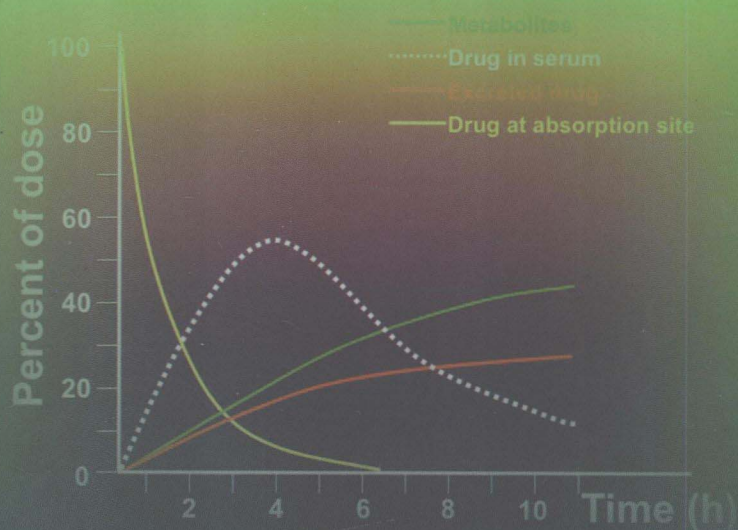


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Pharmacology

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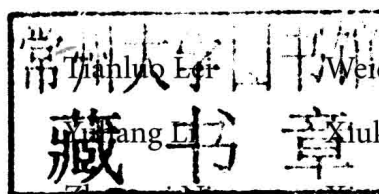
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Foreword

Global developments in medicine and health shape trends in medical education. And in China education reform has become an important focus as the country strives to meet the basic requirements for developing a medical education system that meets international standards. Significant medical developments abroad are now being incorporated into the education of both domestic and international medical students in China, which includes students from the districts of China's Hong Kong, Macao and Taiwan that are taught through mandarin Chinese as well as students from a variety of other regions that are taught through the English language. This latter group creates higher demands for both schools and teachers.

Unfortunately there is no consensus as to how to improve the level and quality of education for these students or even as to which English language materials should be used. Some teachers prefer to directly use original English language materials, while others make use of Chinese medical textbooks with the help of English language medical notes. The lack of consensus has emerged from the lack of English language medical textbooks based on the characteristics of modern medical education in China.

In fact, most Chinese teachers involved in medical education have already attained an adequate level of English language usage. However, English language medical textbooks that reflect the culture of the teachers would in fact make it easier for these teachers to complete the task at hand and would improve the level and quality of medical education for international students. In addition, these texts could be used to improve the English language level of the medical students taught in Chinese. This is the purpose behind the compilation and publishing of this set of English language medical education textbooks.

The editors in chief are mainly experts in medicine from Capital Medical University (CCMU). The editorial board members are mainly teachers of a variety of subjects

from CCMU. In addition, teachers with rich teaching experience in other medical schools are also called upon to help create this set of textbooks. And finally some excellent scholars are invited to participate as final arbiters for some of the materials.

The total package of English medical education textbooks includes 63 books. Each textbook conforms to five standards according to their grounding in science; adherence to a system; basic theory, concepts and skills elucidated; simplicity and practicality. This has enabled the creation of a series of English language textbooks that adheres to the characteristics and customs of Chinese medical education. The complete set of textbooks conforms to an overall design and uniform style in regards to covers, colors, and graphics. Each chapter contains learning objectives, core concepts, an introduction, a body, a summary, questions and references that together serve as a scaffold for both teachers and students.

The complete set of English language medical education textbooks is designed for teaching overseas undergraduate clinical medicine students (six years), and can also serve as reference textbooks for bilingual teaching and learning for 5-year, 7-year and 8-year programs in clinical medicine.

We would like to thank the chief arbiters, chief editors and general editors for their arduous labor in the writing of each chapter. We would also like to acknowledge all the contributors. Finally, we would like to acknowledge Higher Education Press. They have all provided valuable support during the many weekends and evening hours of work that were necessary for completing this endeavor.

President of Capital Medical University
Director of English Textbook Compiling Commission
Zhaofeng Lu
August 1st, 2011

Preface

This book is aimed to provide a complete, current and readable pharmacology textbook for clinical medical students.

Pharmacology not only deals with how drugs work on the body, it also covers the cause of certain disease and its pathophysiological process that underlie their action. Therefore, this book is organized as following courses: ① Introduction, to mainly introduce the disease concept and its pathophysiological cause and process that the drugs are used for interference, and the overall drug treatment and their classification. ② Detailed descriptions of commonly used drugs in clinical practice including their mechanisms of action at molecular and cellular levels, clinical usage and adverse effects. Some important drug interactions and contraindications are also listed in order to give students an overall apprehension for rationale and efficient drug therapy that is really complicated and sometime even lethal to patient life in clinical practice. ③ There is a summary section at the end of each chapter and key points at the beginning of the chapter in a box to provide an easy way to master or remember the important concepts and informations of this chapter.

Although most of the contributors of this textbook have taught pharmacology course for more than 10 years for medical students, it is the first time for them to write pharmacology textbook in English. It is a big challenge for us and we have studied and referred several well-known pharmacology books in the world, including *Basic & Clinical Pharmacology* by Katzung BJ, *Goodman & Gilman's The Pharmacological Basis of Therapeutics* by Brunton LL, et al., *Rang & Dale Pharmacology* by Rang HP, Dale JM, et al., *Lippincott's Illustrated Review Pharmacology* by Finkel R, et al., and several pharmacology textbooks in Chinese. Therefore, this textbook is written mainly based on our teaching experiences and our understandings of these books and the principle concepts and theories of pharmacology.

We are grateful to teachers and students who discussed with us about the important points in each chapter, and suggestions and comments about this pharmacology textbook are always welcome.

Dali Luo

January, 2015

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