Professional English for
Scientific Research in Traditional Chinese Medicine

中医科研英语教程

主　　编◎童　瑶　劳力行（中国香港）
主　　审◎陈凯先
英文主校◎吴子斌（中国香港）

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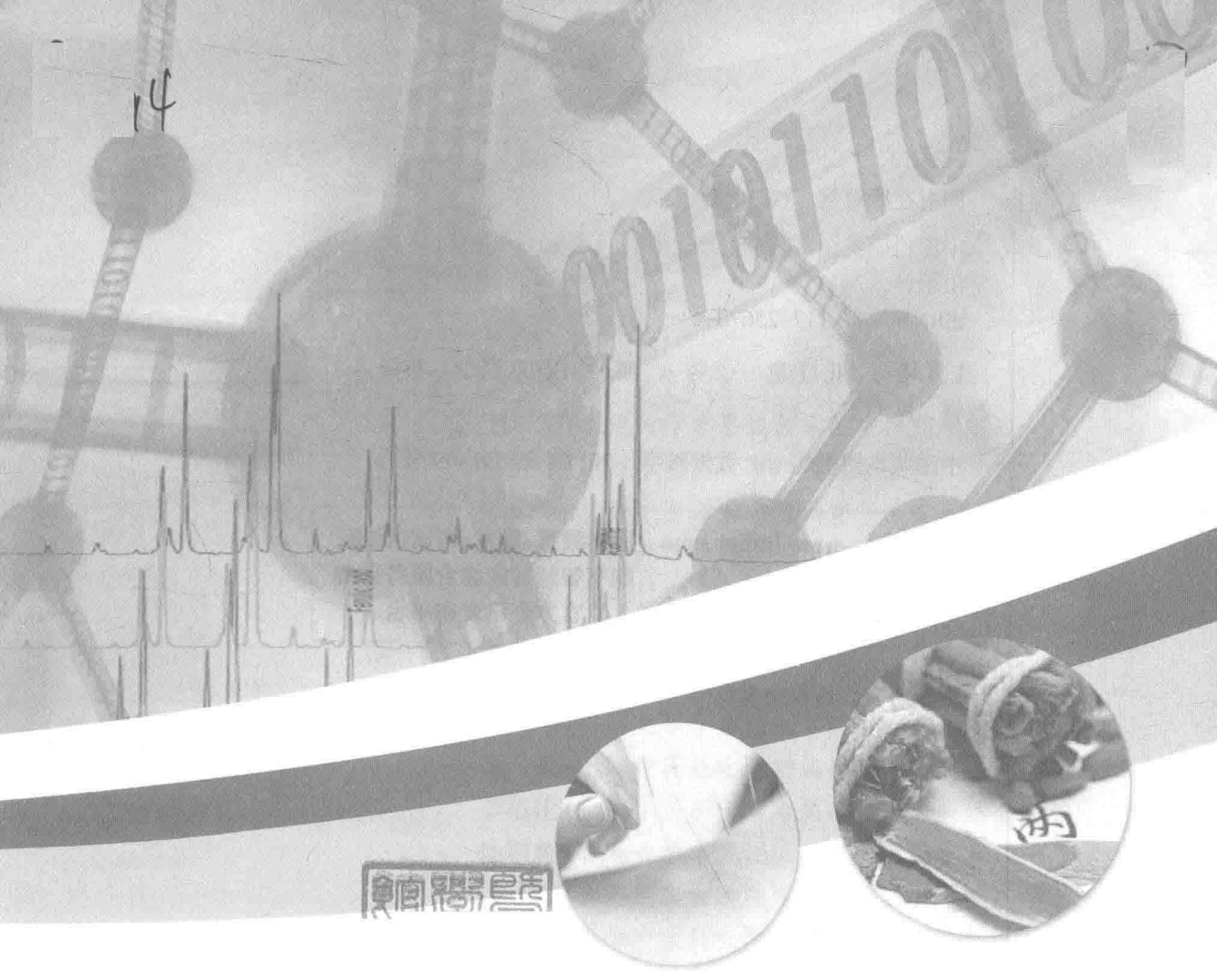

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主　　编　童　瑶　劳力行(中国香港)

副 主 编　沈剑刚(中国香港)　周　恩

主　　审　陈凯先

英文主校　吴子斌(中国香港)

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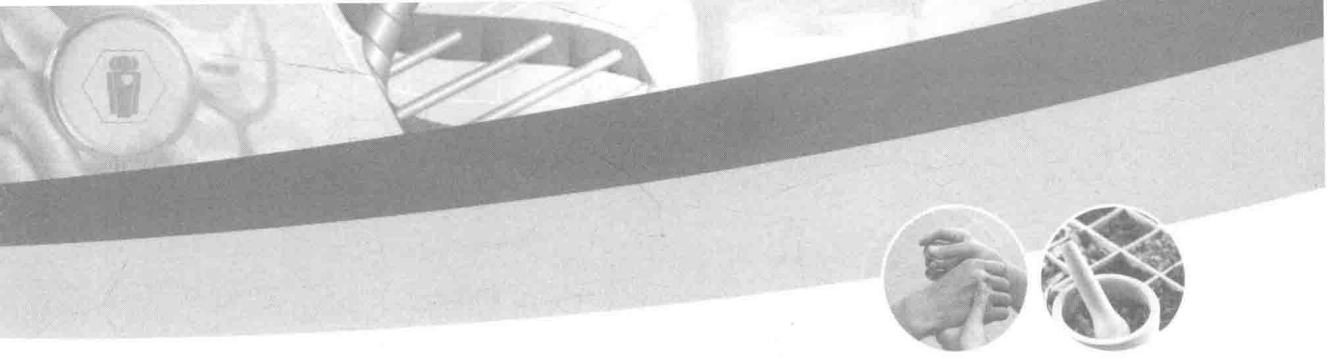

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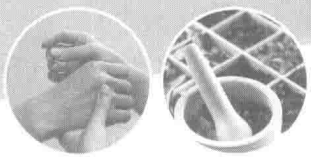

前　言

21世纪，中医药学在国际的影响力日益扩大，实现中医药现代化、推动中医药走向世界，是全球共同关注的焦点。随着中医药科研的国际学术交流日益频繁，中医药科研工作者的专业英语水平和应用能力亟待提高。

《中医科研英语教程》是一部实用性很强、面向高层次中医药科研人员的专业英语教材，旨在提升国内研究生及从事中医药研究的科研人员的科研英语基本素质和应用能力，掌握临床与基础研究的基本要求、方法、程序、内容等的英文表述；熟悉国际英文科研标书及论文的撰写与SCI论文发表流程；掌握国际学术会议交流及口头演讲技巧等，为推动中医药国际化、现代化奠定国际交流的语言基础。

《中医科研英语教程》在明确中医药专业研究生及科研工作者应该具备的科研英语的应用能力的前提下设计编写内容。教材选用内容原则上既要符合国际科技规范标准，又要具有很强的实用性。编写内容是作者结合自己研究领域及应用英语的实践经验而写，涉及中医药研究领域范畴较广泛，包括系统综述与荟萃分析、随机对照临床研究、中药质量控制研究、医学影像学、中医药治疗常见病与多发病的基础和临床研究、针灸临床研究、国际研究基金竞标项目标书撰写原则及规范、SCI论文撰写及出版程序、中医药科研国际交流及口头演讲技巧等内容的常用医学科技英语。

为了既便于引导读者自主学习从而实现学习成果目标，也有利于开展多种教学活动及教学方法。本书编写体例每章（第五章是每节）均由以下4部分组成：①学习目标；②正文；③学习活动；④练习。本书的特点是图文并茂，特殊科研专业术语用脚注标出，每章节最后附有参考文献，以方便学生查阅引文原文。书末附有中医药SCI期刊介绍。

总之，本教材编写体例从有利于学生自主学习和教师多元化评估出发，本教材适用于具有一定专业英语基础的高层次医学专业人员，除了标题有中英对照，全书基本以英文为主，目的为了使得读者尽快进入语境，减少依赖翻译的惰性，以较快地提高科研英语水平和应用能力。

中医药科研涉及研究领域、研究思路和技术方法范畴很广，本教材目的是为了提升研究者应用医学科技英语的能力，所以不能一一赘述，只能列举一部分作者从事中医临床研究和实验研究领域中应用中医药科研英语的实践体会，加上受英语水平的限制，其中难免会有些错误之处，欢迎读者批评指正。此外，书中所举例子和引用的相关指南均为当时的最新资料，由于其有一定的时效性，读者应注意查阅相关网站的最新资料和指引。我们殷切期望，《中医科研英语教程》的出版发行，为广大从事中医药研究的科研工作者和研究生带来实用和参考价值，对促进中医药国际交流，实现中医药全球化、现代化，起到积极的意义。

本教材编写人员是来自上海中医药大学、香港大学、香港中文大学、香港理工大学、香港浸会大学、香港伊丽莎白医院和香港仁康医疗中心等教育、科研机构，他们大多是长期从事中医药研究的教授和医学博士，具有海外学习及工作的经历，并具有熟练应用英语的能力。在本书的编撰过程中，作者们不辞辛劳反复修稿，保证了本书的学术严谨性。其中尤其要感谢香港中文大学医学院吴子斌教授负责本书英文审校，对每一篇文稿的英文表述都做了仔细的校对和修改；香港大学中医药学院的陈海勇博士协助主编对本书书稿的编写体例和格式做了反复多次的统一修订。

童　瑶　劳力行

2018 年 3 月

Preface

The 21st century has witnessed a growing impact of traditional Chinese medicine (TCM) in the world. More and more attention has been drawn to the modernization and globalization of this Chinese medical heritage. The increasingly frequent international communication on research in TCM raises the bar for the competence and proficiency of language skills, especially professional and academic English, among TCM researchers.

Professional English for Scientific Research in Traditional Chinese Medicine is a practicable textbook written for advanced TCM researchers. The purpose of this book is to equip graduate students and TCM researchers with a basic understanding of academic and professional English in traditional Chinese Medicine, and help them master the language necessary for presentation of requirements, methods, procedures and contents, etc. for clinical and basic studies. Moreover, this book introduces internationally recognized standards for preparation of research proposals, theses and manuscripts submitted for publication in Science Citation Index (SCI) journals. Last but not least, this book discusses oral presentation skills in academic settings on international conferences. Acquiring the above language skills will lay the ground for effective academic communication of TCM research in English, thus foster the globalization and modernization of Chinese Medicine.

Professional English for Scientific Research in Traditional Chinese Medicine is clearly defined to fulfill the practical goal of mastering academic and professional English among TCM graduate students and researchers in TCM. It follows international academic standards, and could be easily applied in daily scientific practice. This book has a relatively extensive coverage of the different research areas in TCM, due to the diverse research backgrounds and clinical expertises of the authors. It encompasses various aspects of basic and clinical research methodology and

skills including: systematic review and meta-analyses; randomized controlled trials, quality control of Chinese materia medica, medical imaging, clinical acupuncture studies, principles and standards for writing international grant proposals, manuscript preparation and publication in SCI journals, communicating and presenting TCM research data and findings with international investigators, etc.

This book is written in a way to maximize the opportunities for the practice of English by readers, and various learning resources and teaching methods are provided. Each chapter of this book (each section in chapter 5) consists of four parts, 1) learning objectives, 2) contents, 3) activities, and 4) exercises. The book features not only texts but also illustrated with figures, along with specific professional terminologies annotated and references listed in each chapter. Toward the end of this book, SCI journals dedicated to the field of TCM are introduced.

The structures and styles of this textbook have been specially designed for motivating self-learning among students, as well as facilitating multifaceted assessment by instructors. The book meets the needs of advanced TCM professionals who possess a reasonable level of proficiency in English. The whole book is written in English, encouraging readers to familiarize themselves with an English environment through reading and learning and gaining interest in the language, rather than simply relying on Chinese-English translation. Only in this manner can the readers efficiently improve their language skills.

The science of TCM is a particularly wide-ranging field, and research in TCM embraces extremely diverse principles and techniques. However, the primary goal of this book is to advance the usage of academic and professional English among TCM researchers, rather than elaborating on every single aspect of TCM studies. The writing is based on the author's own experience of clinical research and basic research in TCM.

It should be noted that all the examples and funding resource guidelines are based on the currently available information when the book is written. Due to the fact that this information might be updated from time to time, the readers should check relevant websites and follow the most updated information for their guidelines. We welcome any comments, and hope that this book will serve as a truly practical and useful reference book for TCM students and scholars. We believe that promoting communication on TCM using English as the international language will be instrumental to the globalization and modernization of TCM.

The authors and editors of this book are affiliated to various prestigious major TCM educational institutions in China, including Shanghai University of TCM, the University of Hong Kong, the Chinese University of Hong Kong, Hong Kong Polytechnic University, Hong Kong Baptist University, Queen Elizabeth Hospital, and UNIMED Medical Institute. Many of them are professors or medical practitioners with ample experience in TCM research. They have been studied and conducted research abroad, and demonstrated a comprehensive understanding and proficiency of English. To ensure that academic quality of this book is

superb, the chapters have undergone several rounds of rigorous revision. Specifically, we are appreciative of the assistance of Prof. Tzi Bun Ng (the Chinese University of Hong Kong), the English editor of this book, for his careful proofreading and editing of the English usage in every paragraph. We are also much obliged to Dr. Haiyong Chen (School of Chinese Medicine, the University of Hong Kong), for his tireless efforts in unifying the style and format throughout the book.

Yao Tong and Lixing Lao
March, 2018

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Contents

Chapter 1
Systematic Reviews and Meta-Analyses

系统综述与荟萃分析

Learning Objectives

1. To be familiar with English terms for the systematic review and meta-analyses.
2. To describe the difference between a systematic review and a meta-analysis.
3. To grasp the basic statistical principle behind meta-analyses.
4. To conduct a meta-analysis by RevMan software and describe the results in English.
5. To improve written skills for the results of systematic reviews and meta-analyses.

Section 1 What Are the Systematic Reviews and Meta-Analyses?

何为系统综述与荟萃分析？

Systematic reviews[1] represent one of the literature review approaches that summarizes the best available evidence from either published or unpublished documents using a **peer-review**[2] **protocol**[3].

1 Systematic review 系统综述
2 Peer-review 同行评审
3 Protocol 研究或设计方案

Systematic reviews with the high-quality **randomized controlled trials**[1] stand at the top level of **evidence pyramid**[2] (**Figure 1.1.1**) and are thought to be one of the approaches in evidence-based medicine. The process of a systematic review usually involves literature search, assessment of the quality of methodology described in the literature, summarizing and synthesizing information, and providing an objective conclusion in line with the currently available evidence. The statistical method, called meta-analysis[3], is usually applied for the eligible studies in systematic reviews.

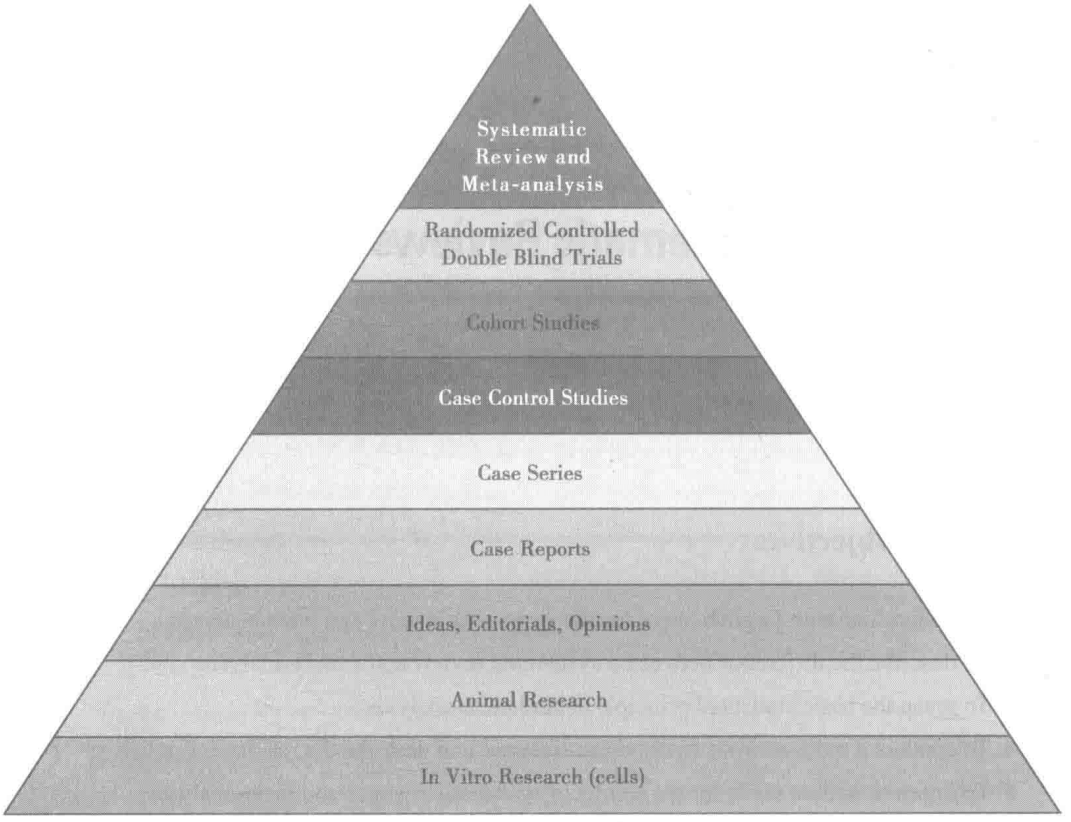

Figure 1.1.1 Evidence pyramid. Systematic review and meta-analysis is at the highest level of the evidence pyramid. *Figure is modified from http://library.downstate.edu/ EBM2/2100.htm.*

Meta-analysis is the statistical procedure for combining data from several individual studies. It was first named by Dr. Glass, a psychologist, in 1976 [1]. Meta-analysis provides a statistical estimate on the **overall effect**[4] of the treatment by calculating the **weight**[5] and **effect size**[6] of the studies included, and assessing the heterogeneity of the effect across the studies [2].

1 Randomized controlled trial 随机对照试验，缩写为 RCT
2 Evidence pyramid 证据金字塔
3 Meta-analysis 荟萃分析。Meta 源于希腊词，类似于 after or beyond，常用作前缀，意指在 …… 之后或超出
4 Overall effect 统计学中总效应量
5 Weight 统计学中指权重
6 Effect size 统计学中指效应量

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