

民族药

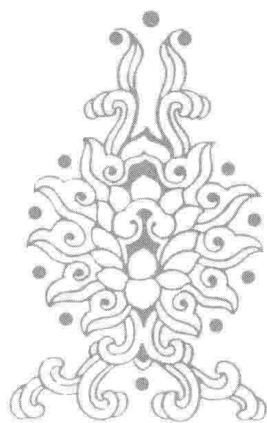
创新发展路径

朱兆云 主编

 科学出版社

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内 容 简 介

本书围绕民族药发展所面临的传承和创新两个核心问题,分上、中、下三篇展开,全面回答了民族药“是什么”、“怎么样”、“如何实现创新发展”。其中上篇在厘清民族药及民族药学概念和内涵的基础上,整理民族药发展现状及瓶颈,引出源于实践的“资源调研→规范化研究→成果产业化并努力实现国际化”民族药创新发展路径;中篇基于自身长期实践和认识,结合相关学科,系统展开路径的深入分析阐释;下篇通过案例介绍,说明民族药创新发展的必要性和可行性。

全书语言简明扼要,兼顾科学性、实用性和可读性,可供从事传统药物科研、教学、生产、管理等工作的人员,以及对民族药感兴趣的读者参阅。

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序

民族药，犹如含苞待放的小花，长在山间，似在深闺人未识。然而，正是这看似不起眼的小花，却承载着深厚的民族文化，回应着人类对生命和健康的呼唤，从悠远的历史走到今天，为我们保存下这一份独特而珍贵的资源。传统药物的宝库，也因民族药的存在，显得更加熠熠生辉。

2015年10月，中国药学家屠呦呦研究员因在抗疟药物青蒿素发现中的首要贡献，荣获诺贝尔生理学或医学奖。屠呦呦的获奖，使青蒿素家喻户晓，与此同时，对青蒿素发现具有关键启发作用的“青蒿一握，以水二升渍，绞取汁，尽服之”也逐渐为人所知。这是中国传统医药古籍《肘后备急方》中关于青蒿治疟及其用法的记载。毫无疑问，科学诺奖梦圆，不仅意味着中国科学迈入了至高的荣誉殿堂，更清晰地肯定，中国传统医药，为全世界做出了重要贡献。20世纪90年代末至今，青蒿素类药物挽救了数百万人的生命，已成为全球标准的一线抗疟药物。在未来，中国传统药物，必将持续为人类医疗健康的壮丽事业贡献更大的力量。

1902年，在西南一隅的云南，彝族名医曲焕章先生发明了云南白药。110余年间，云南白药享“伤科圣药”之誉而驰名中外，却从不失开拓进取的精神。从烽火岁月，到和平建设年代，再到全球掀起科技创新浪潮的今天，在几代人的努力下，云南白药不断赢得越来越广阔的舞台，成为大健康领域令人瞩目的领跑者。1969年，在全国中草药运动中，云南文山壮族苗族自治州丘北县苗族医生罗老献出灯盏花治疗中风的秘方。云南省药物研究所的科技人员率先据此展开了系统研究和成功开发。自此，这株神奇小草的名字，开始频繁出现在全国心脑血管疾病防治的第一线，并带来几十亿元的年产值和民族地区经济社会发展模式的转变，成为单味民族药开发的典范。

当蓝紫色的灯盏花遍开三迤大地，当云南白药逐渐与日常生活产生种种联系，我们更加坚定地相信，民族药的生生不息，是全人类的福祉所在。几千年来，历代先民用智慧和汗水浇灌了民族药之花，赋予她不断向前发展的动力和历久不衰的生命力。如今，历史的接力棒交到我们的手里。然而，当我们肩负起发展民族药的历史使命，不可避免地要面对民族药发展所遇到的瓶颈。显然，唯有突破瓶颈，古老的民族药，才能在新的历史条件下，获得和谐相称的发展和更强大的生命力。民族药所面临的发展瓶颈可以归结为两个核心问题，传承和创新——这是传统知识发展共同面临的核心问题，是发展的一体两面。因此，在科学技术日新月异的现代社会，如何更好地传



承，如何更好地创新，如何更好地平衡传承与创新的关系，成为有志于民族药发扬光大的人们必须面对的命题，也是云南省药物研究所为之上下求索的命题。

诞生于1956年的云南省药物研究所，先天拥有在民族药领域探索和实践的资源优势：云南地处独特的低纬高原地区，全省地势西北高东南低，相对高差达6664米，造成显著的气候南北差异和垂直差异，全境可划分为7个气候类型，孕育了占全国总数51%的6559种药物资源；同时，多元文化背景和深山峡谷造成的区域阻隔，使云南拥有25个人口在5000人以上的世居少数民族，是全国少数民族最多的省份，各民族皆有用药知识和经验的创造积累。如此典型的生物多样性和民族文化多样性，赋予云南发展民族药的先天优势。云南省药物研究所立足这一得天独厚的优势，针对民族药发展所面临的两个核心问题，克服重重困难，组织实施“低纬高原地区天然药物资源野外调查与研究开发”，开始了几十年的艰辛探索。这是对天赋资源的感恩和珍惜，更是为一种庄严的责任感所驱使。

几十年间，药物所科技人员踏遍滇山云水，寻访民族民间医药工作者，拍摄照片、采集标本，翻译民族语言文字，鉴定标本和药材，编研专著，收载药物4000余种，并建成3个共享信息数据库，极大提升了基础研究成果的公益性。同时，开展以调研所获的民族民间用药经验为线索的新药筛选、成药性综合评价，以及系统规范的开发研究，创制苗药灯盏花系列4个新药和彝药金品系列5个新药。项目实施的同时，包括民族民间药物资源研究室、药物安全性评价中心等在内的民族药研发体系及技术平台逐渐建立和完善，与平台发展相适应的创新团队在实践中成长壮大。云南省药物研究所（云南白药集团创新研发中心）被认定为西南民族药新产品开发国家地方联合工程研究中心、国家技术创新示范企业、国家级企业技术中心。

“低纬高原地区天然药物资源野外调查与研究开发”项目，坚持不懈数十年，通过实施资源调查研究、新药创制及成果产业化的系统工程，取得了显著的社会经济效益，荣获2012年度国家科学技术进步奖一等奖。随着该项目的实施，以及民族药国际化探索研究的深入开展及阶段性目标的实现，基于实践的民族药创新发展路径“资源调研→规范化研究→成果产业化并努力实现国际化”逐渐确立。这是一条在反复实践与认识中诞生、修正和提高了的民族药创新发展路径，从民族药发展所面临的核心问题出发，落脚在“如何实现创新发展”，坚持基础研究与应用开发密切结合，积极引入科技发展新成果，更为重要的是，它已为实践本身所证实，可信、可行。

近年，我在工作中经常遇到诸如“当地有一些好的民族药物，应该怎样开发”的咨询。这正是多年前我们自己所面临的困惑，也是我们孜孜以求数十年，所想要解答的问题。可以说，上述民族药创新发展路径，就是我们尝试走出的一条路。鉴于云南高度复杂的自然地理环境，以及丰富多样的民族医药文化，这一路径在其他

地区民族药发展中应当具有更强的可复制性和可推广性。因此，我们在持续推动低纬高原地区民族药发展的同时，启动并完成本书的编写，对探索出的民族药创新发展路径进行深入分析阐释，希望我们的实践经验，以及从其中获得的认识，可以为民族药事业的发展提供参考。

每一代人的努力，都是一朵小小的浪花，都将随着民族药发展的清流，汇入人类历史的长河，辉映那粼粼波光。本书的诞生，无论是能提供有益借鉴，还是能起到抛砖引玉的作用，或是二者兼有，都将是民族药事业的幸事。这是因为，让更多的人关注民族药，让更多的人共同努力，使民族药之花盛放并福泽四方，是每一位民族药工作者最大的心愿。

云南白药集团研发总监

云南省药物研究所所长



二〇一六年八月

Preface

The ethnomedicines is like budding flower, growing in the mountains, and even like a girl in her boudoir. However, such seemingly unimpressive flowers carry the ethnic cultures and respond to human's call for life and health. It preserves a special and precious resource for us since ancient time. Moreover, the treasure of traditional medicines becomes more gorgeous for the existence of ethnomedicines.

In October 2015, Chinese pharmaceutical researcher Tu Youyou won Nobel Prize in Physiology or Medicine for her contribution to the first findings of artemisinin (an effective antimalarial drug). Tu's prize makes artemisinin well known worldwide; and the process of "take one bunch of Qinghao, soak in two sheng of water, wring it out to obtain the juice and ingest it in its entirety", which is the key to the discovery of artemisinin, become known gradually at the same time. This is the record of artemisinin curing malaria and its usage in the ancient traditional Chinese medical book "Zhouhou Beiji Fang". There is no doubt that the realization of the dream in winning the Nobel Prize not only means Chinese science for traditional medicine has stepped into the supreme honor hall, but more clearly affirms that traditional Chinese medicine has made important contribution to the whole world. Ever since 1990s to present, the artemisinin has saved millions of people, and it has become the standard first-tier anti-malarial drug worldwide. In the future, traditional Chinese medicine will certainly consistently making greater contribution to human's health.

In 1902, Qu Huanzhang, a famous doctor of Yi Nationality in Yunnan (a southwestern corner in China), invented Yunnan Baiyao. Over the past 110 years, Yunnan Baiyao enjoying the honor of "Holy Medicine of Trauma" has been famous all over the world, but it never lacks the spirit of forging ahead. From war times to peacetime and even today with the new tide of technology is going on, Yunnan Baiyao, with the effort of several generations, has been winning wider stages and becoming the impressive leader in the field of Big Health. In 1969, Luo, a doctor of Miao Nationality in Qiubei County, Wenshan Prefecture, Yunnan Province, made his secret recipe to public for curing stroke with *Erigeron breviscapus* in the national Chinese herbal medicine movement. Then, the scientists developed systematic research and made a success based on it in Yunnan Institute of Materia Medica. Since then, the name of this magical herb starts to appear on the front line of national cardiovascular and cerebrovascular diseases prevention and treatment, and brings the annual benefit of billions of yuan, transforms the development mode of economical society in minority areas, and even becomes the model of development of single ethnomedicines.

When the bluish violet *Erigeron breviscapus* blooms over Yunnan Province, and Yunnan Baiyao gradually connects to peoples' daily life, we are firmly convinced that the continuous growth of ethnomedicines is the fortune of whole human beings. Over the thousands of years, our ancestors watered the flower of ethnomedicines with wisdom and sweat, endowed her with the motivation to forge ahead and the continuous vitality. Today, the relay baton of history is handed to us. However, when we taking the historical mission of developing ethnomedicines, we inevitably face the

development barrier. Obviously, conquering those barriers is the only way of ancient ethnomedicines to gain harmonious enhancement and stronger vitality in the new historic condition. The aforementioned barriers can be concluded into two core problems: inheritance and innovation, which are core problems faced by the development of traditional knowledge and the two sides of development. Thus, the points of how to inherit and innovate better and how to balance the relation between them become the necessary proposition for those who aspire to carry forward ethnomedicines as well as the proposition pursued by Yunnan Institute of Materia Medica in the modern society where science and technology changed quickly.

Yunnan Institute of Materia Medica, set up in 1956, has innate resource advantages of exploration and practice in the field of ethnomedicines: Yunnan is located in special plateau in low latitude region, and its terrain is high in the northwest and low in the southeast, whose relative height difference reaches 6664 m, and therefore the northern and southern are different in climate and the vertical difference is significant; moreover, the whole province can be divided into 7 kinds of climate types, and Yunnan breeds 6559 types of drug resources, which makes up 51% of the whole country; at the same time, the multi-culture background and regional partition caused by mountains and valleys make Yunnan contain 25 minorities whose population reaches over 5000, which makes it the province with the most minorities in the country, and all nationalities have creation and accumulation of drug use knowledge and experience. Such typical biodiversity and ethnic cultural diversity endow Yunnan with innate advantages of developing ethnomedicines. Yunnan Institute of Materia Medica, based on such unique advantage, focuses on the two core problems faced by the development of ethnomedicines, and overcomes great difficulties to organize “Field study and R&D of natural medicine resources in plateau in low latitude region”, and also starts decades of hard exploration. This is appreciation and cherishing to natural resources as well as a solemn sense of responsibility.

Over the past decades, the researchers in the institutions traveled all over Yunnan to seek folk medical practitioners, take photos, collect specimens, translate national languages and words, identify specimens and medicinal materials, and they have compiled books (recording over 4000 types of drug), and set up 3 databases, thereby improving the commonweal of basic research achievement greatly. At the same time, they develop new drug selection and comprehensive of druggability based on the national folk drug use experience gained in the study and R&D of system specification, so far they have created 4 types of new drug of the series of *Erigeron breviscapus* in Miao medicine and 5 types of Jinpin series in Yi medicine. During the execution of the project, the R&D system and technology platform of ethnomedicines including national folk medicine research institution and drug safety assessment center are gradually set up and optimized, and the innovative team appropriate to the platform's development grows strong. Yunnan Institute of Materia Medica (Yunnan Baiyao Group Innovative and R&D Center) is identified as national-local joint engineering research center of new products of southwest ethnomedicines, national demonstration enterprise of technical innovation, national enterprise technology center.

The project of “Field study and R&D of natural medicine resources in plateau in low latitude region” lasts for decades, and gains significant social and economic benefits by executing systematic engineering of resource study, new drug manufacture and achievement industrialization, and it won National First Award for Science and Technology Progress in 2012. With the execution of the project,



the deepening of international research of ethnomedicines and realization of phased objective, the innovative development route of ethnomedicines “resource study → standardized development research → industrialization of the achievements and efforts for internationalization” based on practice was gradually established. This is an innovative development route of ethnomedicines born, revised and improved in repeated practice and recognition, starting from the core problem faced by the development of ethnomedicines, settling on “How to realize innovative development”, sticking to the close combination of basic research and applied development, actively introducing new achievement in science and technology; and more importantly, it has been verified as credible and feasible by the practice itself.

Recently, I always met consultations such as “How to develop local good ethnomedicines” during my work. This is exactly what we were confused by several years ago, and also the answer I want to give out over the past decades of pursuit. The above innovative development route of ethnomedicines, so to speak, is a way we are trying to take. In view of the highly complicated natural geographical environment and abundant culture of ethnomedicines in Yunnan, this path may have stronger replicability and generalizability in the development of ethnomedicines in other areas. Thus, we had started and finished the compilation of this book while keeping promoting development of ethnomedicines in plateau in low latitude region, deeply analyzing and explaining the innovative development route of ethnomedicines. We hope our practice experience and the knowledge can provide a reference for the development of ethnomedicines.

The effort of each generation is just like a small wave, which will feed into the long history of human with the flow of development of ethnomedicines, reflecting the glistening light. The birth of this book is the fortune to the ethnomedicines, no matter providing beneficial reference or attracting valuable contribution, or both. This is because it's every ethnomedicines practitioner's greatest wish to draw more people's attention to ethnomedicines, let more people strive to make ethnomedicines benefit all over the country.

Zhu Zhaoyun

R&D Director of Yunnan Baiyao Group

Director of Yunnan Institute of Materia Medica

August 2016

前 言

数千年来，民族药为各民族的繁衍昌盛做出了重要贡献，也为人类文明的画卷添上了浓墨重彩的一笔。这里的民族药，是指不同文化背景族群传统使用的药物，是各民族传统药物的总称。在中国，民族药一般指各少数民族在本民族传统医药理论或实践经验指导下应用的药物，与中药、民间药同为中国传统药物的有机组成部分。2015年，中国药学家屠呦呦研究员因在抗疟药青蒿素发现中的首要贡献，荣获诺贝尔生理学或医学奖。这使我们深刻认识到，在现代社会，传统药物必将在全人类医疗健康的广阔舞台，持续发挥更重大的作用。著名彝族药云南白药之成功令人瞩目，苗族药灯盏花系列药物堪称单味药开发之典范，它们共同证实当民族药借助现代科技走出深山、走下高原，揭开神秘的面纱，将对人类健康及民族地区经济发展和社会进步产生深远的影响。同时，我们也应看到，民族药的发展，在迎来大好机遇的同时，仍面临诸多挑战，仍需要有志于民族药发展的人们，不畏艰辛，在民族药发展的道路上不断探索，推动民族药事业发展取得更大进步。

地处低纬高原地区的云南，拥有高度典型的生物多样性和民族文化多样性，是探索民族药创新发展的绝佳试验场。云南省药物研究所自成立以来，立足这一先天优势，提出基础研究与应用开发密切结合的研究模式，在低纬高原地区民族药资源调研和新药开发领域展开了数十年的深入实践。同时，有意识地在实践中总结经验、获得认识，以认识指导实践，从而修正认识、提高认识，终在取得显著社会效益的同时，探索出一条切实可行的“资源调研→规范化研究→成果产业化并努力实现国际化”民族药创新发展路径。本书将很好地结合多年实践经验，对诞生于反复实践中的民族药创新发展路径进行深入分析阐释，期望可为我国民族药事业发展提供有益的借鉴。

全书分为上、中、下三篇。上篇“民族药概要”，前三章以简明扼要的语言，厘清民族药及民族药学的概念和内涵，依次梳理民族药文化特征、发展历程、研究特性、产业开发及国际化现状、问题及对策等，勾画当前中国民族药发展状况的轮廓。第四章依据可获得的资料，从发展简史、理论基础、用药特点、药用资源等方面，分别对中国55个少数民族药做了简要整理。第五章站在全球角度，梳理世界主要民族药应用、监管、现代研究与开发现状及全球贸易状况。中篇“中国民族药规范化研究”为全书核心内容。以实践经验为基础，紧密结合领域内相关法律法规和现代科学技术，阐述创新发展路径各环节，以及平台团队建设过程所涉及策略



性、技术性问题。此部分注重规范性、可操作性、可参考性，以及科学技术发展新成果的引入；尤其是，针对创新发展系统工程所涉及的一系列庞杂的技术性问题，制作了大量简洁明了的图表，力求图文并茂，以帮助读者更好地理解 and 参考。下篇“中国民族药创新发展案例”，以案例形式介绍在中国民族药创新发展过程中，部分在产业化发展方面具有较大影响或特色的企业和产品，同时提高阅读的趣味性。

综观全书结构，首先介绍民族药及其发展现状和面临的发展瓶颈，引出诞生于实践中的民族药创新发展路径；在此基础上，系统展开民族药创新发展路径的分析阐释；最后分专题介绍民族药创新发展案例，以实证方式说明民族药创新发展的必要性和可行性。全书三部分内容，涵盖了民族药“是什么”、“怎么样”、“如何实现创新发展”，环环相扣且前后呼应。同时，注重知识性与可读性结合，兼顾科学性与实用性，既可为高等院校、科研院所等机构以及企业中从事传统药物科研、教学、生产、管理等工作的人员提供参考，亦可供广大读者，尤其是民族医生、民族药爱好者、民族地区管理者、高等医药院校相关专业学生参阅。

本书编写过程中其他需要说明的问题亦在此列出。中国55个少数民族中，超过30个民族为跨境民族，若无特殊说明，本书所指均为中国境内的民族。凡涉及中国各民族人口数量，数据均参照《中国2010年人口普查资料》（上册，中国统计出版社，2012年）；凡涉及世界各洲及各国面积、人口数量及民族组成，数据均参照《世界国家地理地图集》（中国地图出版社，2016年2月最新修订）。中篇“中国民族药规范化研究”部分，若无特殊说明，民族药创新发展路径各环节分析阐释的依据为中国或国际化探索部分所涉及国家和地区现行有效的法律法规、法定标准、规范、技术指南等，截止时间为2016年6月30日。

本书所涉及的参考资料主要来源于历年出版和发表的图书、期刊文献、学位论文、统计报告，相关企业发布的年报、社会责任报告，以及正规媒体公开报道等，详见“主要参考文献”。由于篇幅所限，部分参考文献未能列出，在此一并表示感谢！

本书编著团队主要由云南白药集团、云南省药物研究所组成。在编写过程中，得到云南省科技厅的大力支持，得到多位少数民族药物专家的指导，在此表示衷心感谢！

由于我们水平有限，不足和错漏之处在所难免，敬请批评指正。

《民族药创新发展路径》编委会
二〇一六年八月

Foreword

Over thousands of years, ethnomedicines not only makes a great contribution for the inheritance and prosperity of various ethnic groups, but also plays an indispensable role for human civilization. Under this context, ethnomedicines refers to various medicines used by ethnic groups with different cultural backgrounds, which contains all traditional medicines from all ethnic groups. In China, ethnomedicines refers to drug used by minorities under the guidance of traditional medical theories or practical experiences, which, together with traditional Chinese medicine and folk medicine, are considered as an organic component of China's traditional medicine. In 2015, the Chinese researcher named Tu Youyou, has won the Nobel Prize in Physiology or Medicine due to her work for the findings of artemisinin against parasitic diseases. All the aforementioned facts have fully demonstrated that traditional medicine is bound to play a momentous role for medical treatment and health of all humanity in modern society. The success of renowned ethnomedicines from Yi ethnic group—Yunnan Baiyao has drawn attention over the world. And development of the series products of *Erigeron breviscapus* from Miao ethnic group also deserves exemplary title. These achievements have jointly revealed that, fully taking advantage of modern science and technology, ethnomedicines will leave remote mountains and plateau, and impose further impacts on human health, and economic development and social progress in regions inhabited by ethnic groups. Meanwhile, we also realized that the development of ethnomedicines is still confronted with numerous challenges as well as with golden opportunity coming. Therefore, persistent efforts from people who are devoted to develop ethnomedicines are needed to speed up growth and development of ethnomedicines.

Located in plateau of low latitude, Yunnan possesses typical biodiversity and several ethnic cultures, which is the best choice of pilot project to develop ethnomedicines. Relying on innate advantage, Yunnan Institute of Materia Medica has proposed a research mode for integrating fundamental research with applied development, and profoundly practiced investigation and survey of ethnomedicines and development of new drug over decades in plateau of low latitude since its establishment. Meanwhile, the institute also purports to sum up experiences and to get new understanding through practice. Depending on understanding and practice, it aims to obtain great social economic benefit, and explore an appropriate innovative development path of “resource study → standardized development research → industrialization of the achievements and efforts for internationalization”. Combining with practical experiences over the past several years, this book fully expounds innovative development way of ethnomedicines facilitated by implementations, so as to provide helpful and beneficial reference for the development of ethnomedicines in the future.

This book is divided into three parts. The first part is “Outline of Ethnomedicines” which briefly summarizes present development of ethnomedicines. It concisely and accurately clarifies concepts and connotations of ethnomedicines and ethnopharmacology, and successively presents cultural characteristics, brief history, specialty of study, industrial development, internationalization, problems and countermeasures, and so on in the first three chapters. Based on available documents, Chapter 4 has made brief summary for ethnomedicines of 55 Chinese ethnic minorities about the brief history



of development, theoretical basis, medication features, medicinal resources and others. From global perspective, Chapter 5 summarizes application, supervision, modern research and development, global transaction of ethnomedicines around the world. The second part puts emphasis on “Standardization Research of Ethnomedicines in China”. On the basis of practical experiences, this part elucidates all procedures of innovative development path, and tactic and technical questions in the process of team construction according to relevant laws and regulations together with modern science and technology. The key point is standardization, operability and reference, as well as introduction of new achievements of scientific and technological advance. Especially, in terms of a series of complex technical questions related to innovative development system, this book provides abundant tables and figures for better understanding and reference. The third part is “Cases for Innovative Development of Ethnomedicines in China” which presents some enterprises and products which have greater influences or specialty.

Throughout this book, status quo and development barrier of ethnomedicines are presented firstly, and innovative development path obtained practice is further introduced. Depending on this basis, the book further systematically analyzes and elucidates development path of ethnomedicines; finally, relevant industrial cases are separately introduced into special topics while elucidating the necessity and feasibility of innovative development of ethnomedicines in an empirical way. Three parts cover “What ethnomedicines is”, “How is ethnomedicines developing” and “How to realize innovative development”, which make this book more integrated. Besides, knowledge, readability, scientificity and feasibility of this book have been taken into account. This book is recommended for agencies like institutions, research institute, and enterprises engaging in scientific research, teaching, production and supervision of traditional medicine, especially doctors and amateurs of ethnomedicines, administrators of regions inhabited by ethnic groups, college students majoring in medicine.

Other problems need to be addressed are listed during writing this book. There are 55 ethnic minorities in China, with more than 30 crossing Chinese territory. Unless otherwise provided, all ethnic minorities in this book are limited to Chinese territory. For any information related to population size of Chinese ethnic groups, please refer to Tabulation on the 2010 Population Census of the People’s Republic Of China (Volume 1, China Statistics Press, 2012); for any information related to area of all continents, national territorial areas of countries, population size and composition of ethnic group, please refer to Atlas of the World (SinoMaps Press, the latest updated and revised edition in February 2016). Unless otherwise specially provided, the second part of “Standardization research of Chinese ethnomedicines” is based on Chinese or international existing laws and regulations, mandatory standard, norm, technical guide and others to discuss development path and all links of ethnomedicines as of June 30, 2016.

All reference data involved in this book are from books, periodicals literatures, academic dissertations, statistical reports, enterprise annual reports, social responsibility reports and legal public reports published over the past years. See “Main References” for more details. Due to limitations of content, some of references are not listed. Authors of this book hereby express appreciations for all.

This book is mainly compiled by Yunnan Baiyao Group Co., Ltd and Yunnan Institute of Materia Medica. We hereby express our sincere thanks for support of Yunnan Provincial Department of Science and Technology and guidance of several experts specialized in ethnomedicines in the process of compiling.

We look forward to receiving your criticism upon this book for any oversight errors due to our limited knowledge.

Editorial Committee
August 2016

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