This book is dedicated to my beloved parents.
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The history of human development is the history of the struggle with diseases. Although modern medicine has developed into the stage of sophisticated techniques like organ reconstruction, artificial cells, and cloned animals, people still have to facing the perhaps intolerable damages, both existing and potential, caused by so-called new stuffs such as superbugs (e.g. New Delhi Metallo-1), nuclear radiation, chemical and biological pollution, computer and mobile phone radiations, transgenic foods, etc.

Should we follow our ancients because we envy prehistoric humans who content with a natural way of life, that is, getting food and medicine from their natural surroundings to obtain the balance on the survival and to achieve harmony with the nature? Or should we keep in accordance with the modernization to “conquest” the nature for meeting our endless requests and pursuing luxury life and vanity, which caused costly invention for modern expensive antibiotics of generation after generation, in turn put ourselves into the risk of super bacteria, SARS or other variant (such as the MDR-HIV species) and varying viruses of strong epidemic? It is worthy for us modern citizens of the world with serious consideration.

From a historical perspective, there is no shortage of medicines nowadays categorized as complementary medicines, alternative medicines, or, in a fashioned word, ethnomedicines. In fact, the alternative therapies traced back from bloodletting, enema, witchcraft, and shaman ceremony in Paleolithic till the medieval church accommodating patients overnight as a treatment, are worthy of pondering over and deserve thorough investigation.

Ayurvedic and traditional Chinese medicine (TCM) both have splendid histories over thousands of years with the theoretical system prior to that of Western medicine.
Furthermore, the natural drugs from animals and botanical sources are anthropomorphic and abundant of local cultural connotations in many countries. The study of these ethnopharmacological species thus calls for more carefulness and comprehensiveness, and should be combined with its multi-faceted cultural factors.

Traditional medicines hold irreplaceable advantages and rightful place in the aspects of economics, culture, national crisis and many others. However, the uneven applications were found in the world. 80% of the populations of the African continent are using traditional medicines, while complementary and alternative medicines represents only as street markets in contrast of western medicine as a super market in north America and most of European countries. However, we are pleased to notice that, in recent years, it is surging again on every continent to carry out the researches of traditional medicine, of the collection of the pharmaceutical data, and of the construction work of the local specimen library of traditional medicines. Meanwhile, it is apparent that meditation, Qigong, Tai Chi, Yoga and other exercises of capable to balance the physical and mental health have become increasingly popular; which reflects the cultural diversity is hopeful to get passed down in the world. We hope that these healthy traditional medicines and therapies earn more understanding and supports worldwide.

On the other hand, it is a huge task to deeply investigating, to further explore and re-evaluate, and finally to evidence and identity the traditional medicines with the strategy of taking full advantage of the costly developed modern medical technology such as molecular pharmacology, molecular biology, modern pharmaceutics, computer-aided drug design, genomics, proteomics, glycomics and other emerging disciplines. It is nevertheless a huge contribution to human health and life, which merits the joint efforts of our and next generations. This book series is useful to bridge the divide between western and traditional medicines.

It is the first volume of the book series entitled, “Traditional and Folk Herbal Medicine: Recent Researches” which encompasses a total of 19 papers from 14 countries. These papers describe various utilizations of local natural drugs against many harmful diseases. Each paper demonstrated the summarized experiences and unique insights of the individual authors. I believe it is a book with rich content, of practice, and with a high reference value, whilst its publication will unambiguously provide useful supplementary information to the R&D departments of pharmaceutical companies, functional food companies, clinicians, pharmaceutical workers, pharmacological and toxicological researchers, and the undergraduate as well as graduate students at medical schools.

Dr. V.K. Gupta kindly took the codification work of this book, his team exhibited great enthusiastic about soliciting manuscripts, the layout, and follow-up publishing for this book. On behalf of all of the authors, I express the heartfelt thanks to them. Moreover, our gratefulness should also go to Daya Publishing House, New Delhi for jointing in the launching of this book series.

To the point of about ending this preface, we sadly figured out that the nuclear crisis caused by the earthquake in eastern Japan has not yet resolved; and Libya gunfire still ringing in our ears; while the legend 2012 of doomsday prediction is
more rampant. We should perhaps sincerely revisit Einstein warned us: the need for Society is to begin to consider as soon as possible for the wisdom to find a balance between the access and its application of knowledge. Maybe we really ought to reflect on whether the rapid development of technology has brought a greater sense of security and comfort to human beings. It might be worth to apply the wisdom of ancient philosophers such as Lao Tzu, the Buddha, Hippocrates, etc. for the healing of the traumas of human body and mind caused by various diseases.

Finally, I’d like to take this opportunity to wish our planet, this unique blue planet, enjoy a permanent peace; also I wish the success of the publication and distribution of our book series.

Sincerely yours,

Yu

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Preface

Traditional and folk medicines have been developed over millennia using the acquired experience and accumulated knowledge of man. Both beneficial and harmful effects of plant materials have been studied and theories about their use have been developed. Thus, man has succeeded in discovering cures using herbal, animal and mineral medicines. Many indigenous medicines began as a myth and then transferred to new generations as folk medicines and finally developed as modern drug treatments following a scientific analysis of their effects.

Plants have formed the basis of traditional medicine for thousands of years and continue to provide mankind with new remedies. Modern medicine has its roots in ancient medicine, and it is likely that many important new remedies will continue to be discovered and commercialized in future by following the leads provided by traditional and folklore knowledge and experience. Most of the secondary plant compounds employed in modern medicine were first discovered through ethnobotanical investigation.

The history of medicine is an account of mankind’s efforts to deal with human illness and diseases ranging from primitive attempts of preliterate man to the present complex array of therapeutic specialties. The development of traditional medicines has been influenced by the different cultural and historic conditions in which they were first developed. Practices known as traditional medicines include Ayurveda, Siddha, Unani, Islamic, Chinese, Korean, African and other medical knowledge and practices all over the globe. Although modern medicine may be available in these countries, herbal medicines (phytomedicines) have often maintained popularity for historical and cultural reasons.

The use of traditional medicine has changed dramatically over the past thirty years. Due to its affordability, availability and accessibility, traditional medicine has played an important role in meeting the demands of primary health care in many developing countries, particularly in Africa and Asia. Since the 1990s, the use of traditional medicine has surged. It not only maintains its function in primary health
care in developing countries (70-80% of the population in India and Ethiopia still depend on traditional medicine and practitioners for primary health care), but its use has expanded widely in many developed countries where it is referred to as Complementary or Alternative Medicine (CAM). Concurrently, many people in developed countries have begun to turn to alternative or complementary therapies, including medicinal herbs. For instance, 70% of the population in Canada and 80% in Germany have used traditional medicine as CAM treatment.

It is owing to a world wide and sustained effort of scientist’s that an enormous information is being generated on traditional and folk medicinal plant researches. Based on this rational, the present volume of the book series entitled, “Traditional and Folk Herbal Medicine: Recent Researches” presents edited information on 19 research and review communications received from India and abroad. The chapters included in this volume are: The Potential Effectiveness of Medicinal Plants Used for the Treatment of Sickle Cell Disease in the Democratic Republic of Congo Folk Medicine: A Review; Ayurvedic Pharmaceutics and Insights on Personalized Medicine; Bioactivities of Duabanga grandiflora for Human Skin Cells; Chromolaena odorata, A Traditional Medicinal Herb with Hemostatic and Wound Curative Properties: An Overview; Chemistry, Pharmacology and HPTLC Standardisation of Asparagus recemosus (Shatavari), an Important Ayurvedic Herb; Ethnobotanical, Phytochemical, Pharmacological and Conservational Studies on Glycyrrhiza glabra: An Overview in Pakistan; Pharmacotherapeutic Potential of Medicinal Plants against Cardiometabolic Diseases; Recent Investigations on Therapeutic Potential of Clitoria ternatea Linn.; The Research Advance of Tibetan Medicine Dida; Euphorbia Latex: A Magic Potion; Traditional Medicine: Its Role in the Search for New Antiparasitic Candidates; A Simplified Procedure for Monitoring the Stability of Herbal Remedies for the Purpose of Manufacturing and Regulation; Effect of a Cysteine Proteinase from Bauhinia forficata Leaves on Thrombin-Induced Human Platelet Aggregation; Ajwain (Tracyspermum ammi) Seeds in Health Promotion and Disease Prevention; Quality Control, Standardization and Chemo Profiling of Herbal Drugs and ISM Preparations; Ficus gnaphalocarpa, Ficus cordata and Ficus chlamydocarpa: Potential Sources of Bioactive Compounds; Effects of Holarrhena floribunda Leaf Extract on Gastrointestinal Functions in Male Rats; Insulin Releasing Effects of Cumin (Cuminum cyminum L.) Seeds in Diabetic Rats; Phytochemical Analysis and in vitro Antioxidant Activity of Essential Oils and Methanolic Extracts of Ocimum spp. (Indian Basils) Growing in Uttarakhand Regions of Central Himalaya.

The studies included are likely to lead further researches in this direction and it is hoped that this publication would attract world wide audience of researchers and the academicians of allied disciplines engaged in the search of new drug from herbal resources.

V.K. Gupta
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The Potential Effectiveness of Medicinal Plants Used for the Treatment of Sickle Cell Disease in the Democratic Republic of Congo Folk Medicine: A Review

P.T. Mpiana¹*, K.N. Ngbolua², V. Mudogo¹, D.S.T. Tshibangu¹, E.K. Atibu¹, B.M. Mbala¹, B. Kahumba³, M.T. Bokota⁴ and L.K. Makelele⁴

ABSTRACT

In our continued efforts to search for novel and bioactive antisickling compounds from indigenous plants, we recently investigated crude extracts from 53 plants species growing spontaneously in the Democratic Republic of Congo which are prescribed by traditional healers or sold in markets for their potential against sickle cell disease.

The dried and powdered plant materials were repeatedly extracted by cold percolation three times with solvents of increasing polarity (n-hexane, dichloromethane, ethanol, methanol, water) for 72 hrs at room temperature. The specific combined extracts were filtered and concentrated to dryness under reduced pressure using a rotary evaporator. Dry crude extracts were screened for their biological activity using in vitro sickling suppressive test of Emmel.

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