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Book Review

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"TRADITIONAL MEDICINAL PLANTS AND MALARIA"

Merlin Willcox, Gerald Bodeker and Philippe Rosoanaivo, CRC Press, Boca Raton, London, New York and Washinton, D.C., 2004. p. 431. Epilogue by M. L. Wilcox. Forward by D. A. Warrell. Numerous illustrations, Traditional Herbal Medicines for Modern Times, Vol. 4, USS 99.95$/66.99£UK, ISBN 0-415-30112-2 (hardcover)

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Apparently, malarial disease has been accepted to be an endemic, "non-genetic" disease of the African generations and of the people in some other tropical regions of the world. It had remained undefeated despite the inexhaustible list of inherited traditional anti-malarial herbs, purportedly used for hundreds of years by our ancestors. The majority of the rural populations are still using the herbs today. It is believed very strongly therefore, that if those herbs never worked for our predecessors, malaria would have devastated Africa and the Missionaries that came to "scramble for Africa" would not have met a single person on the continent of Africa. The Peruvian ***Cinchona*** tree was one of those inherited anti-fever herbs that led modern science to the discovery of natural quinine as well as several synthetic quinolines, particularly chloroquine. All the subsequent scientific efforts at using modern chemotherapy to replace the traditional herbs, for no known reason, have met with side effects, toxicities and drug resistance by the parasite. Hence today, malaria disease causes more deaths, even though it is curable, than the dreaded HIV/AIDS whose cure has not been found. It could be speculated that, with the advent of HIV infection, the prevalence of malaria is bound to increase, especially in the non-temperate regions of the world including the sub-Saharan Africa where both malaria and HIV/AIDS co-exist significantly. By now and with the ***Cinchona*** discovery, malaria should have been contained more effectively if the 17th century tempo had been sustained.

Where have we missed the road towards the conquest of malaria? What has science done wrong? Where do we then go from here and what is the way forward? These are pertinent and substantive issues in this field. The text, **"Traditional Medicinal Plants and Malaria"**, co-edited by 3 authors of versed experience in parasitic infections and involvement in the Global Initiative for Traditional Systems of Health (GIFTS), might have set out to address most of these issues. The book, of 431 pages, represents the 4th Volume of a series namely: ***"Traditional Herbal Medicines for Modern Times"*** by Dr. Roland Hardman (Ed), a retired Associate Professor of Pharmacognosy, a renowned Pharmacognosist himself and a former research teacher to many great Pharmacognosists in the world (including this reviewer). The book, which is commenced with the comprehensive list of over 50 scientific contributors, stating their full contact and e-mail addresses,

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is built up of six Parts, systematically subdivided into twenty-five separate chapters. Two of the co-editors of the book wrote the Forward and the rich Introduction.

The **Part 1** is appropriately devoted to the ancient utilization of herbs for malaria control, highlighting the role of traditional medicine and the limitations of the current global strategy as well as the various issues involved. The **Part 3**, consisting of five chapters, is used to complement Part 1 in this regard, having examined the socio-cultural, ethno medical and ethnographic perspectives of plant use by different cultures in fighting malaria within the local communities, mostly by self-medication. Both **Parts 1 and 3** therefore, correctly remind us that, indigenous use of herbs can serve as potential leads to anti-malarial drug discovery, and that indeed, as seen in **Part 2**, the first anti-malarial drug, quinine, came from the Peruvian *Cinchona* tree. Furthermore, similar old and new examples of anti-malarial herbal development efforts, as case studies from indigenous plants of China, India, Ghana, Mali, etc., are also presented. In **Part 4**, the presentation of the laboratory research techniques has addressed the issues involved in pharmacological methods including toxicological evaluation of candidate plants. The three chapters under **Part 5** deal with some clinical and observational research findings subsequently specifying some guidelines for research in this field. The book consistently highlights the basic herbal medicine philosophy of multi-component nature (similar to the orthodox Polypharmacy) which may tally with the principle of synergism and may explain the observed absence of drug resistance in herbal therapy but showing the contrast of the mono-component approach by current scientific methods. Finally, there are four chapters in **Part 6** dealing with the latest information and research findings on insect repellence and malaria vector control agents in medicinal plants. Additional tips on appropriate research guidelines for potential research entrants into this field are generously provided.

Overall, the book **"Traditional Medicinal Plants and Malaria"** has clearly conveyed the following massages: The basic concept for developing the first line anti-malarials, stemming from the study and acknowledgement of traditional medical skills of some indigenous cultures, is presented in details. The advent and subsequent introduction of synthetic chemistry into the anti-malarial drug discovery, has halted the basic concept; but alas, the current clinical and pharmaceutical eventualities of that singular act (e.g. side effects, drug resistance, etc.) had again reminded us to go back to base where *Artemisia annua* has been found to provide the answer. Many other candidate anti-malarial plants with supposedly perceived efficacies may be waiting for similar opportunities for anti-malarial screening and subsequent development. The list of such plants can be derived from the book, for all interested readers. This neatly packaged text therefore, is being recommended for many categories of readers including medical, pharmaceutical, general and industrial drug scientists. Libraries of health care, teaching and research institutions and those who want a current book of facts as a springboard for the long awaited anti-malarial herbal industry will find it useful. Relevant research students and established investigators in this field, planning to publish their findings can use the well-researched articles, buttressed with nearly 1,500 references, glossary of technical terms, general index and epilogue for literature citations. Traditional healers, who appreciate scientific investigations prior to the claim of efficacy, will love to use this book.

Happy Reading while we await the discovery of an ideal anti-malarial therapy.