

with any particular health condition along with every associated caveat. This is not the case here. When discussing safety, prevention, and long-term health, the approach is rational, enabling, and positive—not clinically over-cautious and disempowering.

The final section, Common Illnesses in Women, departs from specific women's issues to diseases that affect women differently from men: cardiovascular health, musculoskeletal problems, HIV, a range of mental conditions, and diseases of aging. The penultimate chapter looks at a whole woman approach to healthy aging, followed by the editors' epilogue, which raises issues affecting the social construction of gender inequality in health: economic inequality, environmental factors, the paucity of clinical and scientific research on sex and gender differences, and the need to recognize women's traditional role as healers.

Written by women, primarily for women, this book provides a powerful and practical set of guidelines for an integrative, celebratory, whole person approach to women's health.

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Garlic and Other Alliums: The Lore and the Science by Eric Block. Cambridge, UK: Royal Society of Chemistry Publishing, 2010. Hardcover; 474 pages. ISBN: 978-0854041909. \$49.95. Available in ABC's online catalog #577.

Probably every adult on earth is familiar with the unique sulfur-related flavors and scents of garlic (*Allium sativum*, Alliaceae) and onions (*A. cepa*). Millions also associate garlic with some type of health benefit, often handed down from grandparents. A major purpose of this book is, as succinctly stated in the subtitle, to help the reader understand the history and multi-cultured background of the lore and how the lore has been supported or not supported by modern scientific investigation.

The author has done an excellent job of fulfilling this purpose. There is certainly not a more skilled person to handle this task than Professor Eric Block, who has spent about 40 years studying and deciphering the complex chemistry of sulfur compounds associated with the *Allium* plants and the types of transformation

compounds found in kitchen preparations of garlic and onions. In his extensive travels, he has studied and photographed how the *Alliums* are used and revered worldwide. This experience and his interest in history have resulted in many unique and very interesting features not expected in a strictly scientific book, such as *Alliums* in art (see especially Appendix 2), literature, and architecture, and uses as herbicides and pesticides.

Although the book goes into great and important detail describing the chemistry of *Allium*-derived sulfur compounds, every attempt is made to explain things in a manner that can be understood by non-professionals. Marvelous parallels and deviations are described between the sulfur chemistry of garlic and onions, highlighting the important differences that occur between 2-propenyl and 1-propenyl compounds and the critical importance of the unique *Allium* enzymes, alliinase and lachrymatory factor synthetase. The author also describes several new mass spectral methods that have allowed the identification of short-lived sulfur compounds and proof of mechanistic pathways. The history of the discovery of garlic's sulfur compounds is well described and includes unique photos of several of the early (pre-1950) founding scientists. Appendix 1 contains an extensive table of the cysteine sulfoxides (flavor precursors) content of 39 *Allium* species.

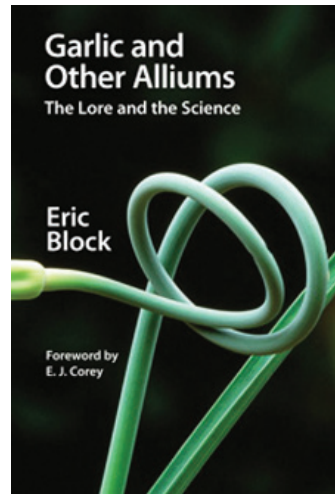
While the author has had limited experience in conducting clinical trials, he has done an admirable job of critically reviewing the evidence and the meta-analyses on clinical trials of garlic supplements for cardiovascular effects and epidemiological studies on the possible anticancer associations. He is thorough in listing and describing worldwide expert panel reviews on the possible health benefits of garlic, such as those by the National Center for Complementary and Alternative Medicine (NCCAM) at the US National Institutes of Health, Health Canada, The European Scientific Cooperative for Phytotherapy (ESCOP), and the World Health Organization (WHO). The author describes the

levels of evidence that are used to assess human health benefits and the elements that should be part of any high-quality randomized clinical trial. Because garlic has been used for centuries for what we now would call its antimicrobial effects, the author provides an extensive table in Appendix 1 on the *in vitro* antimicrobial activity of allicin, ajoene, and the allicin-derived allyl sulfides on 41 different bacteria, fungi, and protozoa. He also expounds upon the adverse effects that some *Allium* compounds (thiosulfonates) can cause, with alarming photos of topical (skin) garlic burns that can occur when too much fresh garlic is applied for too long.

Garlic: The Science and Therapeutic Application of Allium sativum L. and Related Species, the first scientific book in English

on the chemistry and possible health effects of garlic, was published in 1996 by Williams & Wilkins (and was co-edited by this reviewer). With 2,500 references, that book represents an exhaustive review of the scientific literature on garlic to that date. The 2010 book by Block, with its 1,100 references, is the second most extensive scientific book on the chemistry and medicinal studies on garlic. It provides, among many other unique features, important updating

of the chemistry and health studies that have been conducted in the intervening 14 years. When the 1996 book was written, numerous clinical trials on the cardiovascular effects of garlic products had shown more positive effects than the also numerous trials that have been conducted since then, probably due to inferior quality in the conduct of the earlier trials. Hence, Block's book summarizes and emphasizes the serious doubts that exist about the effects of garlic on serum cholesterol and platelet aggregation, although the effects on lowering blood pressure among hypertensive individuals has been supported by two recent meta-analyses. Thus, Block's book is an important and complementary reference work to the aforementioned 1996 publication. Non-scientists should find much of the book to be most interesting, while anyone with a serious interest in the chem-



istry and possible health benefits of the *Alliums* will find the book to be essential reading.

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Herbal Medicine: Trends & Traditions
 by Charles W. Kane. Oracle, AZ: Lincoln Town Press; 2009. Hardcover; 325 pages. ISBN: 978-0-9771333-3-8.

A frequently-expressed concern of laypeople regarding herbal medicine is that it takes too much effort to decide which sources to trust. Some scientists criticize popular herb use, believing that Western herb traditions have no discernable system or standards. *Herbal Medicine: Trends & Traditions* admirably addresses both ends of the spectrum, communicating how to use herbs effectively, safely, and within guidelines understandable at any level of expertise. In his introduction, Charles W. Kane addresses the common fears of the herbal neophyte as well as the research-driven expert.

This book is mainly a *materia medica*, but with useful additions. Clinical herbalists will appreciate a vitalist orientation without jargon. In the introduction, terse philosophical paragraphs explain why Kane avoids formulas for symptoms and conditions. This harmonizes well with the emphasis in integrative medicine on “patient-centered medicine,” a term coined by Michael Lerner of Commonweal.

Kane concisely summarizes actual rather than theoretical applications of herbs representing a standard Western dispensary. Actions such as “astringent” or “vulnerary” are as significant a shorthand for the Western tradition as descriptive terms are in Eastern systems of medicine. Using these actions in context, Kane gives simple physiological effects to make herbal actions more understandable.

The author has taken pains to answer lay questions alongside those concerns more likely to occur to a professional. The first question his book helps answer may be,

“Do I need to go the Emergency Room, make a doctor’s appointment, or treat this with herbs?” Assuming self care is appropriate, *Trends & Traditions* provides a way for the reader to choose from among over 100 popular herbs.

A few hundred more herbs are listed in appendices that are usefully divided into a therapeutic index, a repository with preparation and dosing details, plus a grouping of herbs by botanical family.

The beauty of connecting to nature is evident in *Trends & Traditions*’ 58 color plates. Kane provides a short, fine guide on the ethics of gathering to readers who are new to herbal medicine. Proper drying with low technology leads from introductory pages into the section on preparations, ranging from tea to syrups, tinctures, and an explanation of percolation that is inviting to anyone previously intimidated by phytopharmacy. The preparations section is as comprehensive as a modern herb guide needs to be. Appendices that augment the section include “Weights and Measures,” and worksheets to practice making percolations. There is a 30-page bibliography where several scientific papers are cited for each herb, though for *Cannabis sativa* (Cannabaceae) the omission of Dr. Ethan Russo’s published body of work seems odd.

The *materia medica* section describing medicinal uses for each herb is the most extensive. Firmly rooted in the Western tradition, Kane writes with confidence about the system that draws from Eclectic, Physiomedical, historical, and contemporary branches of herbal

medicine.

The monograph format abides throughout, though it has been extended by Kane to weave in points on wild-crafting, medicine-making, constitutional concepts of human physiology, and more philosophical discussions.

Herbs appear in alphabetical order by common name, from agrimony (*Agrimonia* spp., Rosaceae) to yucca (*Yucca* spp., Agavaceae). Each entry begins with the family, binomial, synonyms, a botanical description full of color and detail for newer herbalists yet accurate terms of identification to

suit more experienced collectors. Information includes distribution, collection technique, and, as needed, commercial availability. Short paragraphs on chemistry, or constituent lists, are fairly standard but up to date and accurate. For instance, yerba mate’s (*Ilex paraguariensis*, Aquifoliaceae) alkaloids reflect scientific consensus rather than unsubstantiated marketing claims.

The actions given for each plant cover internal and topical uses in each of the relevant body systems the herb helps. Kane points out useful herb combinations for specific problems, and offers prevention tips in addition to the occasional entertaining aside. How to use the herb is followed by a bulleted list of indications for a quick review of highlights. Kane avoids any controversy regarding the way doses are given, perhaps in light of his explicit aim to communicate in common language.

The *materia medica* section could be improved with line drawings of each plant not represented in photos. In a comprehensive resource, a picture is worth an awful lot of botanical words, and those new to plants are likely to benefit from even a small image.

First drafted as a counterpoint to Army life while Kane was stationed in east Afghanistan, this herbal guide sustains a vital, positive feel, though sometimes the tone is sober. As if the immediacy of larger issues during the initial period of writing informed Kane’s style, there is a welcome and blunt summary on key points. In contrast to herbalists who have written lengthy introductions defining the place of herbs in modern healthcare, Kane suggests that the usefulness of plants needs no justification, though there is room for clarification.

Herbal Medicine: Trends & Traditions shares with readers the pragmatic experience of a focused man rather than the notions of one who reads and teaches about herbs. The point of the book, then, is to communicate in an accessible way how plants help people. *Trends & Traditions* achieves its aim with a clarity that makes it an essential resource for everyone who wishes to use both popular and less familiar Western herbs for medicine.

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