

BOOK REVIEW

Garlic and other alliums – the lore and the science, by Eric Block, Cambridge, The Royal Society of Chemistry, 2010, 454 pp., US\$49.95, GB£29.95, ISBN 978-0-85404-190-9

Comprehensive does not begin to describe the contents of this book because it is so wide-ranging in its cross-cultural and cross-disciplinary coverage. Let's face it, while the species discussed grow best in the temperate zones, they occur or are cultivated on every continent (except maybe Antarctica), ranging as far north as Alaska, Iceland and Finland and as far south as Ushuaia, the southernmost city of Earth. Historically, all civilizations are linked to the use of garlic and onions. So, we get treated to interesting accounts going back thousands of years.

The contents start with the botany of allium species, and then cross into coverage of the plants in art and literature, before touching the basic chemistry of the most obvious odoriferous and lachrymatory compounds. Interesting natural products rarely advertise their presence as explicitly as those contained in and produced by garlic and onions. Yet, pinning down the underlying chemistry took many decades of ingenious sleuthing. Much greater detail of chemical knowledge is presented under the intriguing chapter title "Chemistry in a Salad Bowl", historically covering the many research leaders and groups that made vital contributions to a very difficult field. Chapter 5 delves into folk medicine and some treatment options for human and animal diseases. The story concludes with accounts of alliums in the environment and their use as repellents for many pests.

Each chapter covers in great detail the chemistry and the manifold chemical and biochemical conversions as they occur in the preparation of varied dishes. Cooks have known for centuries about the way that flavor is influenced by the degree of chopping, any resting period and the temperatures of frying and cooking, even by the metals of containers and implements used. Now, we can look up how the specific allium chemicals and their enzymatic and thermal conversion species add to the flavors inherent in raw foods and those due to the Maillard reaction.

This book is a labor of love and that shows especially in the beautiful historical illustrations and many original images by the author. But I had not expected a 454-page book to contain 128 pages of cited documentation, extra illustrations and index. This astonishing collection of cited material is only topped by the way the author's contributions over four decades show up on so many of its pages. I bought an extra copy for my son's family, none of them chemists, and they also enjoyed it.

Wolfgang H.H. Gunther
WHHG Consulting, West Chester, PA, USA
Wolfgang@Gunther.com
© 2012, Wolfgang H.H. Gunther