

Review of Herbal Principles in Cosmetics: Properties and Mechanism of Action

Herbal Principles in Cosmetics: Properties and Mechanism of Action. By B. Burlando, L. Verotta, L. Cornara, E. Bottini-Massa. (University of Piemonte Orientale “Amedeo Avogadro”, University of Milano, University of Genova, and Helan Cosmesi di Laboratorio, respectively). CRC Press: Boca Raton, FL, USA. 2010. xxvii + 426 pp. 16 × 24 cm. \$149.95. ISBN 978-1-4398-1213-6.

Plants have been used for their benefits to skin health and beauty for millennia and are commonly featured as ingredients in modern cosmetics, especially for those brands that advertise themselves as “natural”. As with pharmaceutical uses of plants, traditional use often predicts a functional benefit, and a deeper appreciation for phytochemical and biological qualities of the plant is necessary for effective application in a finished product.

Herbal Principles in Cosmetics: Properties and Mechanism of Action is the eighth volume in the series “Traditional Herbal Medicines for Modern Times”. The intent of the series is to address topics of relevance to interdisciplinary health sciences by providing context as well as the latest research developments by and for ethnobiologists, taxonomists, conservationists, agronomists, chemists, pharmacologists, clinicians, and toxicologists. In this book, the authors succeed in providing a valuable reference volume for such diverse readers, not the least of which is the cosmetic chemist interested in incorporating functional botanicals into a product.

The essential information required to hone a basic understanding of the science underlying the use of herbal materials for beautifying the skin is presented in three opening chapters. This section of the book provides the compulsory framework for the 70 herbal monographs to follow. Chapter 1 condenses skin physiology, biochemistry, and clinical aspects of dermatology that are relevant to the subject matter of this book. A whirlwind overview of phytochemical compounds pertinent to dermatology and cosmetic applications is delivered in Chapter 2. The final introductory chapter is a primer on cosmetic formulation, with a useful perspective on the function of botanical extracts, oils, and compounds as vehicles and as actives. These first chapters are necessarily dense with background information for the intended audience and nicely coach the reader. They are perhaps not referenced as fully as might be desired; however, the authors have included numerous representative citations to provide the reader an indication of the primary literature and an appreciation for many of the most pertinent journals and resources for this field.

The monographs comprise botanicals from traditional practices that are currently used in dermatology and cosmetics. Each monograph consists of (1) a brief description of botanical features, ethnobotanical uses, and commercial value; (2) a list of phytochemical constituents, with particular emphasis on active principles; (3) a review of biological and therapeutic properties, with a focus on mechanisms of action at the cellular and

molecular levels; (4) known dermatological and skin/hair care applications; and (5) side effects, including toxic properties and allergies.

Seventy monographs are arranged alphabetically by common name from Abyssinian Kale to Yellow Sweet Clover. These are not always the most familiar common names, but an extensive index at the end of the book is very helpful to locate plants by Latin name or to search for plants with specific biological activities or containing specific phytochemicals. The monographs are well referenced.

The plants chosen for inclusion represent numerous herbal traditions including Ayurveda and Traditional Chinese Medicine and botanicals from Middle Eastern, European, Asian, Central/South American, and African herbal traditions.

It is interesting that for many monographs, the “Properties” section is much longer and has more supporting publications than the “Dermatologic and Cosmetic Use” section. This is probably a realistic profile of the current state of the field. Many plants have a long and successful history of traditional use, and in many cases, a good deal of laboratory and some clinical work has been done to support their use as topical or ingestible actives for skin. Still, often the complete dermatological studies that would answer outstanding questions about bioavailability, efficacy, safety, and stability are lacking or at any rate have not been published. The information detailed in *Herbal Principles in Cosmetics* provides valuable insight into many interesting plants that are backed by solid evidence for dermatological efficacy. It also reveals abundant opportunities for further fruitful research in the field.

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