J. Soc. Cosmet. Chem., 35, 131–132 (March/April 1984)

Book Review

ALLERGIC CONTACT DERMATITIS TO INGREDIENTS USED IN TOPICALLY APPLIED PHARMACEUTICAL PRODUCTS AND COSMETICS, by A. Dooms-Goossens. Leuven University Press, Leuven, Belgium, 1983. 164 pages, paper bound. Price: 580 FB.

This book is divided into three sections dealing with clinical experiences covering the identification and surveillance of allergic contact dermatitis using a computer system; factors derived from ingredients and products which influence the frequency of allergy; and a discussion on hypoallergenicity. In most sections, there are ample clinical examples which demonstrate the point that the author wishes to express.

Identification of allergens in cosmetic and pharmaceutical preparations has been a perplexing problem because of several factors, including confirmation of dermal reactions with suspected ingredients or products. Dooms-Goossens proposes a system which relies on the computer for storage of clinical data relating to the frequency of allergic contact dermatitis. The items of data entry include the patient's history, exposure to a product or ingredient, and the contents of the open literature. Even though this system seems to be a quick method of correlating clinical manifestations with known allergens, it seems that the quality and quantity of data which is currently available on ingredients will not allow for a completely reliable surveillance system. There are occasions where the allergen is produced within the finalized formulated product via a chemical reaction or when small quantities of impurities are introduced into a product. In these cases, the computer system would not be extremely reliable. The author discusses other drawbacks of the system such as the difficulties in the identification of ingredients, inasmuch as ingredient labeling laws from country to country are not consistent.

One of the most important aspects of the book deals with the multitude of factors which influence the allergenicity of products. This section well describes how changes in manufacturing, processing, and stability conditions of ingredients may render an ingredient allergenic. The author thus implies the importance of testing the entire formulated product when testing potential allergens. This is well emphasized in his discussions on the importance of vehicle potentiation in such areas as increasing dermal penetration of the allergen, maximization through the induction of a mild irritant response, and the formation of an allergen depot in the skin. In addition to potentiation, the reduction in allergenicity through the phenomena of quenching is discussed. The author provides an in-depth evaluation of quenching and some possible explanations for the reduction in allergenicity when multiple allergens are present in a formulation.

There is an extensive discussion concerning the petrolatums, emphasizing the differences between the so-called white

and yellow petrolatums. Analytical information is presented which provides the chemical differences for the different types of petrolatums and the components which may be responsible for petrolatum allergy. In this section, a discussion of the carcinogenic activities of polyaromatic hydrocarbons is given which seems to be out of place and beyond the scope of the book.

The last section, dealing with hypoallergenic preparations, proposes methods which can be used by the formulating chemist intending to minimize contact with highly allergic compounds. Emphasis is given to the fact that total elimination of fragrances or other suspect formulation ingredients may not necessarily abolish the allergic potential of a formulation.

In conclusion, the book is very specific and should not be considered as an introduction to the topic. It would seem to be rewarding to the experienced clinician treating many cases of allergic contact dermatitis associated with pharmaceutical and cosmetic products.—**MATTHEW PALAZZOLO**—Gillette Medical Evaluation Laboratories.