

medical|neurocosmetics—a new frontier?

by Rob and Carol Trow

It seems that every time we open up a newspaper, trade journal or magazine, we learn a new skin care term, innovation or ingredient. So it follows that we recently came across the term, “neurocosmetics,” which some say will represent the new frontier in the industry.

Neurocosmetics refer to topical ingredients that work on the cutaneous (on the skin’s surface) nervous system. They became a focus of attention during the annual meeting of the New York Society of Cosmetic Chemists. In a recent issue of the *Global Cosmetic Industry Journal*, Steve Herman also reported on the topic of neurocosmetics.

The relationship between the skin and the cutaneous nervous system is ripe for exploration. Keratinocytes, langerhans cells, melanocytes, endothelial cells, fibroblasts and the other cells of the skin are, to some extent, modulated and controlled by nerves.

The emerging study of neurocosmetics may lead to new ways of inducing a positive action on the skin’s nervous system that results in increased skin health.

The brain and skin care

According to Douglas DeBlasi, whose presentation was titled “A Neurocosmetic Approach to Improvement in Sensitive Skin Protection” at the meeting of the New York Society of Cosmetic Chemists, neurocosmetics can affect how the brain responds to topical treatments. The potential impact of this emerging field on skin care is significant. But, there is much to learn. The field is in its infancy. To date, the actives in the neurocosmetics

family are peptides of various origins and a variety of plant extracts. A simple example of an easily understandable neurocosmetic is menthol, which acts on the skin as a physical coolant or heat source based on concentrations, formulations and location. As the chemical penetrates the skin, action occurs to relieve sore muscles.

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At issue will be: can the action caused by topical products that affect the cutaneous nervous system play a role in the next generation of skin care ingredients? Can the signals sent to the skin’s surface nerve clusters via neurocosmetics be used to help improve signs of biological or environmental aging of the skin, or to help normalize problematic skin?

What about regulation?

Another factor that must be taken into account is that, in order for neurocosmetic ingredients to be effective, they must pass through the dermis, the layer just below the skin’s outer layer. Will that characteristic result in the classification of neurocosmetics as drugs? It is too early to determine the Food and Drug Administration’s stance. There is still much for us to learn regarding the skin and topical applications of actives.



It used to be that a generation of skin care products lasted ten years, then five, now three. With the advent of stem cell research, the study of the genome, advances in biotechnology and other scientific discoveries, we are merely touching on the surface of what may be possible in the near future for topical skin care. ■

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