Combine Cosmeceuticals to 'Protect and Repair'

BY DOUG BRUNK

LAS VEGAS — When patients ask Dr. Ranella Hirsch what topical cosmeceuticals to apply regularly to their skin, she responds with the mantra "protect and repair."

"You protect in the morning," she said at the annual meeting of the American Society of Cosmetic Dermatology and Aesthetic Surgery. "Your first-line agent should emphasize sun protection, but you can combine antioxidants with that to help prevent redness and other sun damage. At night, you want to repair with a retinoid or a peptide. Ideally, I like to have patients use a combination of products with complementary benefits. There is no one product that's going to do it all."

Dr. Hirsch, a dermatologist who practices in Cambridge, Mass., noted that sales of cosmeceuticals were expected to reach \$7.2 billion in 2008, up from \$6.4 billion in 2004.

"Baby boomers are being seduced by marketing and antiaging claims of these products," she said. "The question is: Can these promises be fulfilled? Cosmeceuticals are not subject to the [Food and Drug Administration's] rigorous approval process. What kind of advice can we give to patients about how these products work and what they can really deliver?"

She discussed the benefits of the following cosmeceutical ingredients:

- ▶ Retinol (vitamin A). Found in many skin care creams, retinol is a relative of prescription tretinoin. "It's less irritating than tretinoin," Dr. Hirsch said. "It can increase epidermal water content and epidermal hyperplasia, but mainly it enhances collagen synthesis. That's one of the main ways it decreases the appearance of fine lines. It can also interfere with melanogenesis, which helps lighten sunspots."
- ▶ Niacinamide (vitamin B₃). This hydration repair agent increases ceramides and free fatty acids in the epidermis, and improves the lipid barrier. In turn, it decreases transepidermal water loss. "We recognize that preventing transepidermal water loss is important, not just for the health of the skin but also for photodamaged skin," she said. "If you can restore that barrier and prevent water loss, the skin will feel smoother and plumper."
- ▶ Coenzyme Q10 (ubiquinone). This fat-soluble antioxidant downregulates matrix metalloproteinases (MMPs). By inhibiting them, "you can help decrease the collagen breakdown in the skin," explained Dr. Hirsch, who is the immediate past president of the ASCDAS. "They are coenzymes for steps in the production of cellular energy, and they inhibit lipid peroxidation of plasma membranes and prevent oxidative stress."
- ▶ Idebenone. This substance is a potent synthetic derivative analogue of coenzyme Q10. "In initial studies, it was found to be a very powerful antioxidant, also downregulating MMP expression," improving roughness and dryness, and hydrating the skin, she said.

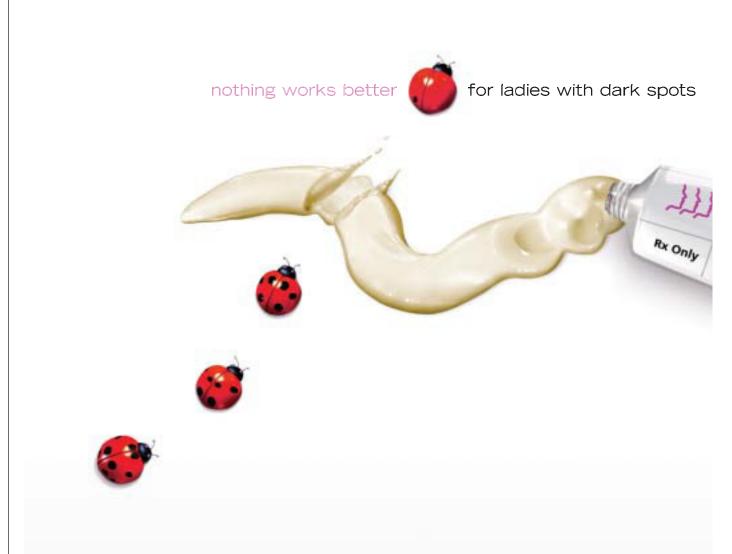
- ▶ Polyphenolic flavonoids. Derived from plants, these substances are antioxidant, anti-inflammatory, photoprotective, and anticarcinogenic. They are contained in wine, tea, coffee, and soy.
- ▶ Green tea. This ingredient contains the polyphenols epicatechin-3-gallate and epigallocatechin-3-gallate (EGCG). Studies have demonstrated that pretreatment of human skin with EGCG mitigates UVB-induced erythema.
- ▶ Coffeeberry. Derived from unripe coffee berries, this extract contains the polyphenolic antioxidants chlorogenic acid, quinic acid, and ferulic acid. In vitro, it has been found to upregulate collagen and connective tissue synthesis and downregulate collagen breakdown, Dr. Hirsch said.
- ▶ Peptides. Matrixyl, a procollagen pentapeptide fragment owned and licensed by Sederma SA, reportedly stimulates

production of collagen I and II and fibronectin by fibroblasts.

Another product, acetyl hexapeptide-3 (Lipotec SA's Argireline), claims to mimic botulinum toxin–like effects in vitro. Overall, she was skeptical about topical products with injectablelike claims. "Better than Botox?" she asked. "No!"

Dr. Hirsch disclosed that she is the senior medical adviser for Vichy Laboratories, a division of L'Oreal USA.

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