

IS THERE REALLY SUCH A THING AS HOPE IN A JAR?

Dermatologists help consumers sort through the cosmeceutical conundrum

NEW YORK (Nov. 13, 2008) – When it comes to cosmeceuticals, consumers are bombarded by marketing claims that often fail to live up to their hype. Banking on promises that a product can “reverse the aging process” or “deliver the results of a facelift” leads consumers to spend billions of dollars each year to try an array of anti-aging skin care products. Their hope is that one day they will find a product that actually lives up to its claims.

Speaking today at the American Academy of Dermatology’s **skin** academy (Academy), dermatologist Patricia K. Farris, MD, FAAD, clinical associate professor of dermatology at Tulane University School of Medicine in New Orleans, discussed how to separate fact from fiction when evaluating cosmeceuticals and tips for gauging the validity of product claims.

“When consulting with our patients, dermatologists can suggest skin care products that have strong science behind them and that have been proven to be safe and effective in human studies,” said Dr. Farris. “The biggest problem with cosmeceuticals is not that they don’t work, but that their benefits are greatly exaggerated.”

Cosmeceuticals can be divided into categories based on their active ingredients. Anti-oxidants represent the largest category. They are followed by peptides (small proteins that stimulate the production of collagen and thicken the skin) and growth factors (compounds that act as chemical messengers between cells and play a role in cell division, new cell and blood vessel growth, and the production and distribution of collagen and elastin). More recently, Dr. Farris noted that the new trend is toward combination products. For example, cosmeceuticals with multiple anti-oxidants, retinol plus anti-oxidants, growth

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factors plus vitamin C and other unique combinations that are now being mass marketed. Consumers tend to favor combination products, embracing the philosophy that if one ingredient is good, then two must be better.

“The important thing to understand about combination products is that often the individual ingredients have been studied, but the combination of active ingredients has not,” said Dr. Farris. “More rigorous scientific studies are necessary to assure that biologic activity is maintained when ingredients are formulated together, and clinical studies should be done to determine if combination products really offer any added benefit.”

Consumer demand is high for cosmeceuticals containing “natural” or “organic” ingredients. However, Dr. Farris advised that the notion that these ingredients are safer than synthetic ones is a common misconception. In reality, there is no data to support the notion that natural or organic ingredients – derived from the root, stem, leaves, flowers and fruit of plants – are safer or even more effective than their synthetic counterparts.

“The problem with cosmeceuticals labeled 'natural' is that the labels themselves don't mean anything because these products are not regulated by the Food and Drug Administration (FDA),” said Dr. Farris. “In fact, 'natural' skin care products are less tested and scrutinized than synthetic products and pharmaceuticals.”

Dr. Farris noted that most compounds as they exist in their natural state cannot be formulated into skin care products. They must be chemically altered *before* they can be incorporated into cosmetics. For instance, compounds including retinol, vitamin C, and soy are among those that require chemical alteration – after which they are referred to as enhanced natural ingredients. Enhanced natural ingredients tend to be more stable, penetrate better and have more long-lasting effects on the skin than unaltered plant extracts, which is the reason why most cosmeceuticals contain chemically-altered ingredients.

“There are a number of cosmeceutical ingredients that are completely synthetic, such as collagen-boosting peptides and synthetic forms of vitamin A,” explained Dr. Farris. “These compounds are among the most potent anti-aging

ingredients and have been used extensively by dermatologists. So, it's important for consumers to understand that synthetic ingredients are not necessarily bad and, in fact, skin care products containing these ingredients are probably among the most effective in the marketplace."

Dr. Farris explained that the key to evaluating the effectiveness of cosmeceuticals is understanding how they are tested. After an active ingredient has been identified, it is evaluated using polymerase chain reaction (PCR) testing, which is used to characterize biologic activity and determine if the ingredient is an anti-oxidant or anti-inflammatory. PCR testing also can tell if an ingredient increases collagen production or reduces collagen breakdown. Although PCR testing is a valuable part of the testing process, many of the claims made as a result of PCR testing are not substantiated by human studies.

"For dermatologists, the gold standard for confirming a product's efficacy remains the double-blind, vehicle-controlled study," said Dr. Farris. "In this type of objectively designed study, the product containing the key ingredients is tested against the vehicle, or the product formulation that is similar to the product being tested but without the key active ingredients." Dr. Farris explained that even though a compound may stimulate collagen production in PCR testing, it does not mean that the ingredient will cause any visible improvement in fine lines and wrinkles.

"Since cosmeceuticals are not subject to the FDA's rigorous approval process, most cosmetic manufacturers do not perform double-blind, vehicle-controlled studies," said Dr. Farris. "Instead, they rely on what are called open-label user studies where subjects apply test creams for a few weeks and then assess their improvement over baseline. Unfortunately, these types of studies are of no real value in determining product efficacy because they do not assess the vehicle's effect and there are no objective measures. People participating in these studies want to believe that they look better after using the product, but that does not necessarily mean it works."

Dr. Farris offered these tips when purchasing cosmeceuticals:

- Ask yourself what the product claims to do and what kinds of studies have been performed.
- Trust your instincts. If it sounds too good to be true, then it probably is.
- Stick with products and brands that you know to be reputable. Well-known manufacturers have more money behind their active ingredients and product testing.
- Beware of Web site claims, as many are biased even if they say they are objective.
- For day, use products containing anti-oxidants, as they have sun-protection properties. At night, use products containing retinoids, peptides or growth factors for their repair properties.
- Talk to your dermatologist about the best options for your skin care needs.

For more information on aging skin, go to the "AgingSkinNet" section of www.skincarephysicians.com, a Web site developed by dermatologists that provides patients with up-to-date information on the treatment and management of disorders of the skin, hair and nails.

Headquartered in Schaumburg, Ill., the American Academy of Dermatology (Academy), founded in 1938, is the largest, most influential, and most representative of all dermatologic associations. With a membership of more than 15,000 physicians worldwide, the Academy is committed to: advancing the diagnosis and medical, surgical and cosmetic treatment of the skin, hair and nails; advocating high standards in clinical practice, education, and research in dermatology; and supporting and enhancing patient care for a lifetime of healthier skin, hair and nails. For more information, contact the Academy at 1-888-462-DERM (3376) or www.aad.org.

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Jennifer Allyn
(847) 240-1730
jallyn@aad.org

Allison Sit
(847) 240-1746
asit@aad.org