New peptide biofunctional ingredient may be used in creams and lotions to boost the skin's own production of coenzyme Q10

BARCELONA, Spain – Ashland Specialty Ingredients, a commercial unit of Ashland Inc., today announced a novel approach to help boost coenzyme Q10 production in skin cells. Using a specially bioengineered peptide, Ashland showed in vitro that the technology boosts endogenous synthesis of coenzyme Q10, the powerful antioxidant recognized as an effective ingredient against premature skin aging. A double-blind clinical study against a placebo cream showed that Ashland's Peptide Q10™ biofunctional helps to reduce facial wrinkles and fine lines when used at just 0.5 percent concentration. The new technology represents a breakthrough alternative to traditional application of coenzyme Q10, where external delivery may not fully restore this lipid-soluble substance within the epidermal layer of skin.

According to Joel Mantelin, global marketing director, Skin Care, Care Specialties, Ashland Specialty Ingredients, Peptide Q10 biofunctional builds upon Ashland's approach to "dialing in" skin care benefits with biofunctional ingredients created specifically for use in conventional creams and lotions. "This ingredient is a complementary, anti-aging skin care strategy to traditional application of coenzyme Q10," he said. "In rethinking CoQ10 with a biological approach, Peptide Q10 biofunctional represents a major boost in anti-aging skin care formulating, a truly viable strategy for countering the age-related decline of endogenous CoQ10."

Cosmetic applications

According to Mantelin, addressing an age-related decline in coenzyme Q10 levels with a peptide bioengineered specifically for creams and lotions will serve as the basis for many innovative product forms. "It is estimated that CoQ10 levels may diminish with aging by as much as 75 percent in the epidermis of people between the ages of 30 and 80," he explained. "This dramatic decline is known to handicap the antioxidant defense capability of cells and impede their ability to produce energy."

"With a peptide bioengineered to help boost endogenous synthesis of coenzyme Q10 in vitro, formulators of skin creams and lotions now have the capability to formulate products with distinct benefits, such as CoQ10 booster, antioxidant builder and as a tool to minimize the appearance of wrinkles and fine lines."

A noticeable effect

A double-blind clinical study with a panel of 10 women ranging in age from 48 to 59 revealed the visible effects of Peptide Q10 biofunctional. Applied twice per day (at 0.5 percent) around the crows-feet area for 28 days, Peptide Q10 biofunctional showed a noticeable effect in helping panelists look younger. As part of the evaluation, cosmetic scientists examined the treated skin using software to measure and compare roughness parameters on silicon replicas. Comparisons of clinical pictures and panelist self-evaluation also demonstrated that Peptide Q10 biofunctional visibly reduced the signs of aging.

A strong antioxidant

A study conducted by Ashland suggests that skin under UVA stress treated with Peptide Q10 biofunctional at 0.5 percent may help limit the production of free radical superoxides when compared with a control. In vitro results indicate a reduction in free radical superoxides production in a sample cell culture with normal human keratinocytes. Additional tests involving UVB stress suggest similar in vitro results.

“Adopting a new approach to boosting the presence of CoQ10, skin care formulators may advance the capabilities of skin care products to a level far beyond what was possible only a few years ago,” Mantelin said. For more information, visit www.ashland.com .

About Ashland Specialty Ingredients

Ashland Specialty Ingredients is a world leader in specialty additives and functional ingredients that modify the physical properties of aqueous systems for products in key markets including personal care, pharmaceutical, food and beverage, coatings and energy. Using natural, synthetic and semi-synthetic polymers derived from plant and seed extract, cellulose ethers and vinyl pyrrolidones, Ashland Specialty Ingredients offers comprehensive and innovative solutions for today's demanding consumer and industrial applications.

In more than 100 countries, the people of Ashland Inc. (NYSE: ASH) provide the specialty chemicals, technologies and insights to help customers create new and improved products for today and sustainable solutions for tomorrow. Our chemistry is at work every day in a wide variety of markets and applications, including architectural coatings, automotive, construction, energy, food and beverage, personal care, pharmaceutical, tissue and towel, and water treatment. Visit ashland.com to see the innovations we offer through our four commercial units – Ashland Specialty Ingredients, Ashland Water Technologies, Ashland Performance Materials and Ashland Consumer Markets.