

Demand GROWS for Sun Care Options

BY JEFF FALK

GCI magazine asked Vermén M. Verallo-Rowell, MD, founder of VMV Hypoallergenics; John Paro, president and CEO of HallStar; Eve Yen, CEO of La Fresh Group; Mike Starch, industry scientist, life sciences business, Dow Corning; and a group of experts from BASF about consumers' awareness of UVA protection, the challenges in creating sun care products and demand.

GCI: Has your company witnessed growth in the demand for new sun care protection options? If so, does the company foresee this demand remaining at these levels for the long term?

Vermén M. Verallo-Rowell: We have definitely seen increased awareness in the dangers of sun and light exposure; this has translated to growing demand for sun and light protection products that are effective. We've also noticed that individuals are being more selective as they become more educated. For example, as information is disseminated about indoor light (infrared and visible light) causing and worsening melasma and hyperpigmentation, our customers choose our products with higher protection factors for indoor light. Additionally, we are seeing customers choose products based on increased sensitivities—for example, noncomedogenic products, as a result of increased acne occurrence associated to their sun care product. We are expecting this level of demand continuing—in terms of both protection factors and

new ingredients—because of consumers' increasing selectivity.

John Paro: Yes, demand for new sun protection options is growing. Our customers are increasingly aware that their products must have significant levels of both UVA and UVB protection, and this has generated heightened interest in photostabilizers. We expect this demand to increase globally over the next few decades and remain in place for the long term.

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Eve Yen: The demand and interest have been growing [in wipes as a delivery method]. We attribute this trend to two distinct advantages of wipes: a single-use packet delivers convenience and portability and a wipe is a quick and effective applicator as opposed to squeezing cream on your bare hands. Just as the market share of other cosmetic and personal care wipe products continues to grow, we predict that the demand will continue to increase.

Mike Starch: Yes. Growing consumer awareness of the damaging effects of sun exposure has prompted manufacturers to expand their range of sun care products. I think demand for sun protection solutions is likely to remain strong for the foreseeable future.

GCI: What are the challenges to creating sun care products that provide both the UVA and UVB protections? Is there any room on store shelves for products that provide only one type of protection? Are consumers going to be willing to increase their spend for products that provided protection from both?

VVR: The challenges in the making of all sun care, whether for protection against UVA or UVB, lies in the testing. Manufacturers will need to do both in vitro studies—a laboratory procedure that does need expertise to perform, and in vivo studies on a minimum of 20–30 patients—an even more detailed study that needs not just expertise but patience and consistency in its performance.

Repeat studies should also be done to assure that subsequently manufactured batches of the product continue to match the claims for UVA/B protection. As sun care formulations are still not fully understood by consumers, the chances are fairly high, in our opinion, that we will still see a wide variety of products on shelves with low SPFs, UVB-only protection, gels/sprays with problematic protection, unstable formulations, etc. Consumers who have already been diagnosed with skin cancer or pre-cancers, or who have been warned about their propensity toward developing these, are already willing to increase their spend as the investment is no longer merely for aesthetic considerations but has real, life-saving implications.

JP: The two biggest challenges are preventing product degradation during use and formulating products that protect adequately while remaining affordable. Photostabilizers are both effective at reducing product degradation during use and cost-effective when used as recommended. For the foreseeable future, consumers will be able to choose from many products that provide a wide range of protection against sunburn and UVA exposure. Daily, consumers are demonstrating their willingness to spend

more for products that provide higher levels of protection, and we expect that trend to continue.

BASF: The main challenge is to get adequate UVA protection, particularly in high SPF (indicates UVB protection) formulations. Currently, most claim broad-spectrum protection, leaving the consumer confused about the amount of UVA protection. The new FDA Sunscreen Monograph proposal includes requirements for a ratio of UVA/UVB protection, so that high SPFs would also contain high UVA protection. Filters providing the highest UVA protection will be those containing zinc oxide and avobenzene, two popular UVA filters in the U.S.

Today, consumers can choose products such as tanning oils and lotions that provide one type of protection, but enhance a deeper, darker tan. A very low SPF, such as 2 or 4, may be acceptable, but with increased public awareness of the skin health and photoaging implications of UVA rays, these may lose popular appeal. When the

new FDA Sunscreen Monograph goes into effect, both UVA/UVB protection will be necessary. Consumers that are informed about the dangers of UVA rays, such as melanoma cancer threats, would be inclined to purchase a product at a higher cost if it promotes greater protection. Since the majority of products already claim UVA/UVB protection, the differentiating factor will be sun care that contains inorganic or organic ingredients.

EY: Developing effective and safe sun care products involves strictly adhering to the regulations and guidelines established by the FDA, as well as countless third-party performance tests. In 2008, La Fresh worked with a dermatologist on a case study in which the doctor educated her patients of the importance of constantly protecting themselves from the harmful effects of UVA and UVB. The finding was that when provided a more convenient and portable form of sunscreen, the informed patients actively exercised preventive care during their daily routines. Consumer education at

multiple levels (i.e., clinical and marketing) is, therefore, a crucial factor.

MS: There are serious challenges in formulating products for the U.S. market that provide high levels of both UVA and UVB protection. The reason is that the FDA has approved very few UVA absorbers, and the most effective of these, avobenzone, cannot be used with the most popular UVB absorber (octinoxate). New UVA absorbers approved in Europe would allow formulators to provide a high level of balanced UV protection, but until the FDA approves them for the U.S., a consumer-acceptable product with high UVA/UVB protection will be difficult to achieve.

GCI: How are the challenges of creating sun care ingredients, in general, different from creating ingredients for beauty products?

VVR: Sun care ingredients have the specific function of either absorbing light waves then transforming them into another form of energy such as heat or acting as

a physical barrier to light, bouncing light back by reflection or scatter. The challenges for both types are to identify/choose:

- natural or synthetic ingredients;
- specific or combined ratings against UVB (the SPF), against UVA (the PFA);
- the needs of a specific consumer group—children, athletes, high intensity use, indoor protection;
- irritancy or allergenicity;
- cosmetic appearance on skin so consumer will use them consistently;
- additional ingredients that may be included, such as an antioxidant to slow down the oxidation of oils and thereby delay the deterioration of the lotion;
- ensuring that the ingredient remains stable and does not degrade when exposed to light;
- additional properties such as skin soothing and moisturizing perceived as desirable for acceptance of use by the consumer; and
- affordability of the technology/ingredient.

JP: There certainly are challenges in creating sun care ingredients. Sun care products are health care products and, therefore, regulated accordingly. However, there is also great opportunity for beauty products. As consumer awareness grows, we believe demand for daily wear products that protect against UVA and UVB exposure is going to increase significantly.

BASF: Yes. The FDA regulates sunscreens as OTC drugs (sunburn prevention) and the active ingredients are regulated. There is a list of approved ingredients (i.e., zinc oxide) that can be used as UV filters in sunscreens. The process of adding new ingredients is the same as any other OTC drug. Safety and efficacy must be demonstrated and the process is expensive and timely, even with the new TEA [an FDA regulatory mechanism in which data for products already approved in other countries are taken into account to authorize the use of active ingredients in OTC drugs and related products] alternative to the NDA (new drug application).

GCI: In a press release for its Uvinul A Plus, BASF states that “More and more skin care and decorative cosmetic products now contain UV filters.” In BASF’s data, are consumers showing a clear preference for products with these filters versus similar products without?

BASF: Consumers are looking for an all-in-one product—a decorative makeup, for example, with good skin feel and appearance that also provides protection from sun damage. As our culture becomes more multifaceted, products are also required to become multipurposed.

GCI: How has the growing importance of both aesthetic appeal and protective attributes in sun care products impacted their creation? Has it become inherently more difficult because there is a need to focus on more than simply providing protection? Or does this actually expand the sun care market by creating sun care

products that a consumer may choose and use for moisturizing benefits, for example?

JP: Aesthetic factors are very important, and can enhance or limit product sales. For example, many consumers prefer organic sunscreens. The inorganic types feel less pleasant, both in application and on the skin. In general, people won’t use products that aren’t easy and pleasant to apply and comfortable to wear, and that is especially true for products such as moisturizers that are used every day. All sun protection products work by forming a uniform, oil-phase film on the skin within which the active ingredients—the protective UV filter molecules—are evenly dispersed. If not formulated properly, the protective film can feel greasy and unpleasant. Creating sun protection products that people want to use is the essence of good formulation.

GCI: What challenges are there in creating water- and sweat-resistant products that feel pleasant on the skin and still provide UV protection?

BASF: One key challenge is formulating ingredients that will prevent wash-off of the UV filter with minimum alteration to the skin-feel. Many products are lotions or creams that contain emulsifiers to make the oil and water mix better. However, they also contribute to washing off the oil-based UV filters. The most aesthetically pleasing lotions tend to be water-continuous, and the emulsifiers for these enhance wash-off of the oil. Oil continuous or oil-based formulations have higher water resistance, but can be perceived as greasy-feeling. Hydrophobic film-forming polymers provide good wash-off protection, and care must be taken to choose those that do not give the skin a tight feel or rub off readily. ■ **GCI**



JEFF FALK is senior editor of *GCI* magazine.