



# ADVANCED skin care

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**E**STHETICIANS AND SPA OWNERS continually search for new products to aid them in providing cutting-edge care for their clients. They ask, “What’s new? What’s the latest in product development?” At the same time, the companies who sell to them are constantly working to develop new products. The creative innovation behind the new products these companies have developed usually springs from cosmetic chemists, a group of specialized scientists whose functions can be stated simply as “formulators of hope-in-a-jar.” These innovators strive to find and incorporate the latest and most effective ingredients into new and better, results-oriented products for the beauty and medical service providers to use and recommend to their clients or patients. ➤

peptides  
enter the  
market in  
force

by Sam Dhatt

### Panting for a peptide patent

At this time, for formulators, the most sought-after ingredient is palmitoyl pentapeptide-3, called Matrixyl, a patented ingredient manufactured and sold by Sederma SA in Paris, France. According to research presented, this ingredient has proven to stimulate the development of new collagen, elastin and GAGs (glycosaminoglycans) in the dermal layer of the skin as no other topical ingredient has before. Matrixyl is a combination of peptides, specifically a pentapeptide (five amino acid peptides in a chain). These peptides are assembled to create a healing and repair response in the dermis of the skin as it stimulates the collagen I, collagen III, and elastin fibroblasts, as well as develops fibronectin, and GAGs. Fibronectin and GAGs are important components of the dermal matrix. When topically applied over time, Matrixyl noticeably increases skin thickness and functions to improve the appearance of aging skin. It can also stimulate the production of collagen IV fibroblasts in aged skin. (See Figure 1.)

### What are peptides?

Proteins must be broken down into smaller units, called peptides, for our bodies to use them. Considering this, proteins used in topical skin care products must also be “simplified” in order for our skin to use them. Peptides, for our purposes, are molecules made from smaller protein molecules called amino acids. When the small amino acids build up, bind together and form a chain, a peptide is created. Chemists synthesize these chains of amino acids to perform specific functions in skin care products. Therefore, when a product contains peptides, the protein has been synthesized to its most useable form, i.e., shorter-chain amino acids. It then is more readily available to efficiently build and repair the skin.

### Another peptide to watch

One of the causes of wrinkles is repetitive skin creasing during habitually triggered expressions like forehead creasing, furrows between the eyes, lines around the eyes, etc. These *continues*

## Published studies and findings

Figure 1

IN A SERIES OF STUDIES, Matrixyl demonstrated its capabilities in taking 10 to 15 years off the appearance of clients who applied it topically. It did so with no irritation and increased skin hydration and thickness.

Three studies on Matrixyl in vivo, in double-blind formats, were conducted. One on 25 panelists against a placebo for six months, another on 10 panelists against a commercial cream containing 3 percent vitamin C for six months, and a third on 16 panelists against retinol for four months.

The studies were published and reported at the 2002 Congress of Dermatology in Paris. Sederma SA, Paris, which holds the patent, conducted the studies that compared the proprietary ingredient Matrixyl, against three chosen alternate vehicles. The sites were measured histologically and microscopically for analysis.

COMPARISON OF MATRIXYL TO A PLACEBO	
skin roughness	17 percent improvement
wrinkle volume	68 percent improvement
wrinkle depth	27 percent improvement
Collagen I	increased 117 percent
Collagen IV	increased up to 357 percent
Glycosaminoglycans	increased up to 267 percent

According to Sederma SA, Paris, the studies showed that there were no changes in any of these end points with the alternate vehicles:

Comparison of Matrixyl to 3 percent vitamin C: Matrixyl outperformed the popular vitamin C product in density, roughness, volume of wrinkle and depth of wrinkle as it lessened each property in the study participants’ skin.

Comparison of Matrixyl to retinol: Matrixyl produced faster results than

retinol in overall gain in skin thickness at two months, but both were the same at four months. Wrinkle depth, length, volume and surface roughness were not significantly different. The study participants noted the absence of irritation and sun sensitivity with Matrixyl compared to the retinol vehicle.



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repetitive movements also cause the skin to lose its elasticity and collagen in the depth of the wrinkles, which causes them to widen and deepen. The sufferers of these wrinkles see them as reminders of their aging every time they look in the mirror, so they naturally want them to disappear. In 2002, these worried consumers began hearing about the fantastic results of injections that smooth foreheads and reduce lines around eyes. Botox took the cosmetic world by storm and the American public has been signing up for injections in droves. The function of Botox is simple. It destroys a protein involved in the release of a neurotransmitter that normally signals the muscle to tense or contract. The result of this temporary destruction of the protein is paralysis, or no movement of the muscle. When muscles don't tense, the skin relaxes and wrinkles are smoothed.

But many consumers aren't ready to commit to routine injections, so until they are ready, or if they are never ready, they are looking for an alternative at-home skin care product. Do we have a simple and viable alternative to these expensive injections; to the muscle paralysis that must be produced to get the smoothing effect?

A new ingredient, acetyl hexapeptide-3 (six amino acid peptides in a chain), called Argireline®, is a short-chain peptide developed by scientists at Lipotec in Barcelona, Spain. This new ingredient simply keeps the signal protein (catecholamine) from connecting to the cell and from triggering the muscle contraction. But it does this without paralysis, allowing natural expression and movement in the target area.

Botox, immediately produces smoother skin. However, the dermal layer of the wrinkle is still damaged, with reduced collagen and elastin, and tiny creases are still evident on the skin. When Botox injections are no longer active, the skin again collapses into the wrinkles. New products are now developed teaming Argireline, the relaxer, and Matrixyl, the dermal builder. The skin is truly repaired, not just "frozen."

Many physicians' offices and spas are recommending these products to their Botox patients to augment results. Linda Champion Orsuto, esthetician, 800 West Salon and Day Spa, Marlton, NJ, retails Matrixyl and Argireline products to clients who get Botox injections to fill in the depth of the wrinkles through the repair of the collagen and elastin.

"The results are amazing and allow the skin to look more natural and eventually totally smooth," says Orsuto.

### **Reality and expectations**

Clients' expectations must be addressed when peptide products are sold or undue product returns will result.

"We carefully address the expectations of our clients," says Orsuto. "We explain how they work, how to use them, and the timeline they can expect." The spa is experiencing great success in sales, with almost 100 percent repurchase, and great results for the clients.

How soon will it take to see results? A professional selling these products must explain the facts to his or her client. The key words here are "over time." While Botox

*continues*

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injections can produce immediate wrinkle-smoothing effects, the peptide products will take time, from two to 12 weeks, depending on the health of the skin and depth of the wrinkles. This must be explained thoroughly until the esthetician senses the client understands.

One way to ensure clients' understanding is for estheticians to use the products themselves to draw attention to the obvious changes. Lynne Williams, Face Magic, Albany, GA, just started selling the products a short time ago and began using them herself to demonstrate the results.

"The clients are seeing noticeable improvements in my eyes, mouth, outer cheeks and forehead," she says. "My outer cheeks and the labial fold are softening dramatically. And the deep lines in my upper lip and lip line don't travel as far and some are softening and disappearing already," says Williams.

One method of demonstrating the changes to the individual client is through photography. Orsuto works one day a week at a plastic surgery office and takes "before" and "after" pictures of the purchasing clients.

"These photos provide evidence of the dramatic changes in their skin and ensures their commitment to using the products for a long time to come," says Orsuto. She takes the pictures before they begin using the products, then at three months and again at six months.

### Finished formulations

These ingredients, Matrixyl and Argireline, are found in treatment gels and lotions, and many other products such as eye, face and body creams and lotions; sun protection; lip products; and more. Products for hyperpigmentation and dark circles also benefit from these ingredients because they have also been shown to lighten and correct irregularities in skin discoloration. Formulating chemists often pair Argireline and Matrixyl with ingredients such as alpha hydroxy acids, coenzyme Q10, alpha lipoic acid, kinetin, liposomes and many others for skin-firming, elasticity and hydrating purposes. These other ingredients are chosen to produce noticeable, immediate improvements to prevent discouragement in the client until the Matrixyl and Argireline can produce their more dramatic results.

### Finding manufacturers

Each company will have its own formulations, some good, some great, others not so great. A key to the results of each formulation will be the percentages of Matrixyl and Argireline, but most companies will maintain that as proprietary information. Actually, a results-oriented

product must have 10 to 20 percent Argireline, 3 to 5 percent Matrixyl—the Sederma SA, Paris, study results were with 2 percent and 4 percent Matrixyl—plus other quality ingredients to produce noticeable results. Additionally, an effective formulation requires careful manipulation of the pH for these particular ingredients to do what they are designed to do. Most products are packaged in sealed pump bottles, which will cost more than inexpensive jars with lids. The pumps prevent oxidation and contamination and enhance shelf life. Also, keep in mind that these are costly and patented ingredients, so a well-formulated product that produces great results will be more expensive than one that is not.

### Who are they sold to?

Mature clients with wrinkles and fine lines are especially interested in purchasing these products and respond with enthusiasm to the results. Linda Gibbs, esthetician, Mark's Place Hair Salon and Day Spa, New Philadelphia, OH, sells these products to any client over 40 years old with fine lines or actual wrinkles. Younger clients, however, are purchasing the products to prevent wrinkles developing in areas such as their foreheads and around the eyes.

"I watch for any indication of repetitive expression creases, such as someone who always raises her forehead when speaking, and sell the products as a preventive," says Gibbs.

The bottom line here is most clients or patients either have wrinkles or have fine lines that will be wrinkles in the near future. If they wish to reduce these conditions and improve elasticity and firmness, the best investment is to consider the new technology without forgetting the tried and true. As professionals in the industry, it is important to be aware of the newest ingredients on the market in order to be able to converse with clients about how they can make dramatic differences in their skin. ■

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