

# Oligopeptide-34: Advances in Skin Brightening

*by Dr. Diana Howard*

For many years, The International Dermal Institute has tested almost every single new brightening agent that has been introduced to our industry. It was only when we tested Oligopeptide-34 were we blown away by the results. Our studies indicate that Oligopeptide-34 is indeed the most effective, non-hydroquinone skin whitener. Let's explore this peptide in detail.

## **What is Oligopeptide-34?**

Oligopeptide-34 is a small protein molecule (also known as a peptide) consisting of 13 amino acids strung together to create a highly efficient and active molecule that addresses melanin formation.

## **Where does it come from?**

Oligopeptide-34 was developed in conjunction with an Asian biopharmaceutical company. Their specialty is the study of protein growth factors and growth factors mimicking peptides in pharmaceuticals. They are actively researching stem cell technology and developing diagnostic tools for the biopharmaceutical industry.

## **How does it work?**

Oligopeptide-34 decreases melanin synthesis and tyrosinase activity in melanocytes, and it decreases the transfer of melanosomes to new keratinocyte cells (terminology definitions can be found at the end of this article). Studies in the laboratory using human melanocytes and Melanocyte-Stimulating Hormone (MSH, the hormone that signals the melanocyte to start melanin production) show expected production of melanin in 72 hours. In test tubes where Oligopeptide-34 was added, the amount of melanin production was significantly reduced (about 33 percent).

After determining the optimum concentration of Oligopeptide-34, we concluded additional studies that indicated a reduction in Tyrosinase enzyme activity by 65 percent. Studies comparing Oligopeptide-34 to Vitamin C and Arbutin showed Oligopeptide-34 to be superior; Vitamin C and Arbutin reduced pigmentation by 27 percent and 40 percent, respectively, while Oligopeptide-34 reduced pigmentation by 47 percent. Twice daily application on 22 Asian individuals indicated "a statistically significant brightening effect on pigmented spots" as measured by spectrophotometers and subjective appraisal. Eighty-four percent of the panelists rated the product performance after eight weeks as "very good or good."

## **Brightening the Skin Safely**

It's important for professional skin therapists to have a safe and effective weapon in the treatment room for minimizing hyperpigmentation to even skin tone without the use of Hydroquinone.

As clients become increasingly interested in brighter, more luminous skin, it's up to professionals

like you to educate them on the amazing benefits of Oligopeptide-34. It's time clients understand that pigmentation can be effectively treated without running the risk of potential skin damage.

### **Terminology**

**Melanin:** the pigment in our skin.

**Melanocyte:** the cell that makes melanin.

**Melanocyte-stimulating hormone (MSH):** the hormone that turns the melanocyte on, starting melanin production.

**Melanosomes:** packets of melanin pigment that get transferred to surrounding cells.

**Tyrosinase:** the enzyme involved in steps one and two of melanin production.

**Keratinocytes:** technical term for cells of the epidermis.