

Targeting the Dermal Matrix for Skin Anti-aging

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Cutaneous aging is a complex process involving a series of cellular and extracellular matrix events. The dermal matrix of the skin plays a pivotal role during this process. Studies by us and other investigators have consistently found that dermal matrix progressively degrades throughout a person's life. The manifestation of this progressive reduction of dermal matrix is the loss of skin elasticity, which may in turn lead to gradual appearing and/or deepening of facial lines, wrinkles and increased sagging.

It was postulated that enhancing dermal matrix protein production, assembly and stabilization can contribute to improve facial volume and firmness over time, thereby slowing down the appearance of skin aging. To investigate this possibility, a screen of synthetic substances and medicinal herbs was conducted to identify cosmetically acceptable substances that can influence the production and stabilization

of dermal matrices. We identified a substance that showed strong stimulatory effect on dermal matrix components, such as collagen, elastin and hyaluronic acid in an *in vitro* model. Formulation that contains this substance has shown a stronger collagen-boosting effect than the formulation that contains Hydroxypropyl tetrahydropyrantriol in the 48-hour treatments on skin reconstructive tissues. A double blind placebo controlled split-faceclinical efficacy study was conducted using bio-instrumentation, After 4-weeks of use, results showed significant treatment improvement over placebo in firming and smoothing of skin. Subsequent clinical trials were performed where significance was observed on various skin conditions. In this presentation, our findings from both *in vitro* and *in vivo* studies will be shown and discussed.

Biography:

Siming Chen is a Research Fellow of Avon Products Inc., where her primary research focus is on anti-aging skin biology and pigmentation. Prior to joining Avon, She was a Research Associate in Weill Medical College of Cornell University, investigating molecular mechanisms of retinoid on stem cell growth and differentiation.

Lisa Di Natale, M.S., joined Avon in 2001 and is currently Senior Manager Clinical Efficacy. Lisa's long history within clinical testing brings invaluable knowledge determining product performance. Currently, she leads efforts on study design for unique Clinical assays and claim substantiation for Avon products globally across categories with focus on skincare, color and personal-care.