

# 3<sup>rd</sup> International Conference and Exhibition on **Cosmetology & Trichology**

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## **Combination therapy: Mechanical resurfacing with adipose derived stem cell media infusion**

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**Background:** Mechanical skin resurfacing can produce results for patients with dyschromias, fine rhytides, acne scarring, and oily/sebaceous skin, and can increase overall tone, texture and skin rejuvenation. Adipose-derived stem cell conditioned media, display multi-lineage developmental plasticity and secrete various growth factors that control and manage the damaged neighboring cells. The essential functions of adipose derived stem cells produce and secrete growth factors which in turn have diverse regenerative effects in the skin. Conditioned medium from adipose derived stem cells stimulates both collagen synthesis and migration of dermal fibroblasts, which can improve the wrinkling, accelerate wound healing and improve overall appearance of skin according to Experimental Dermatology May 2011 issue. The overall result is that the skin looks healthy, radiant and exhibits improved aesthetic appearance. Mechanical resurfacing has evolved into a popular non-invasive cosmetic procedure for photo-aging and other common cosmetic concerns and ADSCs are emerging as a leading ingredient in today's skin care products.

**Objective:** The objective is to show that optimal results are obtained when combining mechanical resurfacing followed by an ADSC media infusion applied during the same in-office procedure.

**Methods:** Mechanical resurfacing (microdermabrasion, mechanical exfoliation or microresurfacing) employs the use of a medium, such as a diamond or bristle tip. The medium is combined with vacuum for exfoliation of the stratum corneum as well as circulation, which supports the inflammatory response in the dermis. An increase in collagen remodeling is shown as well as the stratum corneum normalizing and achieving a healthy "basket weave" appearance. There is also increased hydration by improving the barrier function of the skin. When the stratum corneum is removed from the mechanical resurfacing immediately prior to an adipose derived stem cell media infusion, the ADSC media will have increased penetration into the skin. This will maximize the results of wound healing properties and skin regeneration from the ADSCs.

**Results:** Both mechanical resurfacing and the use of topical ADSCs show an improvement in the skin, but the combination therapy of mechanical resurfacing and using an ADSC media infusion immediately post delivers a synergistic result. Not only are results vastly improved, but any downtime is also decreased with the wound healing benefits of ADSCs.

**Conclusion:** Today, patients desire results with little to no downtime, and the combination therapy of mechanical resurfacing with an ADSC media topical or infusion during a single treatment capitalizes on these demands.

### **Biography**

Laura L McDermott, BIS, LE, MA has been in the aesthetics industry for over ten years, helping people look and feel better. She has practiced as an esthetician, medical assistant and laser technician in Arizona. In 2005, she received her Bachelor's Degree in Communication/Mass Communication at Arizona State University. Combining her hands-on experience as a skin care professional and her passion for skin, she then began working as an educator and a trainer. Over the last five years, she has taught at the Skin & Makeup Institute, Clearskin Laser Centre and various CME workshops, which include lecturing at SDSS and ASLMS. She has also created and recorded online educational webinars for Universal Companies. Currently, she is working with DermaSweep as the VP of Training & Development, where she works closely with UCI Dermatology, UCSF Dermatology and Scripps Dermatology on resurfacing protocols.

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