Medical device CE class III increases transcription of collagen type 1 and elastin genes in human skin fibroblast

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Mesotherapy/biorevitalization with hyaluronic acid (HA) is a treatment approach currently used for skin rejuvenation. Various products are available on the market and present a wide range of polycomponent formulations. Most of those formulations contain non cross linked hyaluronic acid in combination with a biorevitalization cocktail, formed by various amounts of vitamins, minerals, amino acids, nucleotides, coenzymes and antioxidants. Although ingredients are very similar in-between the different products, *in vitro* and clinical effects may vary substantially. There is a real need for better characterization of those products in terms of their action on human skin or *in vitro* skin model. In this study, we analyzed the effect of Medical device Class III based in HA on human skin fibroblast *in vitro*. Skin fibroblast viability and capacity to induce the production of key extracellular matrix was evaluated in presence of different concentration of RRS HA injectable. Viability was evaluated through MTT assay and key extracellular matrix genes collagen type 1 and elastin were quantified by quantitative PCR. Results demonstrated that the product could promote human skin fibroblast viability (+15%) and increased fibroblast gene expression of collagen type 1 gene a 9.7 fold and elastin a 14 fold time *in vitro*. Those results demonstrate that mesotherapy/biorevitalization products can effectively modulate human skin fibroblast at least *in vitro*.

Biography
Evgeniya Ranneva is presently working as a Dermatologist and Specialist in Rehabilitative and Reconstructive Medicine. She has completed her PhD in Aesthetic Medicine in 2003. She is an experienced Trainer of chemical peelings, International Trainer of fillers and botulinum toxin injection. She is the Founder of first public training course "New method: Mesotherapy", "Homeomesotherapy in aesthetic medicine" (Russia). She is the Scientific Coordinator of educational project for “International Plastic-Aesthetic Residence” (Spain, Belgium and Italy). She is working as a Medical Advisor for Aesthetic Dermal SL and Project Head for “RRS-Inject” (Spain). Her main research focuses on dermatology, cosmetic dermatology and aesthetic medicine.

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