

NOVELTIES IN SKIN AGING

Michel Laurence

Inserm, France

To identify the role of dermal fibroblasts in age-related scarring defects, we have described in a recently published study the differences between human dermal fibroblasts from young and old donors in terms of age, phenotypic characteristics, including senescence, and functional abilities: activation in myofibroblasts, stress response, migration and contraction. We also investigated the differentiation capabilities of dermal fibroblasts in adipocytes according to the age of the donors (young slice and aged slice). We characterized these fibroblasts in terms of membrane markers and adipocyte differentiation capabilities and compared them to mesenchymal stem cells. We then studied the effect of age on these two parameters: differentiation capacity and expression of membrane markers and demonstrated an alteration of these two points with age. Recent data have been collected to establish comparison of proteomic and secretomic profiling of young and aged dermal fibroblasts. Numerous proteins have been identified and are currently studied for their function in aging by KO down-regulation or surexpression. Moreover, our results brought evidence of the involvement of predominant combined molecular signaling pathway in subjects with early androgenetic alopecia compared to normal volunteers. This set of data suggests a gene profiling of premature skin aging in human beings.

BIOGRAPHY

Michel Laurence is specialized in Dermatology and Pharmacology, she is responsible for research group in the Skin Research Center, Inserm Unit, at Paris Saint-Louis Hospital. She works in the Research Team at the Skin Research Institute conducted by Professor Martine Bagot, Head of the Dermatology department at Saint-Louis Hospital and Dr Armand Bensussan, Director of Inserm Unit. She also worked at the Inserm Unit on a fundamental research project studying the mechanism of signaling pathways involved in cutaneous cell resistance to treatment, with a focus on drug-induced apoptosis. Several partnerships have been also established with cosmetic laboratories to provide experimental designs *in vitro* and *in vivo* in human beings. Her work has yielded 67 articles and three patents including new cosmetic dressings. She is involved as external expert in several national and international academic institutions.

laurence.michel@inserm.fr

