



Solar lentigines or age spots are hyperpigmented lesions that are located predominantly on the sun-exposed areas of the skin, such as the dorsum of the hands, the face, the shoulders, and the scalp. It is associated with photo-ageing and is seen most commonly after the age of 50.

StratiCELL has developed an in vitro 3D model of reconstructed epidermis that recapitulates main features of solar lentigines. The specific culture conditions based on a proprietary cocktail of melanogenic mediators induce hyper-proliferation and hyper-pigmentation of the epidermis.

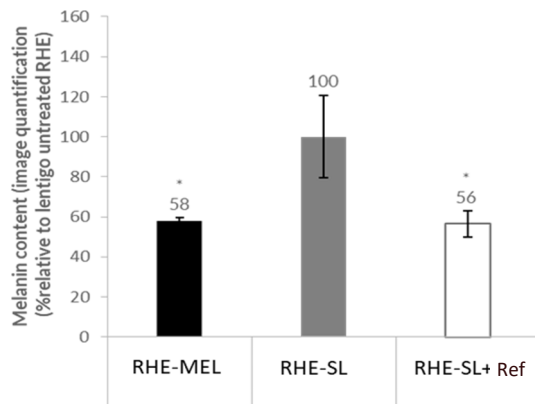
SKIN MODELS:

- **RHE-MEL**: reconstructed human epidermis with melanocytes (different phototypes)
- **RHE-SL**: hyper-pigmented human epidermis upon stimulation with a cocktail of fibroblast-derived melanogenic factors
- **RHE-SL SPOTS**: reconstructed human epidermis with individualized age spots upon application of a cocktail of melanogenic factors
- **Positive reference (Ref) available for full objectivation**

ENDPOINTS:

- **Dermoscopy**: high-resolution macroscopic pictures and calculation of the Individual Typology Angle (ITA), the Pigmentation Index (PI)
- **Tissue morphology**, thickness (histology), metabolic activity (MTS assay)
- **Melanin content** by colorimetry after Solvable™ solubilization and Fontana-Masson staining on paraffin-embedded sections
- **Expression of gene playing key roles in pigmentation disorders, by RT-qPCR**: individual gene expression by TaqMan or 96 key genes expression by TaqMan Low-Density Array (contact StratiCELL for more details about the *Melanogenesis-TLDA* array).

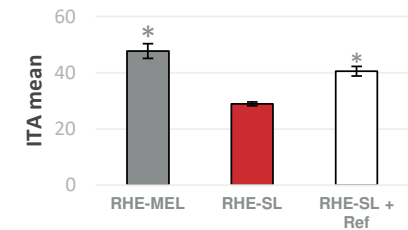
Melanin quantification upon Fontana-Masson staining and image analysis. *: $p < 0.05$



Tissue morphology and high resolution dermoscopy images



The individual typology angle (ITA) characterizing the phototype is inversely proportional to the phototype (*: $p < 0.5$).



The pigmentation index (PI) for which value is directly proportional to the skin pigmentation (*: $p < 0.5$).

