

MALASSEZIA OVERGROWTH : a promising new 3D skin model



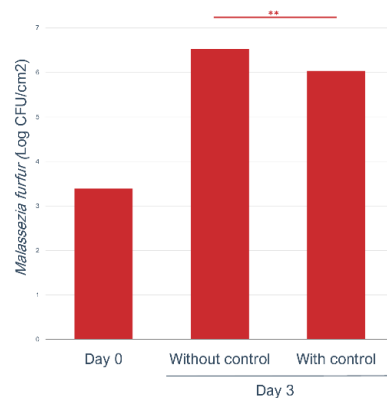
Malassezia furfur is a lipophilic natural cutaneous yeast, generally located in hyperseborrhic regions of the body, like face and neck. In case of dysbiosis, *M. furfur* is related to pityriasis versicolor or seborrheic dermatitis on the body skin. On human scalp, Malassezia overgrowth is however responsible for dandruff.

To allow new studies on the efficacy of innovative antifungal actives, StratiCELL has overcome the challenging colonization of reconstructed epidermis by living *M. furfur*, as a model of Malassezia infection. This new *in vitro* model displays a huge reactivity of the tissue, as observed by the expression of inflammatory, immunity and skin barrier biomarkers.

Description Replicates the colonization of skin by *Malassezia furfur*.

Skin model **RHE-MF**: Reconstructed Human Epidermis (RHE) topically colonized by *Malassezia furfur*.

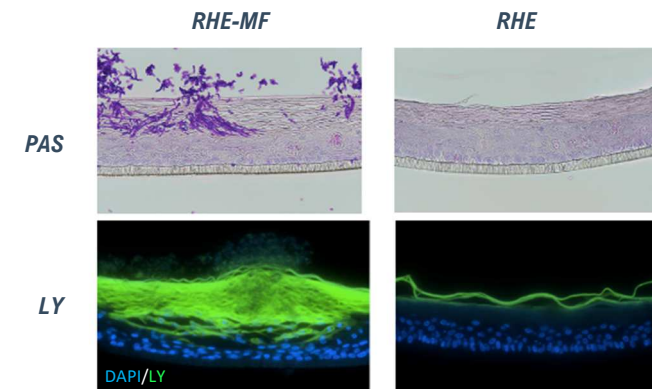
Endpoints **1. Growth of *M. furfur*** on RHE by C.F.U. (Colony Forming Units) counting. Positive control : *M. furfur* growth inhibitor.



2. Skin response to *M. furfur* colonization by gene expression (RT-qPCR) : individual TaqMan probes or 93 genes TaqMan Low Density Array (TLDA – “Skin Response to Microorganisms”).



3. Morphological analysis of RHE-MF after Periodic acid-Schiff (PAS) staining and **Trans-epidermal barrier** Lucifer Yellow (LY) diffusion assay.



RHE colonized by *Malassezia furfur* (RHE-MF) or not (RHE). Periodic acid-Schiff (PAS) staining and trans-epidermal barrier Lucifer Yellow (LY) diffusion.

4. Skin response to *M. furfur* colonization by quantification of biomarkers (ELISA).