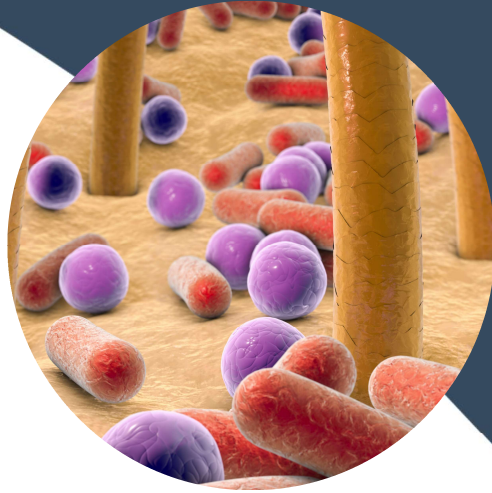


IN VITRO & EX VIVO TESTING



stratiCell
Testing & Beyond

MicroBIOS Platform

Combining 3D skin model with microbial strains

On its **MicroBIOS Platform**, StratiCELL is studying commensal and opportunistic strains of the skin including *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Cutibacterium acnes* and *Malassezia furfur*. StratiCELL is able to topically colonize its reconstructed human epidermis with these microbial strains, and jointly monitor both the bacterial growth and the epidermal response to infection. This dual approach allows to objectivate the influence of dermo-cosmetic active ingredients and skin care products on the skin microbial flora.



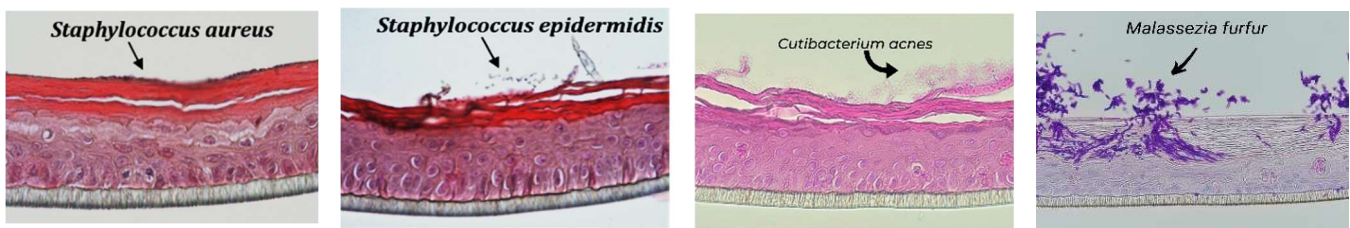
3D models

- RHE-SA** : Reconstructed Human Epidermis typically colonized by *Staphylococcus aureus*
- RHE-SE** : Reconstructed Human Epidermis typically colonized by *Staphylococcus epidermidis*
- RHE-SA-SE** : Reconstructed Human Epidermis typically co-colonized by *Staphylococcus aureus* and *Staphylococcus epidermidis*
- RHE-CA** : Reconstructed Human Epidermis typically colonized by *Cutibacterium acnes*
- RHE-MF** : Reconstructed Human Epidermis typically colonized by *Malassezia furfur*



Testing Methods

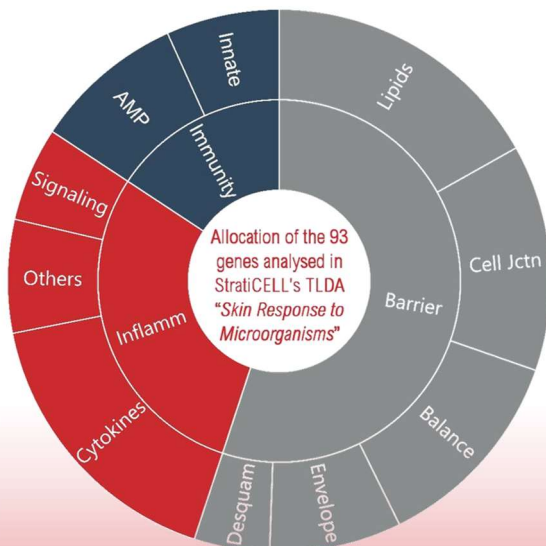
1. **Morphological analysis** of colonized reconstructed epidermis after histological staining : Hemalun/Eosin (H/E) staining for bacteria or Periodic acid-Schiff (PAS) staining for yeasts.



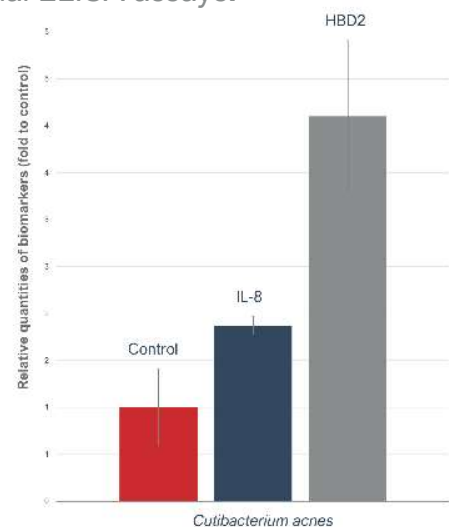
2. **Bacterial growth** on top of RHE by Colony Forming Units (C.F.U.) counting. Positive controls available for each strains, in single and co-infections.

3. **Skin response to the presence of microorganisms:**

- RT-qPCR gene expression analysis using StratiCELL 's TaqMan Low-Density Array (TLDA) referred as "Skin Response to Microorganisms".



- quantification of secreted proteins by individual ELISA assays.



Relative quantification of inflammatory biomarkers (IL-8 or HBD2) released in the culture media of RHE colonized by *Cutibacterium acnes* compared to uncolonized RHE (Control).