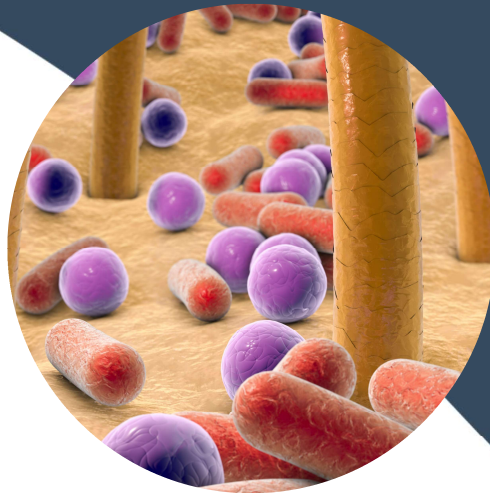


# IN VITRO & EX VIVO TESTING



stratiCell  
Testing & Beyond

## MicroBIOS Platform

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### Combining 3D skin model with microbial strains

On its **MicroBIOS Platform**, StratiCELL is studying commensal and opportunistic strains of the skin including *Staphylococcus aureus*, *S. epidermidis*, *Cutibacterium acnes* and *Malassezia furfur*. StratiCELL is able to inoculate 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 topically colonized by *Staphylococcus aureus*

**RHE-SE :** Reconstructed Human Epidermis topically colonized by *Staphylococcus epidermidis*

**RHE-CA :** Reconstructed Human Epidermis topically colonized by *Cutibacterium acnes*

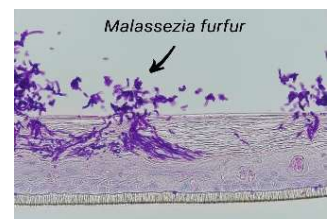
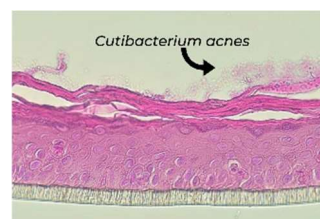
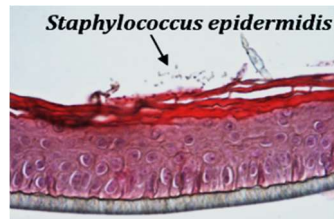
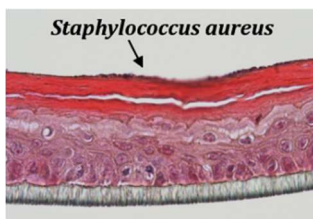
**RHE-MF :** Reconstructed Human Epidermis topically colonized by *Malassezia furfur*



## Testing Methods

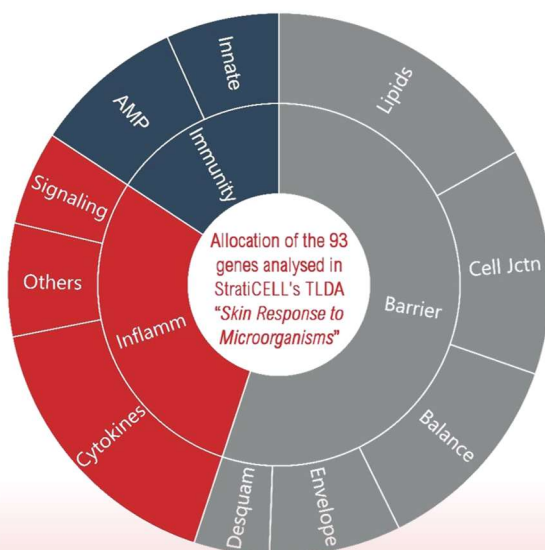
### 1. Morphological analysis of colonized tissues after histological staining :

Hemalun/Eosin (H/E) staining for bacteria or Periodic acid-Schiff (PAS) staining for yeasts.

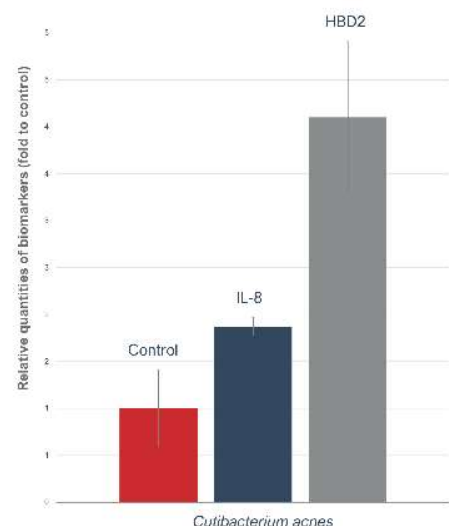


### 2. Bacterial adhesion and growth on RHE by C.F.U. (Colony Forming Units) counting. Positive controls available.

3. **Skin response** to the presence of microorganisms by **gene expression** (RT-qPCR using StratiCELL 's TaqMan Low-Density Array referred as "Skin Response to Microorganisms").



4. **Skin response** to the presence of microorganisms by **quantification of secreted proteins (ELISA).**



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).