

IN VITRO & EX VIVO TESTING



stratiCell  
Testing & Beyond

## Staphylococcal infections

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### ***Staphylococcus aureus & Staphylococcus epidermidis***

***Staphylococcus aureus*** and ***Staphylococcus epidermidis*** are natural cutaneous bacteria playing an important role in the skin barrier homeostasis. Staphylococcal dysbiosis is typically observed in the skin flora of patients with severe atopic dermatitis, showing a high relative abundance of *S. aureus* at the expense of *S. epidermidis*.

**StratiCELL** tests the efficacy of innovative dermo-cosmetic active ingredients to modulate *S. aureus* and *S. epidermidis*, using reconstructed epidermis colonized by each strain, individually or in combination. Anti-inflammatory efficacy testing using the Atopic Dermatitis 3D model is also available at StratiCELL.



## 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*



## Positive References

**RHE-SA :** penicillin-streptomycin (PS)

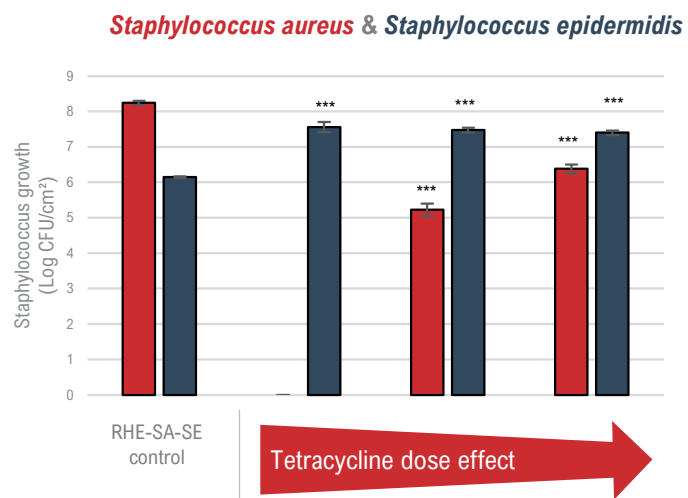
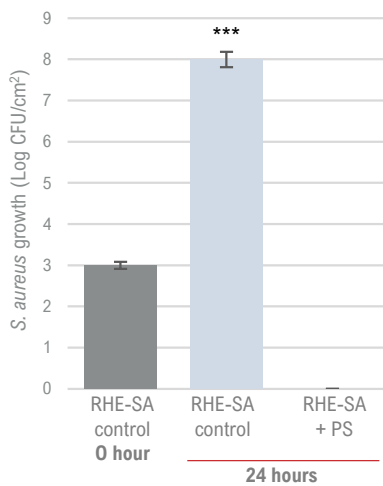
**RHE-SE :** bacterial growth factors

**RHE-SA-SE :** tetracycline (TET)

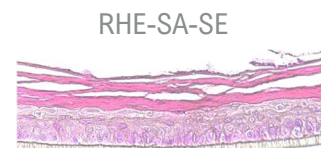


## Testing Methods

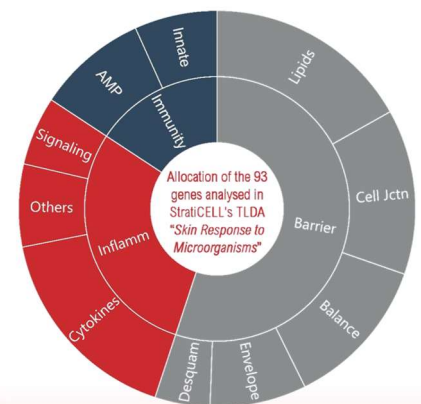
1. **Bacterial growth** on top of RHE by Colony Forming Units (CFU) counting, in the absence (control) or presence of the respective positive references.



2. **Morphological analysis** of RHE-SA, RHE-SE and RHE-SA-SE after Hemalun/Eosin staining.



3. **RHE-SA and RHE-SE : skin response to colonisation** by RT-qPCR using StratiCELL 's TaqMan Low Density Array (TLDA) "Skin Response to Microorganisms".



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*in vitro* models and testing on Atopic Dermatitis