

INFLAMMATION : *in vitro* models for acute and chronic inflammation

Inflammation is the natural immune system response to various trigger. When skin cells recognize external pathogens or internal abnormal structures, the immune system activates to stop the danger and to start the skin recovery process. **Acute inflammation** is the short-term immune response that follows infection, sun-burn, allergen or contact with irritant and pollutant. Acute inflammation is rapidly reduced when the causative agent is treated, leaving no permanent skin damage. On the counterpart, **chronic inflammation** is a long-lasting and self-sustaining inflammatory status, causing serious permanent tissue damage. Common chronic skin conditions are atopic dermatitis and psoriasis. In order to provide relevant pre-clinical support for the development of anti-inflammatory dermo-cosmetic compounds, StratiCELL offers various *in vitro* skin models and assays that replicate both acute and chronic inflammatory conditions.

ACUTE INFLAMMATION

CHRONIC INFLAMMATION

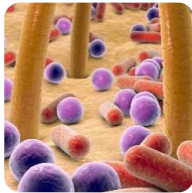
ACUTE INFLAMMATION



TNF-alpha or Phorbol diester (PKC inducer)

- IL-6
- IL-8
- TNF-alpha
- CXCL-5
- MCP-1

BACTERIAL INFECTIONS



Toll-Like Receptors activation (LPS, MALP-2)

- IL-6
- IL-8
- TNF-alpha
- CXCL5
- MCP-1
- HBD2

ACNE



Cutibacterium acnes (IA1)

- HBD2
- IL-8

MALASSEZIA OVERGROWTH



Malassezia furfur

- HBD2
- IL-8
- TNF-alpha

UV LIGHT & POLLUTION



UV A/B +/- Pollutants

- IL-6
- IL-8
- PGE2
- TNF-alpha

ATOPIC DERMATITIS



- Th2-type inflammation
- Loss of barrier function

PSORIASIS



- Th17 inflammation
- Th22 hyperplasia