



DERMATOSIS

Background

Dermatosis is defined as a disorder involving lesions or eruptions of the skin that are acute (lasting days to weeks) or chronic (lasting months to years). Acute lesions are relatively common and exhibit a wide range of clinical conditions.

Usually, these conditions are triggered by local or systemic immunologic factors (e.g., allergic reaction); however, the exact etiology remains unclear. Acute inflammatory dermatosis conditions include erythema multiforme (EM), pruritus (urticaria), and eczema.

Readouts

The following parameters will be taken into consideration:

- **Immunofluorescence:** qualitative and/or quantitative evaluation of the expression of selected markers (ie. E-Cadherin, ICAM-1, Neurotrophin 4 etc.) by acquisition of confocal images or Odissey scanner.
- **Inflammatory cytokines:** quantitative evaluation of the production of selected panels of pro inflammatory cytokines by multiplex analysis (ie. IL-6, IL-1 α , IL-8, IP-10, TARC, MCP-1, RANTES etc.)
- **Gene expression:** quantitative evaluation of the expression of selected panels of genes of interest (i.e. E-Cadherin, ICAM-1, Neurotrophin 4 etc.) in challenged cells. A transcriptomics analysis of challenged cells can also be taken into consideration.
- **Morphological analysis:** qualitative analysis of alterations in cell morphology in challenged cells.
- **Vitality assay:** quantitative evaluation of cell viability with MTT assay
- **Oxidative stress:** quantitative evaluation of total ROS production in challenged cells.

Pathology Model

Commercial reconstructed human epidermis (RhE) models will be used: EpiDerm (MatTek corporation). Oxazolone will be applied to keratinocytes in order to induce skin sensitization (i.e. 0.4% for 6h).