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SALT consists of dendritic antigen-presenting cells, cytokine-producing keratinocytes, draining peripheral lymph nodes and recirculating T lymphocytes.
SALT is an integrated system of immune surveillance uniquely designed for the skin.

First demonstration of the Langerhans cells´ antigen presentation function.

First demonstration of the bone marrow origin of epidermal Langerhans cells.

First demonstration of Langerhans cell generation in vitro from CD34+ hemopoietic precursor cells


Transforming growth factor β1 (TGF-β1) is of critical importance for LC development.

Perturbation of the cutaneous microenvironment by “danger signals” leads to phenotypic and functional changes in cutaneous dendritic cells. Langerhans cells and dermal dendritic cells switch from an antigen uptake/processing mode into an immunostimulatory mode and migrate from the skin to the draining lymph node.

Dendritic cell migration is not always accompanied by maturation. Upon their arrival in the lymph node, such immature dendritic cells deliver tolerizing signals.

First demonstration of cytokine production by keratinocytes.

First demonstration of neuropeptide production by keratinocytes.

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T lymphocytes of normal human skin exhibit an oligo-polyclonal repertoire, express mainly TCR $\alpha$/ $\beta$ heterodimers and display predominantly the memory phenotype. Expression of the cutaneous lymphocyte antigen (CLA) endows these cells with skin-homing properties.


Identification of a new set of chemokines responsible for the attraction of memory T cells into skin.