

## Liv Eidsmo

### Title: Resident T cells in human skin – protective, pathogenic or contextual?

Abstract: Resident T cells provide barrier immunity in murine models of viral infections. In contrast to experimental models, the human skin hosts a heterogeneous pool of resident T cells, with at large unknown roles in homeostasis, immunity and disease. We recently reported that the integrin CD49a marks CD8+ T cells poised to cytotoxicity and IFN-gamma production, while CCR6-expressing IL-17 producing T cells lack CD49a-expression in healthy skin. Our data indicates that microbial interplay with genetically predisposed keratinocytes and dendritic cells may shape the local pool of resident T cells in individuals afflicted by the relapsing skin disease psoriasis and we and others have shown that resident T cells poised to IL-17 are enriched in resolved lesions. Activation of these cells induce both type-1 interferon- and psoriasiform responses that correlates to clinical outcome following UVB treatment. To further understand the functionality of resident T cells in human skin, a global clinical trial is currently investigating disease-driving T cell induced responses in psoriasis. Our data indicates roles for human resident T cells in health and disease, which opens up for future attempts to alter these cells by topical treatment.

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