



POSTER PRESENTATION

Open Access

Expression of IL-1 family members upon stimulation with IL-17 differs in keratinocytes derived from psoriasis patients and healthy donors

P Muhr¹, J Zeitvogel¹, T Werfel¹, M Wittmann^{1,2*†}

From 5th European Workshop on Immune-Mediated Inflammatory Diseases
Sitges-Barcelona, Spain. 1-3 December 2010

Background

A number of studies have challenged the T cell centred pathogenetic view of psoriasis by the finding that epithelium-expressed genes are intimately involved in the inflammatory process. IL-17 is an important inflammatory mediator in skin psoriasis.

Objective

IL-17 is known to act on keratinocytes and we were interested in its impact on expression of pro- and anti-inflammatory IL-1 family members.

Methods

We compared human primary keratinocytes derived from psoriasis patients and healthy individuals using qRT-PCR and ELISA.

Results

In the presence of IL-17 psoriasis derived keratinocytes showed a significantly higher induction of the pro-inflammatory members IL-1F6 and IL-1F9 compared with those from healthy individuals but not of anti-inflammatory members IL-1F5, IL-1F7 or IL-1F3. Both basal, as well as IL-17 induced production of IL-1F2/IL-1 β and IL-1F1/IL-1 α were found to be significantly lower in psoriasis keratinocytes.

Conclusion

As keratinocytes were derived from epidermal stem cells of the hair follicles and obtained from non-lesional sites, differences found are likely to present an intrinsic

feature of psoriasis epithelium. Our data suggest that the significance of IL-1 members as therapeutic targets in psoriasis conditions merits further and thorough investigation.

Author details

¹Dept. of Dermatology and Allergy, Division of Immunodermatology and Allergy Research, Hannover Medical School, Hannover, Germany. ²Institute of Molecular and Cellular Biology, Faculty of Biological Sciences, University of Leeds, Leeds, UK.

Published: 25 November 2010

doi:10.1186/1479-5876-8-S1-P19

Cite this article as: Muhr et al.: Expression of IL-1 family members upon stimulation with IL-17 differs in keratinocytes derived from psoriasis patients and healthy donors. *Journal of Translational Medicine* 2010 8(Suppl 1):P19.

**Submit your next manuscript to BioMed Central
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



† Contributed equally

¹Dept. of Dermatology and Allergy, Division of Immunodermatology and Allergy Research, Hannover Medical School, Hannover, Germany
Full list of author information is available at the end of the article