

A Robust, Predictive Animal Model of Psoriasis

Researchers at the University of Dundee have established a transgenic mouse model of psoriasis which recreates the main characteristics of human psoriasis *in vivo*. The model is suitable for pre-clinical drug discovery and is available on a fee-for-service basis.

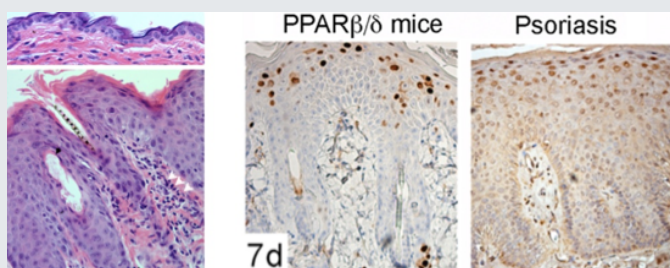
Background

Novel, easily reproducible biological systems which replicate the phenotype of human psoriasis are required for the discovery and assessment of new treatments.

The Opportunity

Researchers at the University of Dundee have developed the first transgenic, humanised mouse model of psoriasis (the P-mouse), based on the activation of human PPAR β/δ in murine epidermis. The P-mouse recreates essential elements of human psoriatic immune activation, inflammation, signalling and gene dysregulation, including:

- hyperproliferation of keratinocytes;
- dendritic cell accumulation;
- endothelial activation;
- a Koebner phenomenon;
- psoriasis-like gene dysregulation.



Histology analysis shows changes that are strikingly similar to human psoriasis. LHS: histology of mouse skin before (top) and after (bottom) induction of PPAR β/δ . RHS: Expression of PPAR β/δ in transgenic mice after induction and in human psoriatic plaques.

The model can be used as a predictive tool for drug discovery, including as a screen for potential therapeutic treatments.

IP Status

The technology is protected by a patent application, first published on 4th February 2010 as WO 2010/013071 A2

Commercial Opportunity

The model is available on a flexible, fee-for-service basis. Complete datasets assessing the effect of test substances on the model will be provided within 12 weeks.



The P-mouse:

A versatile model for the research, identification and assessment of therapeutic agents:

- predictive tool for drug discovery
- model suitable for screening potential therapeutic treatments
- robust tool for research into disease pathogenesis

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