SKIN DISEASE
Imiquimod-Induced Psoriasis

Psoriasis is a chronic, disfiguring, inflammatory and proliferative condition, characterized by red and scaly skin. Psoriasis is induced in mice by topical administration of imiquimod, a ligand for toll-like receptor (TLR) 7 and 8 and a potent immune activator[1].

Species: *Mus musculus* (Balb/c).
Number of animals/group: 4 animals.
Route of administration: upon request.
Treatment mode: upon request.

Main Read-outs: PASI (Psoriasis Area Severity Index), erythema score, scales, thickness.
Facultative read-outs: Histology, detection of neutrophil infiltration, cell proliferation, immunohistochemistry, cytokine release, RT-PCR analysis of biomarker messenger RNA and others.

Validation Data

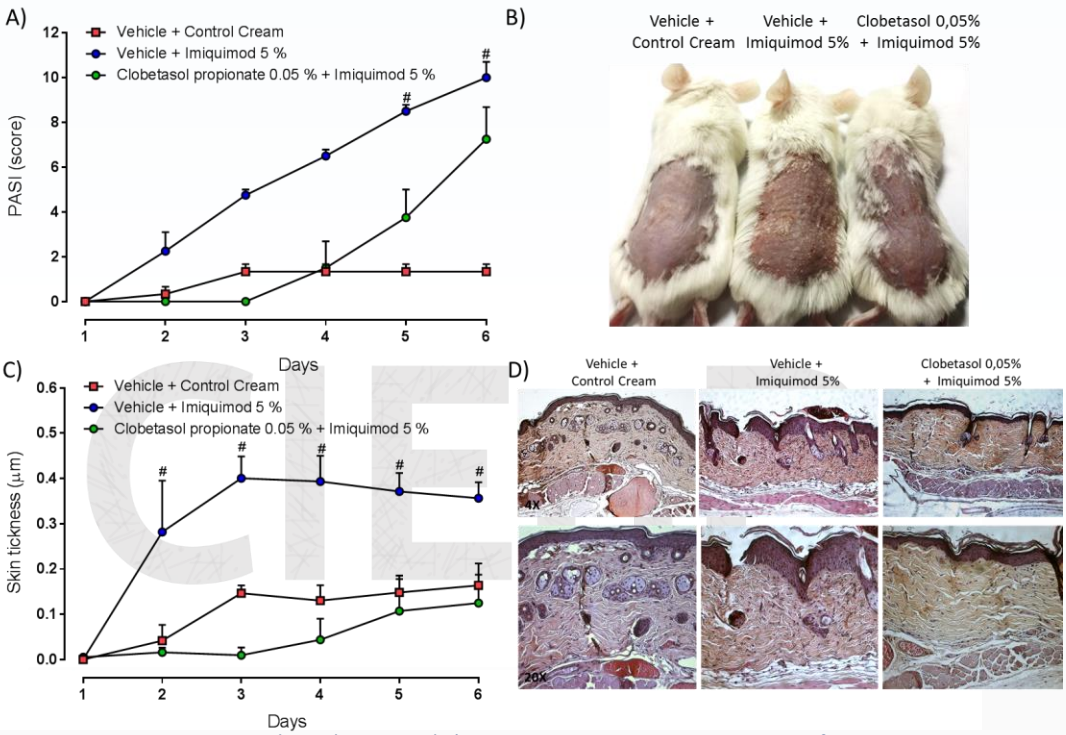

Figure: Psoriasis area severity index (PASI) score (A), phenotypical presentation of mouse back skin after 6 days of imiquimod-induced psoriasis (B), skin thickness (C) and histology (D). Psoriasis was induced by topical application of imiquimod 5% on the shaved back skin. Negative control group received the topical cream (vehicle) for six consecutive days. Clobetasol (0,05 % %), a corticoid clinically used for treatment for human psoriasis was used as positive control. Each column represents the mean ± SEM of 4 mice per group. For statistical analyses was used Kruskal-Wallis test or two way (ANOVA) followed by Bonferroni test. #P < 0.05 versus vehicle group.

To avoid bias and to allow reproducibility all in vivo experiments follow the ARRIVE guidances[2]. Mice and rats colonies from Charles River Laboratories are breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals.

References:
[1]van der Fits L, Mourits S, Voerman JS, Kant M, Boon L, Laman JD, Cornelissen F, Mus AM, Florencia E, Prens EP, Lubberts E. Imiquimod-induced psoriasis-like skin inflammation in mice is mediated via the IL-23/IL-17 axis.J Immunol. 2009 May 1;182(9):5836-45.
[2]Kilkenny C, Browne WJ, Cuthill IC, Emerson M, Altman DG. Animal research: reporting in vivo experiments: The ARRIVE guidelines. PLoS Biol. 8 (6): e1000412, 2010.

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