

Accepted Manuscript

How Effective is Tacrolimus in the Imiquimod - Induced Mouse Model of Psoriasis?

Hannah Pischon, Moritz Radbruch, Anja Ostrowski, Fabian Schumacher, Stefan Hönzke, Burkhard Kleuser, Sarah Hedtrich, Joachim W. Fluhr, Achim D. Gruber, Lars Mundhenk

PII: S0022-202X(17)32973-1

DOI: [10.1016/j.jid.2017.09.019](https://doi.org/10.1016/j.jid.2017.09.019)

Reference: JID 1091

To appear in: *The Journal of Investigative Dermatology*

Received Date: 29 April 2017

Revised Date: 22 May 2017

Accepted Date: 6 September 2017

Please cite this article as: Pischon H, Radbruch M, Ostrowski A, Schumacher F, Hönzke S, Kleuser B, Hedtrich S, Fluhr JW, Gruber AD, Mundhenk L, How Effective is Tacrolimus in the Imiquimod - Induced Mouse Model of Psoriasis?, *The Journal of Investigative Dermatology* (2017), doi: 10.1016/j.jid.2017.09.019.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



TITLE PAGE**HOW EFFECTIVE IS TACROLIMUS IN THE IMIQUIMOD - INDUCED MOUSE MODEL OF PSORIASIS?**

Hannah Pischon^{1,6}, Moritz Radbruch¹, Anja Ostrowski¹, Fabian Schumacher^{2,5}, Stefan Hönzke³, Burkhard Kleuser², Sarah Hedtrich³, Joachim W. Fluhr⁴, Achim D. Gruber¹, Lars Mundhenk^{1,*}

¹Institute of Veterinary Pathology, Freie Universität Berlin, Germany

²Department of Nutritional Toxicology, Institute of Nutritional Science, University of Potsdam, Germany

³Institute for Pharmacy (Pharmacology and Toxicology), Freie Universität Berlin, Germany

⁴Department of Dermatology, Venerology, and Allergology, Charité - Universitätsmedizin Berlin, Germany

⁵Department of Molecular Biology, University of Duisburg-Essen, Germany

⁶This article is part of the Ph.D. thesis of H.P.

*Corresponding author: lars.mundhenk@fu-berlin.de; Institute of Veterinary Pathology, Freie Universität Berlin, Robert-von-Ostertag-Str. 15, 14163 Berlin, Germany; +49 30 838 62442

SHORT TITLE**HOW EFFECTIVE IS TACROLIMUS IN MURINE PSORIASIS****ABBREVIATIONS**

TAC, tacrolimus; IMQ, imiquimod; Fig., Figure; TEWL, transepidermal water loss; PASI, modified psoriasis area and severity index; DXM, dexamethasone; LC-MS/MS, liquid chromatography tandem-mass spectrometry; SD, standard deviation; H&E, hematoxylin and eosin;

TO THE EDITOR

The imiquimod-induced mouse model has become a widely used standard to model human psoriasis since its introduction in 2009 and seems to mirror psoriasis in many pathogenetic, clinical, and histological features (van der Fits et al., 2009). Due to various advantages, the number of publications based on this model has increased exponentially in the past seven years (Hawkes et al., 2017). However, van der Fits et al. already stated that the models response to anti-psoriatic drugs still needs to be shown. A review article in this journal addressed a lack of validation of the model resembling human psoriasis and thus its applicability for therapeutic testing (Hawkes et al., 2017).

The immunomodulatory drug tacrolimus (TAC) is commonly used for topical treatment of dermatitis because it lacks important side effects of corticosteroids (e.g. skin atrophy). However, efficacy of topically applied TAC has not yet been achieved in the most common plaque type psoriasis, in contrast to facial and inguinal psoriasis, and its efficacy after systemic administration (Scheinfeld, 2004).

Here, we investigated how effective topical TAC treatment is in the imiquimod-induced mouse model of psoriasis.

Download English Version:

<https://daneshyari.com/en/article/8716183>

Download Persian Version:

<https://daneshyari.com/article/8716183>

[Daneshyari.com](https://daneshyari.com)