Clinical Dermatology Research Journal

Editorial

A SciTechnol Journal

Effect of Inflammation on the Expression of ABC Transporters In Normal Human Keratinocytes

Hanan Osman-Ponchet*

Abstract

Skin is the largest organ in the human body and is one of the major targets of air pollution. There is increasing evidence indicating that ATP-binding cassette (ABC) family transporters play an important role in the transdermal absorption of their substrates [1-4]. Exposure of the skin to air pollutants has been associated with inflammation with increasing production of pro-inflammatory cytokines. The connection between inflammation and ABC transporters transcript levels in the skin is not known. This study investigated the effect of inflammation on the expression levels of ABC transporters in normal human keratinocytes (NHK). NHK (Sterlab France) were treated with pro-inflammatory mediator lipopolysaccharide (LPS). mRNA expression of TNF-alpha, CXCL8 (IL-8), ABCB1, ABCC1, ABCC2 and ABCG2 was measured by quantitative real time RT-PCR. Treatment with LPS up-regulated the mRNA expression of TNF-alpha and IL-8, confirming the inflammatory properties of LPS in human keratinocytes. While LPS treatment had no effect on the expression of ABCG2, it increased the expression of ABCC1 and ABCC2 in human keratinocytes. This study clearly shows a connection between inflammation and ABC transporters transcript levels in human keratinocytes. This finding is of great importance and need to be considered in pharmacokinetic evaluation of anti-inflammatory agents when treating inflammatory skin.

Speaker Publications:

Osman-Ponchet et al., Characterization of ABC transporters in human skin. Drug Metabol. Drug Interact., 29 (2014), pp. 91- 100

Osman-Ponchet et al., Expression of drug transporters in the human skin: comparison in different species and models and its implication for drug development. ADMET DMPK, 5 (2017), pp.

3.Alriquet et al., Characterization of SLC transporters in human skin. ADMET DMPK, 3 (2015), pp. 34-44

4.Clerbaux et al., Membrane transporter data to support kinetically-informed chemical risk assessment using non-

Biography

Dr. Hanan Osman-Ponchet is currently Founder and CEO at PKDERM Laboratories. PKDERM provides innovative in vitro solutions to pharmaceutical and cosmetic industries to evaluate the efficacy and safety of products likely to come into contact with the skin. Hanan has a PhD in Biochemistry, Cellular and Molecular Biology and a long experience at Sanofi and Galderma. She has authored more than 30 peer-reviewed publications and patents and has given invited oral presentations at different scientific conferences

20th European Dermatology Congress April

29-30, 2020 Prague, Czech Republic**Abstract**

Citation:

Effect Of Inflammation On The Expression Of Abc Transporters In Normal Human Keratinocytes, Euro Dermatology 2020, 20th European Dermatology Congress, April 29-30, 2020 Prague, Czech Republic

https://dermatology.conferenceseries.com/europe/abstract/2020/ title-effect-of-inflammation-on-the-expression-of-abc- transporters-in-normal-human-keratinocytes

Citation: Ponchet HO, *(2020) Effect of Inflammation In Normal Human Keratinocytes –2020. Clin Dermatol Res J 5:4*

Author Affiliations Top

PKDERM Laboratories, Grasse Biotech. France

***Corresponding author:** Hanan Osman-Ponchet, PKDERM Laboratories, Grasse Biotech. 45, Boulevard Marcel Pagnol, 06130 Grasse. France.