Amira Tawdy, J Vaccines Vaccin 2014, 5:5
http://dx.doi.org/10.4172/2157-7560.S1.022

OMICS Group Conferences
Accelerating Scientific Discovery

4th International Conference on
Vaccines & Vaccination
September 24-26, 2014 Valencia Convention Centre, Spain

Role of PPAR receptors in both atopic dermatitis and psoriasis

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Background: Since their discovery it has become clear that peroxisome proliferator-activated receptors (PPARs) are ligand-activated transcription factors involved in the genetic regulation of the lipid metabolism and energy homoeostasis. Subsequently, accumulating evidence suggests a role of PPARs in genomic pathways including the regulation of cell growth, apoptosis and differentiation. Recent studies point to the pathophysiological role of the peroxisome proliferators-activated receptor gamma (PPARgamma) in the inflammatory immune response. PPARs represent a major research target for the understanding and treatment of many skin diseases, such as benign epidermal tumors, psoriasis and atopic dermatitis.

Objectives: The objective of this study was to estimate and analyze the PPAR gamma expression and its pathological role in psoriasis and atopic dermatitis.

Methods: We estimate the PPAR gamma gene expression in the lesional skin of atopic and psoriatic patients by quantitative real-time RT-PCR.

Results: Our data showed a significant decreased PPAR gamma expression in lesional skin from atopic dermatitis patients and psoriatic patients (P value<0.001), and the decrease was more marked in the psoriatic patients (P value<0.001).

Conclusion: These data demonstrate that PPARgamma expression has an important role in the pathogenesis of psoriasis and atopic dermatitis through the control of cell proliferation, differentiation and inflammation. So based on these data more researches are needed to estimate the use of PPAR gamma agonist in the treatment of such diseases.

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