Filaggrin and Skin Barrier Function

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Abstract

Research in atopic dermatitis (AD) has gained huge momentum after the finding that mutations in filaggrin gene are major predisposing factors. Filaggrin is a structural protein of stratum corneum (SC) and its breakdown products form natural moisturizing factor (NMF). Accumulating reports suggest that filaggrin contributes skin barrier formation, but the precise mechanisms remain unclear. We generated filaggrin knockout (KO) mice to evaluate the impact of filaggrin deficiency on skin barrier function. Filaggrin KO mice exhibited dry and scaly skin, but did not develop any spontaneous dermatitis. Despite of prominent decrease in NMF, water content and transepidermal water loss (TEWL) in SC of filaggrin KO mice was una

Key words: stratum corneum, filaggrin, skin barrier, tight junction.