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Development of human skin equivalents to unravel the impaired skin barrier in atopic dermatitis skin

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Propositions

Accompanying the thesis

Development of human skin equivalents to unravel the impaired skin barrier in atopic dermatitis skin

1. The expression of enzymes involved in lipid metabolism may not only be dependent on genetic background of the patients. Inflammation and environmental factors may also play an important role (*this thesis*)
2. Lower elongase 1 expression in atopic dermatitis (AD) skin appears to be a contributing factor to the accumulation of shorter chain free fatty acids in AD skin (*this thesis*)
3. In explant human skin equivalents most free fatty acids may first undergo unsaturation and thereafter elongation (*this thesis*)
4. Epidermal characteristics of AD *in vivo*, including the FLG genotype-phenotype can be maintained *in vitro* with the culture of explant human skin equivalents from AD biopsies (*this thesis*)
5. Keratinocytes may also have the potential to contribute to the development of AD by secretion of chemoattractant chemokines that will sustain the allergic inflammation in AD (*Elentner et al., J Cell Mol Med (13) 2009*)
6. Higher stratum corneum (SC) pH impairs the activity of enzymes involved in lipid metabolism and protein shedding (e.g. kallikreins), which contributes to hypercornification and impaired skin barrier function (*Amen et al., Hum Mol Genet (22) 2013*)
7. 1-O-acylceramides might constitute building blocks of the lipid extracellular lamellae in the SC and may contribute to stability of the lamellar phases (*Rabionet et al., J Lipid Res. (54) 2013*)
8. Increasing the level of monounsaturated free fatty acid in SC substitutes contributes to changes in lateral packing and increase in conformational disordering (*Mojumdar et al., Langmuir (30) 2014*)
9. If the whole universe has no meaning, we should never have found out that it has no meaning: just as, if there were no light in the universe and therefore no creatures with eyes, we should never know it was dark. Dark would be without meaning (*CS Lewis*)
10. Good, better, best. Never let it rest. 'Til your good is better and your better is best (*St Jerome*)
11. Science is the acceptance of what works and the rejection of what does not. That needs more courage than we might think (*J Bronowski*)
12. The important thing is to not stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when he contemplates the mysteries of

eternity, of life, of the marvelous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day (*Albert Einstein*)