Project A10 - Skin-sensing of environmental factors and their impact on the development of multiple sclerosis

Subcluster: Environment

Project Summary: Epithelial barrier tissues such as the skin are sensors for environmental and lifestyle factors impacting susceptibility and endophenotype of MS. We aim to investigate how skin-sensing of UV-B light can modulate disease susceptibility and severity in mouse models of MS as well as in MS patients. In particular, we will characterize the relevance of α-MSH signaling for sensing the lifestyle-factor UV-B light (including a proof-of-concept trial in humans), elucidate UV-B light-induced vitamin D-dependent and independent mechanisms for disease modulation, and scrutinize the role of AhR ligands involved in the transmission of environmental stimuli sensed in the skin.

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